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UNITED STATES DEPARTMENT OF THE INTERIOR

THE FLOODS OF MARCH 1936

Part 1. NEW ENGLAND RIVERS

Prepared in cooperation with the

FEDERAL EMERGENCY ADMINISTRATION OF PUBLIC WORKS

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 798

UNITED STATES DEPARTMENT OF THE INTERIOR
Harold L. Ickes, Secretary
GEOLOGICAL SURVEY
W. C. Mendenhall, Director

Water-Supply Paper 798

THE FLOODS OF MARCH 1936

PART 1. NEW ENGLAND RIVERS

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Prepared in cooperation with the
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THE FLOODS OF MARCH 1936

PART 1. NEW ENGLAND RIVERS

ABSTRACT

During the period March 9-22, 1936, there occurred in close succession over the northeastern United States, from the James and upper Ohio River Basins in Virginia and Pennsylvania to the river basins of Maine, two extraordinarily heavy storms, in which the precipitation was almost entirely in the form of rain. The depths of rainfall mark this period as one of the greatest concentrations of precipitation, in respect to time and magnitude of the area covered, of which there is record in this country.

At the time of the rain there were also accumulations of snow on the ground over much of the storm-affected region that were large for the season. The comparatively warm temperatures associated with the storms thawed the snow and added materially to the quantities of water to be disposed of by drainage into the waterways, by surface storage in lakes, ponds, and reservoirs, by absorption in the ground, and, probably in comparatively negligible degree, by evaporation.

The total quantity of water that had to be disposed of in these ways ranged between 10 and 30 inches in depth over much of the region. The water disposed of by natural storage, absorption, and evaporation amounted to average depths over the many river basins generally within the range of 1½ to 3 inches, with a significant degree of uniformity and systematic areal distribution. The remainder of the rain and snow water, generally much larger or even several times larger in amount than surface storage, absorption, and evaporation, required accommodation by the channels of the brooks, creeks, and rivers.

There were generally two distinct flood peaks, and in many of the basins the destruction was seriously aggravated, especially during the first flood, by the break-up of thick ice cover accumulated through a winter of exceptionally continuous and severe cold weather. The resulting floods were extraordinarily severe, and records of river stages, extending on some streams back to or nearly to the time of settlement by white men, were broken, many of them by wide margins. The peak of the Connecticut River at Hartford, Conn., was 8.6 feet higher than had been experienced since the settlement by white men, 300 years ago. The Susquehanna River at Harrisburg, Pa., was 3.5 feet higher than had been known in a period of record covering about 200 years. The Ohio River at Pittsburgh, Pa., was 6.1 feet higher than had been known in the period beginning 1762.

This volume presents many of the facts of these notable floods with respect to the New England rivers, for permanent record and for study and reference by engineers concerned with the building of highways, bridges, and industrial plants, planners of river development, and others. Similar volumes for the region from the Hudson River to the Susquehanna River and for the Potomac, James, and upper Ohio River Basins are presented in companion Water-Supply Papers 799 and 800 respectively.

In this volume records of stage and discharge for the period including the floods are presented for about 150 measurement stations; peak discharges with comparative data for other floods at more than 400 measurement points are summarized; crest stages along an aggregate length of stream channel of 2,820 miles are tabulated; and results of detailed studies of the rainfall and run-off and many other kinds of flood information are presented.

INTRODUCTION

Extraordinary floods occurred during March 1936 in the north Atlantic slope drainage basins from the Kennebec River Basin in Maine to the James River Basin in Virginia, also in the upper Ohio River Basin in Pennsylvania and in some parts of the St. Lawrence River Basin in New York and Vermont. The loss of life and property damage caused by these floods constituted a major catastrophe. Between 150 and 200 lives were lost, and damage amounting to hundreds of millions of dollars was inflicted upon many cities and towns, railroads, highways, and other improvements. Many bridges were seriously damaged or washed away, and normal transportation was seriously disrupted and impeded. Erosion and deposition of debris also caused much damage.

The stages and discharges of these great floods were notable, not only because they equaled or exceeded those of all previously recorded floods in many of the river basins but also because the floods occurred simultaneously over an extent of area that was unprecedented in the records or traditions of floods of the region, covering many years and even centuries.

In each of the following primary drainage basins the flood discharges of the main river and most of the tributaries closely approached or exceeded, some of them by large amounts, any records of floods previously known in those areas:

Kennebec River	Thames River	Susquehanna River
Androscoggin River	Connecticut River	Potomac River
Saco River	Housatonic River	James River
Merrimack River	Delaware River	Upper Ohio River

The discharge of the Hudson River below the outlet of Sacandaga Reservoir would have exceeded all records except for the regulation afforded by storage reservoirs, of which the Sacandaga Reservoir itself was the most outstanding example. The large area included within these primary drainage basins and the nearby lesser basins or parts of basins that suffered similarly from these floods is shown in figure 1. Tributaries of the upper Ohio River that were not in extreme flood are not included in this area.

The floods of March 1936 impressed upon the inhabitants of the flooded regions as never before the magnitude of the problem of carrying flood waters down long reaches of river channel through thickly settled valleys to the ocean. The people are stimulated to search for solutions of the problem and for ways to protect themselves against flood catastrophes in the Geological Survey largely in cooperation with States and municipalities and generally for periods beginning many years prior to the March floods. By this program the Survey has obtained continuous records of stages and rates and volumes of flow of the streams, covering the range from drought to extraordinary flood.

When the record-breaking characteristics of the floods of March 1936 became known, it was recognized that the collection and compilation of data related to them were of special importance and that the information should be published in a form best suited for use in studies and designs for flood protection and flood control. Necessarily, much of this essential information had to be collected before the evidences of the floods were obliterated by normal weathering or by vegetal growth. It was recognized also that the processes of clearing away the flood debris would be undertaken promptly in every city, town, hamlet, and farm in the region, thereby destroying in many places the best evidence of flood heights. It was therefore apparent that immediate steps should be taken to collect the information regarding the floods while the evidences of them were yet discernible, in order that the essential records might be preserved and published for use in future hydraulic developments. The work that was involved went far beyond the scope of the ordinary river-measurement program, especially as it was desirable that the information should not be limited to the regular river-measurement stations but should also relate to other rivers or places not included in the routine program. The critical situation demanded prompt and energetic efforts to obtain and publish the essential stage and discharge information regarding these record-breaking floods.

Accordingly, the Public Works Administration, acting in accordance with the National Industrial Recovery Act of 1933, allotted to the Geological Survey, late in March 1936, $125,000 for surveys of stages and discharges of the floods and for the preparation and printing of reports thereon.

This volume is one of a series of three regional reports presenting the records of stages and discharges of rivers in the northeastern United States during the great floods of March 1936, also a summary of the meteorologic and hydrologic aspects and interpretative studies of rainfall and run-off relations and other information related to the floods. The three reports are published as water-supply papers under the general title "The floods of March 1936", with the following serial numbers and distinguishing subtitles pertinent to the contents of the respective volumes:

the future. It is becoming increasingly recognized and accepted that such measures must be adopted and planned on sound and adequate basic information and that one of the most essential items of such basic information consists of reliable records of floods of the past. Thus the stages, discharges, and other characteristics of these floods are of interest and importance as criteria in the design and construction of hydraulic works and should be given full consideration in plans for all future developments,

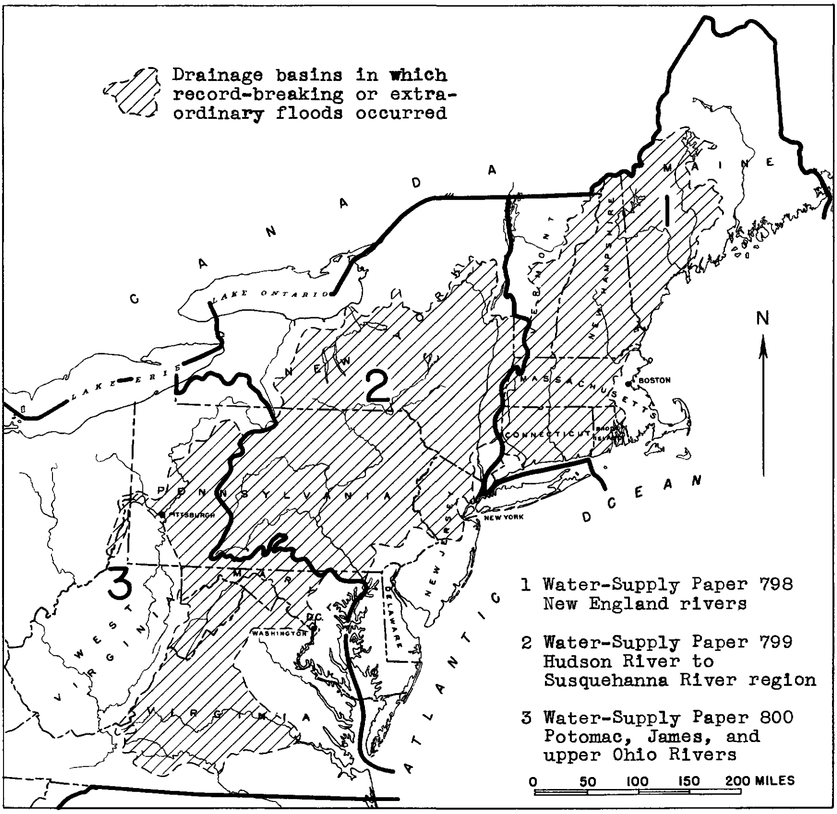


Figure 1.- Areas covered by the reports on the floods of March 1936 in the northeastern United States.

so as to avoid the recurrence of loss of life and human suffering and the serious economic damages attendant upon floods for which the works of man have made inadequate allowance.

The United States Geological Survey, operating through several local district offices, maintains as a part of its regular nation-wide stream-gaging program about 400 river-measurement stations within the area ravaged by the floods of March 1936. These stations have been maintained by

ACKNOWLEDGMENTS

The Geological Survey, acting through its district field offices in the region, cooperates with State and municipal agencies in the several districts. Acknowledgment is made to these cooperating agencies for participation in the collection of the systematic records of river discharge that form the broad base on which the specific flood information has been placed, also for cooperation in the establishment and operation of many river-measurement stations essential to the study and in the maintenance of field organizations in which engineers trained for investigations of this kind were available for the special studies related to the collection of the field data and the preparation of the reports.

Information appearing in this series of reports has been obtained from many sources, including individuals, corporations, and governmental organizations, local, State, and Federal. Financial cooperation in connection with the regular river-measurement program of the Geological Survey in the areas covered by this report has been received from the following agencies: In Connecticut, the State Water Commission, the City of New Britain Board of Water Commissioners, and the City of Hartford Flood Investigation and Improvement Committee; in Maine, the Public Utilities Commission; in Massachusetts, the Department of Public Works, the Metropolitan District Water Supply Commission, and the Metropolitan District Commission; in New Hampshire, the State Planning and Development Commission; and in Vermont, the State through its executive department.

Federal agencies to whom acknowledgments are made for services rendered or data furnished include the United States Weather Bureau; the Corps of Engineers, United States Army; the Public Works Administration; the National Resources Committee; and the Works Progress Administration.

Assistance in collecting records was also rendered by the Connecticut State Planning Board, the Massachusetts State Department of Public Health, the Massachusetts Geodetic Survey, the New Hampshire Water Resources Board, the Rhode Island Department of Public Works, the City of Pawtucket, the Springfield Board of Water Commissioners, the Connecticut Light & Power Co., the Hartford Electric Light Co., the Union Water Power Co., the New England Power Co., the New England Power Association, the Rumford Falls Power Co., the Kennebec Water Power Co., the Proprietors of Locks and Canals on the Merrimack River, the Essex Co., the Holyoke Water Power Co., and the Turners Falls Power & Electric Co. So far as practicable, acknowledgments for individual contributions of information are given at appropriate places in the report.

Part 1, New England rivers (covered in this volume, Water-Supply Paper 798).
Part 2, Hudson River to Susquehanna River region (Water-Supply Paper 799).
Part 3, Potomac, James, and upper Ohio Rivers (Water-Supply Paper 800).

The areas treated in the respective volumes are shown in figure 1.

AUTHORIZATION

The data contained in this series of reports were collected by the United States Geological Survey under the following authority contained in the organic law (20 Stat. L., p. 394):

> Provided, That this officer [the director] shall have the direction of the Geological Survey and the classification of public lands and examination of the geological structure, mineral resources, and products of the national domain.

Under this law, river measurements were begun by the Geological Survey in 1888 in connection with special studies relating to irrigation. Since the fiscal year ending June 30, 1895, successive annual appropriations by the Congress have included items for this work, and for many years such items have been enacted in the following language:

> For gaging the streams and determining the water supply of the United States, and for the investigation of underground currents and artesian wells, and for the preparation of reports upon the best methods of utilizing the water resources.

ADMINISTRATION AND PERSONNEL

The field and office work incident to the preparation of this report were performed by the water-resources branch of the Geological Survey under the general administrative direction of N. C. Grover, chief hydraulic engineer. The actual field work and the collection and tabulation of the basic information with respect to stages and discharges were done by the district engineers and their staffs in the division of surface water, C. G. Paulsen, chief. The district engineers participating in the collection and preparation of the information in this volume relating to the New England rivers were B. L. Bigwood, Hartford, Conn.; H. B. Kinnison, Boston, Mass.; and M. R. Stackpole, Augusta, Maine. The direct supervision and coordination of the collection of data and the final assembling of the reports were carried on in the division of water utilization, R. W. Davenport, chief. W. G. Hoyt, consulting engineer, conservation branch, has directed and prepared the presentation of information on rainfall and other climatologic features and the section on rainfall and run-off studies. In carrying on all this work the permanent field and office staffs were assisted by temporary employees appointed by the Secretary of the Interior under the provisions of the National Industrial Recovery Act.

GENERAL FEATURES OF THE STORMS

During the period March 9 to 22, 1936, four distinct storm centers passed over the northeastern part of the United States. The first disturbance, that of March 9 and 10, passed north of Lake Ontario and was accompanied by fairly general rains in western Pennsylvania and western and central New York and by snow in northern New England. On March 10

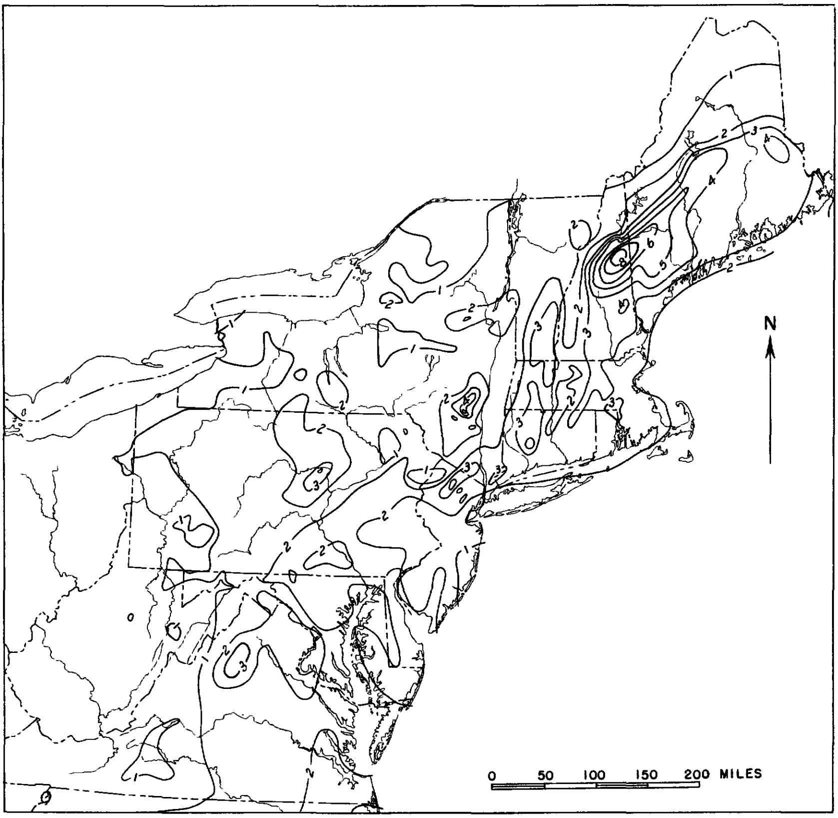


Figure 2.- Isohyetal map of the northeastern United States showing total precipitation, in inches, March 9-13, 1936.

a Gulf disturbance was centered off the Georgia coast and moving northeastward with increasing intensity. By March 12 this disturbance had crossed Virginia, Maryland, Pennsylvania, and New York. On the 13th the storm center had merged over western Quebec into a disturbance that had passed over the Great Lakes region on the preceding day. These disturbances were accompanied by heavy precipitation over the entire northeastern part of the United States. (See isohyetal map, fig. 2.) In this report the precipitation accompanying the general disturbances of March 9-10 and of March 11-12 has been treated as one general storm. Over the area as a whole, the greater part of the precipitation is recorded as having occurred on March 11 and 12. The center of maximum rainfall was in the White Mountain area in New Hampshire, with secondary centers in southern Vermont, in the Berkshire Hills in western Massachusetts and Connecticut, in the Catskill Mountains in southeastern New York, the

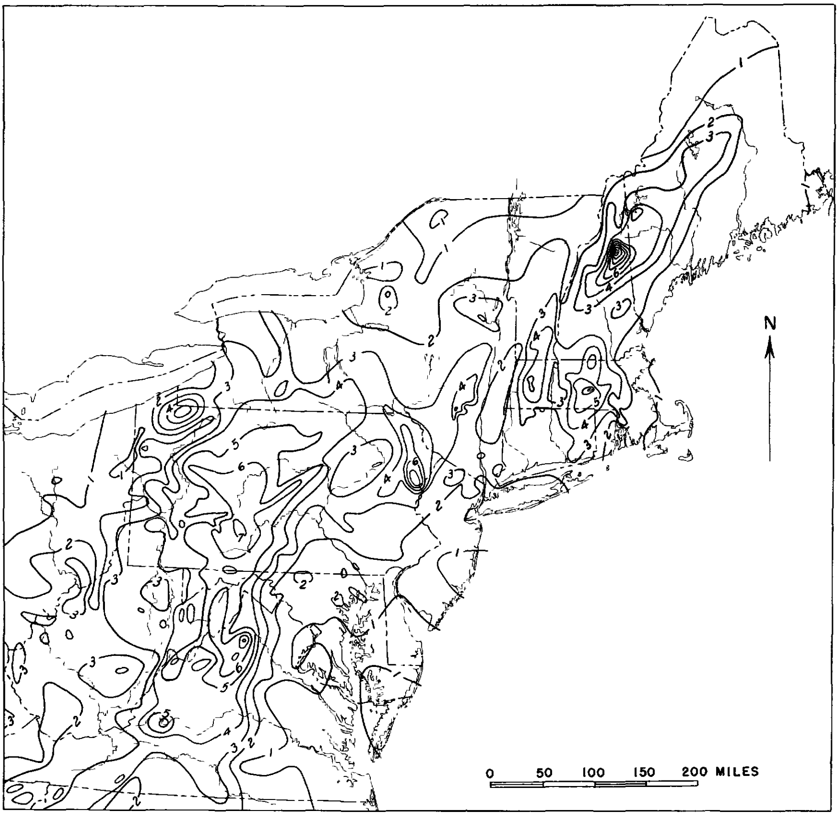


Figure 3.- Isohyetal map of the northeastern United States showing total precipitation, in inches, March 16-19, 1936.

Pocono Mountains in Pennsylvania, and the Blue Ridge in Maryland and Virginia. Precipitation over the Northeastern States was generally light on March 14 and 15 and accompanied a minor disturbance that passed over the Great Lakes and into Canada. On the 15th and 16th there was an area of outstanding low barometric pressure over the Gulf States. By the morning of the 18th this disturbance was over Virginia, and it passed over New Jersey and Connecticut on the 19th and over Quebec on the 20th. This disturbance was accompanied by general heavy precipitation over all the areas affected by the floods. The major part of the rainfall was recorded on March 17 and 18. (See fig. 3.) Although this heavy rainfall centered in the White Mountain area, it reached very considerable magnitude (exceeding 4 or 5 inches) over most of central New England, southern New York, most of Pennsylvania, western Maryland, northern Virginia, and the northeastern part of West Virginia. On the 20th, 21st, and 22d

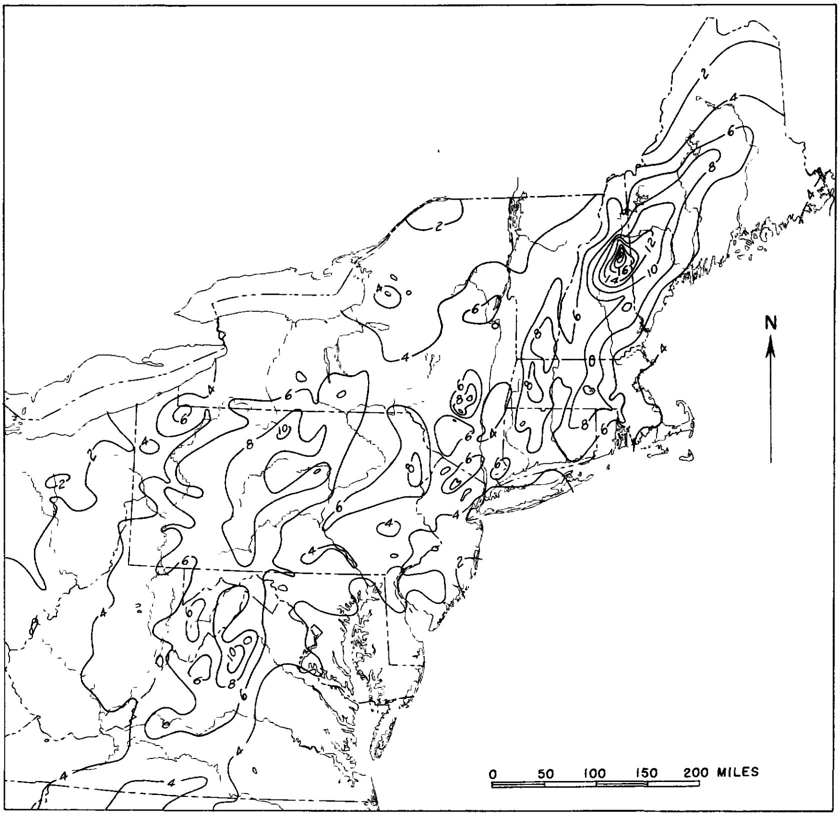


Figure 4.- Isohyetal map of the northeastern United States showing total precipitation, in inches, March 9-22, 1936.

another disturbance crossed the area, accompanied by heavy snowfalls in western Pennsylvania and western New York and by minor rains elsewhere.

Again on the 27th and 28th there was a minor storm which caused heavy precipitation in parts of New England, which, however, was not of sufficient magnitude to create an independent flood and was sufficiently delayed not to contribute to the major floods. The rainfall associated with the major floods is that in the period March 9 to 22. Therefore, the analysis of rainfall in this report is applied to the two major storms in that period. Figure 4 shows the precipitation for the entire storm period, March 9 to 22.

The areal extent of the two storms in respect to depth of rainfall was approximately as follows:

Precipitation (inches)	Area covered (square miles)	
	First storm March 9-13	Second storm March 16-19
More than 8	170	150
6	1,300	6,700
4	7,900	43,500
2	76,000	163,000

The areal extent of the total storm period, March 9 to 22, in respect to depth of rainfall was approximately as follows:

Precipitation (inches)	Area covered (square miles)	Precipitation (inches)	Area covered (square miles)
More than 18	120	More than 10	4,000
16	300	8	19,000
14	800	6	66,000
12	1,500	4	168,000

In connection with the magnitude of the precipitation recorded for this storm, consideration should be given to the fact that the first heavy rain fell on a snow cover that had a water content of 1 to 2 inches in headwater areas in northern Virginia and Maryland; 2 to 4 inches over most of Pennsylvania, New Jersey, southern New York, and Connecticut; and 5 to 10 inches or more in northern New York, most of Massachusetts, Vermont, New Hampshire, and Maine. Figure 5 presents a map of the northeastern United States showing lines of estimated water content of snow on the ground March 9.

In respect to the amount and extent of precipitation, the first storm was notable but not extraordinary. In certain areas it produced larger floods than the second storm, but in general it stands out only as a major contributing factor to the catastrophe that was to follow. The second storm was of sufficient magnitude and extent to rank with the great northern storms, although it was apparently exceeded in amount of heavy precipitation by seven outstanding northern storms which have been analyzed by the engineering staff of the Miami Conservancy District. (See Storm rainfall of eastern United States: Miami Conservancy Dist. Tech. Rept., pt. 5, revised, Dayton, Ohio, 1936.) These seven storms occurred on October 3-4, 1869; May 31 to June 1, 1889; May 19-21, 1894; July 12-14, 1897; November 3-4, 1927; March 24-25, 1913; and August 23-24, 1933. The storms of March 1936 occurred earlier in the year than any of

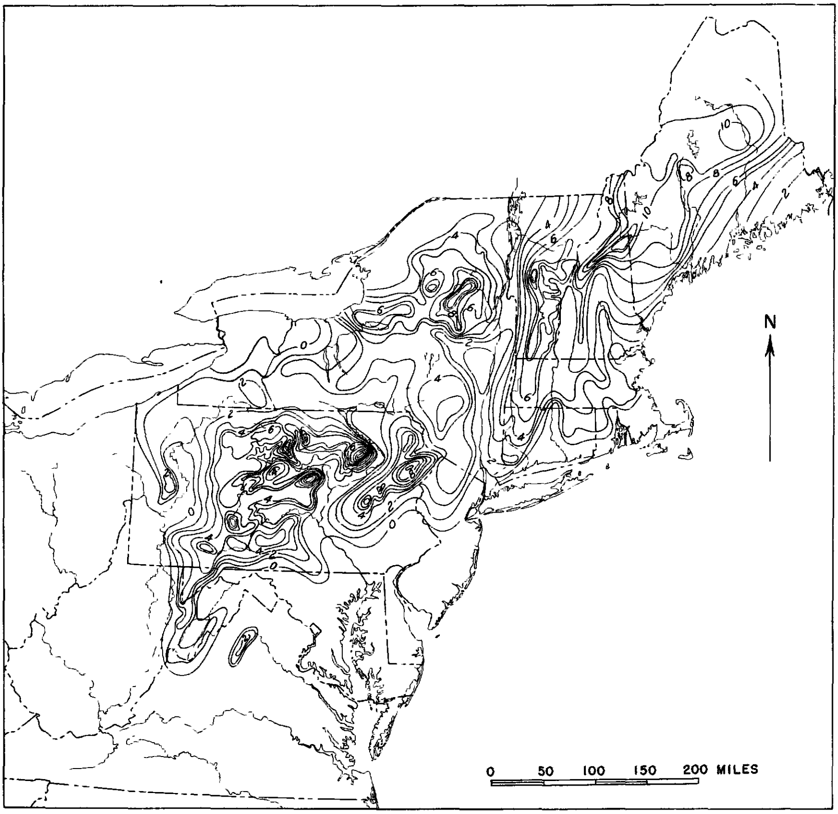


Figure 5.- Map of the northeastern United States showing the depth, in inches, of the water content of snow on the ground March 9, 1936.

the outstanding northern storms of record prior to that time. However, if the water content of the snow on the ground March 9, 1936, is taken into account, as well as the total rainfall for the period March 9 to 22, there appears to have been a greater aggregate amount of water over the area than had occurred at any previous time covered by the record, probably exceeding that in the Miami Basin during the storm of March 1913, which caused the Miami flood. (The rainfall of January 1937 in the Ohio River and Mississippi River Valleys has not yet been analyzed to determine its relation to the storms under consideration.)

In the companion Water-Supply Paper 800, "Floods of March 1936, The Potomac, James, and upper Ohio Rivers", there is presented a section entitled "Weather associated with the floods of March 1936" by Stephen Lichtblau, of the United States Weather Bureau, which describes and analyzes the air movements and other meteorologic phenomena incident to the floods. The section includes 12 explanatory charts and a bibliography of pertinent literature.

FLOODS OF THE NEW ENGLAND RIVERS

The train of meteorologic events preceding the floods of March 1936 on the New England rivers (see fig. 6) was highly favorable to a culmination in river stages and discharges of extraordinary height and volume. Cold weather early in the winter, before there was a cover of snow, had frozen the ground at least to the normal extent for the time of year, thus setting the stage for a high run-off when the winter accumulation of snow should melt. During January and February New England had many falls of snow. Unusually low temperatures prevailed without the intervention of a winter thaw, and as late as March 9 there had been little thawing weather over most of the region. Therefore, at the start of the first intense rain storm on March 12 and 13 an unusually large amount of water was held in storage in the drainage basins in the form of snow and ice. The weather became unseasonably warm about March 9 and continued so during the remainder of the month. By March 22 the water previously held in storage in the form of snow and ice had been released over most of the areas of New England except in the northern parts.

Contemporaneous with the thawing of the snow and ice, and perhaps in some degree contributing factors to such thawing, the heavy rains of the general storms previously described fell over most of New England. These rains occurred largely in two distinct periods centering about March 11 and 12 and March 17 and 18. The train of flood-promoting events therefore contained two heavy storms, of which the second was generally much the larger and associated with the more serious flood consequences.

The heaviest rain of both storms fell in a zone extending northeastward from the southern part of Vermont across New Hampshire into central Maine. Heavy rainfall was general, however, and in the second storm there were exceptional peaks of precipitation in other places, notably in

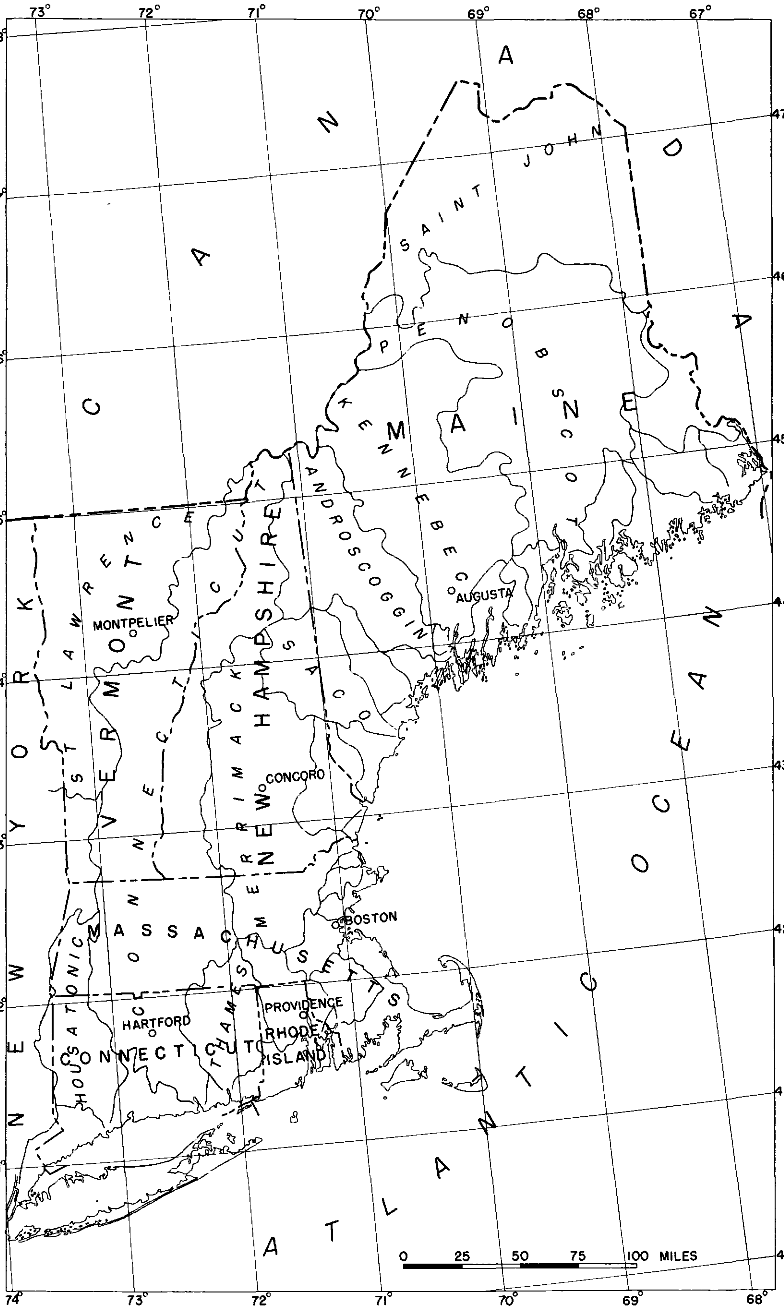


Figure 6.-Drainage basins of the New England rivers.

southern Vermont, central Massachusetts, and northeastern Connecticut. In northern and western Vermont and eastern Maine the rainfall was less heavy and the accompanying floods were generally less severe.

The flood resulting from the first storm was accompanied by the breaking up of the heavy ice on the streams and was distinctively an "ice" flood. The heavy ice cover that had formed over long reaches of the streams during the extended period of subfreezing temperature in January and February was, in general, thicker and stronger than that usually found at times of the spring break-up. The thawing temperatures of the last few days in February and the first week of March had failed to loosen or to soften materially this ice, and therefore the rains of March 11 and 12, associated with warm temperatures and augmented by the run-off from melting snow, caused a tremendous volume of water to pour into the ice-blocked channels of every river and rivulet. Notable ice jams occurred on the Kennebec, Androscoggin, Connecticut, and other rivers. The ice jams on the Kennebec River caused much damage in the tidewater reaches below the dam at Augusta, Maine. The stages of the river at Augusta and Hallowell, Maine, caused by ice jams at Browns Island and Swan Island, were 3.6 feet higher than the previous high-water record, established March 2, 1896. The stage at Gardiner, Maine, resulting from the ice jam at Swan Island, was 2.0 feet above the high-water record of 1896. The stage at Richmond, Maine, was 0.4 foot lower than that of March 2, 1896.

The water from the melting snows and the extraordinary rainfall of the second storm flowed, therefore, into river systems that were still burdened with the waters of the first flood and so put into action the processes of flood destruction and demoralization. Fortunately, the loss of life was small, but the property damage, direct and indirect, in New England was more than $100,000,000. With the progress of the flood, means of communication and routes of transportation were seriously crippled, as the river valleys were filled and extensive overflow areas were covered to unprecedented depths by flood water. The advance forecasts were surprisingly accurate, thus aiding materially in keeping the loss of life relatively low and in the removal to safe places of many valuable commodities. Telephone, telegraph, and radio services kept the public advised as to the severity of the floods well in advance of the flood crests, permitting evacuation of the areas likely to be endangered.

A. TWO SPANS OF THE BRIDGE OVER KENNEBEC RIVER BETWEEN RICHMOND AND DRESDEN, MAINE, CARRIED AWAY BY ICE.

The center span failed later.

B. THICK ICE DEPOSITED BY KENNEBEC RIVER AT FARMINGDALE, MAINE.

A. RAILROAD BRIDGE OVER ANDROSCOGGIN RIVER BETWEEN BRUNSWICK AND TOPSHAM, MAINE, DESTROYED BY ICE.

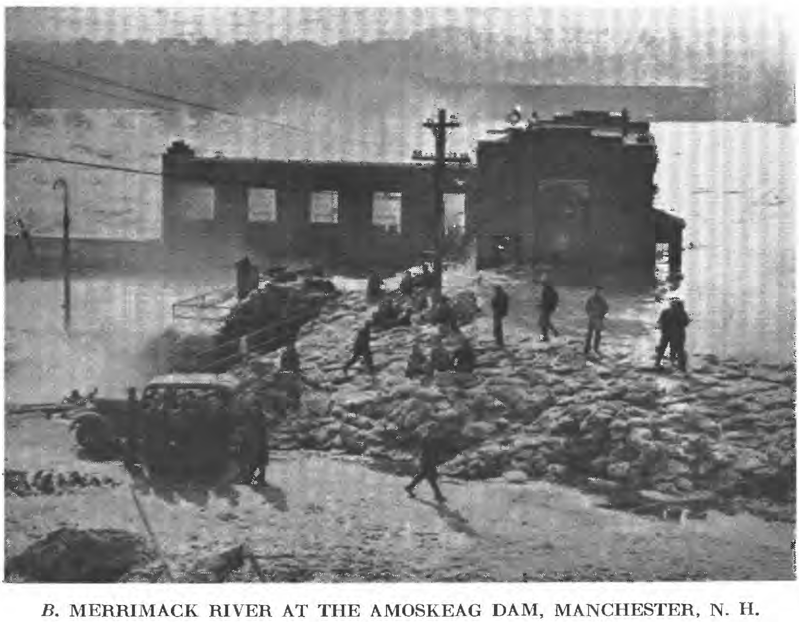
The other two spans were carried away afterward.

B. MILLERS RIVER AT ATHOL, MASS., SHOWING BUILDING DAMAGED BY ICE.

Courtesy of International News Photo, Inc.

A. DAMAGE TO BUILDING CONSTRUCTED OVER BLACKSTONE RIVER AT WORCESTER, MASS.

Courtesy of International News Photo, Inc.



B. MERRIMACK RIVER AT THE AMOSKEAG DAM, MANCHESTER, N. H.

Emergency protection by sandbag levee.

A. SOUTH HIGHWAY BRIDGE OVER ANDROSCOGGIN RIVER BETWEEN LEWISTON AND NEW AUBURN, MAINE.

B. TYPICAL ILLUSTRATION OF DAMAGE TO HIGHWAYS.

Snow shoulders confined drainage to the roadway. Courtesy of the Lewiston (Maine) Sun-Journal.

Many of the rivers carried large quantities of ice during the second flood, and damages to some structures were due to both ice and water.

A great ice jam formed in the Androscoggin River above Lewiston, Maine, in a reach several miles long just above the pond of the Gulf Island power plant. When this jam broke, at about 3 a.m. March 20, a large volume of water was released, causing a rise of 1.75 feet in the pond in a period of less than half an hour, according to power-station records. If the temporary storage of water in the pond is added to the computed outflow of 118,000 cubic feet a second at the dam, it is estimated that the inflow for several minutes must have been at least 250,000 cubic feet a second. Doubtless there were high flows of short duration at various points on other rivers, caused by the breaking of ice jams, but there are no records available to show how great such flows were.

On the Saco River the large basin just above the village of Hiram, Maine, did much to reduce the peak discharge below that place. The flood created a ponded area of about 25 square miles, and about 6,000,000,000 cubic feet of water was thus stored temporarily. Ice jams on the Saco River were not as serious as on the Kennebec and Androscoggin Rivers, although six highway bridges across the lower river were carried away by the accumulation of ice. The damages in Maine due to the floods of March 1936 exceeded those for any other recorded flood. As many as 81 highway bridges were reported to the Maine State Highway Commission as requiring reconstruction on account of loss or damage by the flood.

The floods were especially severe throughout the Merrimack River Basin in New Hampshire and Massachusetts, and exceeded all previous records except at a few places in the northern part of the basin. At Bristol, N. H., the Ayers Island Dam on the Pemigewasset River passed the floods successfully with a 15.0-foot head over the crest. Except for a brief shut-down during the first flood, due to blasting of ice in the forebay, the power-house operation was continuous. The Eastman Falls Dam, on the Pemigewasset River at Franklin, N. H., experienced a severe battering. Although the dam was not destroyed, the apron was entirely removed, and the crest settled 3.1 feet for about two-thirds of its length. The power-house was put out of operation and remained so for some time after the flood. The Sewalls Falls Dam, on the Merrimack River at Concord, N. H., was almost completely submerged. The abutments were protected by valiant efforts, and although the dam was somewhat damaged the power plant escaped with only 1.5 feet of water on the floor. At the Garvins Falls Dam, on the Merrimack River at Bow, N. H., three courses of capstones were carried off the crest for practically its entire length. These blocks of stone, some of them weighing as much as 6 tons, were scattered over a distance of 300 feet below the dam. Two of the old horizontal generators in the power-house were completely submerged, but the new vertical generators remained dry.

The severest wash-out in the Merrimack River Valley occurred at Hooksett, N. H., where water from 18 to 20 feet deep flowed through the main street. Pole lines, barns, houses, stores, schools, and roads were swept away, as were several hundred feet of double-track railroad embankment about 20 feet high. The generator station at the Hooksett power plant was completely demolished, leaving the generator standing on its pedestal. At the crest of the flood there was a fall of only 3.0 feet at the dam. A three-span abandoned wooden railroad bridge which crossed the river just above the Hooksett Dam was washed away, each span going over the dam intact.

The Amoskeag Dam and power-house at Manchester, N. H., came through unscathed, although it is estimated that half a million bags of sand were used in their defense. Owing to the peculiar channel conditions the flood crest at the dam was 3 feet higher on the left bank than at the hydroelectric plant on the right bank. The Amoskeag Mills were severely damaged. In one of these mills a monument marking the peak stages of floods since 1895 indicates that the crest of the 1936 flood was 13.5 feet higher than any flood previously recorded.

The Pawtucket Dam, in Lowell, Mass., was almost completely submerged. At this point the flood of 1936 was 6.4 feet higher than the flood of 1852, which was the greatest previously known at Lowell.

The dam of the Essex Co. at Lawrence, Mass., the last dam on the river, passed the flood without any serious damage to the structure. The cities of Lawrence, Haverhill, and Lowell, Mass., and Nashua and Manchester, N. H., suffered great damage resulting from the inundation of mills and factories.

In the Connecticut River Basin, beginning in the vicinity of Fifteenmile Falls on the main river and extending throughout the remainder of its length, all previously known flood discharges were exceeded except in that part of the river near White River Junction, Vt., where the peak was less than that of November 1927. The relatively low contribution of the White River at the time when the peak discharge of the upper Connecticut River reached White River Junction was the primary reason for this condition. The dam at Fifteenmile Falls passed the flood of 1936 without serious difficulty. The storage afforded by the reservoir above the dam reduced the first flood crest materially. The second flood crest was reduced, however, only by the retarding effect of the reservoir as the flood passed through it, as all available storage capacity had been utilized by the earlier crest.

At Bellows Falls, Vt., with both roller gates on the dam raised as high as possible and all the flashboards off, at the peak of the flood about 29 feet of water was passing over the sills in the roller-gate openings, and 24 feet over the sills at the flashboard openings. The closing of the railroad tunnel at Bellows Falls undoubtedly saved many buildings and streets from serious damage.

The bridge of the Boston & Maine Railroad immediately below the dam at Bellows Falls was loaded with gondola cars but was severely battered by ice, trees, houses, and barns that came down the river. The two arch openings of a railroad bridge near the upper end of the Bellows Falls gorge were practically filled with water moving so fast that a pile-up of water at least 10 feet above the general surface of the river is reported to have occurred upstream from the center pier.

At the Vernon Dam and electric power plant in Hinsdale, N. H., the tailwater rose about 36 feet above normal, and the crest of the dam was submerged nearly 11 feet. The headwater was about 19 feet above the crest, and the electric plant was completely flooded and out of commission.

The dam of the Turners Falls Power & Electric Co., at Turners Falls, Mass., passed the flood with no flow over the abutments. The head on the dam was about 13.7 feet with no submergence.

About 6.5 miles above Holyoke, Mass., an ice jam formed about 5 days before the major flood, and for a period of 2½ days water was diverted from the river channel, overflowed low meadow land, and returned to the normal channel at a point some distance downstream. This ice jam, which apparently formed a complete barrier across the river, broke at about 7 p.m. March 15 and passed over the Holyoke Dam at a stage of 9.5 feet above the crest. The major flood reached a stage of 16.8 feet above the crest at 8 p.m. March 19. After the flood had receded it was discovered that the granite crest of the dam had been carried off to a depth of 5 feet for 1,000 feet of its length.

The ice on the Connecticut River at Hartford, Conn., had an average thickness of 15 inches just before the first flood. At South Windsor, Conn., a great ice jam formed, raising the water 7 feet to a stage equal to that reached by the flood of November 1927. Considerable property was inundated by backwater from the huge jam, but on the whole the damage from this earlier flood in the lower Connecticut River Valley was not great.

Troubles from ice were more serious in the Housatonic River Valley than elsewhere in southern New England. Tributaries of the Housatonic River below Falls Village, Conn., discharged great quantities of water into the main valley, each of the principal tributaries reaching a peak on March 12. Heavy ice brought down by the tributary streams united with the ice on the main river to make huge jams, which formed and broke intermittently. Evidence of the effect of the great ice flows was visible in all the valley below Falls Village.

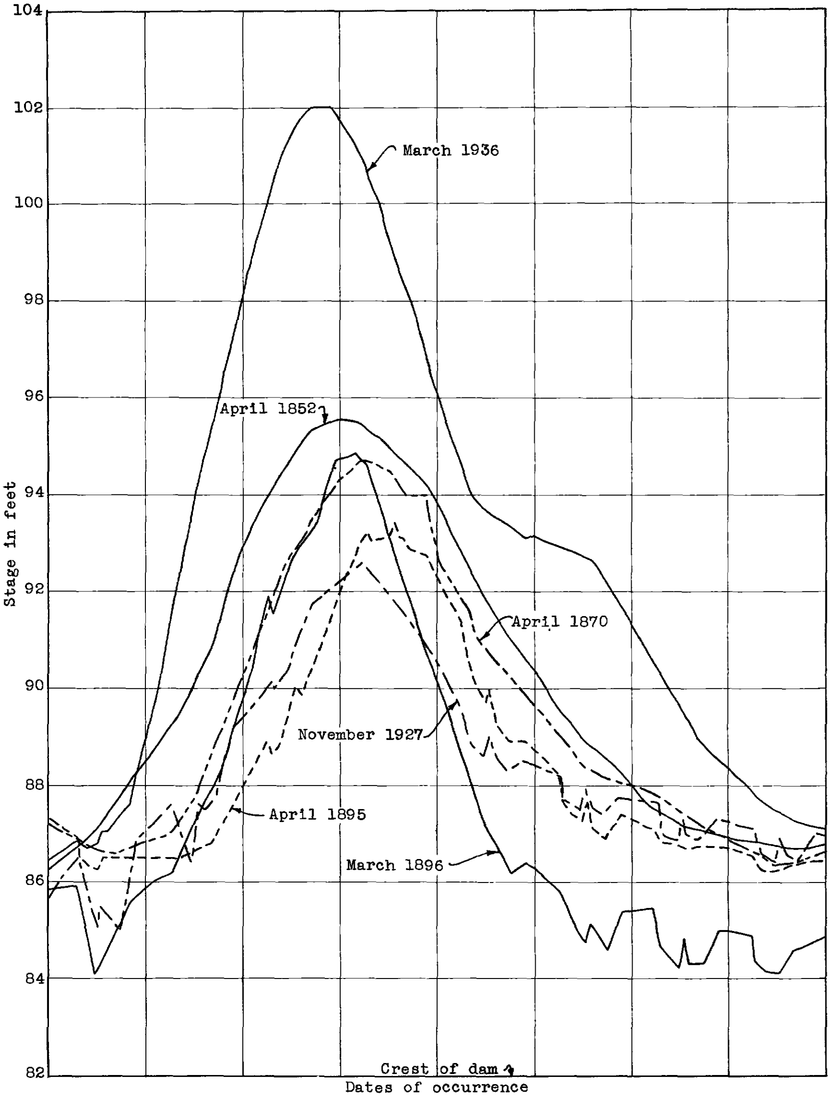
The discharges of the first flood were in general exceeded by those of the second or "great" flood, which occurred less than a week later. The only recorded stages of the first flood that were higher than those of the second flood were reached on some rivers in Connecticut and on the Kennebec River within the backwater caused by the ice jams in the vicinity of Augusta, Hallowell, and Gardiner, Maine.

Figure 7 shows a comparison of stages reached by the flood of March 1936 and previous known large floods on the Merrimack River at the Pawtucket Dam, Lowell, Mass. The hydrographs suggest how widely the flood of March 1936 in the Merrimack River varied from the usual flood. This example is typical of the extreme flood conditions in the rivers of New England southwestward from central Maine.

Plates 1 to 5 and 8 to 14 illustrate conditions experienced on New England rivers during the floods of March 1936.

Pronounced characteristics of the March floods were the extraordinary concentration of waters in the large rivers, and the record-breaking rates of discharge in second-feet per square mile for large areas, which approached those for small drainage basins where excessive rates of discharge have been recorded in local floods caused by storms of the cloudburst type.

Basic information regarding this unprecedented flood is recorded in this report for future reference and study. The adopted method of presentation has been to assemble pertinent facts and statistics in



1852	Apr. 20	21	22	23	24	25	26	27
1870	Apr. 18	19	20	21	22	23	24	25
1895	Apr. 13	14	15	16	17	18	19	20
1896	Feb. 29	Mar. 1	2	3	4	5	6	7
1927	Nov. 3	4	5	6	7	8	9	10
1936	Mar. 18	19	20	21	22	23	24	25

Figure 7.-Hydrographs of the Merrimack River at Lowell, Mass., showing stages reached by the flood of March 1936 and selected previous floods.

sections under subject headings such as "Meteorologic and hydrologic conditions" and "Stages and discharges at river-measurement stations during the flood period", as indicated in the contents. Under these headings the data are generally arranged by drainage basins, it being assumed that they will be most commonly used in relation to drainage-basin subdivisions and river systems. There would be some advantage in presenting the different kinds of data together as a unit for each major drainage basin, but considerations of economy and efficiency in the complete presentation of the detailed information and the desirability of avoiding unessential duplication of discussion of given subjects led to the selection of the adopted form.

Succeeding discussions of precipitation and flood discharge are related to subdivisions of the New England area (see fig. 6) to show groups of major river basins as follows:

St. John River and intervening rivers to Penobscot River. (See fig. 8.)

Kennebec River and intervening rivers to Piscataqua River. (See fig. 9.)

Merrimack River and intervening rivers to Thames River. (See fig. 10.)

Connecticut and Housatonic Rivers and tributaries of the St. Lawrence River in New England. (See fig. 11.)

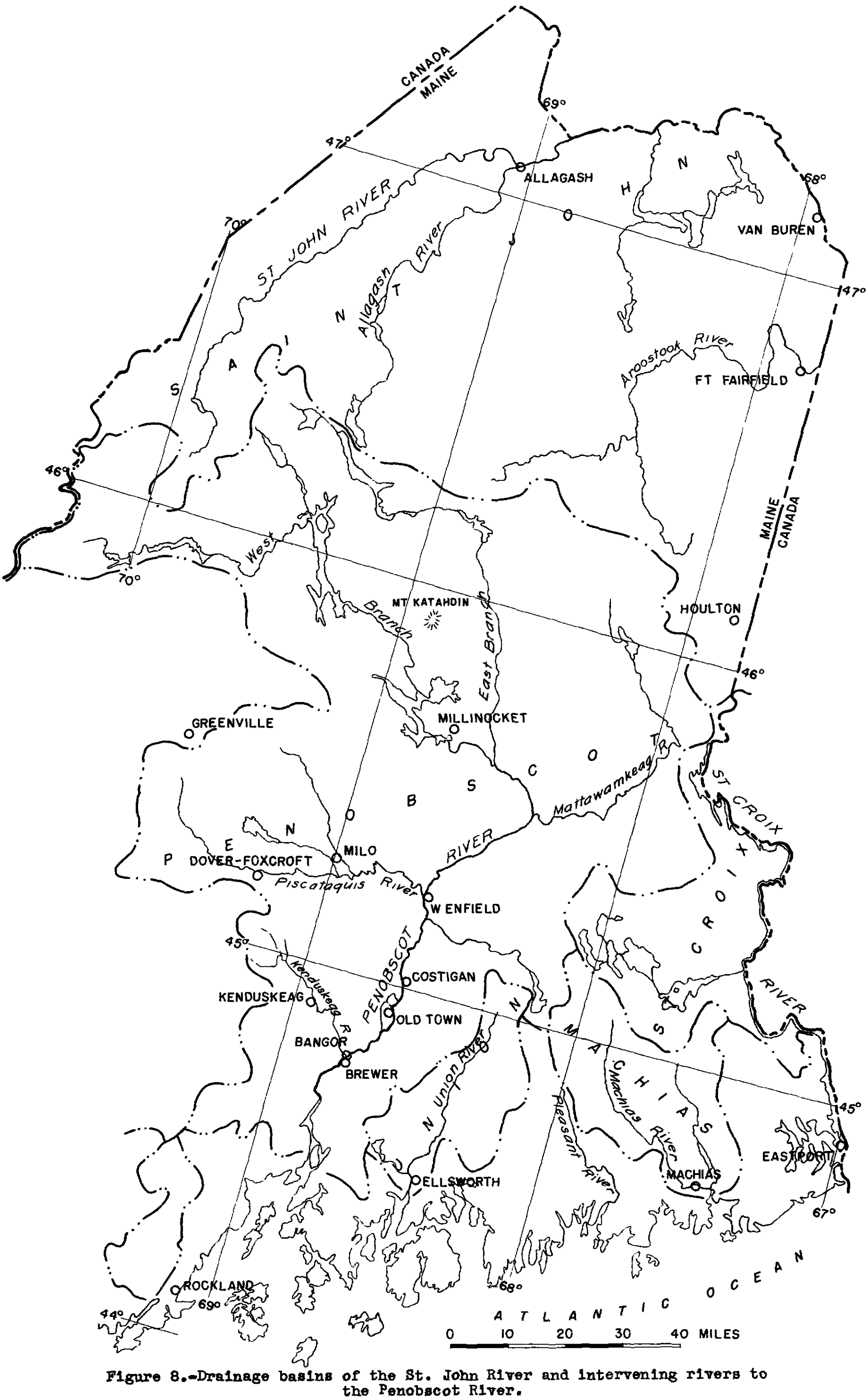


Figure 8.-Drainage basins of the St. John River and intervening rivers to the Penobscot River.

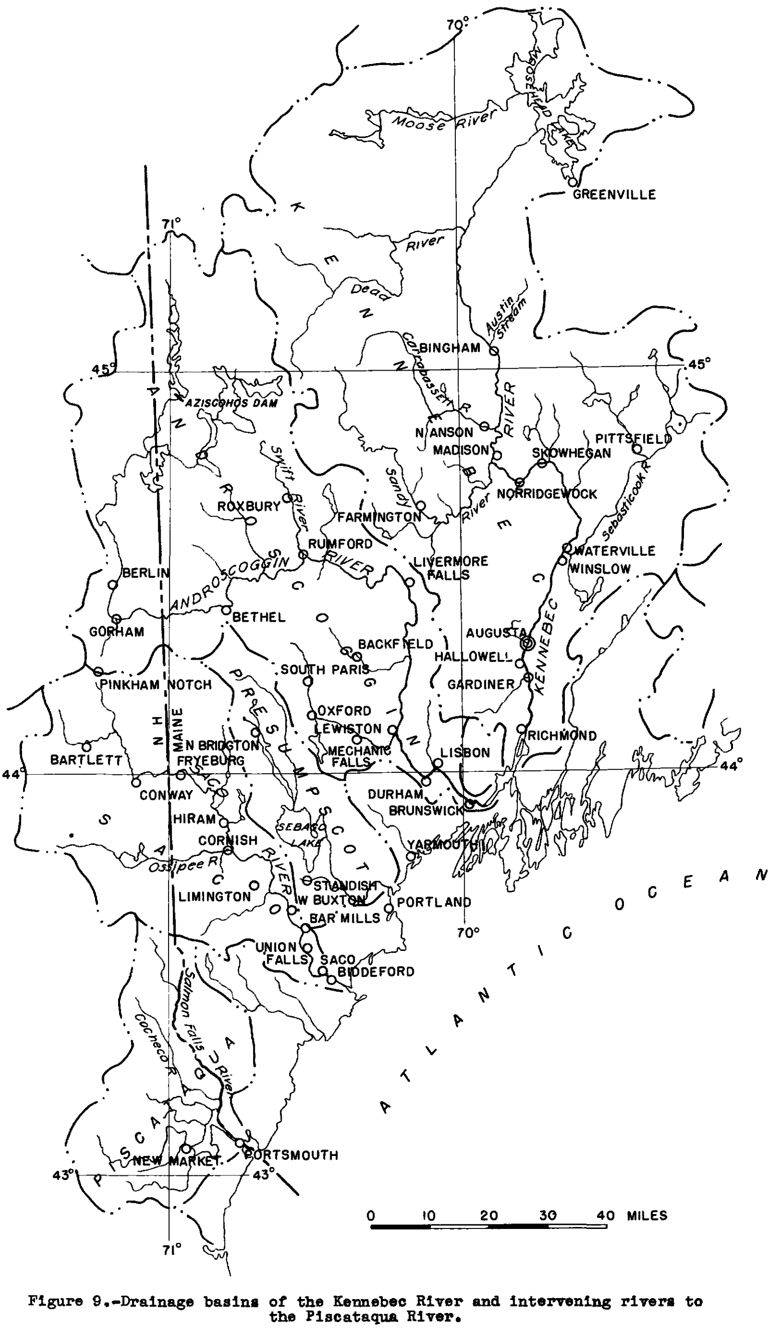


Figure 9.-Drainage basins of the Kennebec River and intervening rivers to the Piscataqua River.

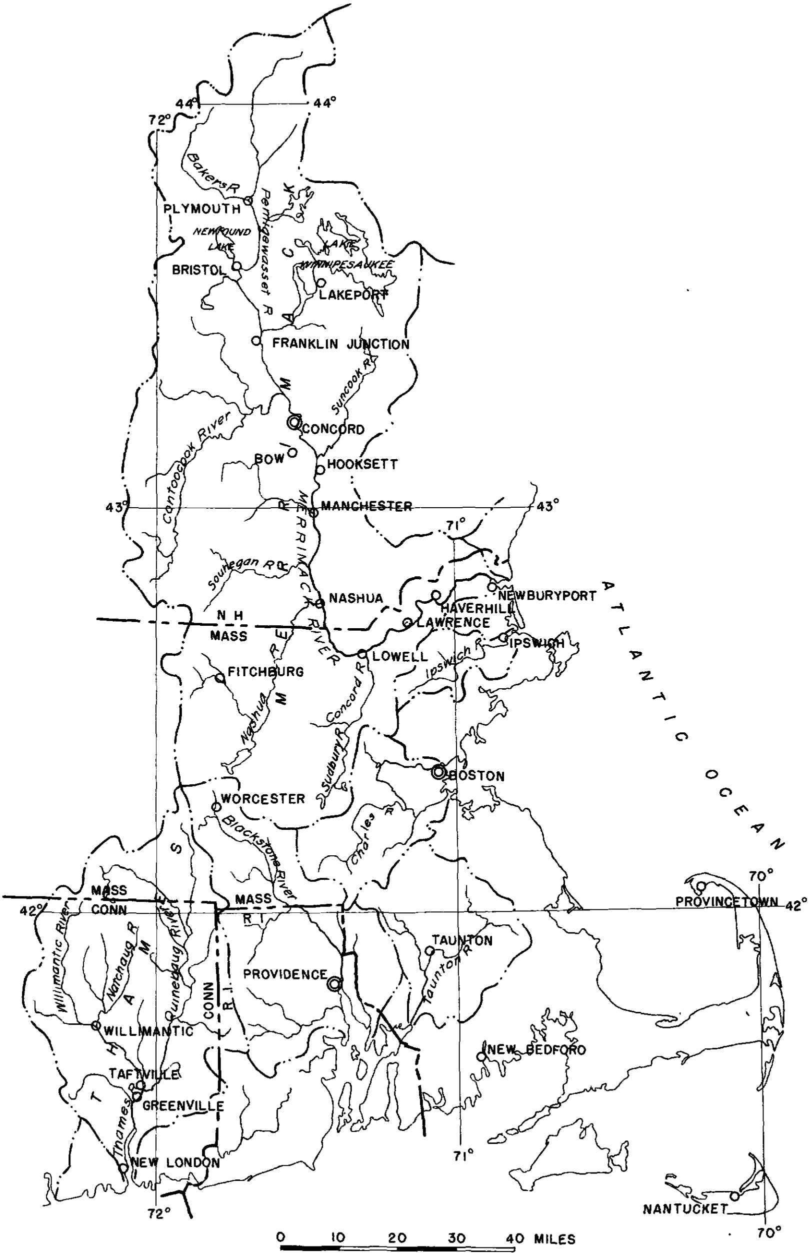


Figure 10.-Drainage basins of the Merrimack River and intervening rivers to the Thames River.

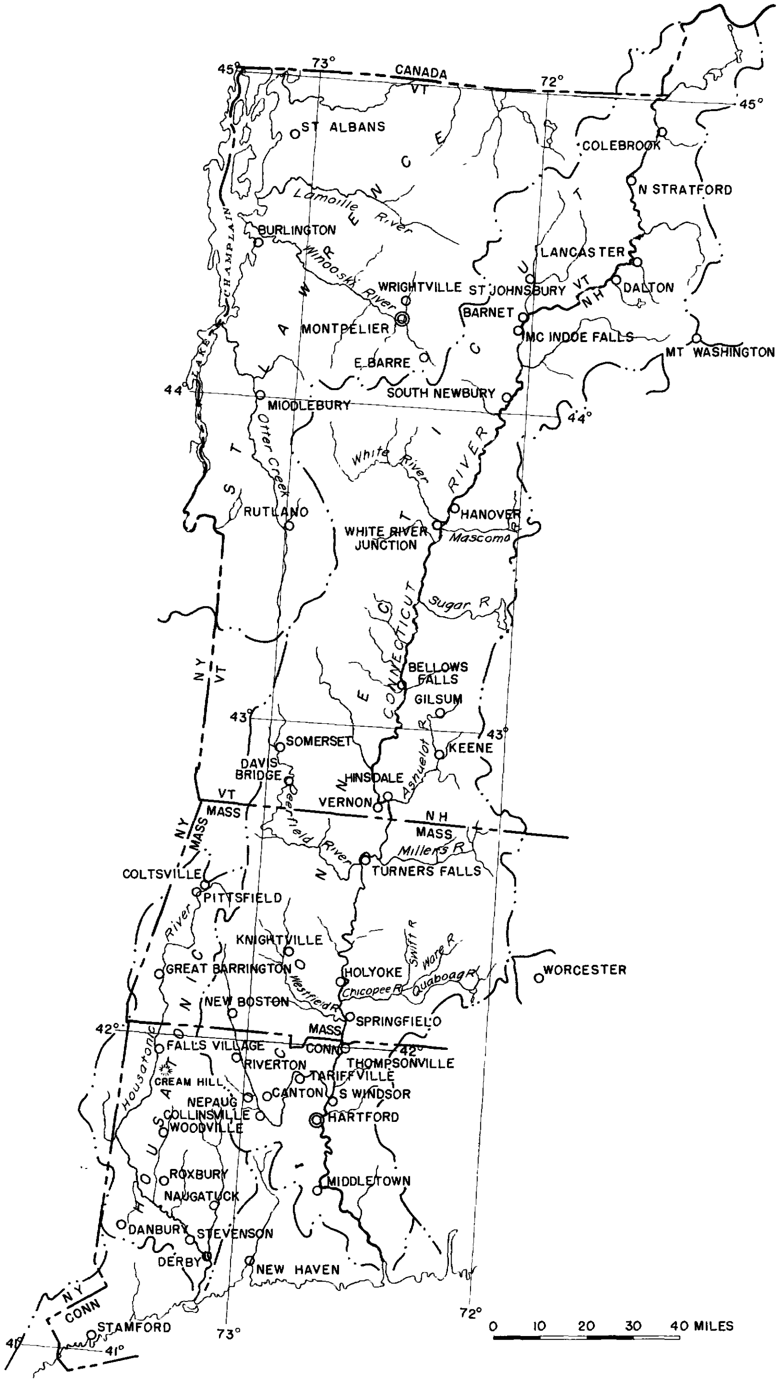


Figure 11.-Drainage basins of the Connecticut and the Housatonic Rivers and tributaries of the St. Lawrence River in New England.

METEOROLOGIC AND HYDROLOGIC CONDITIONS

In view of the exceptional magnitude of the flood flows in many areas a special effort has been made to collect, compile, and present in this report all available basic information relating to rainfall and to snowfall and water content thereof, together with records of temperature and frost conditions that may have had a bearing on the characteristics of the floods of March 1936. To a moderate extent the information has been analyzed, and the effects of meteorologic conditions on flood flows are discussed in this report.

If each of the meteorologic phenomena over the area as a whole is considered individually, no departures from the normal that are sufficient to have caused so unusual a flood are disclosed. There have been colder winters with more snow, individual storms with precipitation exceeding that of either of the March storms, and higher temperatures in the early spring. However, consideration of the magnitude and favorable timing of the events as a whole discloses extremely unusual conditions. It is also evident that with only slightly different timing or combination of events and conditions the flood run-off in many areas might have been much greater. The meteorologic and related data are here presented in detail, with a view to their usefulness to engineers and others who are studying the basic causes of floods and remedial measures for protection therefrom.

Precipitation records

General

All available records of precipitation for the period March 9 to 22 inclusive, which embraced the storms primarily causing the floods, are published in three volumes of this flood report, each volume containing the records directly relating to the group of drainage basins treated therein. In addition there has been included a brief summary of precipitation for the months December, January, and February preceding the flood. The records compiled in table 1 relate to the basins of the New England rivers.

In general the records are grouped by major drainage basins and subdivided by States. Records in adjoining minor basins are listed under the general heading "Minor basins".

Records of precipitation have been obtained chiefly from the United States Weather Bureau. Records were also obtained from numerous other sources, as indicated in the tables, and these additional records have

Table 1.-Daily precipitation, in inches, March 1936
(Measured in the afternoon except as noted)

Station	9	10	11	12	13	14	15	16	17	18	19	20	21	22
St. John River Basin														
Maine:														
Fort Fairfield	-	-	-	0.29	0.53	-	-	0.86	0.22	-	0.30	0.05	0.15	0.21
Fort Kent	-	-	-	.60	-	-	-	-	-	-	.40	-	-	-
Houlton	0.04	-	-	.91	.65	0.07	-	.37	.38	-	.40	.09	.15	.18
Presque Isle	Tr.	Tr.	-	.54	.82	-	-	.64	.29	-	.28	.08	.07	.43
Squa Pan Dam	-	-	-	.93	.56	.10	-	.71	.07	-	.17	-	.29	.18
Penobscot River Basin														
Maine:														
Bangor	.09	0.35	-	1.45	1.36	-	-	-	.23	-	.54	.45	.20	.23
Danforth	1.57	1.99	0.70	.40	-	-	0.57	.17	-	-	-	-	-	.40
Lincoln **	-	.52	-	.22	2.34	.12	-	-	.32	0.02	-	-	.78	.78
Millinocket	.06	-	.69	2.94	.05	-	.19	.73	.11	.32	.83	.03	.49	.12
Milo	.15	.20	-	2.22	1.09	-	-	.43	.23	.07	1.00			.45
Oldtown	.05	.29	-	1.62	1.12	.12	-	Tr.	.22	.03	.87	.61	.32	.19
Orono	.28	-	-	2.90	.02	-	-	.18	.01	-	-	-	.21	-
Ripogenus Dam	-	-	-	.42	1.85	.09	-	.09	1.18	.25	.68	.96	-	.75
Kennebec River Basin														
Maine:														
Bingham *** (a)	.31	-	.15	4.04	.55	.05	-	.95	.19	.44	1.55	.06	.70	.05
Brassua Dam **	Tr.	-	-	.19	1.30	.11	-	Tr.	1.33	.21	.33	.56	.02	.65
East Winthrop **	.41	.42	-	3.00	.34	.08	-	-	.17	.16	1.68	.05	.70	.35
Eustis	.11	-	Tr.	1.61	.23	.11	-	.61	.80	.48	.65	.10	1.20	.60
Farmington	.31	.15	Tr.	3.53	.68	-	-	.71	.24	.36	2.27	.06	.80	.55
Gardiner	.42	.32	.02	2.82	.76	-	-	-	.12	.05	1.40	.09	.61	.45
Greenville	.09	-	-	4.04	.83	.04	-	.69	.30	.33	1.95	.37	.48	.32
Jackman	.02	-	-	.68	.07	.08	-	.68	.20	.04	.06	-	.56	.19
Madison	.49	-	.88	2.59	.19	-	-	.85	.26	.86	.49	.02	.87	-
Moosehead **	Tr.	-	-	.53	1.97	.04	-	Tr.	1.48	.62	.78	.45	-	.49
Skowhegan *** (a)	.30	.10	.10	2.85	.29	-	-	.49	.04	.15	1.60	-	1.92	-
The Forks	.07	-	-	.95	1.45	.45	.07	.02	1.00	.50	.70	.28	.04	.51
Winslow	.24	-	.82	1.81	-	-	-	.18	.04	.97	.09	.05	.68	-
Androscoggin River Basin														
New Hampshire:														
Berlin **	.19	.21	.02	1.68	1.01	.02	Tr.	.09	.89	.52	2.20	.42	.16	2.12
Errol **	.22	.08	-	1.24	.37	.08	-	.66	.70	.81	-	-	.87	.53
Gorham (b)	.17	.25	-	1.92	1.91	.04	-	.14	.75	.78	2.70	-	.15	1.86
Milan **	.39	-	.04	1.03	.39	-	-	.58	.82	.74	.63	-	.87	1.18
Randolph	.44	.25	.49	4.03	.71	.01	-	.72	.68	3.28	2.32	.06	1.97	1.23
Maine:														
Aziscohos Dam (b)	.21	.50	-	1.06	.35	.14	-	.82	.60	.56	1.20	-	1.05	.68
Lewiston	.57	.17	.13	3.07	.37	-	-	.02	.10	.65	1.60	-	1.52	.31
Livermore (b)	.68	-	1.92	2.60	-	-	-	-	-	1.95	-	-	.94	-
Middledam	.12	-	-	1.96	.52	.08	-	.56	.62	2.30	1.60	-	.98	1.00
Oquossoc (b)	.22	.07	-	1.30	.14	.03	.48	.72	.23	1.24	.80	.22	-	.85
Rumford	.28	-	.38	5.07	.39	Tr.	-	.81	.26	1.60	1.29	.45	1.36	.09
Upper Dam	.19	-	-	2.10	-	-	-	1.27	-	1.18	1.19	-	1.24	.12
Saco River Basin														
New Hampshire:														
Bartlett	.44	.25	.45	6.13	.94	.05	.08	.68	.18	2.58	4.68	.20	1.92	.69
Mount Washington	.96	.17	.62	2.67	.72	.13	-	.57	.87	2.10	2.54	Tr.	1.01	1.50
Pinkham Notch **	.86	.07	.69	6.46	.63	.08	Tr.	.86	.44	6.27	4.05	.05	1.33	.64
Maine:														
Hiram	.58	.22	.09	3.08	.36	Tr.	-	Tr.	.11	.57				

**Measured in the morning.
***Measured at midnight.
(a) Data furnished by Central Maine Power Co.
(b) Data furnished by Union Water Power Co.

Table 1 .-Daily precipitation, in inches, March 1936--Continued
(Measured in the afternoon except as noted)

Station	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Merrimack River Basin														
New Hampshire:														
Concord	0.37	Tr.	1.39	1.82	0.06	0.01	0.01	0.02	0.03	2.04	.61	-	1.08	0.60
Franklin	.41	0.17	.19	2.70	.29	-	-	.17	.07	.97	1.41	-	.84	-
Lakeport	.29	.53	-	1.71	1.01	.01	-	.13	.10	.13	1.98	0.19	.08	1.60
Lincoln **	.50	.49	-	2.21	2.49	.01	-	.20	.91	.19	1.23	.40	.05	1.44
Manchester **	.33	Tr.	.67	2.07	Tr.	.02	Tr.	.04	-	1.91	.35	-	1.27	.45
Nashua **	.38	-	2.07	.75	.02	.04	-	-	.04	1.72	.08	.33	1.03	-
New Durham **	.40	.44	2.30	1.10	Tr.	-	-	-	1.47	2.00	Tr.	-	3.30	-
Peterboro	.50	-	-	2.50	.10	-	-	-	-	3.50	.06	-	1.50	-
Plymouth	.75	Tr.	.46	3.46	.33	-	Tr.	.49	.31	2.12	1.82	-	1.13	.31
Wolfeboro Falls	.64	.10	.15	1.98	.30	-	-	.04	.05	1.13	1.23	.01	1.25	.60
Massachusetts:														
Ashby **	.58	-	-	2.93	-	-	-	.11	-	-	5.72	-	1.78	.08
Ashland **	-	.03	Tr.	2.14	.77	.01	-	Tr.	-	.02	3.05	.02	.22	.80
Boylston **	-	.10	-	*	2.98	-	.06	Tr.	-	*	3.71	*	*	1.12
Clinton **	*	.10	.02	*	2.99	-	.04	-	*	*	3.46	Tr.	1.20	-
Concord	.10	.03	.18	1.94	.14	-	.01	Tr.	2.20	.53	-	.51	.10	-
East Pepperell **	.28	-	2.30	.77	-	-	-	-	.05	-	1.41	-	*	*#
Fayville **	-	.05	-	3.31	Tr.	.02	-	.02	-	-	3.21	1.15	Tr.	-
Fitchburg	.24	-	3.05	.40	-	.01	-	-	.49	3.69	-	.84	.98	-
Framingham	.03	-	-	2.91	.02	.02	-	Tr.	-	.06	3.08	-	1.03	.16
Groton ** (c)	.16	-	1.97	.54	-	.02	-	-	.29	2.59	.09	.33	.70	-
Haverhill	.15	.14	.05	1.55	.07	-	.03	Tr.	-	.44	1.12	-	.99	.14
Jefferson **	.03	.14	*	3.18	-	-	.04	-	*	*	5.18	-	.88	.18
Kenoza Lake **	.34	Tr.	1.35	.67	-	.03	-	Tr.	Tr.	1.80	.10	.30	.85	Tr.
Lake Cochituate **	-	.03	-	2.78	Tr.	.02	-	-	.01	.04	2.99	.03	.19	.70
Lawrence	.23	Tr.	*	1.44	Tr.	-	.05	Tr.	-	*	1.82	-	1.08	.14
Lawrence (Exper. sta.) **	.12	-	1.05	.45	-	.06	-	-	.02	1.65	-	-	.92	-
Littleton **	.10	Tr.	2.15	.62	Tr.	.04	-	-	.26	2.57	.13	.23	.58	-
Lowell	*	.22	*	2.22	-	.04	-	-	.04	*	1.62	-	*	.80
Newburyport ** (c)	.11	Tr.	.76	1.06	-	-	-	-	-	1.47	Tr.	.40	.91	-
North Andover **	.19	.01	1.65	.46	-	.02	-	-	.01	1.68	.25	.14	.59	-
Princeton **	-	-	*	3.00	-	-	-	-	*	*	4.60	-	1.05	-
Sterling **	Tr.	.16	*	*	3.09	.01	.03	Tr.	.01	*	3.99	-	.90	.18
Connecticut River Basin														
New Hampshire:														
Bethlehem	.22	.17	Tr.	1.74	.19	Tr.	-	.71	.97	.41	.23	-	.87	.99
Dixville Notch	Tr.	-	.30	1.20	.10	.03	.15	1.44	.22	1.31	.30	Tr.	1.76	.28
First Connecticut Lake	-	-	.25	.79	.03	Tr.	.01	1.35	.04	.54	.20	.01	1.37	.62
Fitzwilliam ** (c)	.16	.03	1.40	.61	.03	.02	-	.11	.54	2.44	.10	.23	1.03	-
Glencliff	.52	-	1.60	1.05	.03	-	.16	1.10	.45	2.00	.25	.05	1.62	.16
Hanover	.40	.02	.06	1.31	.10	.02	.01	.39	.41	.77	.25	Tr.	.69	.12
Keene	.24	.10	1.07	.37	.12	.02	.02	.03	.22	2.12	.27	.02	.76	.61
Lancaster	.40	.06	-	.48	.14	-	-	.73	.73	.10	.28	Tr.	.84	1.16
Newport **	Tr.	.33	Tr.	1.35	.20	Tr.	Tr.	.29	.43	.25	1.75	.08	.31	.87
West Lebanon **	.32	-	.18	1.24	.07	.02	-	.53	.11	.81	.13	-	.61	.14
York Pond **	.24	-	.75	.77	.01	-	.07	1.31	.24	1.87	.21	.03	1.78	.24
Vermont:														
Bellows Falls **	.08	.11	-	1.64	.55	.01	.01	.04	.48	.35	1.61	.13	.14	1.06
Bloomfield	.16	-	-	1.14	.27	.02	-	.82	.61	.10	.04	.23	.53	1.36
Brattleboro **	.15	.13	.07	2.15	.69	.05	.02	-	.18	.57	2.41	.25	.13	1.22
Cavendish	.26	.05	.26	2.66	.30	.08	-	.19	.51	1.52	1.03	-	.86	.17
Chelsea	.12	.10	.13	1.05	.17	.04	-	.96	.61	.79	.52	-	.90	.28
East Barnet	.16	.11	-	.65	1.20	.03	Tr.	.03	1.44	Tr.	.21	.25	.02	1.13
East Ryegate	.25	.12	-	.47	.96	.01	Tr.	.06	1.37	.03	.10	.20	.10	.78
Gilman **	.31	-	.47	.98	-	-	.08	1.41	-	.25	.05	-	.95	.30
Mays Mill **	.25	.20	.02	2.30	.52	.10	.02	-	.12	1.05	2.62	.20	.42	.70
Newfane **	.30	.05	.50	2.57	.20	-	-	.05	.70	3.45	.20	.25	.75	.28
Readsboro **	.25	.26	.03	1.84	.67	.10	.02	Tr.	.26	1.13	1.94	.17	.47	.49
Rochester	.17	.20	-	.60	.82	.02	-	.07	1.70	.15	.52	.10	.21	Tr.
St. Johnsbury	.23	.08	Tr.	1.90	.38	.01	-	.80	.63	.09	.08	.31	.44	.46
Searsburg Mountain **	.31	.28	.01	1.91	.61	.12	-	.08	.34	1.46	1.99	.31	.51	.64
Searsburg Station **	.32	.28	.01	2.16	.76	.21	.04	.02	.36	1.33	1.85	.29	.51	.45

* Included in next measurement.
** Measured in the morning.
\# Total for period Mar. 21-24, 1.01 inches.
(c) Data furnished by Massachusetts State Department of Public Health.

Table 1.--Daily precipitation, in inches, March 1936--Continued
(Measured in the afternoon except as noted)

Station	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Connecticut River Basin-Continued														
Vermont-Continued														
Somerset **	0.59	0.21	0.01	1.78	0.64	0.24	-	0.16	0.30	1.52	1.83	0.35	0.23	0.81
Vernon **	.15	.11	.02	1.75	.58	.04	0.01	.01	.15	.49	2.22	.13	.19	1.04
West Burke **	.06	-	-	.43	1.82	.06	-	-	1.40	.06	-	.32	-	.55
West Hartford **	.22	.07	.09	1.75	.24	-	-	.44	.74	.53	.48	-	.80	.17
White River Junction **	.15	.23	Tr.	.82	.76	.01	Tr.	.08	.58	.04	.88	.07	.11	.66
Whitingham **	.32	.28	.03	2.05	.69	.12	-	.04	.27	1.26	2.09	.21	.48	.52
Wilder **	.09	.21	-	.87	.47	Tr.	Tr.	.11	.59	.06	.90	.10	.05	.66
Wilmington **	.58	.23	.01	1.98	.70	.17	.02	.02	.36	1.05	2.41	.28	.35	.73
Woodstock	.22	.08	.20	2.03	.30	.05	Tr.	.46	.68	1.20	.79	Tr.	.96	.07
Massachusetts:														
Amherst	.23	.03	.61	1.33	.01	-	-	Tr.	.07	2.13	.05	-	.69	.09
Athol ** (c)	-	1.54	.38	.04	-	-	.10	.97	2.55	.11	.68	.27	-	-
Baldwinville **	.52	-	1.69	-	.03	-	-	.04	.50	2.75	.13	-	.93	-
Barre	.34	-	1.69	.38	Tr.	-	-	Tr.	.93	3.52	.06	.38	.55	-
Blandford **	.09	.19	2.58	.31	.02	-	-	.01	2.36	2.10	.11	.51	.43	-
Bondsville **	.15	-	1.35	.18	-	-	-	-	-	-	2.75	-	.73	-
Chester ** (c)	.21	.06	2.66	.32	.02	.01	-	.02	2.48	1.91	.12	.55	.35	-
Chesterfield (c)	.04	.07	2.38	.25	-	.03	-	-	1.70	2.57	.08	-	.24	-
Chicopee Falls **	.09	-	.08	.18	Tr.	-	-	Tr.	.35	2.60	.01	.81	.08	-
Colrain **	.09	Tr.	2.40	.50	Tr.	Tr.	.13	-	.85	2.80	.25	.48	.47	-
Cummington **	.10	.03	2.22	.41	.02	.02	-	.02	1.50	2.47	.15	.60	.36	.01
Dana ** (c)	.40	-	1.56	Tr.	-	-	-	-	1.34	2.88	.01	.78	.12	Tr.
East Northfield **	.08	-	1.66	1.01	-	.05	.01	.08	.96	2.41	.04	.31	.81	-
Enfield **	.30	.02	1.44	.23	.01	-	-	.03	.46	2.82	-	.35	.40	-
Gardner ** (c)	.40	-	1.73	.27	-	-	-	-	*	4.54	.06	-	1.04	-
Granville Dam **	.09	.03	2.70	.26	.03	-	-	-	1.63	1.92	.11	.63	.36	-
Greenfield **	.12	-	2.11	.56	-	.14	-	.08	.32	2.17	.11	.28	.56	-
Greenwich ** (c)	.33	-	1.52	.23	.02	-	-	.02	.64	2.77	.03	.43	.29	-
Hardwick ** (c)	-	.31	-	1.83	-	Tr.	.01	-	Tr.	1.66	3.40	-	-	.12
Heath ** (c)	Tr.	Tr.	1.48	.36	.05	-	Tr.	.08	1.05	2.12	.28	.59	.54	.02
Holyoke **	Tr.	.11	Tr.	1.78	.24	Tr.	Tr.	-	.01	.42	1.98	Tr.	.50	.26
Hoosac Tunnel **	.25	.24	.05	2.16	.47	.08	Tr.	.03	.25	1.19	2.31	.16	.55	.44
Hubbardston ** (c)	.36	Tr.	1.43	.20	.01	Tr.	-	-	.61	3.68	.05	.21	.46	-
Huntington **	.10	.08	2.37	.34	-	-	-	.08	2.25	2.20	.09	.66	.35	-
Ludlow **	.13	-	1.00	.06	.10	-	-	-	.90	1.75	-	.55	.15	.15
Middlefield **	.15	.17	2.31	.35	.15	-	-	.10	2.35	1.80	.03	.62	Tr.	.18
New Braintree **	.14	-	2.02	.20	-	-	-	-	1.00	3.81	.27	-	.41	-
New Salem ** (c)	.52	-	1.86	.35	-	-	-	-	.28	3.72	-	.45	-	-
North Dana ** (c)	.43	-	1.54	.32	.04	-	-	.11	1.90	2.10	-	-	1.01	-
North Rutland **	.10	-	-	2.50	.06	Tr.	-	-	-	4.50	.10	-	-	-
Otis (c)	.07	-	2.50	.30	.03	-	-	-	2.48	1.06	.11	.54	.04	-
Pelham **	.23	-	.85	.09	.02	-	-	.07	.68	2.44	.05	.57	.25	-
Peru ** (c)	.08	.18	2.02	.46	.04	-	-	.16	2.32	1.76	.10	.72	.29	-
Petersham **	Tr.	.39	*	*	1.85	-	Tr.	*	.08	*	4.00	*	.81	.14
Phillipston **	.42	.02	1.57	.26	-	.01	-	.09	.76	2.76	.05	.48	.49	-
Plainfield ** (c)	-	.30	2.25	.38	.03	.03	-	.10	2.03	1.85	.60	-	.38	-
Prescott ** (c)	.28	-	1.57	.18	-	-	-	.02	.65	2.73	.01	.81	.04	-
Rutland **	.15	-	2.59	.22	-	.02	-	-	.90	4.39	.05	.54	.37	-
Shelburne Falls **	.13	.10	.01	2.42	.47	.03	Tr.	-	.08	.96	2.76	.22	.64	.62
Shelburne Falls No. 2 ** (c)	-	*	.77	1.95	.41	-	-	-	1.33	2.22	.20	-	.63	.51
Shutesbury ** (c)	.30	-	2.30	.29	.03	-	-	.06	1.20	2.64	.05	.52	.45	-
South Deerfield **	.53	.04	2.15	.93	-	-	-	.12	1.30	1.40	.14	-	.90	.01
Springfield	.08	Tr.	.04	1.23	1.37	Tr.	Tr.	Tr.	.03	2.01	1.06	-	.85	-
Turners Falls	.14	.03	1.26	1.12	-	.03	-	.11	.11	2.09	Tr.	.21	.68	-
Ware ** (c)	1.05	-	.35	.05	-	-	-	.10	.65	.70	1.80	.40	.20	-
Ware River Intake ** (d)	.37	.31	1.28	.22	Tr.	-	-	Tr.	.98	3.62	.06	.22	.60	Tr.
Warren **	.07	-	2.02	.33	-	-	-	-	.93	3.62	-	.50	.45	-
Warwick **	.13	.02	1.22	.72	Tr.	.04	Tr.	.07	.42	2.92	.16	.21	.77	Tr.
Wendell **	-	.45	.05	1.45	.20	-	-	.10	.40	3.30	.10	.40	.70	-
West Brookfield **	.10	-	2.04	.32	-	-	.03	-	1.13	4.17	-	.14	.88	-
Westfield No. 1	.06	-	.35	2.03	.11	Tr.	-	Tr.	Tr.	2.01	1.01	-	.93	-
Westfield No. 2 **	.06	.03	3.02	.16	.04	-	-	.04	1.00	2.02	.06	.52	.42	-
West Rutland **	.37	.33	1.36	.20	Tr.	-	-	*	*	5.80	-	1.92	.13	Tr.
West Ware ** (c)	.27	-	*	1.58	Tr.	-	-	-	.68	*	2.50	*	.58	-
Williamsburg **	.20	-	2.71	.30	-	.01	-	.01	1.40	1.77	.09	.90	.28	-

* Included in next measurement.
** Measured in the morning.
(c) Data furnished by Massachusetts State Department of Public Health.
(d) Data furnished by Metropolitan District Water Supply Commission.

Table 1.--Daily precipitation, in inches, March 1936--Continued
(Measured in the afternoon except as noted)

Station	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Connecticut River Basin-Continued														
Massachusetts- Continued														
Williamsville **	-	-	1.15	0.24	-	-	-	-	0.35	2.30	0.18	0.33	0.58	-
Winchendon ** (c)	-	0.40	1.55	.30	0.05	0.02	-	0.04	.36	2.59	.08	.21	.91	-
Worthington **	0.16	.12	2.28	.41	-	Tr.	0.02	.06	1.57	2.40	.04	.62	.36	Tr.
Connecticut:														
Barkhamsted **	-	-	*	*	2.46	.02	-	-	*	*	3.40	-	*	0.70
Bristol ** (e)	-	.04	.14	3.55	.18	-	-	-	-	1.41	1.29	.03	.56	.10
Burlington **	-	.01	.10	3.14	.24	-	.03	-	-	1.17	1.74	.06	.71	.23
Burlington (Phelps Brook)** (f)	-	.01	.10	3.45	.18	.01	-	-	-	1.55	1.23	.03	.75	.11
Burlington (Whigville Res.)**(f)	-	.04	.13	2.76	.18	-	.01	-	-	1.03	1.20	.03	.69	.09
Colchester	.08	-	.54	2.31	Tr.	Tr.	-	-	.03	2.10	.34	-	.94	Tr.
Collinsville **	-	-	-	2.91	.22	-	-	-	-	.84	1.59	-	.54	.42
East Hartland **	Tr.	*	*	3.06	.24	Tr.	-	-	-	2.01	.14	-	.59	.26
Enfield ** (g)	.05	-	1.16	.11	-	.10	.01	-	.74	1.46	-	.75	.15	-
Glastonbury (h)	-	-	2.23	-	-	-	-	-	.03	2.90	-	-	-	-
Hartford ***	.02	.02	.67	.70	Tr.	Tr.	-	Tr.	.02	2.06	.14	.03	.66	-
Manchester (h)	-	-	2.20	-	-	-	-	-	-	2.70	-	-	-	-
Middletown	-	-	.25	2.15	.10	-	-	-	-	1.30	.84	-	.70	-
New Hartford (Bakersville)**(f)	.01	.02	.10	3.17	.23	.02	-	-	-	1.85	1.11	.02	.58	.15
Southington ** (i)	-	-	.10	1.95	.15	-	-	-	-	.57	1.58	.04	.47	.19
West Hartford ** (f)	-	.03	.07	1.85	.14	-	-	-	-	.80	1.60	.02	.55	.15
West Hartland **	-	-	*	*	*	3.10	-	-	-	*	*	3.00	*	.88
Housatonic River Basin														
Massachusetts:														
Egremont ** (c)	.03	.02	1.40	.22	-	-	-	-	1.08	.52	.02	.30	-	-
Pittsfield **	.03	-	1.34	.50	Tr.	Tr.	-	.16	1.04	.86	.05	.30	.16	-
Stockbridge	.05	Tr.	.12	1.48	.30	Tr.	-	Tr.	.16	2.08	.13	-	.38	.13
Connecticut:														
Ansonia ** (j)	-	.03	.07	2.17	.16	.01	-	-	-	1.11	1.35	Tr.	.35	-
Cream Hill	.05	-	.52	1.53	.36	.06	-	-	.16	2.18	.26	.03	.41	.06
Derby ** (k)	.02	.02	2.04	.21	Tr.	-	-	-	.86	1.52	Tr.	.39	.06	-
Falls Village	.06	Tr.	.12	1.80	.44	.02	-	-	.11	2.34	-	.02	.05	.08
Naugatuck ** (l)	-	.05	.09	3.59	.20	Tr.	-	-	-	1.30	.92	Tr.	.46	.02
Prospect ** (m)	-	.03	.07	3.36	.19	-	-	-	-	1.31	1.40	.03	.53	.06
Salisbury	.09	-	.23	1.54	.40	-	-	-	.18	2.25	.21	-	.47	.08
Shelton (n)	-	-	-	1.98	.77	-	-	-	-	-	2.02	-	.15	-
Thomaston (o)	-	-	-	2.48	.31	.01	.02	-	.01	1.59	.60	.02	.70	-
Torrington ** (p)	Tr.	.02	.11	2.64	.35	.03	-	-	-	1.90	1.00	.02	.57	.05
Torrington ** (q)	-	-	-	2.74	-	-	-	-	-	-	2.60	-	.60	-
Torrington (r)	-	-	*	3.84	-	-	-	-	*	3.73	-	.65	-	-
Waterbury	.03	-	1.09	3.48	.10	Tr.	-	-	-	2.02	.27	.03	.54	.03
Waterbury (City Hall) (s)	-	.04	.28	3.60	.20	-	-	-	-	1.76	.66	.03	.53	.02
West Norfolk ** (t)	.02	.09	.14	2.34	.39	.10	Tr.	Tr.	.01	2.17	1.04	.06	.46	.24
Wolcott (i)	-	.05	.07	2.93	.17	.02	-	-	-	.79	1.51	.02	.53	.17

* Included in next measurement.
** Measured in the morning.
*** Measured at midnight.
(c) Data furnished by Massachusetts State Department of Public Health.
(e) Data furnished by Bristol Water Co.
(f) Data furnished by Metropolitan Water Bureau, Hartford.
(g) Data furnished by Northern Connecticut Power Co.
(h) Data furnished by Manchester Water Co.
(i) Data furnished by New Britain Water Co.
(j) Data furnished by Ansonia Water Co.
(k) Data furnished by Birmingham Water Co.
(l) Data furnished by Naugatuck Water Co.
(m) Data furnished by New Haven Water Co.
(n) Data furnished by Bridgeport Hydraulic Co.
(o) Data furnished by Waterbury Water Co.
(p) Data furnished by Torrington Register.
(q) Data furnished by General S. H. Wadhams.
(r) Data furnished by Torrington Water Co.
(s) Data furnished by City of Waterbury.
(t) Data furnished by E. C. Childs.

Table 1.--Daily precipitation, in inches, March 1936--Continued
(Measured in the afternoon except as noted)

Station	9	10	11	12	13	14	15	16	17	18	19	20	21	22
St. Lawrence River Basin														
Vermont:														
Burlington ***	0.03	Tr.	0.03	0.99	0.46	0.04	-	0.78	0.14	0.51	0.10	-	0.32	0.05
Cornwall	.03	Tr.	-	1.55	-	-	-	.68	.75	-	-	0.32	.45	-
Enosburg Falls	.15	-	-	.78	.45	-	-	.57	-	.45	-	-	.54	.86
Newport	.25	-	-	.86	.31	.09	-	.40	Tr.	.15	.15	.02	.29	.25
Northfield ***	.16	-	.09	1.12	.09	.01	-	1.34	.29	.59	.18	-	.90	.10
Rutland	.36	0.19	.01	.77	.28	.11	-	.63	1.07	.33	.16	.14	.32	.02
New York:														
Ashley ** (u)	*	.47	-	*	1.69	-	*	*	1.70	-	*	1.14	*	.13
Chazy	Tr.	-	-	.59	.13	.33	-	-	.33	.15	.10	.15	.51	.10
Dannemora	.20	-	-	.45	.35	.15	-	.05	.30	.25	-	.45	.45	.35
Lake Placid Club	-	-	.10	.26	.13	-	0.30	.45	.85	.22	.12	.10	.32	.30
Port Henry ** (u)	-	.06	-	.38	.93	.06	-	.07	1.12	.20	.44	-	.41	.28
Smiths Basin ** (v)	.16	.28	-	1.38	-	.38	-	.67	1.07	.61	-	.52	.30	-
Whitehall ** (v)	.28	-	.24	1.62	.18	Tr.	-	1.60	.18	.71	.36	-	.33	Tr.
Willsboro	Tr.	-	.02	.96	.49	.02	-	.54	.48	.39	.07	.16	.49	-
Canada:														
Brome ** (w)	.10	-	-	-	1.12	.30	-	-	.27	-	.10	.17	.02	
Drummondville (w)	.10	-	.03	.74	.25	.10	-	.10	.07	-	-	-	.27	
East Angus (w)	-	-	.15	.47	.10	-	.05	.66	-	-	.02	.04	1.20	
Farnham (w)	-	-	.09	.58	.20	-	-	.23	.03	.15	.56	-	.55	
Lambton (w)	-	-	-	.07	.12	-	-	.13	-	-	.05	-	-	
Lennoxville (w)	-	-	.14	.51	-	.20	.10	.37	-	-	.03	.03	.35	
Megantic (w)	.10	-	-	.48	-	-	-	.78	-	-	.18	-	-	
Montreal (w)	-	-	.32	.69	.10	-	.07	.26	.16	.07	.73	.01	.99	
Nicolet (w)	-	-	.30	.12	.08	-	-	-	.05	.06	.14	.03	1.23	
Quebec (w)	.01	-	.12	1.04	.08	Tr.	.03	.07	.04	.11	.12	Tr.	.21	
Sherbrooke (w)	-	-	.05	.79	.19	-	-	.58	-	-	.02	.02	.70	
Minor basins														
Maine:														
Bar Harbor	.27	.50	-	1.65	.86	Tr.	-	-	.04	-	1.30	.39	.49	.20
Eastport ***	.42	.28	-	1.09	.44	.06	-	.02	Tr.	-	.25	Tr.	.15	.08
Ellsworth	.65	.15	.02	2.05	.47	.02	-	-	.05	-	1.28	.43	.65	.10
Grand Lake Stream (x)	-	-	-	2.46	-	-	-	.20	.04	-	.16	1.02	.62	.08
Machias **	-	.78	-	-	1.71	-	-	-	-	-	-	1.12	-	-
North Bridgton	.46	.20	.14	3.78	.43	-	-	.35	.14	.72	2.85	.08	1.14	.64
Portland ***	.58	.12	.25	1.23	.24	-	Tr.	.03	.03	.22	.73	-	1.17	.09
Songo Lock (y)	.85	-	*	4.80	-	-	-	-	*	*	*	2.45	*	1.55
Vanceboro (x)	-	-	-	2.72	-	-	-	.49	-	-	-	1.37	-	-
Woodland	.54	-	.07	2.85	-	Tr.	-	.14	-	-	.84	-	.49	Tr.
New Hampshire:														
Durham	.29	.36	.10	2.18	.06	.01	-	.01	-	.46	1.35	-	1.38	.50
Hampton	.37	Tr.	.12	1.65	.25	-	.03	-	-	.34	.78	-	1.04	.36
Massachusetts:														
Attleboro ** (z)	.07	-	2.30	.57	-	-	-	-	-	1.86	-	.24	.47	-
Beverly **	.11	-	.88	1.16	Tr.	-	-	-	-	.98	.10	.12	.74	.02
Blue Hill	Tr.	Tr.	.20	1.80	.11	-	Tr.	Tr.	-	1.58	.22	-	.53	.03
Boston ***	Tr.	Tr.	.36	1.55	Tr.	Tr.	Tr.	Tr.	-	1.51	.09	Tr.	.54	.02
Bridgewater **	.04	-	1.44	.90	Tr.	-	-	-	Tr.	1.59	Tr.	Tr.	.55	-
Brockton **	-	Tr.	.03	1.17	.10	-	-	-	-	.32	.87	-	.51	.05
Brockton No. 2 ** (aa)	.02	-	1.54	.89	Tr.	-	-	-	Tr.	1.97	.01	.15	.52	-
Charlton	.09	.07	2.65	.25	-	.01	-	-	.90	Tr.	.32	4.35	.50	-
Chatham **	.16	.06	.18	1.00	.08	-	-	-	-	.06	.32	.40	.16	-
Chestnut Hill **	.03	-	1.34	.91	.01	.02	-	-	.08	1.89	.03	.11	.45	-

* Included in the next measurement.
** Measured in the morning.
*** Measured at midnight.
(u) Data furnished by New York Power & Light Corporation.
(v) Data furnished by New York Department of Public Works.
(w) Data furnished by Canadian Meteorological Service.
(x) Data furnished by St. Croix Paper Co.
(y) Data furnished by S. D. Warren Co.
(z) Data furnished by Attleboro Pumping Station.
(aa) Data furnished by Brockton Sewage Works.

Table 1 .-Daily precipitation, in inches, March 1936--Continued
(Measured in the afternoon except as noted)

Station	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Minor basins-Continued														
Massachusetts-Continued														
East Walpole **	-	-	1.12	0.93	-	-	-	-	2.65	-	-	-	0.71	-
East Wareham **	-	0.18	Tr.	1.07	1.28	-	-	-	-	-	1.02	0.04	.01	0.61
Fall River	0.15	Tr.	.28	2.15	.02	-	Tr.	-	-	1.78	.20	.01	.58	.02
Falmouth ** (c)	-	Tr.	1.01	1.08	Tr.	-	Tr.	-	-	.80	.02	Tr.	.59	-
Franklin ** (e)	-	-	2.68	.62	Tr.	-	-	-	-	2.75	Tr.	.20	.65	-
Gloucester	.04	-	.13	1.44	.17	Tr.	0.01	-	-	.56	.25		1.01	.04
Greenbush **	.02	-	1.13	.72	Tr.	-	-	-	-	.25	.98	.58	.06	-
Holden Reservoir No. 2 **	.14	-	2.77	.27	-	0.05	-	-	.93	4.55	.04	2.70	.70	-
Hyannis	Tr.	.20	Tr.	1.32	.15	-	-	-	-	.13	.40	-	-	.75
Ipswich ** (e)	.10	.01	1.36	.84	Tr.	.01	Tr.	Tr.	-	1.10	.09	.18	.80	Tr.
Jamaica Plain **	.02	-	1.48	.77	-	Tr.	-	-	.06	1.99	.03	.17	.42	-
Kendall Reservoir **	.10	.02	3.05	.24	-	.03	Tr.	-	1.00	4.39	.04	.40	.50	-
Kettle Brook Reservoir **	.11	.06	2.83	.24	-	-	.02	0.01	1.48	4.32	.07	.70	.28	-
Lakeville **	.09	-	1.38	1.02	-	-	-	-	-	1.48	.05	.05	.50	-
Lynde Brook Reservoir **	.35	-	2.75	.30	-	.02	.02	-	.75	4.96	.05	.50	.45	-
Lynn **	.03	.01	.86	.80	Tr.	Tr.	-	-	Tr.	1.31	.08	.21	.74	Tr.
Manchester **	.03	-	.87	.72	-	-	-	-	-	.74	.12	.17	.67	.01
Mansfield ** (e)	.02	Tr.	1.81	1.03	Tr.	Tr.	-	-	.01	2.13	Tr.	.12	.65	-
Middleboro ** (c)	.08	Tr.	1.56	.77	-	-	-	-	-	1.47	.02	-	.55	-
Middleton **	.10	.02	1.46	.66	Tr.	-	Tr.	-	Tr.	1.55	.05	.21	.63	-
Milford ** (c)	.02	-	2.08	.40	-	-	-	-	-	.06	1.70	.27	.45	-
Millbury **	Tr.	.02	-	2.22	.35	-	-	-	-	.76	4.58	-	.51	.50
Millis **	-	-	2.29	.65	-	-	-	-	-	3.06	-	.20	.79	-
Nantucket ***	.13	.01	.34	.94	Tr.	-	-	.03	-	.36	.18	-	.69	-
New Bedford	.12	.02	.44	.84	-	-	-	-	-	1.05	.03	-	.38	-
New Bedford No. 2 ** (bb)	.16	Tr.	1.07	.63	-	-	-	-	-	1.33	.02	.06	.32	-
Newton	.02	-	1.40	1.03	-	-	-	-	.07	2.25	.03	.25	.45	-
Northbridge ** (c)	Tr.	.10	2.55	.46	-	-	-	-	.95	3.50	-	.50	.51	-
Norwood **	.01	-	1.64	.76	-	-	-	-	.02	2.13	.01	.31	.50	-
Pembroke ** (c)	.01	Tr.	1.38	.82	-	-	-	-	-	1.01	.01	.01	.57	-
Plymouth **	.12	-	*	2.52	Tr.	-	-	-	-	*	.98	-	.65	-
Provincetown	-	.05	.04	1.10	.07	-	-	-	-	.13	.32	-	.67	.05
Rockport	-	-	1.30	-	-	.90	-	-	*	*	.98	-	1.01	.15
Salem **	.01	Tr.	.66	.32	Tr.	.01	-	Tr.	Tr.	1.17	.10	.09	.55	Tr.
Scituate **	.33	Tr.	1.52	.23	.02	-	-	.02	.64	2.77	.03	.43	.29	-
Southbridge ** (c)	.08	Tr.	2.63	.29	Tr.	Tr.	Tr.	Tr.	1.27	3.89	.03	.61	.49	Tr.
Spot Pond **	.04	.07	1.28	.95	-	.03	-	-	.04	1.77	.05	.08	.56	-
Swampscott **	.02	.01	.26	1.42	.06	-	.01	-	-	.86	.32	Tr.	.69	.05
Taunton **	.03	-	*	1.52	.65	-	-	-	-	Tr.	1.60	.02	.10	.40
Waltham ** (ee)	.01	-	1.48	.67	-	-	-	-	.11	2.32	-	.17	.50	-
Wareham **	.18	Tr.	1.03	1.20	-	-	-	-	-	.87	.01	.01	.57	-
Webster (e)	-	.04	-	2.01	.14	-	-	-	-	.38	3.85	.13	.34	-
Weston **	.02	.03	.17	.50	-	-	-	-	.04	1.34	1.69	-	.59	.14
West Peabody **	.08	-	1.23	.94	.01	.02	-	-	-	1.29	.05	.18	.60	-
West Roxbury ** (dd)	.01	Tr.	1.37	.93	Tr.	-	Tr.	Tr.	.04	2.05	.01	.17	.39	-
Wilmington **	-	-	1.43	.76	-	.03	-	-	.02	1.70	-	.21	.74	-
Winchester **	.02	Tr.	1.48	.82	-	.02	.02	-	.04	1.68	.06	.12	.58	-
Wollaston **	.01	Tr.	1.53	.78	-	Tr.	Tr.	-	.03	1.63	Tr.	.05	.43	-
Worcester	.07	.03	.14	2.31	.17	-	.08	-	-	4.98	.46	Tr.	.88	.08
Worcester (Clark Univ.)	.01	.05	Tr.	2.08	.28	Tr.	.01	Tr.	-	.76	4.18	Tr.	.43	.54
Wrentham **	.03	-	2.75	.95	-	-	-	-	-	2.83	-	.22	.56	-
Rhode Island:														
Block Island ***	.22	Tr.	.52	1.49	.01	-	-	-	.01	1.63	.16	.05	.46	-
Kingston	.01	.06	.16	2.21	.14	-	-	-	-	1.17	.49	-	.45	-
Pawtucket **	Tr.	-	*	3.23	-	-	-	Tr.	-	*	3.06	Tr.	.75	-
Providence ***	.01	.01	.59	2.05	Tr.	Tr.	Tr.	Tr.	Tr.	1.74	.04	Tr.	.75	.01
Woonsocket ** (ee)	-	.01	-	3.26	.63	-	-	-	-	.13	3.18	.06	.55	.37

* Included in next measurement.
** Measured in the morning.
*** Measured at midnight.
(c) Data furnished by Massachusetts State Department of Public Health.
(bb) Data furnished by L. J. Hathaway.
(cc) Data furnished by Waltham Water Works.
(dd) Data furnished by Brookline Pumping Station.
(ee) Data furnished by Woonsocket Sewage Works.

Table 1.--Daily precipitation, in inches, March 1936--Continued
(Measured in the afternoon except as noted)

Station	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Minor basins-Continued														
Connecticut:														
Baltic **	-	-	0.19	2.00	0.23	-	-	-	-	3.04	0.56	-	0.81	-
Bridgeport	0.02	0.02	.80	1.40	.23	0.03	-	-	Tr.	1.88	.33	0.04	.40	-
East Haven ** (m)	-	.10	.05	1.00	.60	-	-	-	-	.95	1.15	-	.46	-
Easton (Hemlocks Res.) (n)	-	-	-	2.96	-	.03	-	-	-	-	2.45	-	.43	-
Easton Lake Reservoir ** (n)	-	-	2.55	-	.33	-	-	-	-	-	2.25	.02	.52	-
Greenwich ** (ff)	.12	.23	2.59	.19	.07	-	-	-	1.27	1.30	.14	.30	.11	-
Groton **	-	.15	.09	1.86	.25	-	-	-	-	.18	2.58	-	.45	0.20
Guilford ** (m)	-	.12	.08	2.05	.12	-	-	-	-	.91	1.35	-	.56	.04
Hamden ** (m)	-	.09	.04	1.89	.21	-	-	-	-	1.12	1.44	-	.52	.01
Lake Konomoc **	-	.05	.35	1.95	.15	-	-	-	-	3.00	.20	-	.81	-
Milford ** (m)	-	.05	.06	1.75	.17	.05	-	-	-	.69	1.58	-	.30	-
Mount Carmel **	.03	.04	.40	2.02	.17	.02	-	Tr.	-	1.87	.95	.02	.44	.02
New Canaan ** (gg)	.02	.11	2.98	.21	.02	-	-	-	1.43	1.36	.02	.45	.02	-
New Haven ***	.07	.01	1.02	1.04	Tr.	.01	Tr.	-	Tr.	2.23	.18	Tr.	.35	Tr.
New London	.04	.02	.36	2.29	.11	-	-	-	-	3.01	.02	-	.72	-
North Branford ** (m)	-	.11	.12	1.81	.12	.02	-	-	-	1.05	1.20	.01	.45	.03
Norwalk	.03	*	*	2.31	.20	.03	-	-	-	-	2.50	-	.47	-
Old Greenwich **	-	.10	1.85	.64	.06	.03	-	-	.30	1.90	.56	Tr.	.36	-
Orange ** (m)	-	.07	.06	2.23	.19	.02	-	-	-	1.00	1.70	.02	.39	-
Stamford No. 1 ** (gg)	.03	.15	3.22	.16	.02	-	-	-	1.62	1.16	.04	.53	.01	-
Stamford No. 2 ** (gg)	.02	.14	2.59	.19	.03	-	-	-	1.27	1.10	.04	.40	.01	-
Storrs	.06	Tr.	.17	2.88	.11	-	Tr.	-	Tr.	3.39	1.02	.02	1.18	Tr.
Wallingford (hh)	-	-	2.65	-	-	-	-	.17	-	2.10	-	-	.45	-
Wilton ** (ii)	-	-	-	2.32	.13	-	-	-	-	2.10	.64	-	.55	-
Woodbridge ** (m)	-	-	.15	2.40	.23	-	-	-	-	1.16	1.48	-	.41	-
New York (Long Island):														
Bridgehampton	.01	.03	.43	1.17	Tr.	Tr.	-	-	Tr.	2.46	.16	.01	.32	Tr.
Cutchogue	Tr.	.06	.51	1.14	-	Tr.	-	-	-	1.60	.19	-	.15	.02
Flushing	-	.01	1.34	.21	.02	-	-	-	.02	1.18	.25	Tr.	.26	.02
Hicksville	-	-	.89	.96	Tr.	Tr.	-	-	Tr.	1.12	.53	.05	.26	-
Setauket	.09	-	1.00	.87	Tr.	-	-	-	Tr.	1.45	.27	-	.37	-

* Included in next measurement.
** Measured in the morning.
*** Measured at midnight.
(m) Data furnished by New Haven Water Co.
(n) Data furnished by Bridgeport Hydraulic Co.
(ff) Data furnished by Greenwich Water Co.
(gg) Data furnished by Stamford Water Co.
(hh) Data furnished by Wallingford Water Co.
(ii) Data furnished by Second Taxing District Water Co., Norwalk.

been of great value in supplementing the Weather Bureau data. By collection and inclusion in this report they are preserved and made available for future reference.

The figures represent the amounts of precipitation as reported by the observers and are not strictly comparable on individual days, as the times of the observations at the various stations were not always simultaneous. The amount as recorded usually represents the rainfall for the 24-hour period preceding the time of observation. Rainfall occurring during the daylight hours may be recorded under the date of occurrence when observations are made in the late afternoon or under the date of the following day when observations are made in the early morning.

Distribution of rainfall

In general throughout the area from Maine to Virginia all of the precipitation relating to the floods occurred during the 14-day period March 9-22, except such precipitation as occurred in the form of snow prior to March 9.

Fortunately the meteorologic conditions during the storm period were so similar over the entire area that the records in each basin can be uniformly treated as follows:

1. Throughout the area light precipitation, in the form of either rain or snow, occurred on March 9 and 10. Beginning about March 11 the intensity of precipitation increased, and heavy rains continued through the 12th and, in northern areas, on the 13th. This so-called first storm has therefore been treated as a unit. The recorded precipitation from March 9 to 13 was plotted on Geological Survey base maps (scale 1:500,000), and an isohyetal map was prepared showing total rainfall for the first general storm. This base map has been reduced to appropriate scales for publication and shows the isohyetals of the first storm for the major drainage basins. (See figs. 12, 13, 14, and 15.) The areas between the isohyetal lines on the original base map were measured by planimeter for the drainage basin above each gaging station, and the average total precipitation for each basin was rigorously determined. The results of these determinations are shown under "Rainfall and run-off studies" in column 5, table 13.

2. Beginning about March 16 and continuing through the 19th heavy precipitation occurred throughout the area, with major portions occurring on March 17 and 18. The period March 16-19 constitutes the so-called second storm. The recorded precipitation for these dates was totaled,

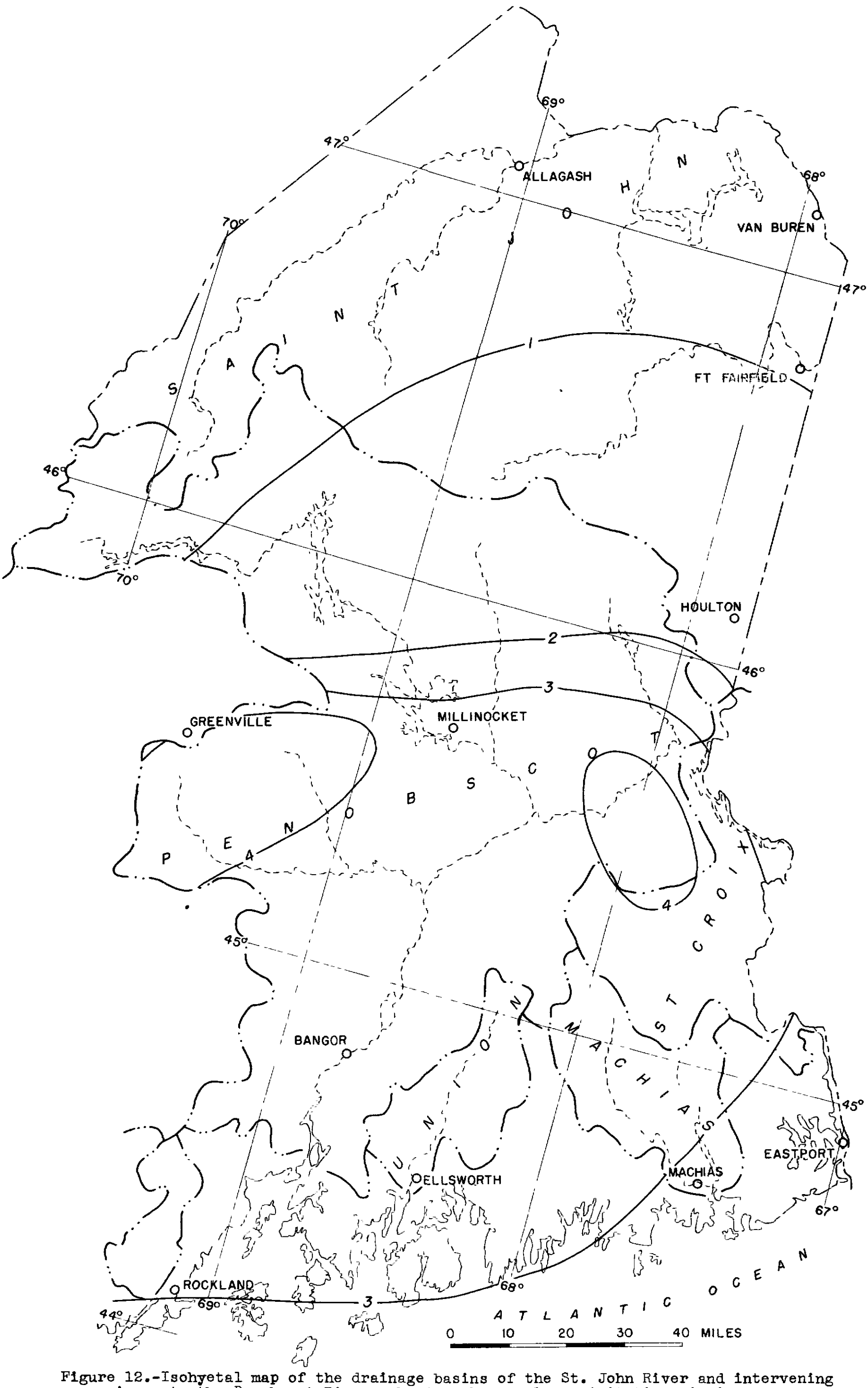


Figure 12.-Isohyetal map of the drainage basins of the St. John River and intervening rivers to the Penobscot River, showing the total precipitation, in inches, March 9-13, 1936.

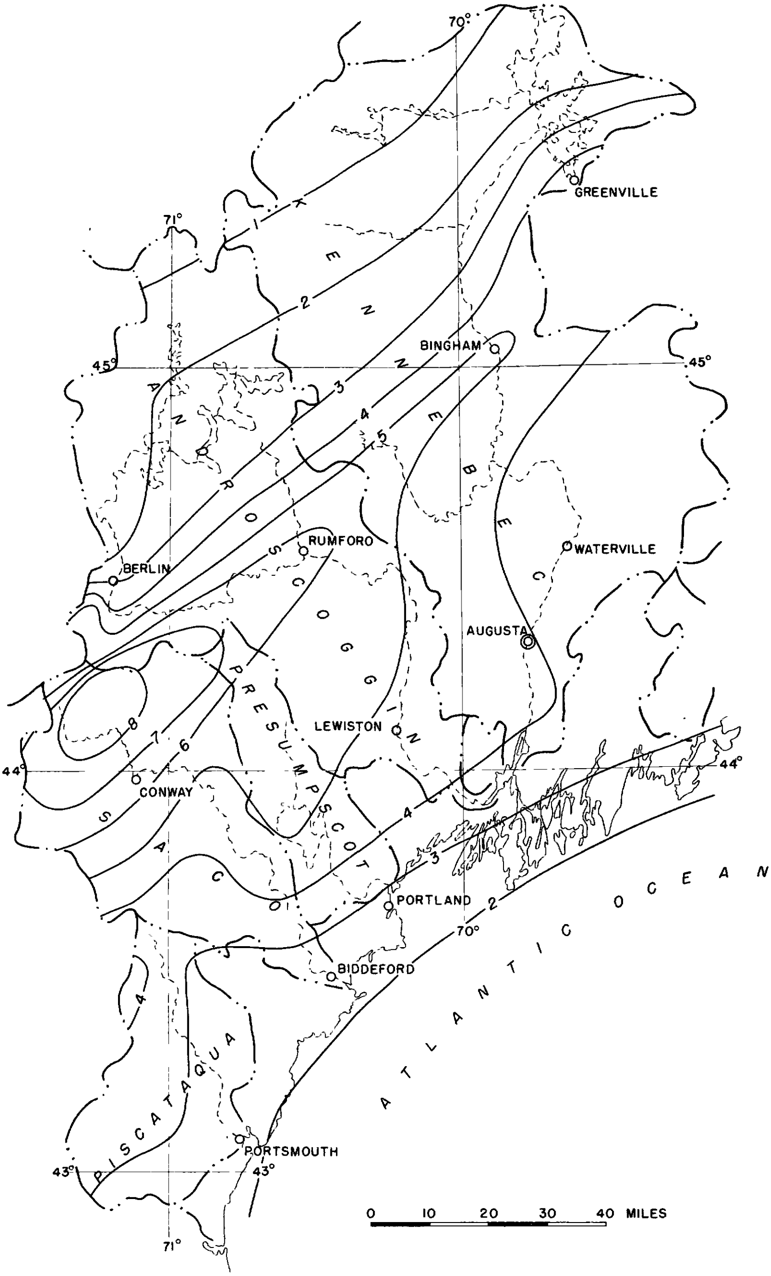


Figure 13.-Isohyetal map of the drainage basins of the Kennebec River and intervening rivers to the Piscataqua River, showing the total precipitation, in inches, March 9-13, 1936.

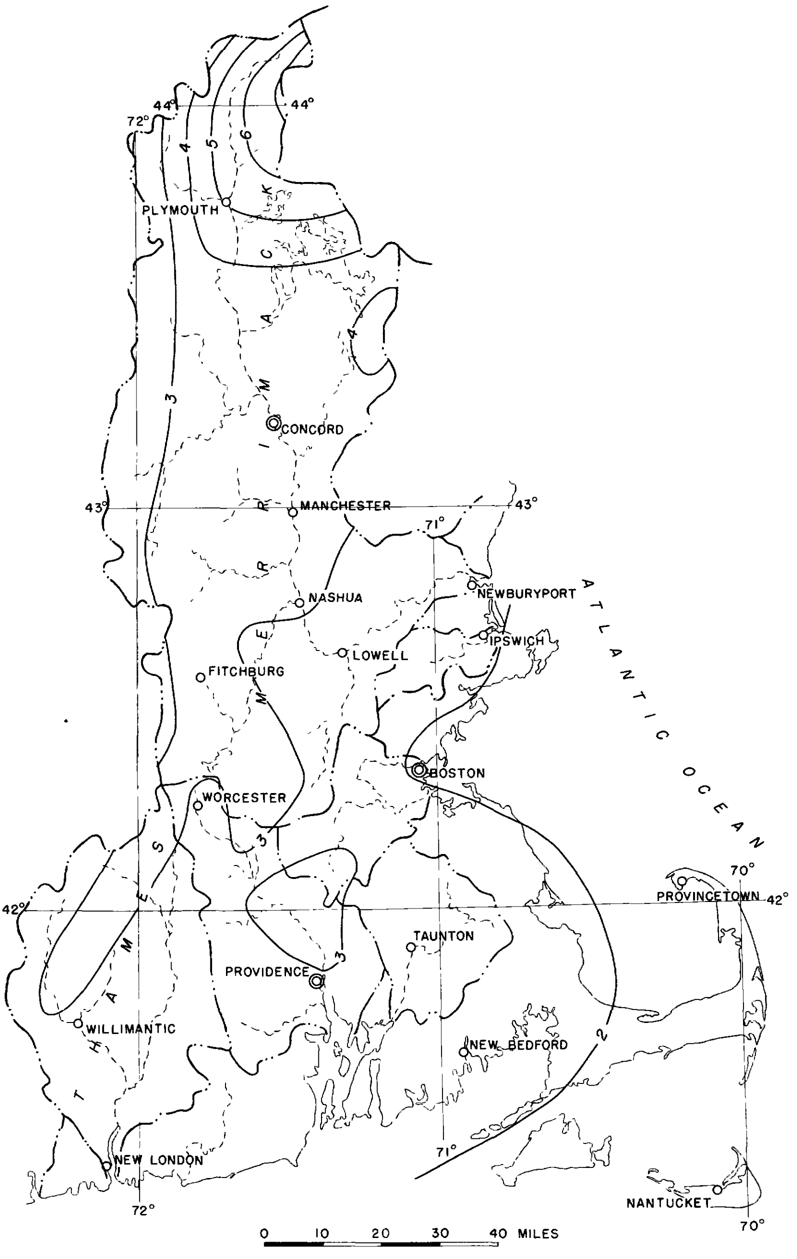


Figure 14.-Isohyetal map of the drainage basins of the Merrimack River and intervening rivers to the Thames River, showing the total precipitation, in inches, March 9-13, 1936.

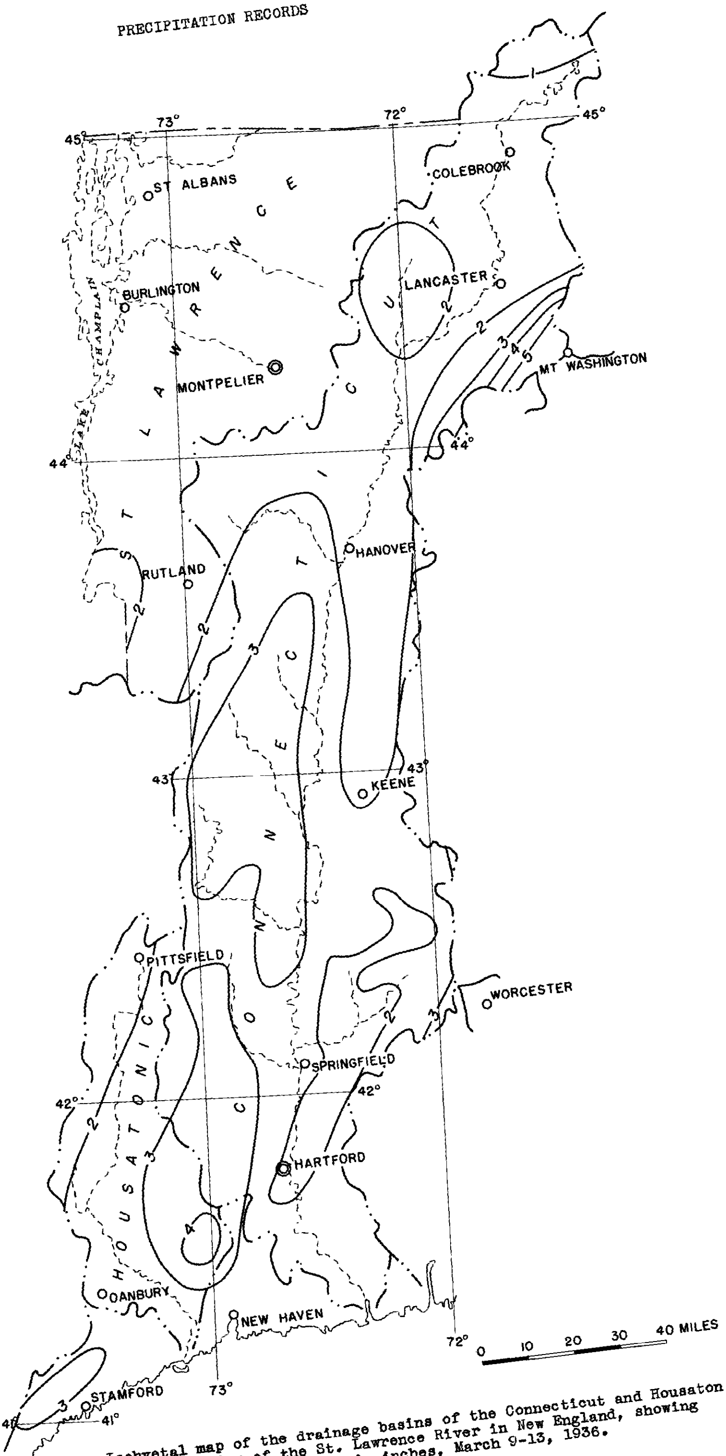


Figure 15.-Isohyetal map of the drainage basins of the Connecticut and Housaton Rivers and tributaries of the St. Lawrence River in New England, showing the total precipitation, in inches, March 9-13, 1936.

an isohyetal map prepared, and total precipitation for each basin determined in the same manner as for the first storm. (See figs. 16, 17, 18, and 19, and column 6 in table 13.)

3. The total precipitation during the period March 9-22 is shown in figures 20, 21, 22, and 23 and in column 7, table 13. These data include minor amounts of precipitation that were recorded in some areas on March 14 and 15 and the precipitation in a minor general storm that occurred on March 20 and 21, part of which fell as rain and part as snow.

In drawing the isohyetals little weight was given to the influence of topography, as time did not permit a thorough analysis of the recorded data with respect to altitude. The basic data included in this report will enable the user to undertake more refined and detailed studies in a particular area. These data will also enable an investigator to make a different time analysis of the storm precipitation from that here contained if he so desires.

As shown in table 2 the antecedent precipitation throughout the New England States was below normal during December and February and considerably above normal during January. The totals for the three months were slightly above normal. No special abnormality is disclosed in these records. Extreme abnormality is shown, however, in the total precipitation for March, of which that recorded from the 9th to the 22d constitutes the major part.

Table 2.- Monthly precipitation and departures from normal, in inches, in the New England States, December 1935 to February 1936

State	December		January		February		December to February	
	1935	Departure	1936	Departure	1936	Departure	1935-6	Departure
Maine	1.91	-1.33	6.40	+2.87	2.75	-0.24	11.06	+1.30
New Hampshire	1.25	-1.70	6.07	+3.06	2.31	- .36	9.63	+1.00
Vermont	1.20	-1.43	4.83	+2.05	2.05	- .41	8.08	+0.21
Massachusetts	1.25	-2.28	6.78	+3.06	2.95	- .53	10.98	-0.25
Rhode Island	1.16	-2.65	6.96	+2.91	4.06	+ .38	12.18	+0.64
Connecticut	1.05	-2.68	7.01	+3.15	2.70	- .90	10.76	-0.43

On March 3 somewhat less than 1 inch of precipitation occurred as snow at the northern stations and as rain at the southern stations. Beginning on March 9, however, and continuing to March 28, there was abnormally

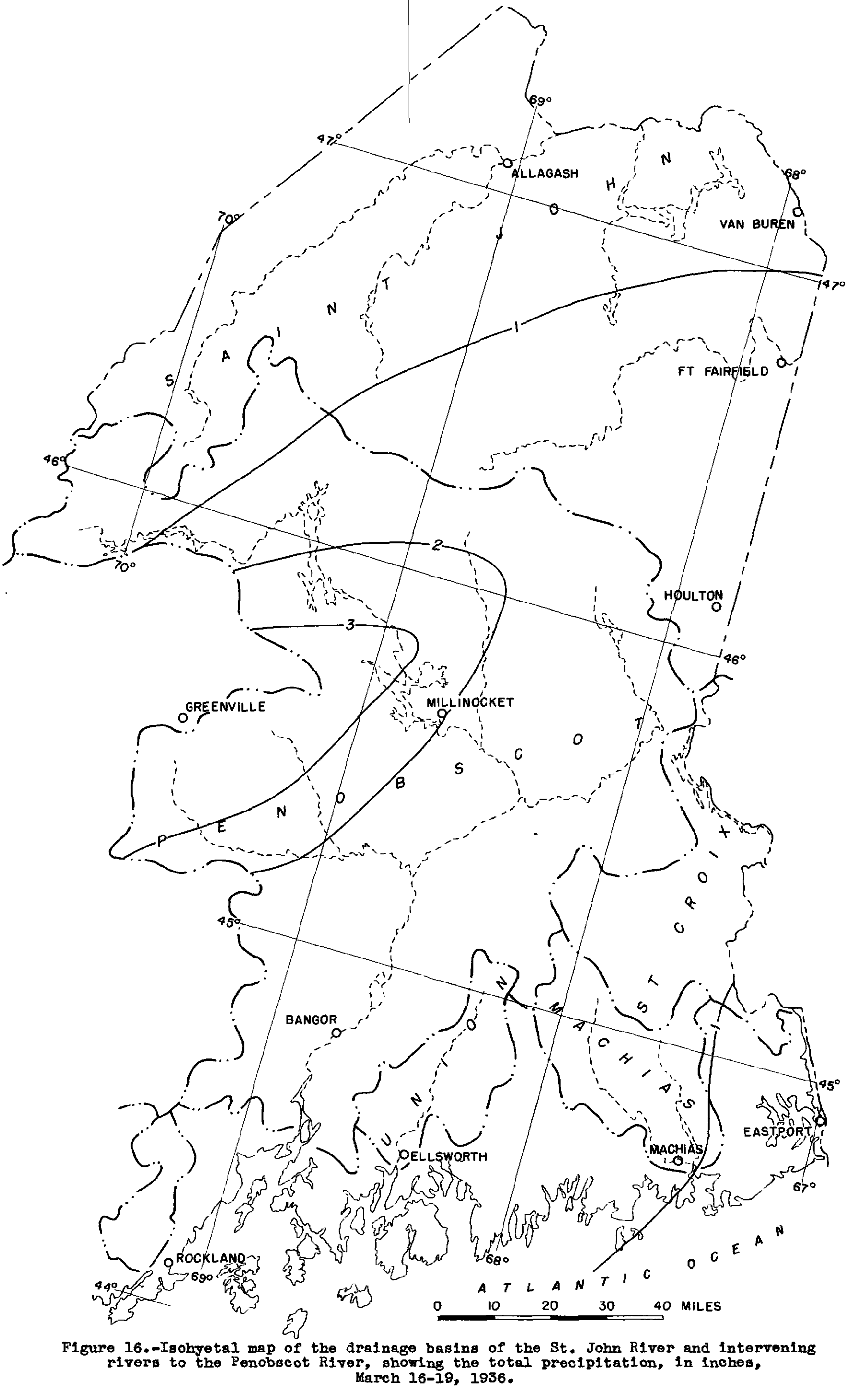


Figure 16.-Isohyetal map of the drainage basins of the St. John River and intervening rivers to the Penobscot River, showing the total precipitation, in inches, March 16-19, 1936.

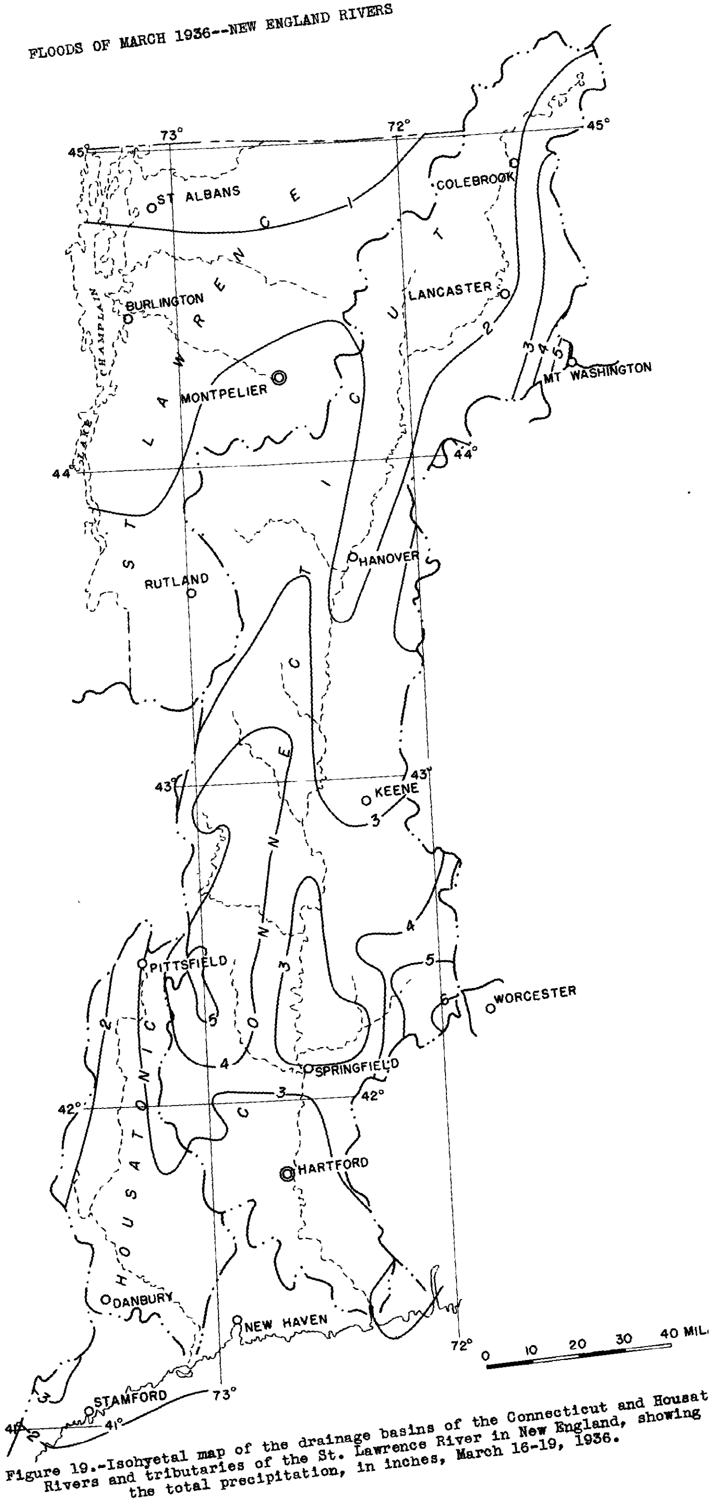


Figure 19.-Isohyetal map of the drainage basins of the Connecticut and Housat Rivers and tributaries of the St. Lawrence River in New England, showing the total precipitation, in inches, March 16-19, 1936.

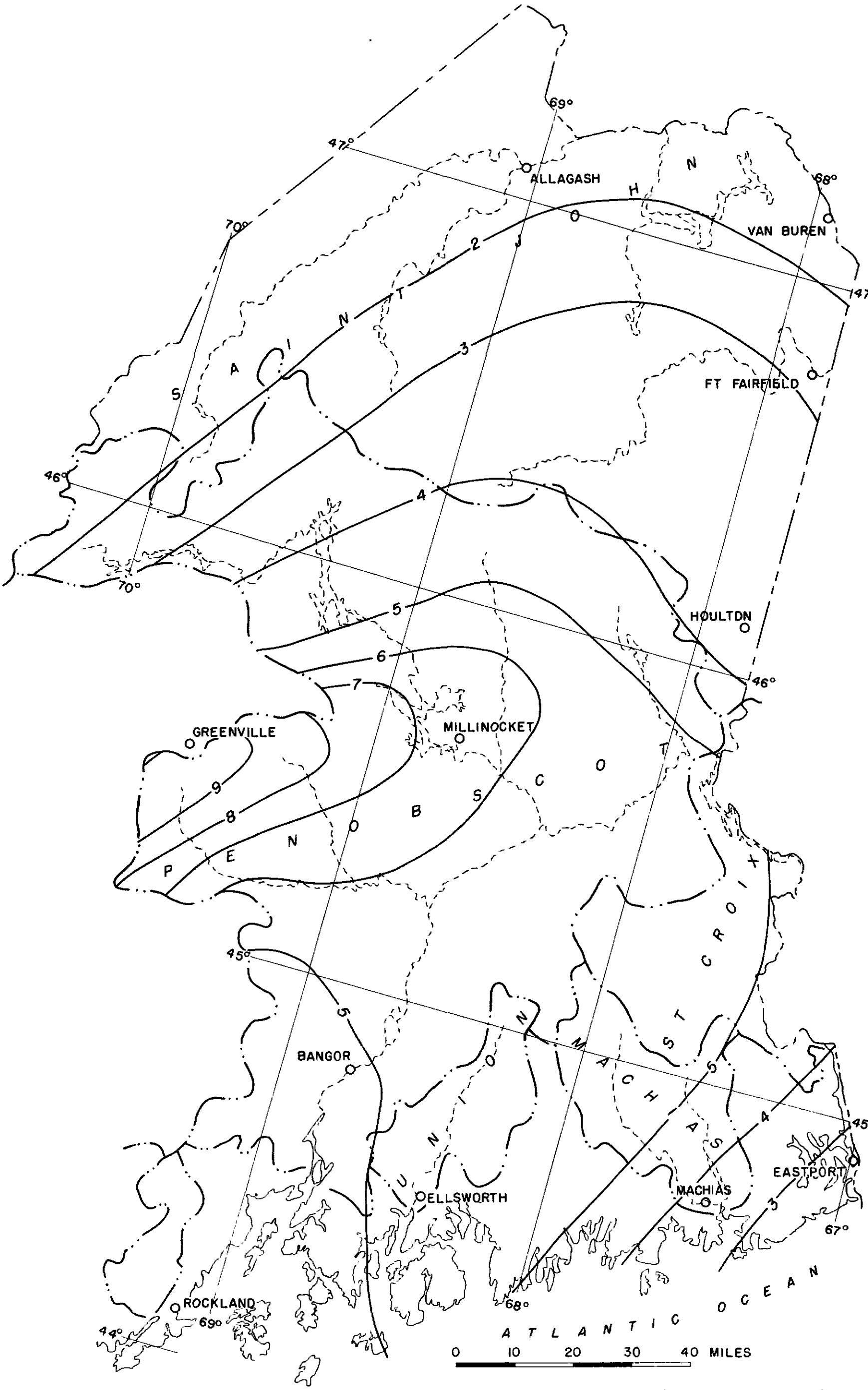


Figure 20.-Isohyetal map of the drainage basins of the St. John River and intervening rivers to the Penobscot River, showing the total precipitation, in inches, March 9-22, 1936.

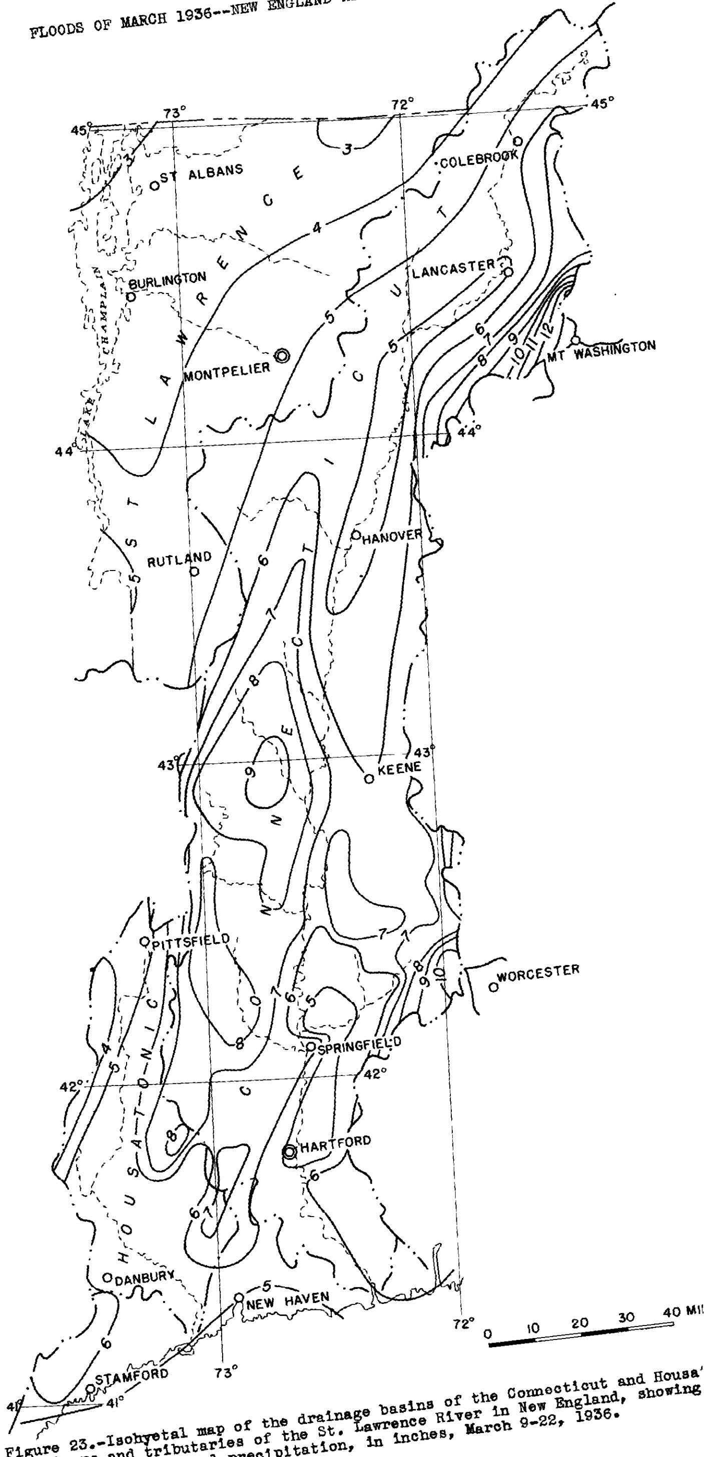


Figure 23.-Isohyetal map of the drainage basins of the Connecticut and Housatonic Rivers and tributaries of the St. Lawrence River in New England, showing the total precipitation, in inches, March 9-22, 1936.

heavy precipitation throughout New England, bringing the total for the month to twice the normal, an amount in excess of that recorded in any previous March. (See table 1 showing daily records March 9 to 22, when most of the precipitation causing the floods occurred.)

The first storm, so far as it related to the New England area, had one major center of precipitation, which was in the White Mountain region and embraced the headwater areas of the Connecticut, Merrimack, Saco, and Androscoggin Rivers. There was also a secondary storm center in the lower Housatonic Basin in Connecticut. In the Pinkham Notch area in New Hampshire the maximum precipitation recorded during the period March 9-13 exceeded 8 inches. In the lower Housatonic area the maximum recorded for the same period exceeded 4 inches. Recording rain gages at various United States Weather Bureau precipitation stations (see fig. 24) indicated that in those places most of the rain fell during the 24-hour period ending at noon March 12 with maximum intensities between midnight March 11 and noon March 12.

The second storm had much the same general pattern as the first. It likewise centered in the White Mountain region and had two secondary centers - one in the vicinity of Worcester, Mass., and one northwest of Holyoke, Mass., in the headwater areas of the Westfield and Deerfield Rivers. The maximum amounts of precipitation recorded during the period March 16-19 were 11.67 inches at Pinkham Notch, N. H., and 8.22 inches near Worcester, Mass. Recording rain gages indicated that most of the rain occurred between midnight March 17 and midnight March 18, except in northeastern New England, where most of the rain occurred on March 19. (See fig. 24.)

During the storm period March 9-22 (fig. 21), the maximum recorded precipitation was 22.43 inches at Pinkham Notch, N. H.

Snow

General

For New England as a whole there was slightly more snowfall than normal during the months of December, January, and February. The monthly totals and departures from normal as compiled from records of the United States Weather Bureau are shown in the following table:

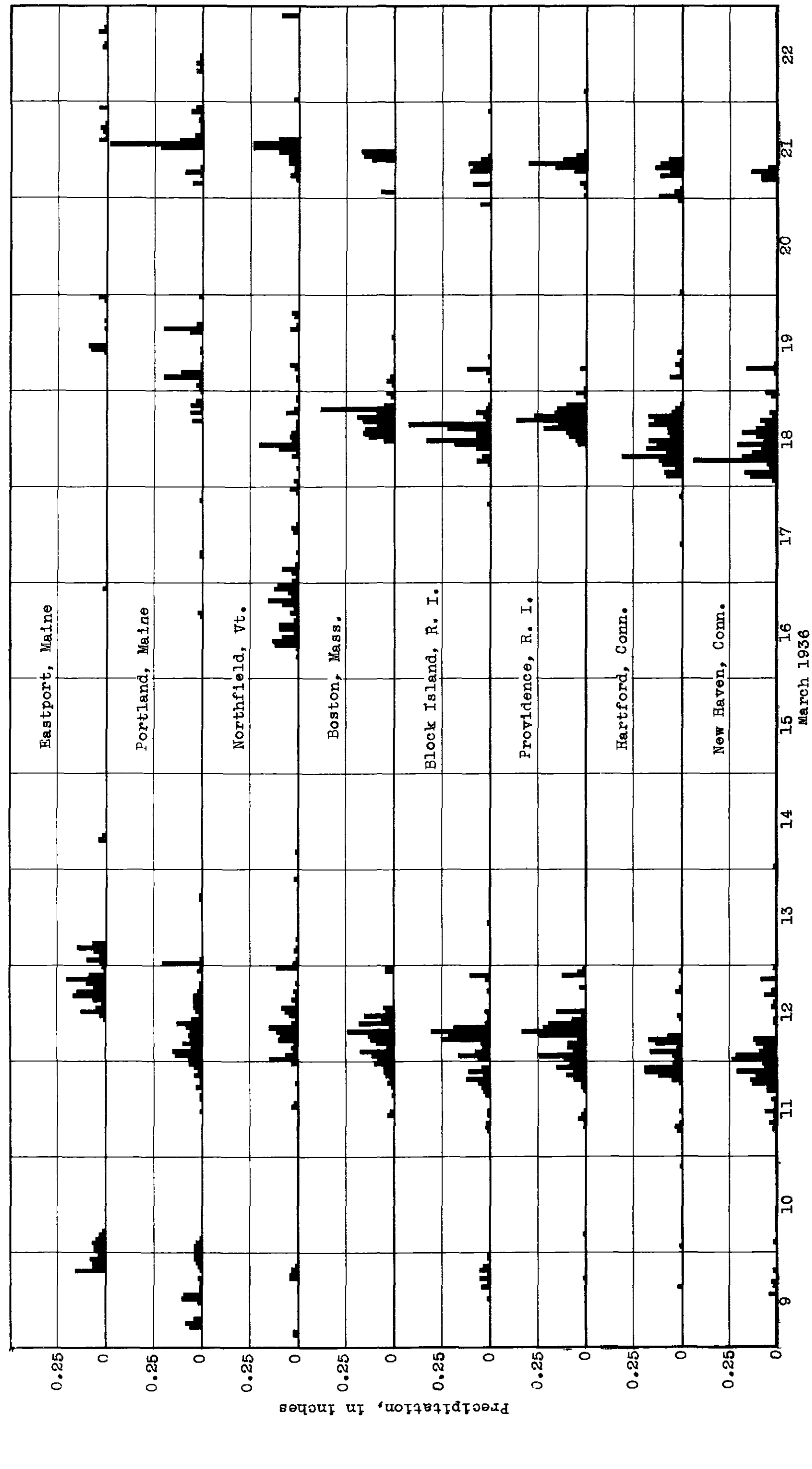


Figure 24.-Hourly precipitation at various United States Weather Bureau precipitation stations, March 9-22, 1936.

Table 3.- Monthly snowfall, in inches, in New England, December 1935 to February 1936

State	December	January	February	Total
Maine	14.3	36.1	19.7	70.1
New Hampshire	9.6	35.7	20.0	65.3
Vermont	7.7	29.3	18.1	55.1
Massachusetts	3.1	18.0	14.9	36.0
Rhode Island	4.4	7.7	7.6	19.7
Connecticut	4.4	17.4	13.4	35.2
Average for New England	7.2	25.5	16.7	49.4
Normal average	11.6	15.6	17.0	43.6
Departure from normal	-4.4	+9.9	- .3	+5.8

Abnormality with respect to the snowfall was apparently shown in the extent to which it accumulated on the ground during the winter on account of long cold periods rather than in the relatively small excess in the total amount above normal.

Water content

On March 9 all of New England was covered with snow, except a narrow coastal area from Boston southward nearly to New Haven. From records collected by the Weather Bureau, water-power companies, engineers of the Geological Survey, and others, the map in figure 5 has been prepared to show an estimate of the water content of the snow cover on or about March 9. All the basic data used in the preparation of this figure are given in tables 4 and 5. In areas where actual observations of snow depth and water content were available for the later part of February or the first part of March, the results should be fairly accurate. Various power companies and power associations have made their records available for study and publication and thereby have aided materially in broadening the scope of this report. In areas where information was wholly lacking or where only snow depths were available, the indicated water content may be considerably in error, as it was necessary to use an assumed ratio for the water content (generally 25 to 30 percent for snow on the ground on March 9, the greater ratios being used for shallow depths).

Unfortunately for the purpose of the best representation of general conditions most of the cooperative Weather Bureau stations are situated in urban or rural communities. Reported snow depths at such locations are generally less than those in adjacent rural areas, especially if those areas are hilly, mountainous, or timbered, and the records must be used with caution in determining basin averages. In compiling the maps showing the water content of snow on the ground March 9 (see figs. 5, 25, 26, 27, and 28), the original data were first plotted on the standard Geological Survey base maps (scale 1:500,000), and some weight was given to topography in the construction of the lines of equal water content. The base data are shown in tables 4 and 5 to aid those who may wish to make a more refined study of snow conditions than was possible in the time available for this report. The areas between the lines indicating water content on the original base maps have been measured by planimeter, and the average water content of the snow, in depth in inches for the drainage basins above the principal gaging stations, has been determined. These data are shown under "Rainfall and run-off studies" in column 4, table 13.

The snow data presented in figures 5, 25, 26, 27, and 28, and in table 13, represent estimates of water content on March 9 and correspond to total snow depletion in areas where all the snow disappeared by March 22. In areas where snow remained on the ground after the floods they represent a figure greater than the total depletion during the floods.

Considerable amounts of snow remained on the ground on March 22 in the headwater areas of the Connecticut, Merrimack, Androscoggin, Saco, Kennebec, and Penobscot Rivers. Outside of these headwater areas the snow had disappeared in general by March 22 or very soon thereafter appeared as stream flow. The rainfall and run-off studies show the important part played by run-off from melting snow in the flood situation, and it is unfortunate that more plentiful snow data are not available. This condition illustrates a serious deficiency in basic meteorologic data, which must be remedied if satisfactory analyses are to be made of floods and flood causes in areas where run-off from melting snow contributes largely to the flood discharge.

Snow surveys

Depth observations.- The measurements of snow depth in New England given in table 4 were furnished by the United States Weather Bureau from original records obtained by cooperative observers. Each snow depth as shown is usually the mean of two or three observations. Absence of figures indicates that no observation was reported. At some of the

SNOW

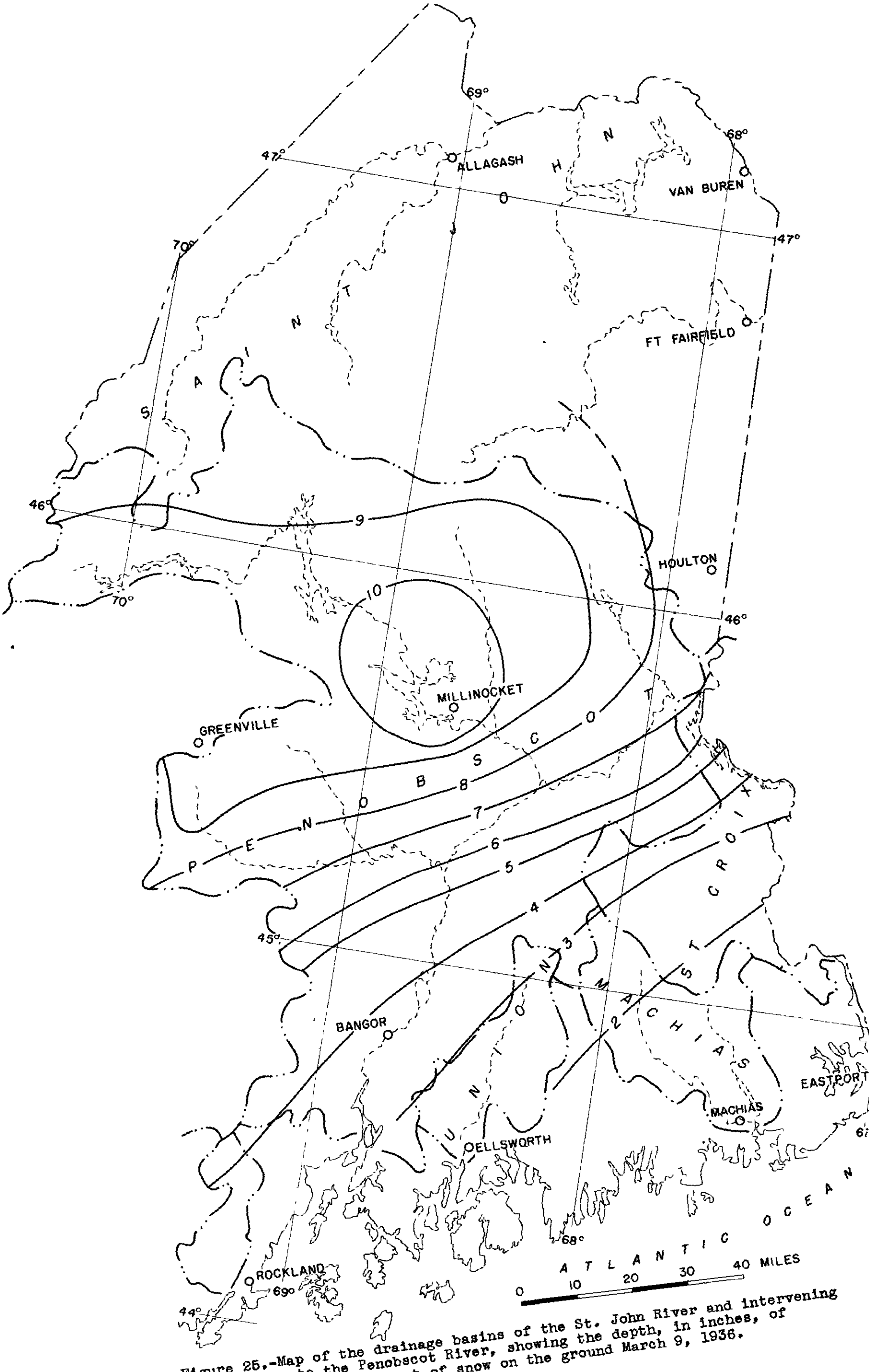


Figure 25.-Map of the drainage basins of the St. John River and intervening rivers to the Penobscot River, showing the depth, in inches, of the water content of snow on the ground March 9, 1936.

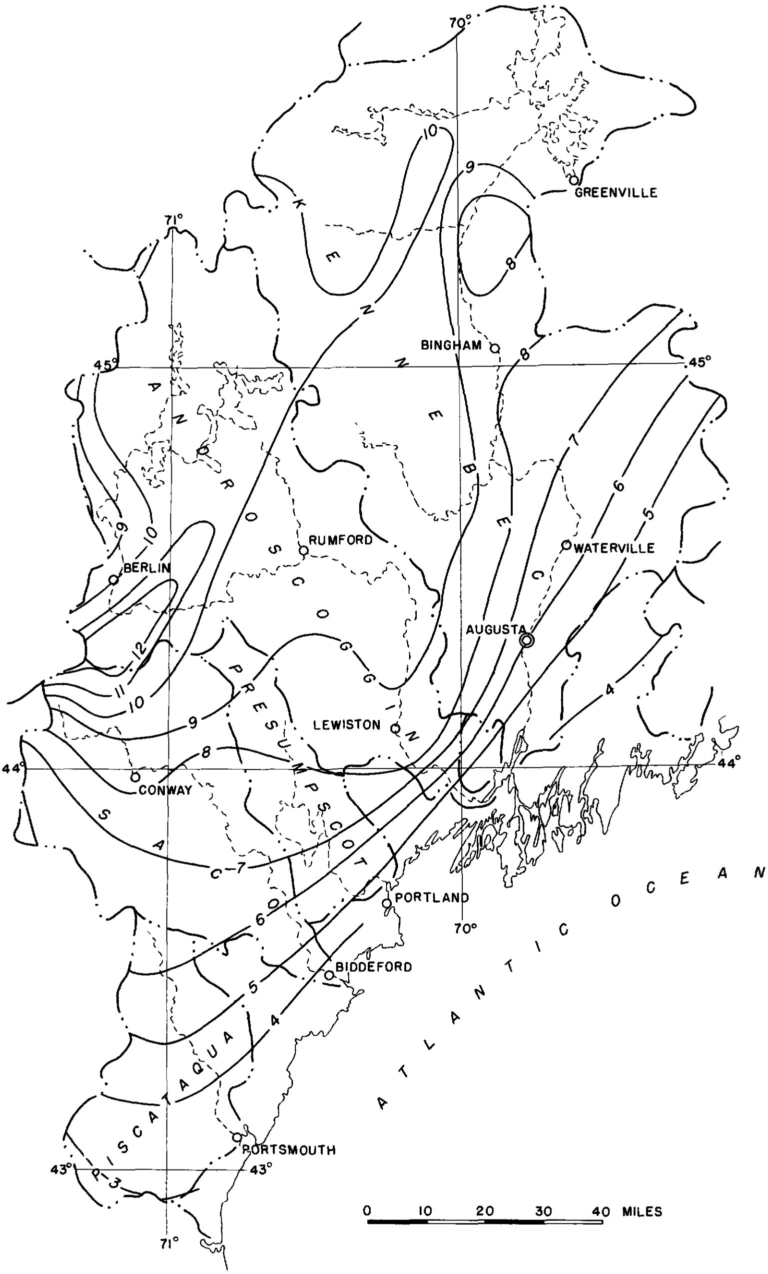


Figure 26.-Map of the drainage basins of the Kennebec River and intervening rivers to the Piscataqua River, showing the depth, in inches, of the water content of snow on the ground March 9, 1936.

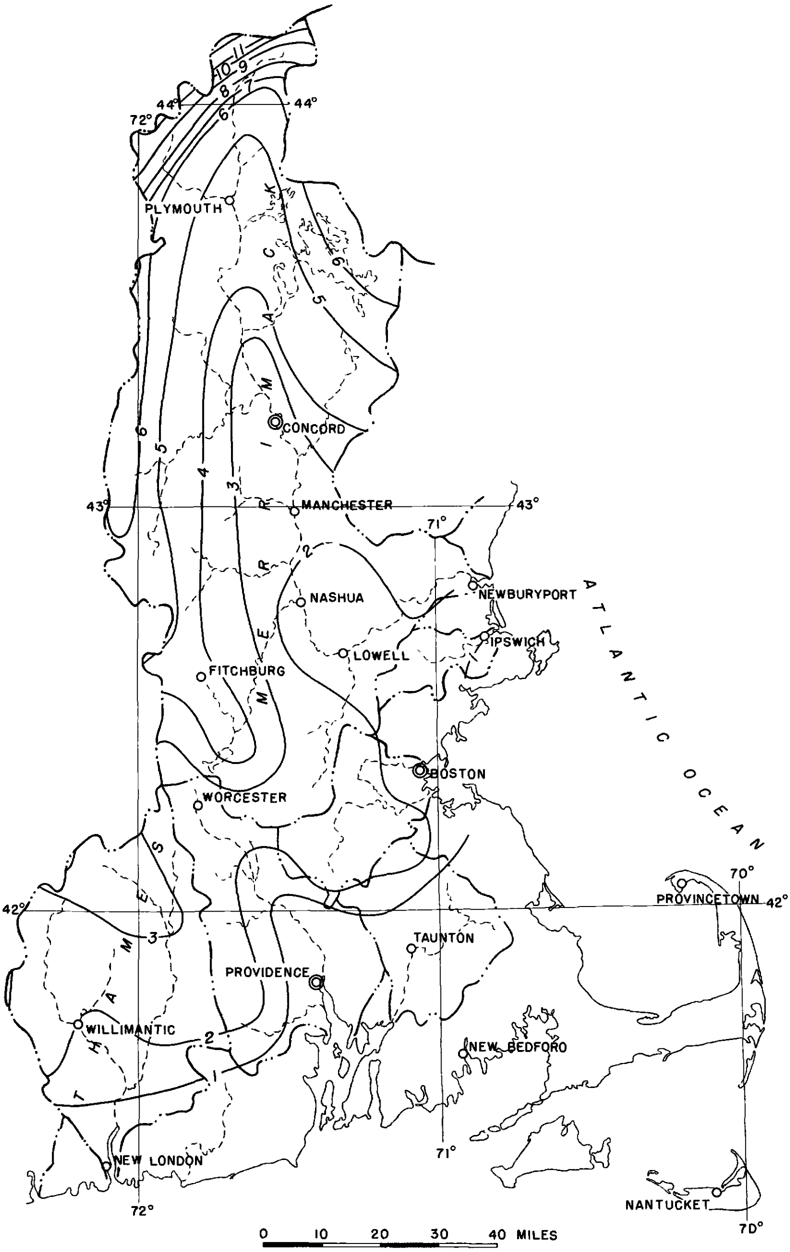


Figure 27.-Map of the drainage basins of the Merrimack River and intervening rivers to the Thames River, showing the depth, in inches, of the water content of snow on the ground March 9, 1936.

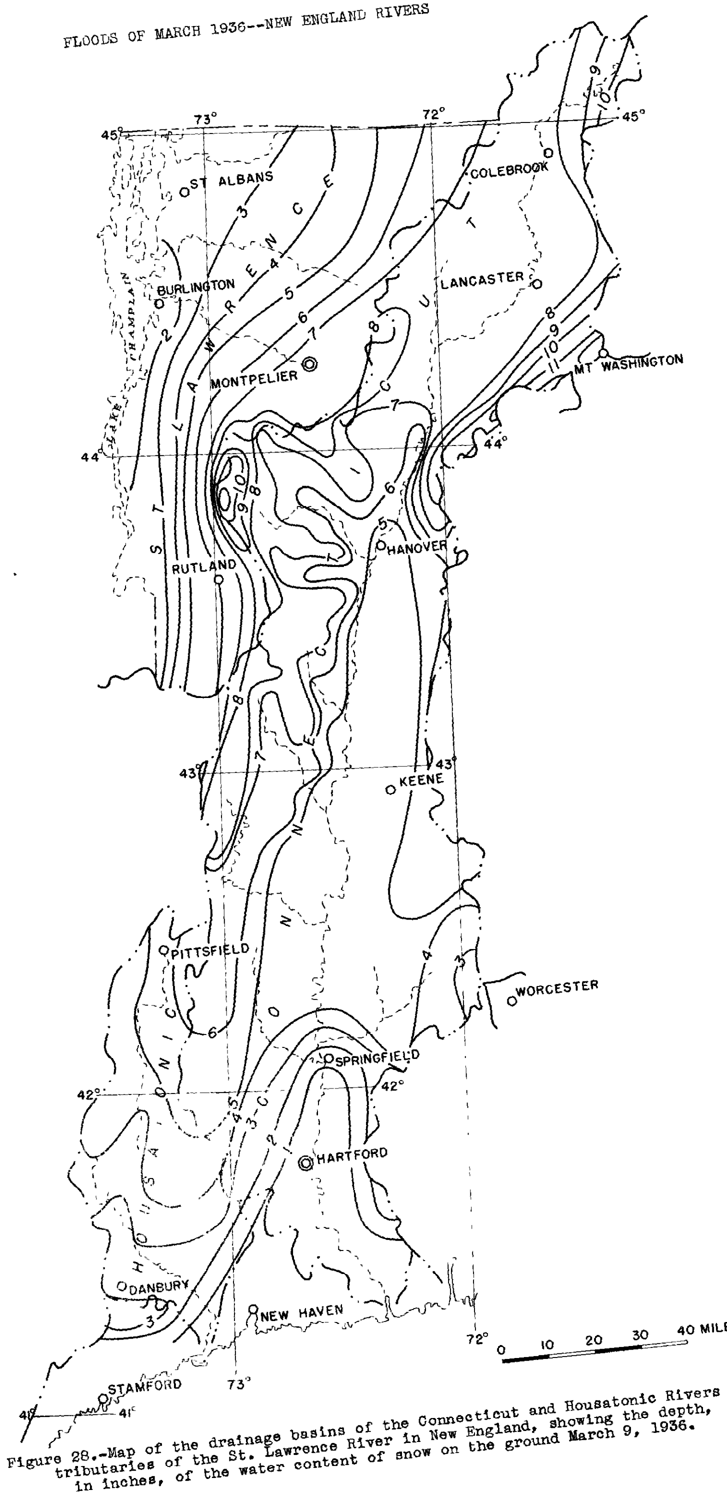


Figure 28.-Map of the drainage basins of the Connecticut and Housatonic Rivers and tributaries of the St. Lawrence River in New England, showing the depth, in inches, of the water content of snow on the ground March 9, 1936.

Table 4 .- Snow depth, in inches, on ground at indicated dates, 1936*
(Dashes indicate no observation)

Station	February				March				
	10	15	25	29	9	12	15	18	22
St. John River Basin									
Maine:									
Fort Fairfield	-	4	-	3	-	-	Tr.	-	-
Houlton	29	27	23	24	29	16	9	Tr.	0
Presque Isle	39	-	38	-	42	14	-	-	-
Squa Pan Dam	-	38	-	-	-	-	-	-	-
Penobscot River Basin									
Maine:									
Millinocket	-	37	-	34	-	-	34	-	-
Milo	-	-	-	19	-	-	-	-	-
Oldtown	-	17	-	4	-	-	Tr.	-	-
Orono	-	20	-	20	-	-	Tr.	-	-
Ripogenus	-	44	-	42	-	-	-	-	-
Kennebec River Basin									
Maine:									
Brassua Dam	-	37	-	-	-	-	24	-	-
Eustis	40	35	37	37	35	26	20	12	2
Farmington	-	44	-	40	-	-	15	-	-
Jackman	-	-	-	70	-	-	-	-	-
Madison	-	32	-	30	-	-	23	-	-
Winslow	-	-	-	-	-	0	-	-	-
Androscoggin River Basin									
New Hampshire:									
Berlin	41	43	32	32	22	12	-	-	-
Maine:									
Lewiston	-	31	-	19	-	-	4	-	-
Middledam	-	34	-	36	-	-	23	-	-
Rumford	22	24	26	24	18	12	5	Tr.	-
Upper Dam	-	35	-	37	-	-	29	-	-
Saco River Basin									
New Hampshire:									
Mount Washington	15	16	15	16	20	12	12	1	8
Pinkham Notch	50	48	48	46	48	36	33	24	16
Maine:									
Hiram	43	48	50	45	46	36	33	26	-
Merrimack River Basin									
New Hampshire:									
Franklin	-	28	-	24	18	-	12	-	-
Lincoln	28	30	28	25	26	24	18	9	-
Plymouth	35	35	31	24	20	13	9	4	0
Wolfeboro Falls	-	30	29	28	25	12	7	1	0
Massachusetts:									
Boylston	-	-	-	-	-	-	7	-	-
Concord	-	18	-	12	-	-	Tr.	-	-
Fitchburg	-	22	-	12	-	-	0	-	-
Haverhill	12	20	10	6	4	2	0	-	-
Haverhill (Kenoza Lake)	14	21	11	7	10	0	-	-	-
Lake Cochituate	-	-	-	-	10	-	0	-	-
Lawrence	-	26	-	8	-	-	-	-	-
Princeton	-	-	-	-	-	-	6	-	-
Sterling	-	-	-	-	-	-	6	-	-

* Data furnished by U. S. Weather Bureau.
Note.- Snow depth given to nearest inch.

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Table 4 .- Snow depth, in inches, on ground at indicated dates, 1936--Continued
(Dashes indicate no observation)

Station	February				March				
	10	15	25	29	9	12	15	18	22
Connecticut River Basin									
New Hampshire:									
Bethlehem	29	31	30	29	24	12	7	-	-
Dixville Notch	-	37	-	39	-	-	16	-	-
First Connecticut Lake	34	33	35	39	-	28	22	18	16
Glencliff	-	25	-	30	-	-	Tr.	-	-
Hanover	24	23	23	19	14	6	Tr.	Tr.	0
Keene	-	24	-	18	-	-	-	-	-
Lancaster	25	-	26	-	-	-	-	-	-
Newport	26	31	25	16	9	5	4	Tr.	0
West Lebanon	39	44	38	38	30	12	6	0	0
West Stewartstown	37	34	32	32	-	-	-	-	-
York Pond	-	37	-	35	-	-	24	-	-
Vermont:									
Bellows Falls	13	20	15	11	10	4	Tr.	Tr.	0
Bloomfield	50	46	39	38	31	12	7	3	2
Cavendish	34	42	37	32	29	16	9	4	Tr.
East Barnet	28	28	-	24	-	-	0	-	-
East Ryegate	27	31	30	-	32	24	-	-	-
McIndoes Falls	-	26	-	29	-	-	-	-	-
Newfane	-	-	24	15	15	-	-	-	-
Readsboro	25	37	30	21	16	14	12	-	-
Rochester	30	29	22	20	20	15	13	3	2
St. Johnsbury	27	25	25	23	19	10	6	Tr.	Tr.
Searsburg Mountain	-	42	-	38	-	-	25	-	-
Searsburg Station	-	35	-	32	-	-	25	-	-
Somerset	-	36	-	32	-	-	29	-	-
West Burke	-	30	-	34	-	-	18	-	-
White River Junction	17	18	16	9	3	Tr.	Tr.	Tr.	0
Whitingham	-	28	-	24	-	-	0	-	-
Wilder	17	22	20	15	12	-	6	-	-
Wilmington	-	35	-	29	-	-	19	-	-
Woodstock	-	30	-	-	-	-	12	-	-
Massachusetts:									
Amherst	-	-	-	17	-	-	0	-	-
Greenfield	18	37	20	-	-	-	0	-	-
Holyoke	19	25	22	18	16	6	Tr.	0	0
Hoosac Tunnel	19	30	20	-	18	7	6	3	-
Petersham	-	-	-	-	-	-	Tr.	-	-
Shelburne Falls	28	42	31	26	16	7	5	2	-
Springfield	16	26	20	10	4	0	0	0	0
Turners Falls	-	30	-	12	-	-	6	-	-
Westfield	-	8	-	9	-	-	-	-	-
West Rutland	-	Tr.	-	-	-	-	-	-	-
Connecticut:									
Colchester	-	9	-	6	4	-	0	-	-
Collinsville	14	19	14	11	7	1	Tr.	0	0
East Hartland	-	-	-	15	-	-	-	-	-
Hartford	-	-	-	10	5	-	-	-	-
Housatonic River Basin									
Massachusetts:									
Stockbridge	-	-	-	13	6	-	0	-	-
Connecticut:									
Cream Hill	21	28	24	18	15	4	2	-	-
Falls Village	-	24	-	12	-	-	0	-	-
Salisbury	17	22	14	13	10	Tr.	Tr.	Tr.	-
Waterbury	11	14	9	3	-	-	-	-	-
St. Lawrence River Basin									
Vermont:									
Burlington	-	-	-	7	-	-	-	-	-
Cornwall	-	8	-	-	-	-	0	-	-
Enosburg Falls	19	20	22	19	6	Tr.	Tr.	Tr.	2
Northfield	-	-	-	22	-	-	-	-	-

Note.- Snow depth given to nearest inch.

Table 4 .- Snow depth, in inches, on ground at indicated dates, 1936--Continued
(Dashes indicate no observation)

Station	February				March				
	10	15	25	29	9	12	15	18	22
Minor Basins									
Maine:									
Bar Harbor	14	16	8	8	14	-	Tr.	-	-
Eastport	-	-	-	2	-	-	-	-	-
North Bridgton	-	35	-	34	-	-	18	-	-
Portland	-	-	-	10	-	-	-	-	-
Woodland	-	12	4	3	6	Tr.	Tr.	0	-
New Hampshire:									
Durham	-	20	21	19	20	-	Tr.	-	-
Massachusetts:									
Blue Hill Observatory	12	20	13	11	6	Tr.	-	-	-
Boston	6	12	4	1	Tr.	0	0	0	0
Brockton	8	12	3	1	-	-	-	-	-
East Wareham	Tr.	4	2	Tr.	-	-	-	-	-
Fall River	3	6	2	2	Tr.	-	0	-	-
Gloucester	7	16	9	6	3	Tr.	0	-	-
Hyannis	-	2	-	-	-	-	-	-	-
Milbury	12	19	13	6	5	0	-	-	-
Nantucket	0	Tr.	0	0	0	0	0	0	0
New Bedford	-	5	-	-	-	-	-	-	-
Provincetown	1	5	1	-	-	-	-	-	-
Swampscott	11	20	8	4	3	Tr.	Tr.	-	-
Taunton	-	6	-	2	-	-	-	-	-
Weston College	13	18	10	6	4	0	-	-	-
Worcester	-	19	-	11	10	Tr.	Tr.	0	0
Worcester (Clark University)	12	20	14	8	7	Tr.	0	0	0
Rhode Island:									
Kingston	1	4	Tr.	Tr.	0	-	-	-	-
Pawtucket	-	7	-	7	-	-	2	-	-
Providence	-	-	-	1	-	-	-	-	-
Connecticut:									
Bridgeport	6	8	4	3	1	Tr.	Tr.	0	0
Mount Carmel	12	14	11	8	5	0	0	0	0
New Haven	4	8	6	2	Tr.	0	0	0	0
New London	1	3	Tr.	Tr.	-	0	0	-	-
Norwalk	-	14	-	11	-	-	0	-	-
Old Greenwich	9	12	6	2	Tr.	0	0	0	0
Storrs	8	12	8	5	4	Tr.	-	-	-
New York (Long Island):									
Bridgehampton	Tr.	3	1	Tr.	0	0	0	0	0
Cutchogue	2	6	2	Tr.	0	0	0	0	0
Flushing	2	4	2	1	0	0	0	0	0

Note.- Snow depth given to nearest inch.

Table 5 .- Snow depth, in inches, and water content, in inches, at indicated dates, 1936

Point of measurement	Date	Snow depth	Water content
Kennebec River Basin			
Jackman, Maine (on Moose River at confluence with Sandy Stream)	*Feb. 1	34.8	7.44
	*Mar. 6,7,8	36.6	9.73
Parlin, Maine (headwaters of Parlin Stream)	*Feb. 1	36.6	8.19
	*Mar. 6,7,8	45.3	12.11
Brassua, Maine (on Moose River between Long Pond and Brassua Lake)	*Feb. 1	33.0	7.44
	*Mar. 6,7,8	37.3	9.83
Tarratine, Maine (near mouth of Misery Stream)	*Mar. 6,7,8	37.5	9.82
Rookwood, Maine (near west outlet of Moosehead Lake)	*Feb. 1	31.6	6.85
	*Mar. 6,7,8	38.1	9.34
Greenville, Maine (near southern end of Moosehead Lake)	*Mar. 6,7,8	38.1	9.34
Moosehead, Maine (outlet of Moosehead Lake)	*Feb. 1	32.8	7.05
The Forks, Maine (confluence of Dead and Kennebec Rivers)	*Feb. 1	29.2	5.80
	*Mar. 6,7,8	33.7	7.90
	†Mar. 10	29.2	7.41
North Anson, Maine (confluence of Carrabasset and Kennebec Rivers)	†Mar. 10	28.0	7.64
Mercer, Maine (on Bog Stream 2 miles above confluence with Sandy Stream)	†Mar. 10	34.5	9.05
Pittsfield, Maine (on Sebasticook River just below Douglas Pond)	†Mar. 10	19.9	6.04
Androscoggin River Basin			
Androscoggin and Kennebec Divide in Rangeley Lake Section, Maine	‡Mar. 6	50	13.2
Rangeley, Maine (eastern end of Rangeley Lake)	‡Mar. 6	39	10.5
Dodge Hill Pond, Maine (north side of Rangeley Lake)	‡Mar. 6	38	8.8
Upper Dam, Maine (between Mooselookmeguntic and Upper Richardson Lakes)	‡Feb. 16	35	6.88
	‡Mar. 1	37	10.31
	‡Mar. 23	18	6.25
Middledam, Maine (near outlet of Lower Richardson Lake above Rapid River)	‡Feb. 16	35	6.88
	‡Mar. 1	37	10.31
	‡Mar. 23	18	6.25
Parmachenee, Maine (on Magalloway River in Lynchtown Township)	‡Feb. 16	37	9.16
Aziscohos Dam, Maine (outlet of Aziscohos Lake)	‡Feb. 16	35	8.75
	‡Mar. 1	37	7.81
	‡Mar. 23	13.5	5.0
Near Errol, N. H. (near confluence of Clear Stream and Androscoggin River)	‡Feb. 16	39.5	9.69
	‡Mar. 1	42	10.00
	‡Mar. 23	19	6.88
Near Pontook Reservoir, N. H. (on Androscoggin River 5 miles above Milan)	‡Feb. 16	35	7.81
	‡Mar. 1	38	8.75
	‡Mar. 23	18	6.56
Near Milan, N. H. (near confluence of Leavitt Stream and Androscoggin River)	‡Jan. 21-23	34	5.5
	‡Mar. 4-6	33	8.5
Near Gorham, N. H. (near confluence of Moose and Androscoggin Rivers)	‡Jan. 21-23	29	5.4
	‡Mar. 4-6	36	10.9
	‡Mar. 16	Tr.	-
Pinkham Notch, N. H. (headwaters of Ellis River, tributary to Saco River, and Peabody River, tributary to Androscoggin River)	‡Jan. 21-23	48	9.1
	‡Mar. 4-6	63	18.9
Civilian Conservation Corps camp near Pinkham Notch, N. H. (headwaters of Ellis River, tributary to Saco River)	‡Jan. 21-23	47	8.0
	‡Mar. 4-6	37	11.4
	‡Mar. 16	24	8.8
Gilead, Maine (on Wild River just above confluence with Androscoggin River)	‡Jan. 21-23	34	5.4
	‡Mar. 4-6	41	10.3
	‡Mar. 16	Tr.	-
Bethel, Maine (just above confluence of Kendall Brook and Androscoggin River)	‡Jan. 21-23	32	5.6
	‡Mar. 4-6	41	9.7
	‡Mar. 16	29	8.8
Grafton Notch, Maine (headwaters of Bear River, tributary to Androscoggin River)	‡Jan. 21-23	36	6.1
	‡Mar. 4-6	46	11.5

*Observation made by Kennebec Water Power Co.
†Observation made by U.S. Geological Survey.
‡Observation made by Union Water Power Co.

Table 5 .- Snow depth, in inches, and water content, in inches, at indicated dates, 1936--Continued

Point of measurement	Date	Snow depth	Water content
Androscoggin River Basin--Continued			
Screwauger Falls, Maine (on Bear River 2 miles above confluence with Androscoggin River)	‡Jan. 21-23	37	6.6
	‡Mar. 4-6	36	8.8
Newry, Maine (on Bear River just above confluence with Androscoggin River)	‡Jan. 21-23	31	5.2
	‡Mar. 4-6	40	9.9
	‡Mar. 16	30	9.3
Andover, Maine (just below confluence of West Branch of Ellis River and Ellis River)	‡Jan. 21-23	31	5.6
	‡Mar. 4-6	38	9.0
	‡Mar. 16	24	7.5
North Rumford, Maine (just below confluence of Pleasure Brook and Ellis River)	‡Jan. 21-23	27	5.0
	‡Mar. 4-6	37	7.9
	‡Mar. 16	26	8.2
Rumford, Maine (one-half mile above confluence of Swift and Androscoggin Rivers)	‡Jan. 21-23	27.5	5.2
	**Feb. 8	16	7.02
	‡Mar. 4-6	37	9.2
	**Mar. 15	5.5	2.71
	‡Mar. 16	22	6.6
Houghton, Maine (headwaters of Swift River just below junction with West Brook)	‡Jan. 21-23	30	5.7
	‡Mar. 4-6	38	9.7
Roxbury, Maine (on Swift River 1 mile above mouth of Walker Brook)	†Mar. 10	28.8	7.11
Fry, Maine (on Swift River 1½ miles below confluence with Birch Brook)	‡Jan. 21-23	29	5.4
	‡Mar. 4-6	35	8.2
Weld, Maine (on Houghton Brook 1 mile above inlet to Lake Webb)	‡Mar. 4-6	36	8.4
Dixfield, Maine (confluence of Webb and Androscoggin Rivers)	‡Jan. 21-23	29	5.6
	‡Mar. 4-6	37	8.8
Peru, Maine (confluence of Upper Stony Brook and Androscoggin River)	‡Jan. 21-23	27	5.15
	‡Mar. 4-6	39	9.2
	‡Mar. 16	23	7.1
Canton, Maine (on Whitney Brook near outlet of Lake Anasoguntlcook)	‡Jan. 21-23	27	5.1
	‡Mar. 4-6	39	9.6
	‡Mar. 16	19	5.4
Jay, Maine (on Androscoggin River about 2 miles below confluence with Sevenmile Creek)	‡Jan. 21-23	28.5	5.25
	‡Mar. 4-6	38	8.4
Livermore, Maine (near confluence of Ford Brook and Martin Stream)	‡Jan. 21-23	26	5.65
	‡Mar. 4-6	41	9.2
	‡Mar. 16	29	8.5
Turner, Maine (on Nezinscot River 3 miles above confluence with Androscoggin River)	‡Jan. 21-23	28.5	4.9
	‡Mar. 4-6	38	4.9
South Paris, Maine (on Little Androscoggin River just above confluence with Stoney Brook)	‡Jan. 21-23	29	5.3
	‡Mar. 4-6	38	8.3
Lewiston, Maine (confluence of Little Androscoggin and Androscoggin Rivers)	‡Jan. 21-23	19	4.9
Saco River Basin			
Civilian Conservation Corps camp near Pinkham Notch, N. H. (headwaters of Ellis River)	‡Jan. 21-23	47	8.0
	‡Mar. 4-6	37	11.4
	‡Mar. 16	24	8.8
Conway, N. H. (confluence of Swift and Saco Rivers)	†Mar. 10	31.2	8.30
*Merrimack River Basin			
Red Hill Pond near Sandwich, N. H. (headwaters of Red Hill River)	Mar. 6	27	5.7
Head of Round Pond near Center Harbor, N. H.	Mar. 6	24	4.7
Head of Long Pond (tributary to Lake Waukewan) near West Center Harbor, N. H.	Mar. 6	30	7.0
Meredith Neck near Meredith, N. H. (northwest side of Lake Winnipesaukee)	Mar. 6	25	6.3
Ossipee Park, N. H. (headwaters of Shannon Brook, tributary to Moultonboro Bay, Lake Winnipesaukee)	Mar. 6	23	4.3

*Observations made by New England Power Co. and New England Power Association unless otherwise noted.
**Observation made by Rumford Falls Power Co.
†Observation made by U. S. Geological Survey.
‡Observation made by Union Water Power Co.

Table 5 .- Snow depth, in inches, and water content, in inches, at indicated dates, 1936--Continued

Point of measurement	Date	Snow depth	Water content
*Merrimack River Basin--Continued			
Tuftonboro, N. H. (headwaters of Melvin River, tributary to Moultonboro Bay, Lake Winnipesaukee)	Mar. 6	27	6.2
Between Mirror Lake and Winter Harbor near Tuftonboro Neck, east side of Lake Winnipesaukee	Mar. 6	21	4.2
North Wolfboro, N. H. (headwaters of Wiley Brook, tributary to Lake Wentworth)	Mar. 6	32	7.1
Ryefield Brook near East Wolfboro (tributary to Lake Wentworth)	Mar. 6	29	6.4
Shaw's Pond near South Wolfboro, N. H. (headwaters of Beaver Brook, tributary to Lake Winnipesaukee)	Mar. 6	29	5.8
New Durham, N. H. (on Merrymeeting River, tributary to Alton Bay, Lake Winnipesaukee)	Mar. 6	22	4.0
Loon Cover, N. H. (on Lake Winnipesaukee at Alton Bay)	Mar. 6	25	5.5
Southwest side of Lake Winnipesaukee	Mar. 6	24	4.2
*Connecticut River Basin			
First Connecticut Lake near Pittsburg, N. H. (near headwaters of Connecticut River)	Feb. 29	28	9.0
	Mar. 15	24	8.4
Dixville Notch, N. H. (near headwaters of Mohawk River)	Feb. 15	43	10.5
Dummer, N. H. (3½ miles north of Crystal railroad station, on Phillips Brook)	Feb. 15	35	7.2
York Pond near Berlin, N. H. (near headwaters of West Branch of Upper Ammonoosuc River)	Mar. 1	35	8.0
F. D. Comerford Hydro-electric Plant near Barnet, Vt. (near confluence of Connecticut and Passumpsic Rivers)	Mar. 1	26	7.5
Near Bethlehem, N. H. (Lower Ammonoosuc River)	Mar. 9	25	5.0
	Mar. 9	27	6.1
Bretton Woods near Mount Washington, N. H.	Mar. 9	41	12.3
Near Franconia Notch, N. H.	Mar. 9	36	10.5
	Mar. 9	28	6.7
	Mar. 9	40	11.5
Near Mount Moosilauke, N. H.	Mar. 9	22	5.5
	Mar. 9	28	6.0
Wells River near headwaters, Vt.	Mar. 11	32	8.0
Wells River at Rickers Pond, Vt.	Mar. 11	30	7.2
On divide between Wells River and Waits River, Vt.	Mar. 11	32	8.8
Waits River in vicinity of West Topsham, Vt.	Mar. 11	22	5.7
Tabor Branch of Waits River near East Topsham, Vt.	Mar. 11	29	7.2
Waits River 2 miles west of Corinth Village, Vt.	Mar. 11	26	6.5
South Branch of Waits River, Vt.	Mar. 11	23	5.7
Near Fairlee, Vt. (headwaters Ompompanoosuc River)	Mar. 2-4	25	6.6
Near Strafford, Vt. (near headwaters of West Branch of Ompompanoosuc River)	Mar. 2-4	29	7.5
Near Thetford, Vt. (near mouth of Ompompanoosuc River)	Mar. 2-4	23	5.2
Headwaters of White River, Vt.	Mar. 2-4	34	8.5
	Mar. 2-4	39	10.0
Near Goshen, Vt. (headwaters of Brandon Brook, tributary to West Branch of White River)	Mar. 2-4	42	11.0
Near Rochester, Vt. (West Branch of White River near confluence with White River)	Mar. 2-4	33	7.2
Near Gaysville, Vt. (White River near confluence with Third Branch of White River)	Mar. 2-4	26	5.2
Headwaters of Third Branch of White River, Vt.	Mar. 2-4	32	6.5
	Mar. 2-4	33	8.1
Near Randolph, Vt. (Second Branch of White River)	Mar. 2-4	23	5.1
Near Randolph, Vt. (near confluence of Third Branch of White River and Ayers Brook)	Mar. 2-4	29	6.6
Headwaters of Second Branch of White River, Vt.	Mar. 2-4	29	7.1
Headwaters of First Branch of White River, Vt.	Mar. 2-4	24	4.6
Near Barnard, Vt. (White River near Silver Lake)	Mar. 2-4	33	8.4
Near North Sherburne, Vt. (on divide between Ottauquechee and White Rivers)	Mar. 2-4	31	6.8
Ottauquechee River near Pomfret, Vt.	Mar. 2-4	29	7.2
Ottauquechee River near Woodstock, Vt.	Mar. 2-4	29	6.6
Ottauquechee River near Quechee Gulf, Vt.	Mar. 2-4	23	5.5

*Observations made by New England Power Co. and New England Power Association unless otherwise noted.

Table 5 .- Snow depth, in inches, and water content, in inches, at indicated dates, 1936--Continued

Point of measurement	Date	Snow depth	Water content
*Connecticut River Basin--Continued			
Mascoma River between Canaan and Dorchester, N. H.	Mar. 5	27	6.9
Mascoma River 5 miles north of Canaan, N. H.	Mar. 5	27	6.8
Mascoma River 5 miles east of Norwich, Vt.	Mar. 5	26	6.0
Mascoma River near Crystal Lake, Lockehaven, N. H.	Mar. 5	23	4.5
Little Brook near Enfield, N. H.	Mar. 5	23	5.8
South end of Sunapee Lake, N. H.	Feb. 27-28	29	6.6
Sugar River Basin near Stocker Pond, N. H.	Mar. 5	25	5.0
Sugar River Basin near Stocker Pond, N. H.	Mar. 5	25	5.6
Sugar River, South Branch, 7 miles south of Newport, N. H.	Feb. 27-28	27	4.6
Croydon Brook 4 miles north of Newport, N. H.	Feb. 27-28	24	4.5
Sugar River 4 miles northeast of Claremont, N. H.	Feb. 27-28	23	4.6
Little Sugar River near North Charlestown, N. H.	Feb. 27-28	27	4.9
Headwaters of Black River, Vt.	Feb. 27-28	26	6.3
Head of Twentymile Stream between Reading and Cavendish, Vt.	Feb. 27-28	29	7.2
Black River at confluence with North Branch, Vt.	Feb. 27-28	26	5.8
Black River near Springfield, Vt., 7 miles west of Connecticut River	Feb. 27-28	22	5.1
Black River near Springfield, Vt., 7 miles west of Connecticut River	Feb. 27-28	24	6.0
Headwaters of Williams River, Vt.	Feb. 27-28	30	7.4
	Feb. 27-28	35	9.7
Williams River near Chester, Vt.	Feb. 27-28	24	5.9
Headwaters of South Branch of Williams River, Vt.	Feb. 25	28	6.4
Williams River near Bartonsville, Vt.	Feb. 27-28	20	5.4
South Branch of Saxtons River 6 miles west of Saxtons River, Vt.	Feb. 25	26	5.7
Saxtons River near Bellows Falls, Vt.	Feb. 25	25	4.5
Cold River near headwaters, N. H.	Feb. 27-28	25	4.4
Cold River at Lake Warren, N. H.	Feb. 27-28	26	4.3
Headwaters of West River, Vt.	Feb. 25	25	6.1
Headwaters of West River, Vt.	Feb. 27-28	36	9.9
Headwaters of West River near Londonderry, Vt.	Feb. 25	31	7.5
	Feb. 25	26	6.2
West River near Windham, Vt.	Feb. 25	29	7.2
Headwaters of North Branch of West River, Vt.	Feb. 25	27	6.7
West River 5 miles northeast of Manchester, Vt.	Feb. 25	35	8.0
Headwaters of Whetstone Brook, tributary of West River, Vt.	Feb. 25	30	7.4
West River Basin between Athens and Brookline, Vt.	Feb. 25	27	6.3
Headwaters of Wardsboro Brook, tributary of West River, Vt.	Feb. 25	28	6.9
West River near U. S. Geological Survey gage near Newfane, Vt.	Feb. 25	23	4.3
West River Basin 7 miles west of Newfane, Vt.	Feb. 25	27	6.4
West River Basin 6 miles northwest of Brattleboro, Vt.	Feb. 25	25	5.2
West River Basin 9 miles west of Brattleboro, Vt.	Feb. 25	27	6.6
Somerset Reservoir near Somerset, Vt. (headwaters of East Branch of Deerfield River)	Mar. 1	32	8.4
Searsburg Mountain near Searsburg, Vt.	Mar. 1	38	10.2
Near West Dover, Vt., on Ellis Brook, tributary to North Branch of Deerfield River	Mar. 1	29	4.7
Near Searsburg, Vt. (near confluence of East Branch and Deerfield Rivers)	Mar. 1	32	5.7
Harriman Reservoir at Davis Bridge, Vt.	Mar. 1	24	4.7
A quarter of a mile west of prison camp near Hubbardston, Mass. (headwaters of Ware River)	†Mar. 18	11.5	2.7
Asneconick Pond near East Hubbardston, Mass. (tributary to Ware River)	†Mar. 18	11.5	2.4
Long Pond near West Rutland, Mass. (headwaters of Longmeadow Brook, tributary to Ware River)	†Mar. 18	15	3.4
Cold Brook, Mass. (near confluence of Potash Brook and Ware River)	†Mar. 18	15	3.1
Oakham, Mass. (headwaters of Five Mile River, tributary of Quaboag River)	†Mar. 18	15	3.4
*St. Lawrence River Basin			
Peacham Pond near Peacham, Vt. (headwaters of Stevens Branch of Winooski River)	Mar. 11	35	8.6

*Observations made by New England Power Co. and New England Power Association unless otherwise noted.
†Observation made by Metropolitan District Water Supply Commission.

stations daily records were available throughout the winter. Only a part of the period covered by the daily records is incorporated in the table.

Apparently none of the cooperative observers make periodic determinations of the water content of the snow. The snow depths may be approximately translated into equivalent water depths by using results of snow surveys made by power companies and other organizations.

Water-content surveys.- In connection with the operation of storage reservoirs and power plants, the Union Water Power Co., the New England Power Co., the New England Power Association, the Rumford Falls Power Co., the Kennebec Water Power Co., the Metropolitan District Water Supply Commission, the district office of the United States Geological Survey at Augusta, Maine, and other agencies have been carrying on a program of snow surveys in New England for several years. These surveys have been chiefly confined to headwater areas of the Connecticut, Merrimack, Saco, Androscoggin, Kennebec, and Penobscot Rivers. The equipment developed and methods employed are the results of experience gained through several years of operation and in the opinion of the respective power companies give consistent results. No data on the water content of the snow in Connecticut are available except an observation made by the United States Weather Bureau at Hartford, where the water content of the snow on February 24 was found to be 4.3 inches. It was estimated that this water content was reduced to 3 inches before the first flood. Table 5 gives the approximate location and the results of observations of snow depth and water content made by various organizations during the later part of February and during March.

Temperature

Temperature played a very important part in the development of the floods of March 1936. Figure 29 shows the daily maximum, the daily minimum, and the accumulated departure of mean monthly temperature from the normal at four Weather Bureau stations - Rumford, Maine; St. Johnsbury, Vt.; Lawrence, Mass.; and Cream Hill, Conn. Several facts having a bearing on the floods are noticeable from these records: First, beginning with December and continuing through February temperatures, in general, were below normal; second, the long period during which there was little if any thawing; and third, the absence of temperatures high enough to cause any "break-up" prior to the first storm. At the northern stations the maximum temperature rarely exceeded 40° and the minimum temperature rarely exceeded 32° F. during the entire period December 1 to March 9.

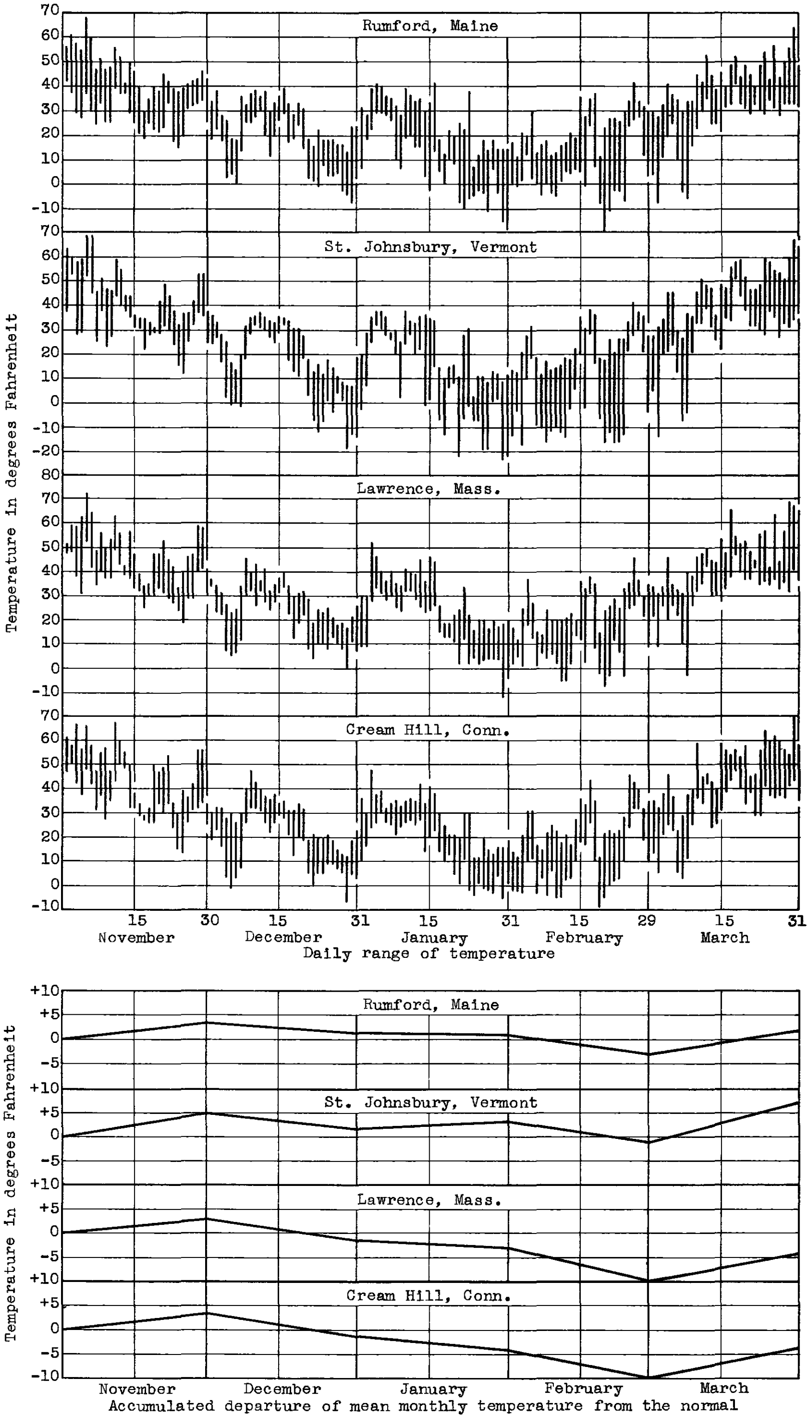

Figure 29.-Daily range of temperature and accumulated departure of mean monthly temperature from the normal at various places in New England for the period November 1, 1935, to March 31, 1936.

At the southern stations there was some thawing during the first half of January, followed by 6 weeks of continuously cold weather, broken only by an occasional melting in the middle of the day. These temperature conditions indicate, first, that over much of northern New England, except for the evaporation from the snow and an indeterminate amount of thawing next to the ground surface, a considerable part of the precipitation that fell in the form of snow during the period December 1 to March 9 was on the surface of the ground at the beginning of the widespread storm period; second, that in areas where there was moisture in the soil not protected by a layer of snow, temperatures were so low that frost would inevitably form to considerable depths; and, third, that the alternate minor thawing and severe freezing, shown by the records at the southern stations, tended to form alternate layers of crust having a high water content. All these conditions were conducive to high rates of run-off when followed by the unusually high temperatures that prevailed from March 10 to 31, accompanied by heavy rains. To some extent, therefore, the ground work for the March flood is seen to have been laid as early as December. The flood situation was further aggravated by the breaking up of channel ice, which led to ice jams and gorges that raised flood stages above those needed for the passage of water down channels unobstructed with ice. This feature was especially noticeable in the Maine rivers, where ice as much as 40 inches thick broke and caused repeated jams. Even in southern New England there was thick ice in the rivers, as indicated by a report of the United States Weather Bureau which stated that there was a 15-inch ice cover on the Connecticut River at Hartford, Conn., on March 9.

Frost in the ground

As the temperatures were, in general, below normal throughout New England during the greater part of December, January, and February and remained so until about March 9, it would seem that, other things being equal, conditions for producing frozen ground prior to the floods were more than normally severe. The protection from freezing that the ground may have derived from the snow cover was so variable, however, that general conclusions regarding departures from normal may be meaningless. From the frost observations collected and incorporated in this report (see tables 6, 7, and 8) the general conclusion may be drawn that where heavy snow cover came early in the season and persisted throughout the winter there was little frost, at least near the ground surface, but that in areas with light snow cover or where the heavy snow cover came late frost was

A. BOND BROOK, TRIBUTARY TO KENNEBEC RIVER, AT AUGUSTA, MAINE, ON MARCH 12, 1936.

Typical of conditions on small streams in this vicinity.

B. CRAWFORD NOTCH ON MARCH 12, 1936, FILLED WITH SLUSH FROM THE MOUNTAIN SIDES.

Courtesy of White Mountain Studio, Littleton, N. H.

present to a large degree. So far as the presence of frost affects infiltration rates and run-off, consideration should be given to the possibility that in some areas, at least, a thin impervious stratum of earth and frozen moisture may have effectively retarded infiltration and increased surface run-off. Accurate frost observations are almost wholly lacking in New England, and, as discussed under "Rainfall and run-off studies" the relatively high amount of run-off as compared to the total water available may indicate that, although the surface of the ground was free from frost in some areas at the time of the flood, the underlying strata were frozen, thus increasing rates of surface run-off and correspondingly diminishing recharge to the ground-water table. The absence of detailed frost data constitutes a serious deficiency in meteorologic information in studying in detail the causes of New England floods. The following observations and estimates of frost conditions are submitted in order that they may be available for use in a more complete analysis of the floods. The estimates given for Massachusetts, New Hampshire, and Vermont were obtained from superintendents of cemeteries. As it is general practice to have cemeteries in gravelly and sandy soils and in open areas, these data may not be representative of other types of soil or of wooded or more sheltered places.

Maine

M. R. Stackpole, district engineer of the Geological Survey at Augusta, Maine, made many inquiries regarding frost conditions before and after the floods. In general it was reported that there was practically no frost in the ground in the wooded sections, because of the early falls of snow at the beginning of winter, but that in the open country the frost ranged from a few inches to a foot or more in depth, depending upon the type of soil. The superintendent of the water district in the town of Yarmouth, 12 miles north of Portland, reported that the frost depth in the highway was 42 inches before the floods and 15 inches after the floods. The soil is clay, and there is much exposed ledge. The road commissioner at Oxford, in the Androscoggin River Basin, reported not more than 14 to 16 inches of frost in the fields before the floods and but little afterward.

While making snow measurements in the vicinity of Rumford just before the floods, the district engineer found that the snow tube, when used in the wooded sections, usually picked up mud, which was contrary to usual conditions for that time of the year. Usually ice about 1 inch thick has been found on the ground under the snow. However, he says that there may have been frost lower down. Table 6 gives frost notes from certain places in the Kennebec, Androscoggin, and Saco River Basins just before the floods.

Table 6.- Frost conditions at indicated places in Maine prior to floods of March 1936

River basin	Town	Frost conditions	Remarks
Kennebec River Basin			
Dead River	Eustis	None in woods	Woods
Dead River	Stratton	do.	Do.
Carrabassett River	Kingfield	do.	Mostly woods
Carrabassett River	East New Portland	None in woods, some in fields	Half woods
Sandy River	Phillips	Only traces in woods	Mostly woods
Sandy River	West Farmington	None in woods	Mostly fields
Sandy River	Farmington Falls	None in woods, 12 inches in fields	Half fields
Kennebec River	Norridgewock	None in fields	Do.
Kennebec River	Skowhegan	Frozen swamp able to support $1\frac{1}{2}$-ton truck	Mostly fields
Sebasticook River	Harmony	None in fields	Half fields
Sebasticook River	St. Albans	2 inches in field	Mostly fields
Sebasticook River	Pittsfield	None in woods	Do.
Sebasticook River	Plymouth	Only traces in field	Half fields
Sebasticook River	Newport	6 to 24 inches in cemetery, 24 inches on plowed side of road, and 3 inches in field	Mostly fields
Sebasticook River	Burnham Junction	None in woods	Half fields
Androscoggin River Basin			
Androscoggin River	Livermore	6 inches in woods	Half woods
Androscoggin River	Lisbon	24 inches in sodded ground	Open country
Saco River Basin			
Saco River	Fryeburg	Practically no frost	Mostly woods
Moose Pond Brook	Denmark	do.	Do.

Table 6.- Frost conditions at indicated places in Maine prior to floods of March 1936 - Continued

River basin	Town	Frost conditions	Remarks
Saco River Basin - Con.			
Ossipee River	Kezar Falls	Not much except in highways	Mostly woods
Saco River	Cornish	Not over 12 inches; none in many places	Do.
Saco River	Steep Falls	6 to 8 inches in places; none in others	Mostly fields
Saco River	West Buxton	6 inches in places; none in others	Do.
Saco River	Biddeford	Little if any	Open country

Massachusetts, New Hampshire, and Vermont

Table 7 gives estimated depths of frost as obtained by H. B. Kinnison, district engineer of the Geological Survey at Boston, Mass., from the superintendents of cemeteries in the cities indicated.

Table 7.- Depth of frost, in inches, in Massachusetts, New Hampshire, and Vermont, at indicated places and dates, 1936

Location	Time of observation			Date of disappearance
	During winter*	March 10	March 20	
Athol, Mass.	12	12	0	Mar. 18
Brookfield, Mass.	36	10	0	Mar. 18
Clinton, Mass.	36	36	-	Apr. 10
Hadley, Mass.	36	20	0	Mar. 18
Huntington, Mass.	20	20	0	Mar. 18
Leominster, Mass.	27	27	-	Apr. 1
Lowell, Mass.	30	30	2	Apr. 1
Palmer, Mass.	42	30	6	Mar. 20
Sturbridge, Mass.	18	-	-	Mar. 20
Taunton, Mass.	35	2	0	Mar. 12
Worcester, Mass.	14	-	0	Mar. 18
Lisbon, N. H.	30	24	6	Apr. 1
Manchester, N. H.	36	18	0	Mar. 18
Nashua, N. H.	30	-	9	Mar. 20
Whitefield, N. H.	20	16	6	Apr. 10

* Date not designated.

DETERMINATION OF FLOOD DISCHARGES

General discussion

The general method employed by the Geological Survey in the determination of river discharge and the collection of records of stream flow consists of the determination of a stage-discharge rating by means of current-meter measurements of discharge at various stages from low water to high water and the application of this rating to the records of stage. If the stage-discharge relation for a station throughout the range of flow has been determined, it is evident that if the stage at any time is known and normal flow conditions prevail, the rate of discharge past the station at that time may be ascertained by application of the rating curve. Obviously the stage-discharge relation can be determined most successfully for the ranges of stage and flow that are of ordinary occurrence. The difficulties of determination increase for conditions of extraordinary occurrence. The determination of flood discharges, especially those of unusually great magnitude, may in most situations be very difficult, and their accuracy may depend upon scanty information as to actual conditions at the time of the flood and upon surveys, analyses, and computations by various more or less indirect methods for extending the curve of stage-discharge relation beyond the range covered by current-meter measurements.

The ideal definition of the curve of stage-discharge relation for extreme floods would be obtained only by an adequate number of field determinations of discharge and by the observation and recording of critical features of flow during the flood at these places of determination. Floods rise and recede on many streams within a relatively short period of time. Moreover, headwater streams within an area of moderate size may for obvious reasons have their flood peaks rather closely in unison. Usual methods and routes of travel are often seriously disrupted in times of extreme flood. Owing to these and other practical difficulties the obtaining of sufficient information for determining flood discharges is a problem requiring not only special experience and ingenuity but also physical energy. However, with watchful attention to forecasts and reports of the Weather Bureau related to the approach and occurrence of major storms, field parties can often be assigned in the drainage area affected by the storm with such timeliness that highly effective use can be made of available personnel and facilities in obtaining critically important information. The adaptation and improvement of equipment both for recording stages and for measuring discharges have also contributed greatly to the collection of adequate and reliable data regarding floods.

The determinations of flow in floods so unprecedented as those of March 1936 are particularly complex and difficult, because they are unique. They therefore involve increasing resort to auxiliary methods and increasing exercise of expert knowledge.

In general, four different methods are employed in determining the maximum discharge of a flood at a given site, and the method used depends on the conditions at the site and the availability of information for its application. Whenever possible the results obtained by one method are verified by a determination by one of the other methods. The methods are (1) extension of rating curves for river-measurement stations, (2) computation of flow over dams, (3) computation of flow from slope-area observations, and (4) computation of flow through contracted openings. These methods are described in engineering textbooks and manuals. General information in regard to their use, with special reference to the conditions pertaining to the floods of 1936, is contained in the following descriptions:

Extension of rating curves for river-measurement stations

Under favorable circumstances the rating curve showing the relations of stage to discharge may be extended to stages and discharges higher than the range defined by current-meter measurements and thus may afford a means of determining the discharge. The successful application of this method requires a thorough analysis and careful appraisal of fundamental flow factors and a knowledge of the channel conditions at the river-measurement stations, especially in regard to the manner in which the width and depth of the channel vary with changes in stage, also the conditions affecting changes of velocity with changes of stage, such as rapids or falls, which may tend to increase velocities, or contractions of channel downstream from the gage, which may tend to decrease velocities. The cross section of the channel at the flood stage, including all overflow and by-pass channels, should be determined by instrumental surveys. Pertinent conditions, such as backwater from lower tributaries and changing influences of contracted sections of the channel below, must be visualized and their effects appraised as accurately as possible from available information.

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The conditions most favorable for the accurate extension of a rating curve consist of well-defined rapids or riffles below the station at all stages and a uniform increase of channel cross section as the stage increases, without abrupt changes in area or addition of overflow channels - in other words, a general uniformity of those channel conditions which control the stage and discharge relations at the gage. In the extension of rating curves the construction and study, in connection with other data, of a curve showing the relation of a product of the cross-sectional area of the channel multiplied by the square root of the mean depth ($A\sqrt{d}$) to the corresponding stage has often proved helpful. The logarithmic plotting of stage and discharge also may be helpful in making the extension. In this method stage and discharge are both plotted on logarithmic scales. The observed stages, or gage heights, are adjusted to conform to the physical conditions of the site, usually by the addition or subtraction of some constant amount determined by study of such conditions. For example, at a river-measurement station with a riffle control of uniform elevation across the channel the gage height of zero flow should be subtracted from each observed gage reading. The graph of the relation thus developed usually tends to be a straight line or a very flat curve and therefore may be extended without danger of great error. Studies of the areas and mean velocities of flow at the measuring section may also be helpful in making the extension of the rating. In these studies the discharge for higher stages is computed from separate determinations of the cross-sectional area of the channel and of the mean velocity. The cross-sectional area of the channel is determined from field observations, and the mean velocity is obtained by extending the curve drawn through the values of mean velocity as determined from current-meter measurements, plotted against corresponding stages.

Radical changes in downstream conditions controlling the velocity or stages, or abrupt increases in the area of channel cross section, such as result from overflowed banks, may interfere seriously with the reliable application of these methods of analysis. In general, it has been found that the results thus obtained are about as likely to be too large as too small. Notwithstanding the application of the best available knowledge and experience, the results obtained by extension of the rating curve may be subject to considerable error, especially if the extension is carried considerably beyond the range defined by current-meter measurements. Results obtained by this method should therefore be used with appropriate caution.

Computation of flow over dams

The computation of flow over dams often affords a helpful and reliable means of determining flood peak discharges. Under favorable conditions the flow over a dam may be computed by a weir formula in which the principal factors are the length of crest between abutments, the head on the crest and a coefficient (C) based on experiment and varying with the shape of the crest and the head. The basic formula for such use is commonly expressed as $Q = CLH^n$, where Q = discharge in second-feet, C = coefficient for the dam, L = effective length of crest in feet, H = head in feet on the crest measured far enough above the dam to avoid the surface draw-down curve, and n = the exponent of H.

The exponent n may be assumed as 1.5, in which case the coefficient C will ordinarily vary with the head as well as with differences in the shapes of crest. For a dam for which adequate basic observations under heads of varying magnitude are available, it is possible to select constant values of both n and C that will represent satisfactorily the general equation of discharge at the dam, in which case n will usually be somewhat more than 1.5.

The velocity of approach in the channel above the dam affects the discharge over the dam and virtually increases the head on the crest by an amount equivalent to the corresponding velocity head. Thus at most dams the areas of cross sections of the approach channels should be obtained either from soundings above the dam after the flood has passed or from maps based on previous surveys, thereby making it possible to take the velocity of approach into account. This procedure has been followed in the surveys of the floods of March 1936. The head over the dam was generally obtained from gage readings made during the flood or from marks made at the time of the flood or from other high-water marks. Whenever the crest of a dam was submerged from backwater below the dam, the effect of such submergence was taken into consideration in computing the discharge over the dam.

The standard procedure in applying this method included a survey of the dam and surrounding features adequate for the preparation of a map showing all information that would guide the judgment of the engineer in computing the discharge. Information as to the shape and profile of the crest and other essential features of the dam was obtained from plans of the dam or by measurement of the dam itself. Profiles of the high-water marks above and below the dam were obtained by surveys. Conditions with respect to submergence, flood plains, overflow channels or other by-passes, and diversions through flood gates and water wheels were observed and recorded. The observations and records of these surveys are available for examination in the district offices of the Geological Survey for those States in which the dams are situated.

In the formula for discharge over dams, $Q = CLH^n$, the exponent n was in general taken as 1.5 and values of the coefficient C were selected from data summarized in Water-Supply Paper 200* or from those contained in modern handbooks, modified in some instances as a result of the experience of engineers of the Geological Survey in the use of such coefficients. The selection of coefficients by the different district offices was unified and coordinated with a view to utilizing the combined experience of the organization, thereby reducing errors of individual judgment. It is believed that the results obtained by this method are reliable, although many of the determinations were made for heads considerably greater than those for which the coefficients are well established by experience and practice. For the depths of flow over dams that occurred in the flood of March 1936, coefficients in general not exceeding 3.80 were used for ogee-shaped crests.

Computation of flow from slope-area observations

In the slope-area method the discharge is determined from measurements of the slope and the cross-sectional area of a suitable reach of channel and the use of formulas that have been subjected to extensive practical application. The basic formula is that of Chezy for the mean velocity of a stream, $V = C\sqrt{RS}$, in which R is the hydraulic radius, S the slope (energy gradient), and C a coefficient whose value depends on the degree of roughness of the bed of the channel and the hydraulic radius. This coefficient may be determined by either of two well-known formulas, Kutter's or Manning's. Both of these formulas include the roughness factor and the hydraulic radius, and Kutter's formula includes also the slope.

These formulas apply most satisfactorily to channels that have uniform beds and cross sections and that are free from bends or other characteristics which would tend to cause irregular and turbulent flows. Natural streams in flood rarely, if ever, have these ideal characteristics in full, and for the determination of discharge by the slope-area method those reaches of channel are selected which conform as closely as possible to the ideal conditions. On many streams the reaches of available channel are

* Horton, R. E., Weir experiments, coefficients, and formulas: U. S. Geol. Survey Water-Supply Paper 200, 1907.

characterized by lack of uniformity in the bed, variations of cross-sectional area, bends, and other disturbing elements that make the application of the method difficult or impracticable.

The coefficient n, which is expected to express the degree of roughness of the channel and which is closely related to the coefficient C, has embodied in it when applied to a natural stream channel various elements beside the resistance to flow afforded by the bed. Among these elements are adverse bottom slope and irregularities of alinement and shape and of material in the bed and banks of the channel that cause cross currents, eddies, and other turbulence, which absorb the energy of the flowing water.

For the hydraulic radius and slope generally found in flooded streams in northeastern United States, the values of n used in the Kutter formula differ little, if any, from those used in the Manning formula. Because of this situation and the uncertainties in selection of values of n introduced by the disturbing elements mentioned above, any differences in the values of n that are caused by the use of one or the other of these two formulas are regarded as having no practical significance.

In some of the Survey districts within the area of the floods of March 1936 the Manning formula was used in the determination of discharge; in others the Kutter formula was used without detracting from the probable comparability of the results. The values of n chosen and used by engineers of the Geological Survey were checked by comparisons with available data, special consideration being given to results of actual determinations of coefficients of roughness by Ramser.* So far as possible, the determinations of discharge made by the slope-area method in the Survey's district offices were intercompared and centrally supervised or reviewed.

A channel for which the flow was determined by the slope-area method is illustrated in plate 6. The basic data used in the determination of discharge in the reach of channel shown in plate 6 are shown in figure 30. Similar basic data for all slope-area determinations were collected and are filed in the district offices.

There may have been no previous application of the slope-area method to the determination of flood discharges that was as comprehensive as that in connection with the determination of discharges for the floods of March 1936. Where there were opportunities to compare the results obtained by this method under reasonably favorable conditions with those obtained by

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* Ramser, C. E., Flow of water in drainage channels; the results of experiments to determine the roughness coefficient n in Kutter's formula: U. S. Dept. Agr. Tech. Bull. 129, November 1929.

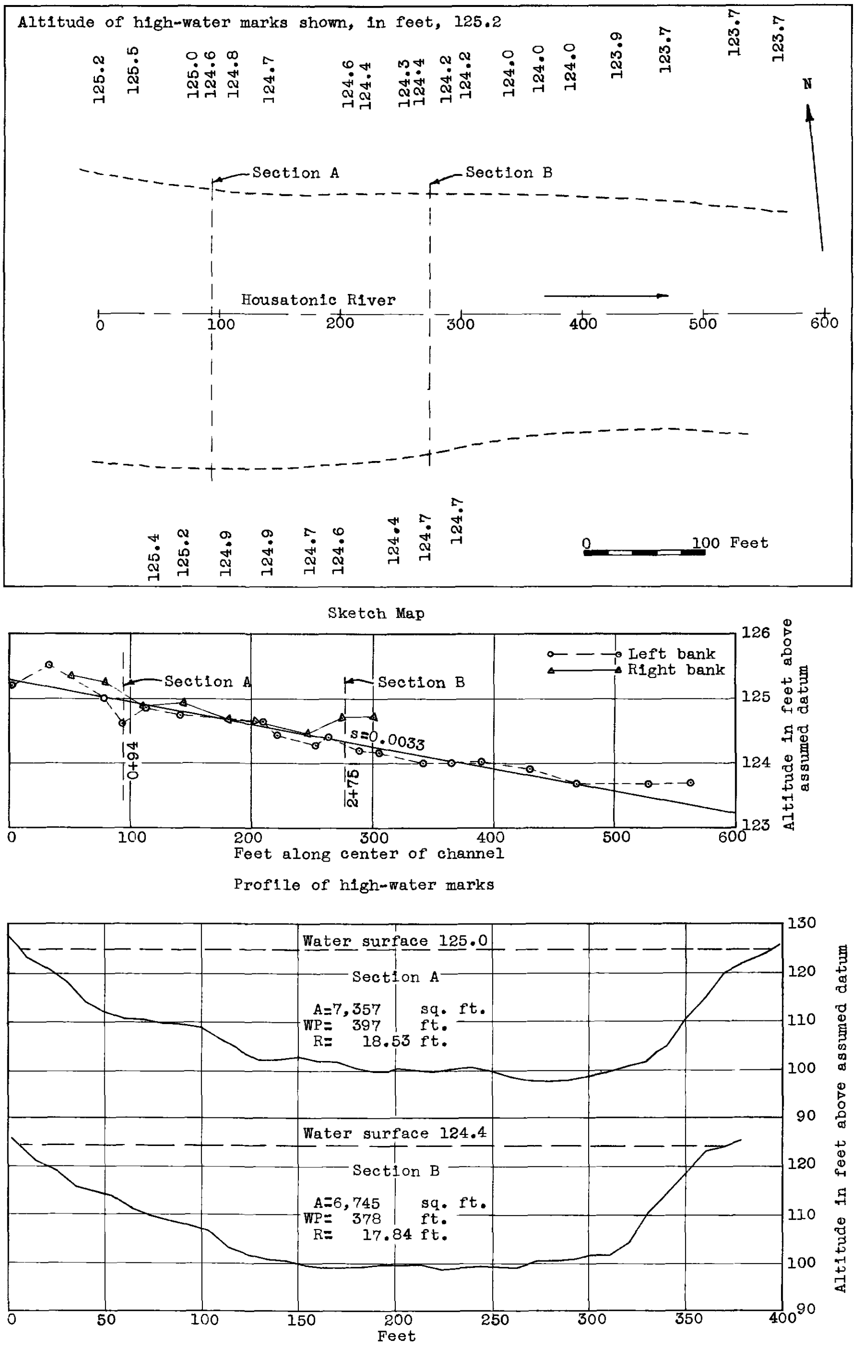


Figure 30.-Map, profile of high-water marks, and cross sections of the slope-area reach for the Housatonic River at Stevenson, Conn.

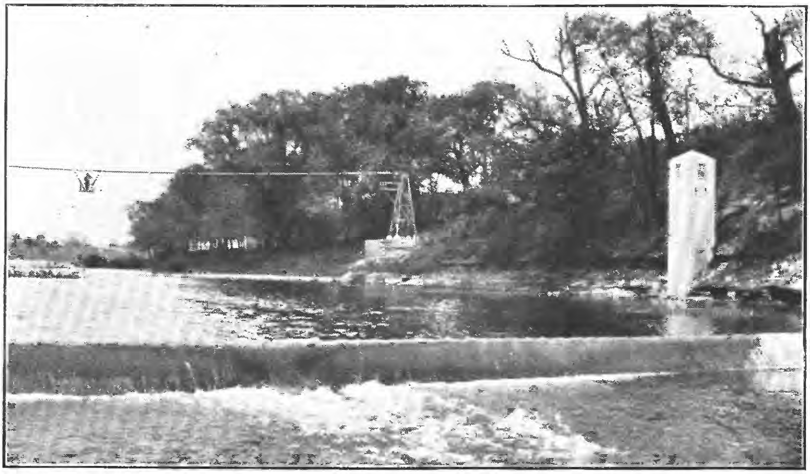
A. LOOKING DOWNSTREAM FROM STEVENSON DAM.

Upstream limit of reach is at gaging cableway, which crosses river some distance below "island" in center of picture; downstream limit is near point where transmission wire appears to cross water in middle distance.

B. LOOKING UPSTREAM TOWARD STEVENSON DAM FROM POINT ON RIGHT BANK.

Section B was taken a few feet upstream from gage shelter shown at right among trees. Section A is about 200 feet farther upstream, near clump of saplings under fourth span from right of highway bridge on crest of dam. Bed of river channel is composed of heavy gravel and cobblestones, with a few large rocks. Left bank slopes gradually upward to an old road, well above maximum flood stage, and is grass-covered, with a few large trees and areas of heavy brush, mostly sumac. Right bank at river edge has a steep slope rising to a berm, generally flat and several feet wide, above which the bank rises steeply and is covered with grass, brush, and small evergreens. The channel is straight throughout the reach and contracts downstream.

SLOPE-AREA REACH ON HOUSATONIC RIVER AT STEVENSON, CONN.



A. ARTIFICIAL CONTROL, RECORDER HOUSE, AND MEASURING CABLE ON OLENTANGY RIVER, DELAWARE, OHIO.

B. RECORDER HOUSE AND MEASURING CABLE ON KAWEAH RIVER, THREE RIVERS, CALIF.

TYPICAL RIVER-MEASUREMENT STATIONS.

other methods, the comparisons indicate that reliable results were obtained. Where the conditions were generally unsuitable for the use of the slope-area method the comparisons have given rather erratic results. The slope-area method has generally been found to be useful as a means for checking determinations of discharges of extreme floods made by other methods and for making determinations where the application of other methods was impracticable.

Computation of flow through contracted openings

The method of computing flow through a contracted opening was applied where a stream passes through a constriction, such as the space between bridge abutments. In such a situation the area of cross section is much less than that of the channel above the opening, resulting in an increase in velocity through the contracted section. Such an increase in velocity can be produced only by converting head into velocity, and the head so used shows as a sharp drop in the water surface beginning near the entrance to the contracted section. The flow through the opening is the product of the area of the contracted cross section and the velocity through it, the velocity being computed from the velocity head corresponding to the drop in water surface through the contracted section plus the head due to velocity of approach minus the head lost by friction. (For a detailed description of this method see Houk, I. E., Calculation of flow in open channels: Miami Conservancy Dist. Tech. Repts., pt. 4, 1918.)

STAGES AND DISCHARGES AT RIVER-MEASUREMENT STATIONS DURING THE FLOOD PERIOD

One of the foremost purposes of this series of reports is the publication of useful detailed information regarding the stages and discharges of streams during the floods of March 1936 that will not be available in the summarized records of river discharge published annually in the water-supply papers of the Geological Survey. The justification for making available such detailed information rests upon the recognized need for records of flood behavior that will show not only the mean daily discharge and the maximum rates of discharge during a flood as usually published for a gaging station but also the stages and rates of discharge continuously throughout the flood period and will make possible a definition of conditions of stage and discharge at all stations in a basin at a given time during the progress of the flood. This detail is essential for intensive and comprehensive studies of the characteristics of floods and promotes the formulation of appropriate plans for flood protection and control. It furnishes basic information for studying the behavior of flood crests, including the incidence of crests from different tributaries of a stream, the progress of flood crests throughout a river system, and other features useful in deriving the elements necessary for forecasting flood heights and for appraising the characteristics of different basins in the shedding of flood waters. It furnishes basic information for the consideration of the practical feasibility of detention reservoirs, channel improvement, forest management, soil treatment, and other measures with respect to their merits for ameliorating damage and losses caused by great floods. Moreover, in view of the exceptional record-setting character of the floods of March 1936, it is important that full and authentic information concerning them be available for reference and guidance in connection with future urban and industrial development, with highway and bridge construction, and especially with the design of hydraulic structures in their relation to flood channels of streams.

In general, records of gaging stations published in this report relate to streams on which floods occurred or which are situated adjacent to the margins of the flooded regions and so serve to define the areal extent of the floods.

Explanation of data

The basic data systematically collected at river-measurement stations consist of records of stage, measurements of discharge, and general information useful in determining the daily flow from the records of gage heights and discharge measurements. The records of stage are obtained either by direct readings on a nonrecording gage or by a water-stage recorder. Measurements of discharge are generally made by a current meter, the methods of use of which are outlined in standard textbooks. Typical river-measurement stations, equipped with water-stage recorder and measuring cable and car are shown in plate 7. Rating tables showing the discharges for indicated stages are prepared from the results of discharge measurements. At some river stations other or auxiliary devices are used in the determination of discharge, such as turbines, venturi meters, and gates, so calibrated as to indicate the quantity of water passing through them.

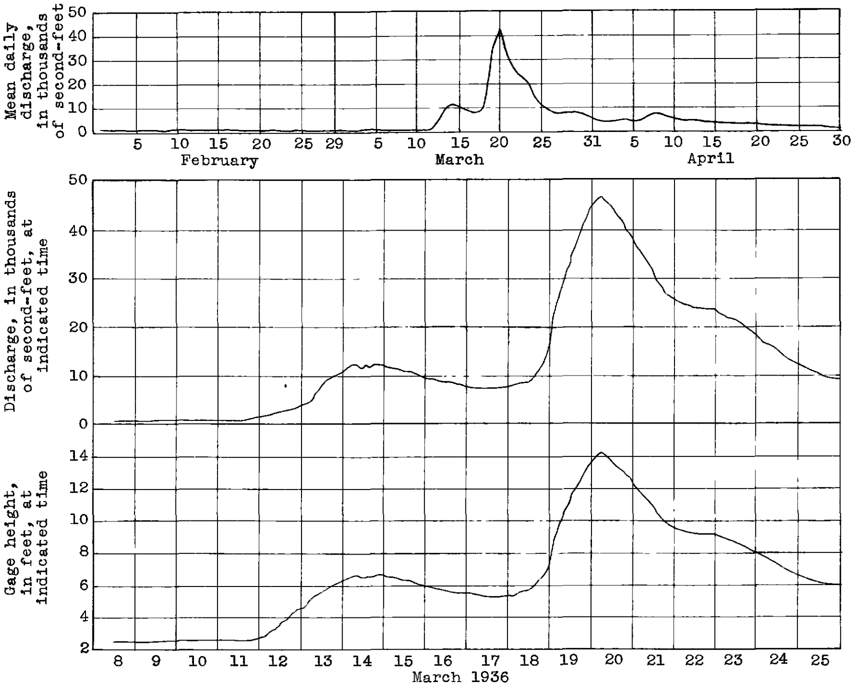
The data presented in the following tables comprise for each river-measurement station a description of the station, a table showing the daily discharges throughout the 3-month period February, March, and

April, 1936, and a table showing the stage and discharge at the times indicated during a period including the major flood flows, generally March 8 to 25 inclusive, in sufficient detail for the delineation of hydrographs to show with reasonable accuracy the stage and discharge at any instant throughout the flood period. The data are intended to be reasonably complete and explicit with respect to essential information, although they are presented in abbreviated and concentrated form. Figure 31 gives two examples of graphs of stage and discharge plotted from these data.

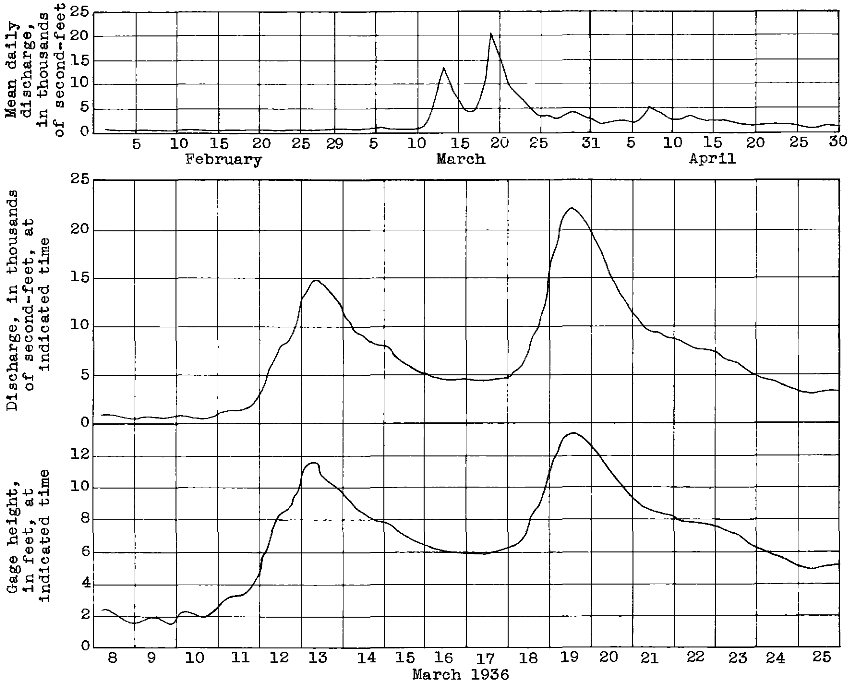
The description of the station gives information concerning the location and datum of the gage, the area of the drainage basin, and the record of gage height. The information regarding gage heights describes the method of determining the stage during the flood and is of special technical significance, because the flood conditions at some localities prevented the use of the usual method of obtaining records of stage and discharge. A statement regarding the stage-discharge relation covers fundamentally a brief reference to methods used in the definition of the rating curve over the ranges of stage occurring in the floods. The description also includes information with respect to any other auxiliary methods used in obtaining the discharge, such as by flow through turbines, venturi meters, or gates. The maximum stage and discharge at the gaging station are given for the floods of 1936 and for the period of continuous record prior thereto, also at some stations for floods antedating such period of record. Miscellaneous notes and comments essential or helpful to understanding the record are included as remarks.

The table showing mean daily discharge presents the data generally for February, March, and April and covers the period of the floods and a time of sufficient length before and after to show the relation of the flood discharges to the prevalent discharges of the late winter and early spring. These data make possible a general perspective of the rises of the March floods and the related stream-flow conditions prior and subsequent thereto. The table shows the mean monthly discharge for the 3 months and the volume of run-off expressed in depth in inches over the drainage area, corrected for artificial storage if the information needed therefor was available. Figure 32 shows hydrographs of mean daily discharge at ten selected river-measurement stations for this 3-month period.

The tables showing stage and discharge at indicated times are designed to present the rise and recession of the flood in detail. In general each table begins on March 8, 3 or 4 days before the beginning of



Contoocook River at Penacook, N. H.



Farmington River at Tariffville, Conn.

Figure 31.-Typical graphs of river stages and discharges at river-measurement stations from records in this report.

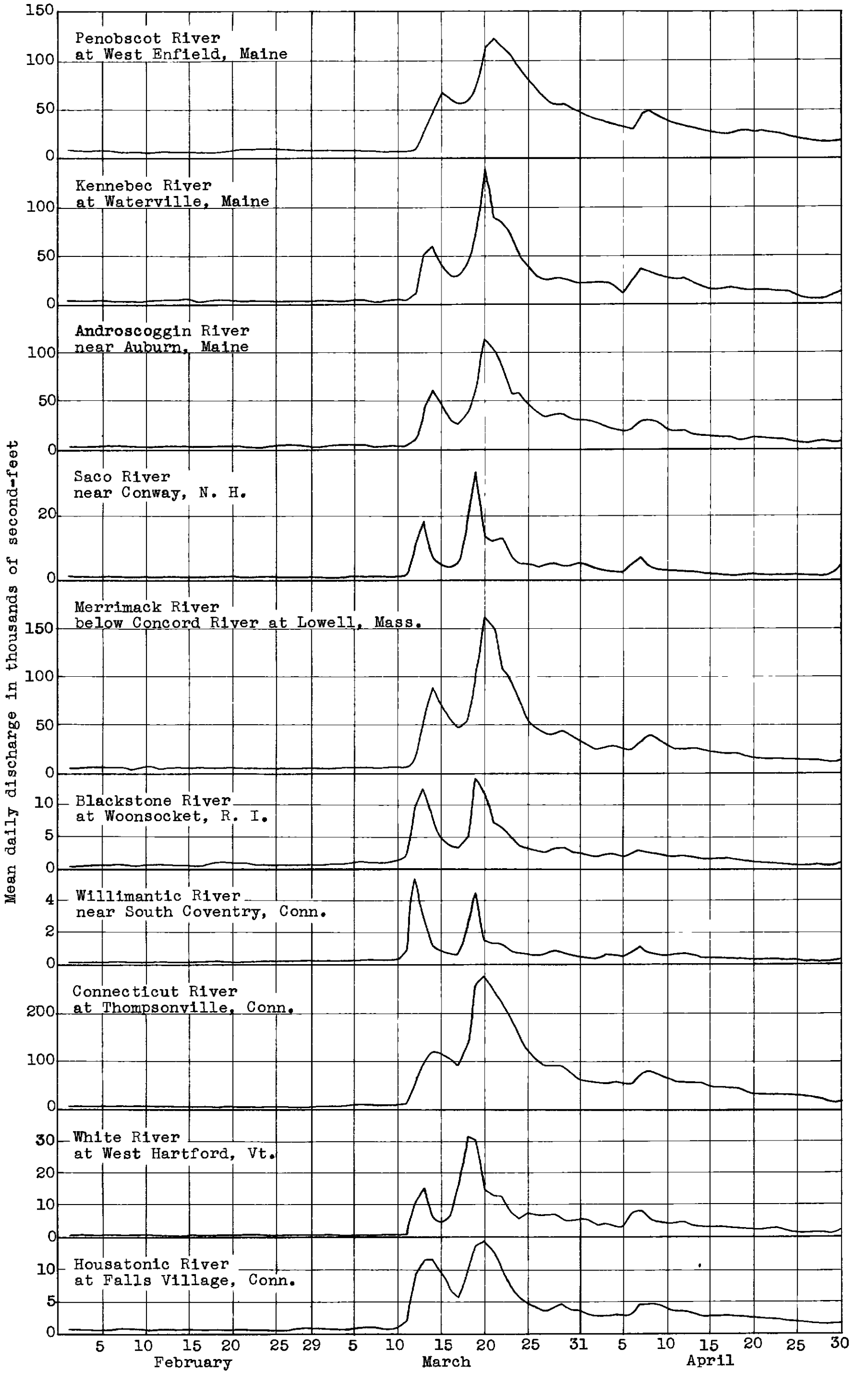


Figure 32.-Graphs of mean daily discharge at various river-measurement stations in New England for the period February 1 to April 30, 1936.

the rise of the first major flood, and continues through March 25, when the flood had largely passed out of the river systems. The period of time covered by this table has been varied under special conditions to include stages and discharges for a longer or different period where it seemed desirable. This table is accompanied by supplemental records of stage and discharge to afford a more detailed record of these items at the given river-measurement station continuously throughout the flood period. Hydrographs of discharge showing characteristics of the flood peaks and conditions of stream flow during the flood period are shown for river-measurement stations in the Merrimack River Basin in figure 33 and for river-measurement stations in the Connecticut River Basin in figure 34.

The stages at the indicated times were obtained from the records of continuous water-stage recorders, so far as such records were available. For stations at which the records of stage were intermittent, consisting of a small number of gage readings per day, or for which the records were broken because of some failure in the recording system, stage hydrographs have been developed on the basis of the available information, and the stages at indicated times have been obtained from those hydrographs. The stage records in this table are given to hundredths of a foot or to other limits of refinement, such as half-tenths or tenths of a foot, as explained in the notes accompanying the records.

The discharge at indicated times is related in general to the corresponding stage in accordance with the stage-discharge relation, as discussed in the preceding paragraph. Where the normal stage-discharge relation was affected by ice or by backwater from tributaries, these conditions were taken into consideration in the determination of discharge. In some instances the stage in its application to the stage-discharge relation for determination of discharge has been used to the nearest half-tenth or tenth of a foot in accordance with certain established limits of refinement.

On certain streams affected by storage in reservoirs above the place of measurement the standardized form is varied as needed for presentation of records of discharge. On such streams the records of observed discharge are corrected for gain or loss in storage as explained in the description accompanying the tables. The records of observed discharge at the gage and the data showing gain or loss in storage used in arriving at the corrected discharges are published in the tables. The following tables present, for several reservoirs, records of stages and storage content through the flood period in a form similar to the data for the river-measurement

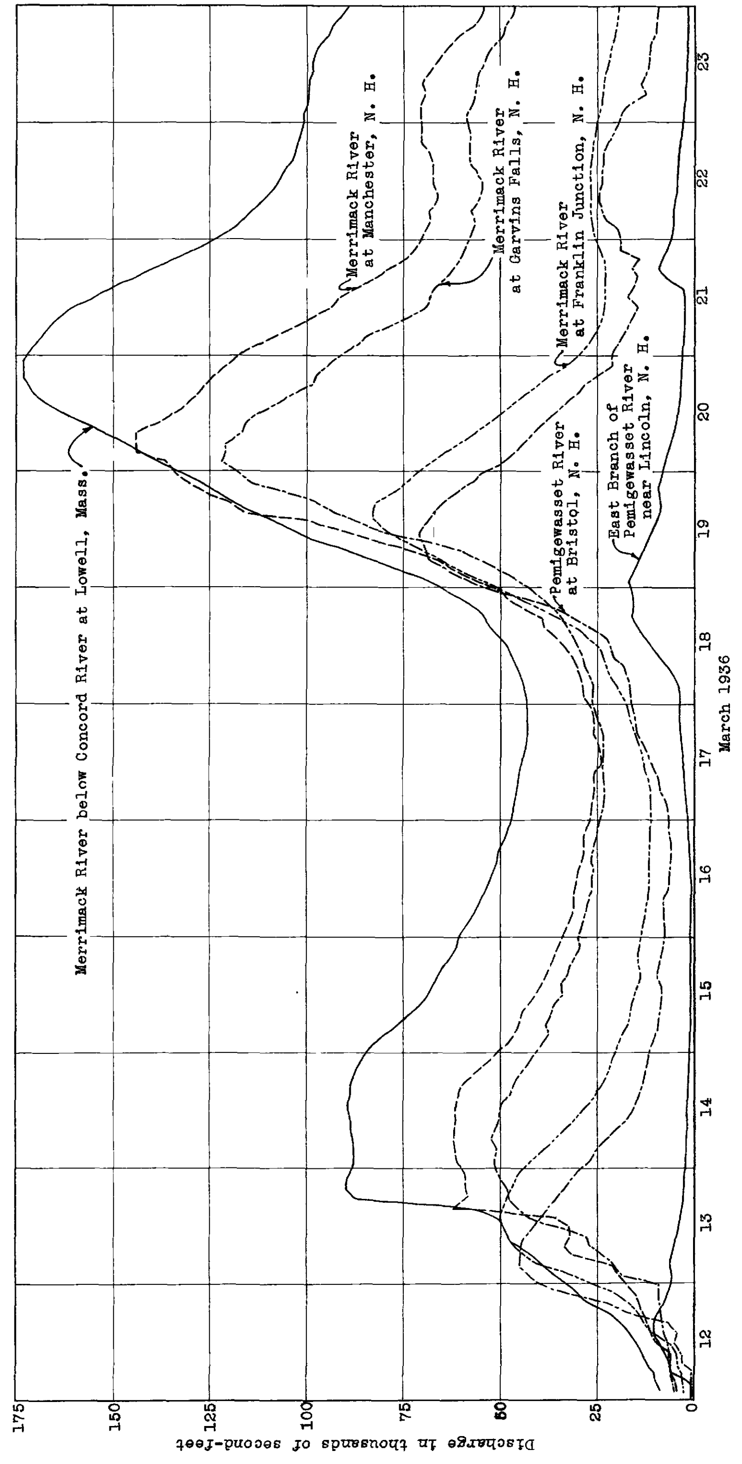


Figure 33.-Graphs of discharge at various river-measurement stations in the Merrimack River Basin, March 12-23, 1936.

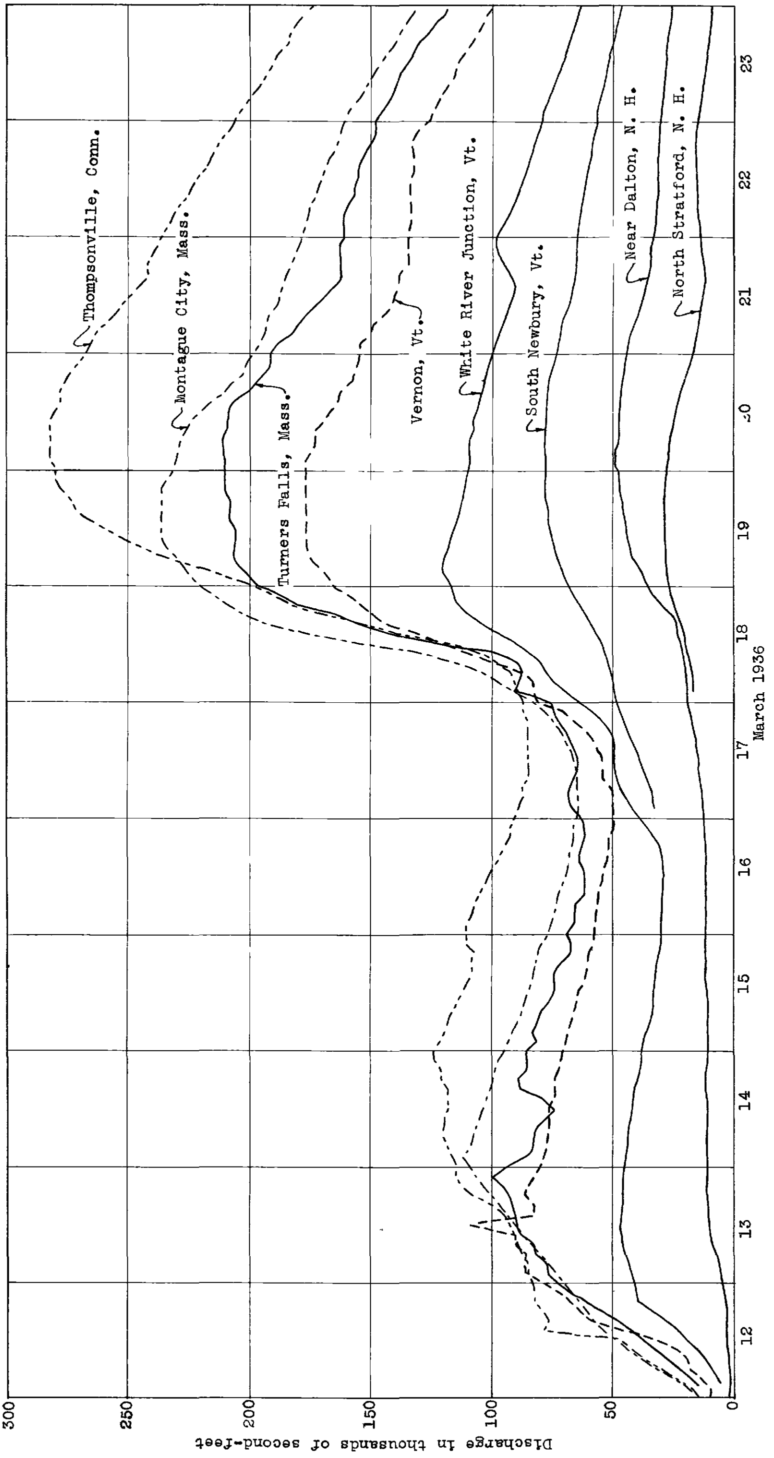


Figure 34.-Graphs of discharge at various river-measurement stations on the Connecticut River, March 12-23, 1936.

stations. These records are of special value for distinguishing the influence of storage regulation on flood flows, in relation both to the appraisal of their effect on flood flows and to the extension of information on the natural characteristics of drainage basins in the shedding of flood waters. However, it should be understood that correction for the effect of artificial storage has generally been made in the following tables only to a moderate extent and only for stations situated within such distance below storage reservoirs as to make the correction readily determinable. For many stations the determination and application of complete corrections would involve analyses and studies beyond the scope of the present report. The descriptive and tabular matter relating to the records is intended to define clearly the status as regards modification by storage and as regards corrections that have been applied therefor. Further consideration of storage reservoirs as a factor influencing the March floods is presented elsewhere in this report.

The records are presented in accordance with the regular arrangement used by the Geological Survey in its water-supply papers. The major drainage basins are treated from north to south in order of their discharge into the Atlantic Ocean. In this volume records of streams in the St. Lawrence Basin follow those for other New England rivers. Records of streams tributary to the Hudson River which drain a small portion of western New England are published with other records of that basin in the flood report on the Hudson to Susquehanna River Basins (Water-Supply Paper 799).

In each of the major drainage basins gaging stations on the main streams are treated first, in downstream order, and then stations on tributaries in similar order beginning with the uppermost. The table of contents presents the stations in the order in which they appear herein; the index shows the stations alphabetically according to stream names and place names.

The maximum discharges at these river-measurement stations and at other places on these streams, with other related information, are listed in table 9, pages 306 to 328 in the order above described. The locations of the stations are shown on the maps accompanying table 9 (see figs. 35 to 38) by means of index numbers listed in the first column of the table.

Reference should be made to the water-supply papers of the Geological Survey for other available published records of flow of the streams discussed in this report. The records of flow published here are based on all information available at this time. Accelerated erosion and deposition in the river channels due to the floods may have changed the stage-discharge relation at some river-measurement stations at medium and low discharges, but all these changes may not have been fully defined in the period available for observations since the floods. Any revisions found necessary in the light of further information will be published in subsequent water-supply papers.

West Branch of Penobscot River at Millinocket, Maine

Location.- Lat. 45°39', long. 68°42', at Quakish Lake Dam and Millinocket mill of Great Northern Paper Co., Millinocket, Penobscot County.
Drainage area.- 1,910 square miles.
Gage-height record.- Water-stage recorder.
Stage-discharge relation.- Discharge computed from flow over dam and through water wheels, log sluices, and filters. When discharge is less than 3,500 second-feet all water passes through wheels.
Remarks.- Flow regulated by storage in North Twin and Ripogenus Lakes (combined capacity, about 45,000,000,000 cubic feet). Mean daily discharge corrected for storage. Storage in percentage of total capacity: Mar. 8, 6 percent; Mar. 15, 8 percent; Mar. 22, 32 percent; Mar. 29, 59 percent; Apr. 5, 71 percent; Apr. 12, 80 percent; Apr. 19, 86 percent; Apr. 26, 88 percent. Records furnished by Great Northern Paper Co.

Mean discharge, in second-feet, 1936

Day	March		April	
	Observed discharge	Corrected discharge	Observed discharge	Corrected discharge
1	2,009		3,322	11,480
2	2,265		3,357	12,116
3	2,311		3,262	11,547
4	2,233		3,262	10,968
5	2,346	*261	2,000	6,362
6	2,240		3,142	11,705
7	2,200		3,282	12,900
8	2,094		3,292	10,397
9	2,000		3,327	9,402
10	2,044		3,373	9,459
11	2,010	870	3,370	9,456
12	2,007	5,584	2,063	9,514
13	2,144	6,569	3,252	8,471
14	2,720	6,850	3,350	6,081
15	2,000	7,008	3,081	6,552
16	2,750	6,880	3,204	7,763
17	2,684	9,343	3,261	6,778
18	2,642	10,900	3,400	6,535
19	2,748	20,000	2,004	5,232
20	2,740	16,000	3,357	6,909
21	2,650	36,600	3,432	4,440
22	2,000	30,079	3,392	7,526
23	3,176	29,517	3,408	7,773
24	3,212	27,291	3,418	3,228
25	3,308	22,400	3,438	5,063
26	3,394	17,915	2,137	7,474
27	3,379	18,958	-	-
28	3,349	17,766	-	-
29	2,000	16,082	-	-
30	3,333	13,677	-	-
31	3,412	11,408		

* Mean for period Mar. 1-10.

Penobscot River at West Enfield, Maine

Location.- Lat. 45°14'15", long. 68°39'10", at highway bridge 1,000 feet below mouth of Piscataquis River and 1 mile southwest of West Enfield, Penobscot County. Zero of gage is 125.2 feet above mean sea level (general adjustment of 1929).
Drainage area.- 6,600 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights used to half tenths between 1.50 and 3.50 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 15. Defined by current-meter measurements below 100,000 second-feet.
Maxima.- 1936: Discharge, 125,000 second-feet 1 a.m. Mar. 21 (gage height, 22.03 feet).
1901-35: Discharge, 153,000 second-feet May 1, 1923 (gage height, 25.15 feet).
Remarks.- Flood run-off affected by storage on West Branch of Penobscot River; storage capacity, 45,000,000,000 cubic feet. Percentage of capacity filled was 6 Mar. 8, 8 Mar. 15, 32 Mar. 22, 59 Mar. 29, 71 Apr. 5, 80 Apr. 12, 86 Apr. 19, and 88 Apr. 26.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	7,600	8,400	43,100	11	5,400	6,700	37,100	21	9,410	122,000	26,500
2	7,810	7,900	40,100	12	5,860	8,200	34,700	22	9,670	112,000	26,000
3	7,100	7,500	36,800	13	5,610	25,200	31,300	23	9,700	105,000	25,000
4	7,060	7,200	34,700	14	5,540	48,400	28,500	24	9,210	91,900	23,000
5	6,510	7,200	31,300	15	5,500	66,000	26,500	25	9,120	79,100	21,600
6	6,080	7,000	28,500	16	5,200	59,400	25,000	26	9,060	67,100	20,300
7	5,960	7,000	45,500	17	4,400	55,200	25,000	27	8,800	59,400	19,000
8	5,860	6,600	48,900	18	5,400	58,700	26,500	28	8,690	55,200	18,600
9	5,750	6,000	44,300	19	6,700	74,300	27,000	29	8,550	55,900	18,600
10	5,590	6,500	39,500	20	8,000	112,000	26,000	30		50,300	19,400
								31		46,100	
Mean monthly discharge, in second-feet									7,074	46,110	29,940
Run-off, in inches									1.15	8.06	5.06

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	5.83	6,960	5.52	6,240	5.61	6,540	5.63	6,640	5.36	6,000	7.97	15,200
4	5.83	6,960	5.50	6,220	5.60	6,510	5.63	6,640	5.33	5,930	8.41	17,000
6	5.81	6,880	5.49	6,200	5.58	6,460	5.63	6,640	5.39	6,080	9.03	18,800
8	5.79	6,810	5.48	6,200	5.63	6,610	5.62	6,610	5.70	6,840	9.76	20,800
10	5.75	6,710	5.29	5,750	5.48	6,240	5.50	6,320	5.78	7,040	10.30	23,000
N	5.51	6,120	5.19	5,520	5.57	6,460	5.63	6,660	5.80	7,080	10.68	25,000
2	5.67	6,510	5.21	5,570	5.57	6,460	5.67	6,510	6.02	7,650	11.99	27,300
4	5.66	6,480	5.32	5,820	5.56	6,440	5.64	6,680	6.39	8,700	12.12	29,300
6	5.59	6,340	5.34	5,890	5.55	6,410	5.71	6,860	6.68	10,000	14.00	31,500
8	5.59	6,340	5.42	6,080	5.57	6,480	5.70	6,840	6.82	11,000	15.72	33,500
10	5.60	6,390	5.51	6,290	5.59	6,540	5.66	6,760	7.00	12,200	16.14	35,600
M	5.59	6,390	5.61	6,540	5.60	6,560	5.55	6,560	7.56	13,500	16.95	37,500
	March 14		March 15		March 16		March 17		March 18		March 19	
2	17.23	39,200	15.54	63,000	14.56	63,600	13.41	55,200	13.29	54,500	14.78	65,000
4	19.36	40,800	15.48	65,800	14.43	62,200	13.36	55,200	13.38	55,200	14.88	65,700
6	19.74	42,500	15.41	67,500	14.33	61,500	13.33	54,500	13.43	55,200	15.01	66,400
8	20.03	44,500	15.30	67,800	14.23	60,800	13.35	55,200	13.61	56,600	15.23	67,900
10	18.80	46,000	15.23	67,800	14.06	60,100	13.30	54,500	13.70	57,300	15.48	70,300
N	19.61	48,000	15.17	67,900	13.95	59,400	13.28	54,500	13.78	58,000	15.72	71,900
2	19.35	49,600	15.08	67,100	13.87	58,700	13.23	53,800	13.93	58,700	16.10	75,100
4	18.15	51,700	15.00	66,400	13.77	58,000	13.60	56,600	14.13	60,100	16.50	78,300
6	16.45	54,000	14.88	65,700	13.68	57,300	13.86	58,700	14.46	62,900	16.85	80,700
8	15.90	56,300	14.82	65,000	13.62	56,600	13.51	55,900	14.52	62,900	17.21	83,900
10	15.72	58,600	14.75	65,000	13.57	56,600	13.38	55,200	14.61	63,600	17.30	84,700
M	15.62	61,000	14.67	64,300	13.49	55,900	13.28	54,500	14.71	64,300	17.77	88,700
	March 20		March 21		March 22		March 23		March 24		March 25	
2	17.93	89,500	22.02	125,000	20.90	115,000	20.25	109,000	18.93	97,500	17.30	84,700
4	17.78	88,700	22.01	125,000	20.75	114,000	20.19	109,000	18.80	96,700	17.15	83,900
6	20.20	109,000	21.99	125,000	20.67	113,000	20.09	108,000	18.64	95,100	17.00	82,300
8	21.20	118,000	21.92	124,000	20.73	113,000	20.00	107,000	18.48	94,300	16.87	81,500
10	21.29	119,000	21.81	123,000	20.70	113,000	19.88	106,000	18.32	92,700	16.71	79,900
N	21.31	119,000	21.72	122,000	20.55	112,000	19.78	105,000	18.19	91,900	16.58	79,100
2	21.46	120,000	21.61	121,000	20.46	112,000	19.66	104,000	18.05	90,300	16.44	77,500
4	21.61	121,000	21.54	120,000	20.39	111,000	19.55	103,000	17.91	89,500	16.32	76,700
6	21.74	122,000	21.43	120,000	20.34	110,000	19.42	102,000	17.80	88,700	16.19	75,900
8	21.89	124,000	21.35	120,000	20.42	111,000	19.31	101,000	17.69	87,900	16.06	75,100
10	21.95	125,000	21.24	118,000	20.34	110,000	19.18	99,900	17.58	87,100	15.92	73,500
M	22.02	125,000	21.10	117,000	20.29	110,000	19.05	98,300	17.42	85,500	15.80	72,700

Supplemental records.- Mar. 14, 1 a.m., 14.95 ft.; 9 a.m., 16.00 ft. Mar. 17, 5 p.m., 14.08 ft., 60,100 sec.-ft. Mar. 21, 1 a.m., 22.03 ft., 125,000 sec.-ft.

Piscataquis River near Dover-Foxcroft, Maine

Location.- Lat. 45°10'35", long. 69°18'55", at Lows Bridge, three-quarters of a mile above mouth of Black Stream and 4½ miles above Dover-Foxcroft, Piscataquis County. Zero of gage is 358.1 feet above mean sea level.
Drainage area.- 286 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights used to half tenths between 4.2 and 5.8 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 13. Defined by current-meter measurements below 6,000 second-feet; extension to peak stage verified by comparison of peak discharge and total run-off of flood with records for other streams in Piscataquis River Basin.
Maxima.- 1936: Discharge, 19,300 second-feet 4 a.m. Mar. 20 (gage height, 15.84 feet).
1902-35: Discharge, 21,700 second-feet Sept. 29, 1909.
Remarks.- Flood run-off not materially affected by storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	134	260	2,490	11	186	205	2,100	21	270	8,600	1,620
2	230	275	2,050	12	196	435	1,880	22	220	10,200	1,570
3	280	210	1,830	13	190	8,140	1,620	23	200	6,820	1,300
4	205	205	1,620	14	186	6,800	1,470	24	205	4,720	1,260
5	240	176	1,420	15	60	5,600	1,370	25	186	3,680	1,260
6	230	170	2,700	16	146	4,580	1,370	26	230	2,840	1,160
7	245	91	5,540	17	230	4,590	1,420	27	250	2,840	1,100
8	134	164	3,560	18	220	5,540	1,570	28	270	3,440	1,120
9	205	210	2,600	19	250	11,200	1,720	29	290	3,560	1,210
10	280	186	2,220	20	300	15,800	1,720	30		2,900	1,720
								31		2,900	
Mean monthly discharge, in second-feet									216	3,792	1,853
Run-off, in inches									0.81	15.33	7.23

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	3.86	170	3.83	160	4.02	150	3.96	235	3.89	220	11.10	2,220
4	3.85	165	3.90	175	3.49	100	3.51	200	3.59	110	12.55	4,500
6	3.84	160	3.78	145	3.00	50	3.09	65	3.60	110	13.80	6,440
8	3.83	160	3.79	150	2.77	40	2.89	45	4.08	240	14.68	8,900
10	3.83	160	4.18	210	3.77	150	4.05	240	4.52	330	15.38	9,900
N	3.83	160	4.57	350	4.35	330	4.37	270	4.62	320	15.47	11,300
2	3.87	170	4.50	310	4.21	260	4.36	270	4.71	340	15.94	11,500
4	3.86	165	4.43	300	4.22	260	4.37	270	5.01	350	13.13	10,900
6	3.85	165	4.30	255	4.13	250	4.16	250	5.37	520	13.95	10,500
8	3.85	165	4.00	150	3.91	225	3.90	220	6.20	800	12.85	9,000
10	3.85	165	3.85	135	3.81	210	3.79	210	7.48	1,090	12.49	8,000
M	3.84	165	3.85	135	3.98	240	3.82	215	9.20	1,380	12.20	7,580
	March 14		March 15		March 16		March 17		March 18		March 19	
2	11.88	7,310	8.91	6,090	7.41	4,970	6.80	4,330	7.11	4,720	9.03	7,420
4	11.52	7,200	8.74	5,990	7.29	4,900	6.84	4,330	7.13	4,720	9.23	7,720
6	11.19	7,100	8.59	5,890	7.16	4,850	6.88	4,460	7.19	4,850	9.48	8,170
8	10.89	7,000	8.44	5,790	7.11	4,720	7.00	4,590	7.32	4,980	9.91	8,800
10	10.55	6,900	8.27	5,690	7.01	4,590	7.01	4,590	7.40	5,120	10.38	9,600
N	10.31	6,800	8.19	5,600	6.92	4,460	7.03	4,590	7.51	5,260	10.97	10,600
2	10.12	6,690	8.11	5,500	6.87	4,460	7.04	4,590	7.71	5,540	11.67	11,800
4	9.95	6,590	7.98	5,400	6.81	4,330	7.09	4,720	7.97	5,960	12.55	13,300
6	9.79	6,470	7.88	5,300	6.78	4,330	7.09	4,720	8.26	6,380	13.22	14,400
8	9.58	6,380	7.78	5,200	6.79	4,330	7.13	4,720	8.52	6,670	13.74	15,300
10	9.33	6,280	7.66	5,120	6.80	4,330	7.13	4,720	8.73	6,970	14.60	17,000
M	9.12	6,180	7.53	5,040	6.80	4,330	7.12	4,720	8.91	7,270	14.95	17,700
	March 20		March 21		March 22		March 23		March 24		March 25	
2	15.22	18,100	11.25	10,900	9.96	8,960	9.62	8,320	7.62	5,400	6.57	4,070
4	15.84	19,300	10.84	10,200	10.40	9,600	9.33	7,870	7.51	5,260	6.53	3,940
6	15.48	18,700	10.45	9,600	10.85	10,200	9.09	7,570	7.40	5,120	6.48	3,940
8	14.99	17,700	10.11	9,120	11.17	10,900	8.86	7,270	7.29	4,980	6.46	3,940
10	14.56	17,000	9.85	8,640	11.35	11,200	8.63	6,820	7.11	4,720	6.37	3,810
N	14.15	16,200	9.61	8,320	11.45	11,200	8.40	6,520	7.00	4,590	6.29	3,680
2	13.73	15,300	9.39	8,020	11.38	11,200	8.24	6,240	6.90	4,460	6.20	3,560
4	13.33	14,600	9.28	7,870	11.18	10,900	8.08	6,100	6.82	4,330	6.17	3,560
6	12.98	14,000	9.19	7,720	10.91	10,400	7.98	5,960	6.76	4,330	6.08	3,440
8	12.54	13,100	9.21	7,720	10.60	9,920	7.86	5,820	6.73	4,200	6.02	3,320
10	12.06	12,400	9.40	8,020	10.29	9,440	7.79	5,680	6.68	4,200	5.97	3,320
M	11.66	11,800	9.61	8,320	9.96	8,960	7.71	5,540	6.63	4,070	5.90	3,200

Supplemental records.- Mar. 13, 2:15 p.m., 15.98 ft., 11,600 sec.-ft.; 5 p.m., 14.77 ft., 10,200 sec.-ft.

Piscataquis River at Medford, Maine

Location.- Lat. 45°16', long. 68°52', 1 3/4 miles above lower ferry in Medford, Piscataquis County, and 3 1/2 miles below Pleasant River. Zero of gage is 248.3 feet above mean sea level.

Drainage area.- 1,170 square miles.

Gage-height record.- Water-stage recorder graph. Gage heights used to half tenths between 3.4 and 6.5 feet; hundredths below and tenths above these limits.

Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 14. Defined by current-meter measurements below 24,000 second-feet; extension to peak stage verified by comparison of peak discharge and total run-off of flood with records for other streams in Piscataquis River Basin.

Maxima.- 1936: Discharge, 50,200 second-feet 6 p.m. Mar. 20 (gage height, 15.07 feet).
1924-35: Discharge, 35,000 second-feet Sept. 18, 1932 (gage height, 12.03 feet).

Remarks.- Flood discharge affected by storage in Sebec Lake. Part of storage released when outlet dam failed about Mar. 20. For daily changes in storage see record for Sebec Lake at Sebec, Maine.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	1,210	835	10,600	11	1,100	810	8,540	21	1,350	43,200	5,830
2	1,130	830	8,710	12	1,060	1,470	7,860	22	1,250	36,600	5,830
3	1,090	835	7,860	13	980	11,800	6,890	23	1,150	33,700	5,150
4	1,080	820	7,210	14	920	27,600	6,270	24	1,060	26,600	4,770
5	1,020	800	6,270	15	875	27,000	5,550	25	1,000	20,200	4,520
6	970	785	7,310	16	750	21,200	5,420	26	930	15,400	4,160
7	940	770	15,400	17	760	18,500	5,420	27	875	13,300	4,050
8	900	750	14,200	18	875	19,400	6,120	28	865	13,800	3,820
9	875	725	11,400	19	1,000	26,600	6,120	29	855	14,600	4,160
10	970	795	9,440	20	1,290	46,400	6,120	30		12,500	4,900
								31		11,400	
Mean monthly discharge, in second-feet									1,005	14,520	6,997
Run-off, in inches									0.93	14.30	6.67

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	4.19	835	4.04	725	4.09	775	4.18	800	4.35	820	6.66	3,710
4	4.16	810	4.05	735	4.10	785	4.17	800	4.34	820	7.25	4,390
6	4.10	760	4.05	740	4.12	790	4.16	800	4.40	830	7.92	5,790
8	4.07	735	4.05	740	4.17	790	4.15	800	4.51	850	8.52	6,630
10	4.06	725	4.05	735	4.21	795	4.20	805	4.60	900	10.26	8,910
N	4.06	725	4.04	730	4.24	795	4.24	805	4.69	1,100	8.02	11,700
2	4.06	725	4.04	730	4.25	795	4.29	805	4.82	1,300	9.07	14,400
4	4.06	725	4.04	730	4.27	800	4.31	810	4.99	1,600	9.39	16,400
6	4.06	725	4.02	720	4.27	800	4.33	810	5.23	2,000	9.77	17,700
8	4.06	725	4.01	715	4.23	800	4.36	820	5.46	2,400	9.93	20,000
10	4.01	700	4.03	725	4.20	800	4.36	820	5.76	2,850	10.15	20,400
M	4.00	690	4.06	750	4.18	800	4.36	820	6.18	3,210	10.33	21,200
	March 14		March 15		March 16		March 17		March 18		March 19	
2	10.66	22,200	11.06	29,800	9.70	23,400	8.68	18,900	8.61	18,500	9.24	21,200
4	10.88	23,200	10.91	28,900	9.59	23,000	8.62	18,500	8.63	18,500	9.37	22,000
6	11.08	24,100	10.77	28,400	9.49	22,500	8.57	18,700	8.64	18,500	9.45	22,000
8	11.27	25,600	10.64	27,500	9.38	22,000	8.53	18,000	8.65	18,500	9.60	23,000
10	11.43	27,100	10.50	27,000	9.29	21,600	8.49	18,000	8.67	18,900	9.79	23,800
N	11.53	29,600	10.43	26,600	9.20	21,200	8.47	18,000	8.70	18,900	10.30	26,100
2	11.47	31,700	10.33	26,100	9.11	20,700	8.45	17,600	8.76	19,400	10.51	27,000
4	11.43	31,300	10.21	25,700	9.02	20,200	8.49	18,000	8.83	19,400	10.80	28,400
6	11.37	31,300	10.10	25,200	8.93	19,800	8.51	18,000	8.94	19,800	11.02	29,400
8	11.30	30,800	10.00	24,800	8.85	19,400	8.54	18,000	9.02	20,200	11.41	31,300
10	11.21	30,300	9.89	24,300	8.78	19,400	8.56	18,500	9.11	20,700	11.79	33,200
M	11.18	30,300	9.80	23,800	8.71	18,900	8.60	18,500	9.20	21,200	12.22	35,200
	March 20		March 21		March 22		March 23		March 24		March 25	
2	12.82	38,100	14.78	48,600	12.53	36,600	12.51	36,600	11.00	29.400	9.51	22,500
4	13.40	41,200	14.62	47,500	12.49	36,600	12.44	36,100	10.84	28,400	9.40	22,000
6	13.91	43,800	14.44	46,400	12.43	36,100	12.33	35,600	10.71	28,000	9.30	21,600
8	14.30	45,900	14.25	45,300	12.43	36,100	12.22	35,200	10.60	27,500	9.19	21,200
10	14.64	47,500	14.03	44,300	12.43	36,100	12.11	34,700	10.47	27,000	9.09	20,700
N	14.81	48,600	13.82	43,200	12.47	36,600	11.96	34,200	10.33	26,100	8.98	20,200
2	14.92	49,100	13.60	42,200	12.52	36,600	11.82	33,200	10.21	25,700	8.88	19,800
4	15.02	49,700	13.38	41,200	12.57	37,100	11.69	32,700	10.07	25,200	8.78	19,400
6	15.07	50,200	13.17	40,100	12.61	37,100	11.52	31,700	10.00	24,800	8.68	18,900
8	15.04	49,700	12.97	39,100	12.61	37,100	11.41	31,300	9.86	24,300	8.59	18,500
10	14.97	49,700	12.78	38,100	12.61	37,100	11.27	30,800	9.73	23,400	8.49	18,000
M	14.89	49,100	12.65	37,100	12.59	37,100	11.12	29,800	9.62	23,000	8.40	17,600

Sebec Lake at Sebec, Maine

<u>Location</u>.- Lat. 45°17', long. 69°6', at Sebec, Piscataquis County. Zero of gage is 225.1 feet above mean sea level.
<u>Drainage area</u>.- 344 square miles.
<u>Remarks</u>.- Present storage capacity, 3,367,000,000 cubic feet. Dams at outlets of Long Pond and Onawa Lake failed about Mar. 21. Dam at outlet of Sebec Lake failed Mar. 20. No change in storage in Wilson Pond during flood period. Gage-height record furnished by Maine Public Service Co.

Gage height, in feet, and contents, in millions of cubic feet, 1936

Day	February		March		April	
	Feet	Millions of cubic feet	Feet	Millions of cubic feet	Feet	Millions of cubic feet
1	-	-	99.3	2,101	95.2	957
2	-	-	-	-	-	-
3	-	-	99.2	2,072	-	-
4	99.7	2,218	-	-	-	-
5	-	-	99.2	2,072	94.4	740
6	-	-	99.2	2,072	-	-
7	99.3	2,101	99.2	2,072	-	-
8	-	-	-	-	-	-
9	-	-	-	-	-	-
10	99.3	2,101	99.2	2,072	-	-
11	-	-	-	-	-	-
12	-	-	-	-	94.8	849
13	-	-	-	-	-	-
14	-	-	-	-	-	-
15	-	-	100.6	2,482	-	-
16	-	-	100.6	2,482	93.6	522
17	98.9	1,984	-	-	-	-
18	-	-	-	-	-	-
19	-	-	102.0	2,890	-	-
20	-	-	105.7	4,018	-	-
21	-	-	-	-	-	-
22	-	-	-	-	93.3	441
23	99.3	2,101	-	-	-	-
24	-	-	-	-	-	-
25	-	-	-	-	-	-
26	99.3	2,101	-	-	-	-
27	-	-	-	-	93.1	386
28	-	-	-	-	-	-
29	99.2	2,072	96.3	1,257	-	-
30			95.8	1,121	-	-
31			95.4	1,012		

Sebec River at Sebec, Maine

Location.- Lat. 45°17'. long. 69°6', 1,000 feet below highway bridge and dam at outlet of Sebec Lake, Sebec, Piscataquis County.
Drainage area.- 344 square miles.
Gage-height record.- Water-stage recorder graph except for periods 8 p.m. Mar. 19 to 2 p.m. Mar. 21 and 2 a.m. Mar. 23 to 10 p.m. Mar. 25, when it was based on flood marks and records from hydro-electric station just above. Gage heights used to half tenths between 4.20 and 5.70 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Defined by current-meter measurements below 6,000 second-feet; extension to peak stage verified by comparison of total run-off of flood with records for other streams in Piscataquis River Basin.
Maxima.- 1936: Discharge, 11,400 second-feet 1:30 p.m. Mar. 20 (gage height, 14.46 feet).
1924-35: Discharge, 4,780 second-feet Apr. 21, 1934 (gage height, 8.40 feet).
Remarks.- Flood discharge affected by storage in Sebec Lake, Onawa Lake, and Long Pond. Part of storage released when outlet dams failed Mar. 20 and 21. For daily changes in storage see record for Sebec Lake at Sebec, Maine. No change in storage in Wilson Pond during flood period.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	465	265	3,910	11	365	340	3,430	21	375	7,730	2,330
2	345	390	3,620	12	335	680	3,250	22	325	6,970	2,330
3	440	375	3,430	13	315	2,560	3,150	23	265	7,300	2,240
4	435	350	3,250	14	350	5,290	2,690	24	385	7,510	2,150
5	420	360	2,970	15	275	5,700	2,510	25	395	7,190	2,060
6	415	340	2,970	16	225	5,500	2,600	26	385	6,330	1,970
7	375	315	3,430	17	370	5,190	2,510	27	390	5,700	1,880
8	390	225	3,720	18	325	5,190	2,420	28	400	5,290	1,790
9	275	310	3,720	19	340	6,230	2,420	29	325	5,090	1,750
10	385	335	3,530	20	360	10,000	2,420	30		4,590	1,750
								31		4,290	
Mean monthly discharge, in second-feet									360	3,804	2,740
Run-off, in inches									1.13	12.80	8.89

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	2.31	196	2.32	199	2.34	206	2.31	196	2.33	203	4.27	1,270
4	2.31	196	2.32	199	2.33	203	2.31	196	2.34	206	4.38	1,380
6	2.31	196	2.55	286	2.52	274	2.51	270	2.65	327	4.78	1,680
8	2.32	199	2.86	421	2.91	445	3.09	535	2.95	465	5.05	1,880
10	2.31	196	2.75	370	2.91	445	3.08	530	2.85	416	5.30	2,080
N	2.31	196	2.65	327	2.85	416	2.91	445	2.80	392	5.46	2,240
2	2.31	196	2.71	352	2.91	445	2.98	480	3.00	490	5.83	2,480
4	2.31	196	2.73	361	2.80	392	2.66	331	4.06	1,120	6.50	3,080
6	2.81	397	2.81	397	2.79	388	2.63	319	4.20	1,230	7.48	3,970
8	2.76	374	2.74	366	2.82	402	2.61	310	4.19	1,230	7.62	4,060
10	2.31	196	2.33	203	2.30	192	2.33	203	4.10	1,160	7.84	4,240
M	2.32	199	2.34	206	2.30	192	2.33	203	4.18	1,230	8.07	4,510
	March 14		March 15		March 16		March 17		March 18		March 19	
2	8.20	4,690	9.27	5,810	9.13	5,600	8.76	5,290	8.50	4,990	9.05	5,500
4	8.35	4,890	9.27	5,810	9.11	5,600	8.74	5,190	8.50	4,990	9.10	5,600
6	8.49	4,990	9.26	5,810	9.07	5,600	8.74	5,190	8.51	4,990	9.18	5,700
8	8.72	5,190	9.22	5,700	9.05	5,500	8.82	5,290	8.75	5,290	9.29	5,810
10	8.85	5,290	9.21	5,700	9.03	5,500	8.86	5,390	8.79	5,290	9.45	5,910
N	9.00	5,500	9.21	5,700	9.00	5,500	8.80	5,290	8.79	5,290	9.40	5,910
2	9.05	5,500	9.23	5,700	8.97	5,500	8.80	5,290	8.83	5,290	9.62	6,120
4	9.08	5,600	9.23	5,700	8.97	5,500	8.80	5,290	8.87	5,390	9.71	6,230
6	9.11	5,600	9.22	5,700	8.94	5,390	8.77	5,290	8.90	5,390	10.10	6,650
8	9.14	5,600	9.20	5,700	8.92	5,390	8.73	5,190	8.94	5,390	10.65	7,190
10	9.24	5,700	9.18	5,700	8.88	5,390	8.73	5,190	8.97	5,500	11.10	7,730
M	9.27	5,810	9.15	5,700	8.76	5,290	8.57	5,090	9.01	5,500	11.42	8,050
	March 20		March 21		March 22		March 23		March 24		March 25	
2	11.77	8,480	12.51	9,240	10.45	6,970	10.40	6,970	10.93	7,510	10.80	7,400
4	12.16	8,910	12.20	8,910	10.46	7,080	10.46	7,080	10.94	7,510	10.77	7,400
6	12.61	9,340	11.89	8,580	10.46	7,080	10.53	7,080	10.95	7,620	10.73	7,300
8	13.13	9,890	11.58	8,260	10.47	7,080	10.59	7,190	10.95	7,620	10.69	7,300
10	13.74	10,600	11.28	7,940	10.47	7,080	10.65	7,190	10.95	7,620	10.64	7,190
N	14.28	11,200	11.00	7,620	10.47	7,080	10.70	7,300	10.94	7,510	10.60	7,190
2	14.44	11,300	10.60	7,190	10.48	7,080	10.75	7,400	10.93	7,510	10.54	7,080
4	14.17	11,100	10.42	6,970	10.46	7,080	10.79	7,400	10.92	7,510	10.49	7,080
6	13.83	10,700	10.44	6,970	10.39	6,970	10.84	7,400	10.90	7,510	10.43	6,970
8	13.50	10,300	10.38	6,970	10.41	6,970	10.87	7,510	10.88	7,510	10.37	6,970
10	13.15	10,000	10.41	6,970	10.40	6,970	10.89	7,510	10.86	7,510	10.31	6,860
M	12.84	9,560	10.44	6,970	10.30	6,860	10.92	7,510	10.83	7,400	10.25	6,760

Supplemental records.- Mar. 20, 1:30 p.m., 14.46 ft., 11,400 sec.-ft.

Pleasant River near Milo, Maine

Location.- Lat. 45°2', long. 69°1', 2 miles northwest of Milo, Piscataquis County, and 8 1/4 miles above confluence with Piscataquis River.
Drainage area.- 322 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights used to half tenths between 3.4 and 6.0 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 13. Defined by current-meter measurements below 22,000 second-feet.
Maxima.- 1936: Discharge, 23,400 second-feet 3:20 a.m. Mar. 20 (gage height, 13.52 feet).
1920-35: Discharge, 24,400 second-feet Apr. 30, 1923.
Remarks.- Flood run-off not materially affected by storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	270	186	2,800	11	200	166	2,060	21	400	10,800	1,570
2	250	168	2,350	12	250	430	1,860	22	275	9,780	1,460
3	235	158	1,990	13	225	8,930	1,570	23	230	7,740	1,260
4	220	158	1,740	14	176	10,500	1,460	24	210	5,380	1,220
5	235	162	1,460	15	142	7,520	1,260	25	210	4,100	1,220
6	235	152	1,860	16	156	5,080	1,220	26	210	3,120	1,140
7	215	148	4,780	17	220	4,580	1,360	27	210	2,960	1,150
8	215	148	4,010	18	295	5,380	1,520	28	210	3,640	1,130
9	220	148	2,800	19	405	10,500	1,520	29	205	3,820	1,260
10	215	166	2,280	20	485	19,800	1,620	30		3,120	1,740
								31		3,120	
Mean monthly discharge, in second-feet									242	4,260	1,822
Run-off, in inches									0.81	15.22	6.32

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	3.89	152	3.89	154	3.87	152	3.85	146	4.00	205	6.56	2,800
4	3.89	152	3.88	154	3.88	156	3.90	162	4.02	215	7.31	3,820
6	3.88	148	3.87	152	3.89	158	3.91	164	4.05	225	8.27	5,180
8	3.85	142	3.87	152	3.90	164	3.93	170	4.10	245	9.02	6,640
10	3.86	146	4.03	198	4.09	220	4.10	225	4.28	330	7.55	8,180
N	3.89	152	3.96	172	3.99	194	3.98	180	4.25	315	8.60	10,300
2	3.85	142	3.84	134	3.88	160	3.89	158	4.30	335	9.16	12,300
4	3.83	136	3.93	162	3.99	194	3.98	180	4.41	365	9.31	12,800
6	3.89	152	3.83	138	3.90	174	3.97	176	4.60	450	9.39	13,000
8	3.89	152	3.70	120	3.78	134	3.83	138	4.90	550	9.44	13,000
10	3.89	152	3.58	100	3.84	152	3.84	140	5.52	1,050	9.35	13,000
M	3.89	152	3.80	130	3.79	138	3.91	164	6.00	1,590	9.10	12,300
	March 14		March 15		March 16		March 17		March 18		March 19	
2	8.79	11,500	7.70	8,860	6.36	5,990	5.67	4,480	5.79	4,780	6.78	6,860
4	8.63	11,000	7.57	8,630	6.27	5,780	5.68	4,580	5.78	4,780	7.10	7,520
6	8.55	11,000	7.42	8,180	6.16	5,580	5.65	4,480	5.76	4,680	7.22	7,740
8	8.48	10,800	7.27	7,960	6.08	5,380	5.65	4,480	5.80	4,780	7.39	8,180
10	8.37	10,500	7.17	7,740	6.00	5,180	5.67	4,480	5.85	4,880	7.61	8,630
N	8.30	10,300	7.11	7,520	5.91	4,980	5.69	4,580	5.90	4,980	7.93	9,320
2	8.22	10,000	7.03	7,300	5.87	4,880	5.71	4,580	6.13	5,380	8.01	9,550
4	8.20	10,000	6.95	7,300	5.80	4,780	5.72	4,580	6.32	5,780	9.77	14,000
6	8.21	10,000	6.85	6,860	5.77	4,680	5.58	4,390	6.45	5,990	9.31	12,800
8	8.11	9,780	6.68	6,640	5.72	4,580	5.79	4,780	6.60	6,420	9.90	14,300
10	7.97	9,550	6.61	6,420	5.69	4,580	5.84	4,880	6.82	6,860	10.77	16,500
M	7.82	9,090	6.49	6,200	5.68	4,580	5.80	4,780	6.90	7,080	12.33	20,300
	March 20		March 21		March 22		March 23		March 24		March 25	
2	13.32	22,900	9.72	13,800	7.74	8,860	7.81	9,090	6.54	6,200	5.70	4,580
4	13.49	23,400	9.42	13,000	7.86	9,320	7.69	8,860	6.43	5,900	5.64	4,480
6	13.30	22,900	9.11	12,300	8.02	9,550	7.56	8,630	6.34	5,780	5.60	4,390
8	12.99	22,100	8.88	11,800	8.15	10,000	7.42	8,180	6.24	5,580	5.54	4,300
10	12.65	21,100	8.63	11,000	8.25	10,000	7.28	7,960	6.18	5,580	5.49	4,200
N	12.30	20,300	8.37	10,500	8.30	10,300	7.14	7,520	6.08	5,380	5.43	4,100
2	11.97	19,500	8.17	10,000	8.30	10,300	7.03	7,300	6.00	5,180	5.39	4,010
4	11.60	18,500	8.00	9,550	8.25	10,000	7.00	7,300	5.93	5,080	5.33	3,920
6	11.23	17,500	7.87	9,320	8.20	10,000	6.94	7,080	5.88	4,980	5.29	3,820
8	10.83	16,500	7.74	8,860	8.12	9,780	6.86	7,080	5.84	4,880	5.23	3,730
10	10.44	15,500	7.69	8,860	8.02	9,550	6.75	6,860	5.81	4,780	5.19	3,640
M	10.06	14,800	7.69	8,860	7.92	9,320	6.64	6,420	5.75	4,680	5.14	3,550

Supplemental records.- Mar. 13, 8:20 a.m., 10.26 ft., 6,900 sec.-ft. Mar. 20, 3:20 a.m., 13.52 ft., 23,400 sec.-ft.

Damariscotta Lake at Damariscotta Mills, Maine

Location.- Lat. 44°3'45", long. 69°31'50", at Damariscotta Mills, Lincoln County.
Drainage area.- 57.0 square miles.
Remarks.- Storage capacity, 946,500,000 cubic feet. Gage-height record furnished by Central Maine Power Co.

Gage height, in feet, and contents, in millions of cubic feet, 1936

Day	February		March		April	
	Feet	Millions of cubic feet	Feet	Millions of cubic feet	Feet	Millions of cubic feet
1	8.08	961.6	7.75	899.1	-	-
2	-	-	-	-	-	-
3	-	-	-	-	-	-
4	8.00	946.5	7.58	867.0	10.25	1,372.4
5	-	-	-	-	-	-
6	7.92	931.3	-	-	10.17	1,357.2
7	-	-	-	-	10.50	1,419.7
8	-	-	-	-	-	-
9	-	-	7.58	867.0	-	-
10	7.83	914.3	-	-	-	-
11	-	-	-	-	10.25	1,372.4
12	-	-	7.75	899.1	-	-
13	-	-	10.12	1,347.8	10.08	1,340.2
14	-	-	10.25	1,372.4	-	-
15	-	-	10.33	1,387.5	-	-
16	7.83	914.3	-	-	9.75	1,277.7
17	-	-	10.50	1,419.7	-	-
18	-	-	10.33	1,387.5	-	-
19	-	-	-	-	-	-
20	8.00	946.5	10.50	1,419.7	-	-
21	-	-	10.92	1,499.2	-	-
22	-	-	-	-	-	-
23	7.92	931.3	11.00	1,514.4	-	-
24	-	-	10.92	1,499.2	9.33	1,198.2
25	-	-	10.75	1,467.0	-	-
26	7.92	931.3	-	-	-	-
27	-	-	10.58	1,434.8	-	-
28	-	-	-	-	9.42	1,215.3
29	-	-	10.50	1,419.7	-	-
30			-	-	-	-
31			10.25	1,372.4		

Brassua Lake near Rockwood, Maine

Location.- Lat. 45°39'40", long. 69°48'50", at dam at outlet in township of Rockwood, Somerset County. Zero of gage is 1,000 feet above mean sea level.
Drainage area.- 708 square miles.
Gage-height record.- Two gage readings weekly, usually made about 8 a.m.
Remarks.- Storage capacity, 8,560,000,000 cubic feet. Records furnished by Brassua Associates.

Gage height, in feet, and contents, in millions of cubic feet, 1936

Day	February		March		April	
	Feet	Millions of cubic feet	Feet	Millions of cubic feet	Feet	Millions of cubic feet
1	42.79	0	42.76	0	67.90	6,533
2	-	-	42.75	0	-	-
3	42.78	0	-	-	-	-
4	-	-	-	-	-	-
5	-	-	-	-	-	-
6	-	-	-	-	67.65	6,440
7	-	-	-	-	-	-
8	-	-	-	-	67.85	6,514
9	-	-	42.70	0	-	-
10	42.69	0	-	-	-	-
11	-	-	-	-	-	-
12	-	-	42.75	0	-	-
13	-	-	-	-	68.15	6,627
14	-	-	-	-	-	-
15	-	-	-	-	-	-
16	-	-	46.10	476	-	-
17	42.66	0	-	-	69.00	6,950
18	-	-	-	-	-	-
19	-	-	-	-	-	-
20	-	-	-	-	68.60	6,798
21	-	-	-	-	-	-
22	-	-	-	-	-	-
23	-	-	58.80	3,410	68.60	6,798
24	42.71	0	-	-	-	-
25	-	-	-	-	-	-
26	-	-	-	-	-	-
27	-	-	-	-	68.35	6,703
28	-	-	-	-	-	-
29	-	-	-	-	-	-
30			67.32	6,318	68.40	6,722
31						

	February	March	April
Gain or loss in storage, in equivalent mean second-feet	0	+2,440	+124

Moosehead Lake at east outlet, Maine

Location.- Lat. 45°35'10", long. 69°42'45", at wharf at east outlet of lake, at Moosehead, Piscataquis County. Zero of gage is 1,011.2 feet above mean sea level.
Drainage area.- 1,240 square miles.
Gage-height record.- Three gage readings weekly, usually made about 8 a.m.
Remarks.- Storage capacity. 23,735,000,000 cubic feet. Records furnished by Hollingsworth & Whitney Co.

Gage height, in feet, and contents, in millions of cubic feet, 1936

Day	February		March		April	
	Feet	Millions of cubic feet	Feet	Millions of cubic feet	Feet	Millions of cubic feet
1	13.15	9,852	11.84	5,736	16.35	20,032
2	-	-	11.77	5,517	-	-
3	13.00	9,379	-	-	-	-
4	-	-	11.65	5,142	-	-
5	12.96	9,253	-	-	-	-
6	-	-	11.55	4,828	16.98	22,057
7	12.88	9,001	-	-	-	-
8	-	-	-	-	17.10	22,443
9	-	-	11.35	4,202	-	-
10	12.72	8,498	-	-	17.00	22,121
11	-	-	11.30	4,046	-	-
12	12.61	8,152	11.30	4,046	-	-
13	-	-	11.55	4,828	16.89	21,767
14	12.50	7,807	-	-	-	-
15	-	-	-	-	16.90	21,799
16	-	-	11.88	5,861	-	-
17	12.46	7,681	-	-	17.05	22,282
18	-	-	12.28	7,116	-	-
19	12.36	7,367	-	-	-	-
20	-	-	13.28	10,262	17.10	22,443
21	12.24	6,991	-	-	-	-
22	-	-	-	-	17.20	22,766
23	-	-	14.30	13,488	17.23	22,863
24	12.07	6,457	-	-	17.30	23,089
25	-	-	14.73	14,854	-	-
26	11.88	5,861	-	-	-	-
27	-	-	15.20	16,351	17.35	23,250
28	11.90	5,924	-	-	-	-
29	-	-	-	-	17.33	23,186
30			15.90	18,588	17.36	23,283
31						

	February	March	April
Gain or loss in storage, in equivalent mean second-feet	-1,668	+5,039	+1,552

Kennebec River at Moosehead, Maine

Location.- Lat. 45°35'10", long. 69°43'10", an eighth of a mile below east outlet dam of Moosehead Lake and half a mile northwest of Moosehead, Piscataquis County. Zero of gage is 1,015.2 feet above mean sea level.
Drainage area.- 1,240 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights used to hundredths.
Stage-discharge relation.- Defined by current-meter measurements below 8,000 second-feet.
Maxima.- 1936: Discharge, 10,200 second-feet 6 a.m. Apr. 8 (gage height, 8.00 feet).
1919-35: Discharge, 13,600 second-feet May 9, 1929 (gage height, 9.19 feet).
Remarks.- Flood run-off regulated by artificial storage. Monthly table includes discharges corrected for diversion through west outlet and storage in Moosehead, Brassua, and Upper and Lower Kokadjo Lakes, having combined capacity of 33,500,000,000 cubic feet. Moosehead Lake rose from gage height 11.9 feet Mar. 16 to 17.1 feet Apr. 8.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	1,870	2,220	1,640	11	2,220	1,660	8,930	21	2,240	400	1,900
2	2,170	2,170	3,780	12	2,010	1,430	7,690	22	2,220	430	1,930
3	2,140	2,230	3,900	13	2,040	550	5,490	23	2,160	448	1,960
4	2,110	2,200	4,730	14	2,120	260	3,570	24	2,170	466	1,960
5	2,080	2,140	6,350	15	2,120	264	2,860	25	2,340	478	1,960
6	2,030	2,030	6,410	16	2,110	278	2,900	26	2,400	490	2,980
7	2,160	1,960	6,820	17	2,110	286	2,950	27	2,470	484	3,860
8	2,470	1,870	8,520	18	2,290	320	2,950	28	2,380	514	3,370
9	2,560	1,780	9,090	19	2,360	360	2,960	29	2,320	520	3,180
10	2,440	1,710	8,990	20	2,300	385	2,450	30		527	3,210
								31		548	
Mean monthly discharge, in second-feet (observed)									2,221	1,013	4,310
Run-off, in inches (observed)									1.93	0.94	3.88
Mean monthly discharge, in second-feet (corrected)									578	8,886	5,946
Run-off, in inches (corrected)									0.50	8.27	5.36

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-
6	4.34	1,890	4.26	1,790	4.21	1,720	4.17	1,670	4.18	1,690	3.63	1,060
8	-	-	-	-	-	-	-	-	-	-	3.62	1,050
10	-	-	-	-	-	-	-	-	-	-	2.73	365
N	4.33	1,880	4.25	1,780	4.21	1,720	4.16	1,660	4.25	1,780	2.50	255
2	-	-	-	-	-	-	-	-	4.20	1,710	-	-
4	-	-	-	-	-	-	-	-	4.00	1,470	-	-
6	4.31	1,850	4.24	1,760	4.19	1,700	4.15	1,650	4.03	1,510	2.50	255
8	-	-	-	-	-	-	-	-	4.02	1,490	-	-
10	-	-	-	-	-	-	-	-	3.59	1,020	-	-
M	4.29	1,830	4.23	1,750	4.18	1,690	4.15	1,650	3.59	1,020	2.50	255
	March 14		March 15		March 16		March 17		March 18		March 19	
2	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-
6	2.51	260	2.52	264	2.54	273	2.57	286	2.62	310	2.71	355
8	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-
N	2.51	260	2.52	264	2.55	278	2.57	286	2.65	325	2.73	365
2	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-
6	2.51	260	2.52	264	2.56	282	2.58	291	2.66	330	2.74	370
8	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-
M	2.51	260	2.53	268	2.57	286	2.59	296	2.67	335	2.75	375
	March 20		March 21		March 22		March 23		March 24		March 25	
2	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-
6	2.76	380	2.80	400	2.85	430	2.87	442	2.90	460	2.92	472
8	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-
N	2.77	385	2.80	400	2.85	430	2.88	448	2.91	466	2.92	472
2	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-
6	2.78	390	2.81	406	2.86	436	2.88	448	2.91	466	2.93	478
8	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-
M	2.78	390	2.83	418	2.86	436	2.89	454	2.92	472	2.94	484

Kennebec River at The Forks, Maine

Location.- Lat. 45°20'35", long. 69°57'45", at The Forks, Somerset County, half a mile above highway bridge and 1 mile above mouth of Dead River. Zero of gage is 568.8 feet above mean sea level.

Drainage area.- 1,570 square miles.

Gage-height record.- Water stage recorder graph. Gage heights used to half tenths between 3.0 and 5.5 feet; hundredths below and tenths above these limits.

Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 17. Defined by current-meter measurements below 10,000 second-feet; extension to peak stage verified by oomparison of peak discharge and total run-off of flood with determinations for other streams in Kennebec River Basin.

Maxima.- 1936: Discharge, 17,100 second-feet 6 a.m. Mar. 20 (gage height, 8.80 feet).
1901-35: Discharge, 23,700 second-feet June 18, 1917 (gage height, 10.1 feet).

Remarks.- Flood run-off materially affected by artificial storage in lakes having combined capacity of about 34,000,000,000 cubic feet. Part of monthly discharge table corrected for storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	2,040	2,370	3,240	11	2,590	1,780	11,300	21	2,440	10,700	3,750
2	2,260	2,370	4,800	12	2,370	1,590	10,700	22	2,370	9,850	3,530
3	2,320	2,370	5,680	13	2,200	1,680	8,400	23	2,340	7,560	3,430
4	2,320	2,310	5,560	14	2,260	1,620	5,940	24	2,340	5,430	3,330
5	2,280	2,290	7,010	15	2,280	1,740	4,200	25	2,420	4,200	3,240
6	2,260	2,140	7,840	16	2,280	1,880	3,970	26	2,490	3,530	3,140
7	2,400	2,060	9,560	17	2,340	2,260	4,080	27	2,540	3,240	4,440
8	2,630	1,960	11,300	18	2,450	5,430	3,970	28	2,540	3,330	4,930
9	2,680	1,900	12,000	19	2,490	12,300	4,200	29	2,470	2,950	4,560
10	2,720	1,860	11,600	20	2,500	15,800	4,320	30		2,950	5,180
								31		3,140	
Mean monthly discharge, in second-feet (observed).............									2,401	4,019	5,973
Mean monthly discharge, in second-feet (corrected)............									733	12,120	7,533
Run-off, in inches (corrected)................................									0.50	8.90	5.36

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-
6	6.20	1,980	6.01	1,890	6.00	1,890	5.62	1,790	5.00	1,670	4.12	1,690
8	-	-	-	-	-	-	-	-	4.95	1,660	-	-
10	-	-	-	-	-	-	-	-	4.40	1,590	-	-
N	6.21	2,000	6.04	1,910	6.08	1,880	5.62	1,790	4.26	1,560	4.08	1,680
2	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-
6	6.12	1,940	6.03	1,900	5.86	1,840	5.54	1,760	4.17	1,530	3.92	1,670
8	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-
M	6.04	1,910	6.01	1,890	5.77	1,800	5.29	1,710	4.08	1,510	3.82	1,660
	March 14		March 15		March 16		March 17		March 18		March 19	
2	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-
6	3.75	1,630	3.70	1,690	3.63	1,860	3.85	2,100	4.45	4,320	6.33	9,270
8	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-
N	3.73	1,620	3.70	1,750	3.61	1,840	3.90	2,160	4.93	5,560	7.50	12,900
2	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-
6	3.73	1,620	3.69	1,800	3.66	1,900	3.96	2,280	5.26	6,600	8.00	14,500
8	-	-	-	-	-	-	-	-	-	-	8.40	15,800
10	-	-	-	-	-	-	-	-	-	-	8.53	16,100
M	3.71	1,610	3.69	1,830	3.73	2,000	4.10	3,000	5.73	7,560	8.72	16,800
	March 20		March 21		March 22		March 23		March 24		March 25	
2	8.79	17,100	-	-	-	-	-	-	-	-	-	-
4	8.60	16,400	-	-	-	-	-	-	-	-	-	-
6	8.80	17,100	7.07	11,600	6.58	10,100	5.83	7,840	5.03	5,810	4.55	4,560
8	8.72	16,800	-	-	-	-	-	-	-	-	-	-
10	8.60	16,400	-	-	-	-	-	-	-	-	-	-
N	8.35	15,800	6.53	9,850	6.55	10,100	5.64	7,280	4.90	5,430	4.42	4,200
2	-	-	-	-	-	-	-	-	-	-	-	-
4	8.20	15,100	-	-	-	-	-	-	-	-	-	-
6	-	-	6.56	10,100	6.43	9,560	5.49	7,010	4.77	5,060	4.33	4,080
8	7.94	14,200	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-
M	7.60	13,200	6.57	10,100	6.20	8,980	5.25	6,340	4.65	4,800	4.23	3,860

Supplemental records.- Mar. 19, 9 p.m., 8.20 ft., 15,100 sec.-ft.

Wyman Pond near Bingham, Maine

Location.- Lat. 45°4'15", long. 69°54'20", at Wyman Dam, in township of Moscow, Somerset County, 1½ miles above village of Bingham. Zero of gage is 400.0 feet above mean sea level.
Drainage area.- 2,612 square miles.
Gage-height record.- Hourly gage readings.
Remarks.- Storage capacity in upper 20 feet of pond, 2,630,000,000 cubic feet. Records furnished by Central Maine Power Co.

Gage height, in feet, and contents, in millions of cubic feet, 1936

Day	February		March		April	
	Feet	Millions of cubic feet	Feet	Millions of cubic feet	Feet	Millions of cubic feet
1	82.8	8,760	84.9	9,060	84.4	8,990
2	83.0	8,790	84.7	9,040	78.0	8,100
3	82.9	8,780	84.5	9,000	79.1	8,240
4	83.2	8,820	84.3	8,980	83.0	8,790
5	83.2	8,820	84.2	8,960	84.2	8,960
6	83.3	8,830	84.1	8,940	82.1	8,660
7	83.3	8,830	83.8	8,900	81.3	8,550
8	83.5	8,860	84.2	8,960	81.5	8,580
9	84.1	8,940	83.7	8,890	81.1	8,520
10	84.1	8,940	83.3	8,830	81.2	8,540
11	84.2	8,960	83.0	8,790	81.1	8,520
12	84.3	8,980	83.8	8,900	81.1	8,520
13	84.2	8,960	84.4	8,990	81.0	8,510
14	84.2	8,960	84.6	9,020	81.0	8,510
15	84.3	8,980	84.4	8,990	81.1	8,520
16	84.7	9,040	84.1	8,940	81.1	8,520
17	84.4	8,990	82.2	8,680	81.7	8,610
18	84.4	8,990	81.5	8,580	83.4	8,850
19	84.4	8,990	84.9	9,060	83.9	8,920
20	84.4	8,990	84.4	8,990	84.0	8,930
21	84.4	8,990	84.5	9,000	84.1	8,940
22	84.4	8,990	84.3	8,980	84.0	8,930
23	84.8	9,050	84.3	8,980	83.5	8,860
24	84.5	9,000	84.4	8,990	84.5	9,000
25	84.4	8,990	83.9	8,920	84.5	9,000
26	84.4	8,990	84.0	8,930	85.0	9,080
27	84.4	8,990	84.4	8,990	85.0	9,080
28	84.5	9,000	84.5	9,000	84.5	9,000
29	84.6	9,020	84.6	9,020	83.6	8,870
30			84.6	9,020	84.8	9,050
31			84.5	9,000		

	February	March	April
Gain or loss in storage, in equivalent mean second-feet.	+104	-747	+19.3

Kennebec River at Wyman Dam, Maine

Location.- Lat. 45°4'15", long. 69°54'20", in township of Moscow, 1¼ miles above mouth of Austin Stream and 1½ miles above village of Bingham, Somerset County. Zero of gage is 480.0 feet above mean sea level.
Drainage area.- 2,612 square miles.
Gage-height record.- Staff gages in pond above dam and in tailrace read each hour.
Maxima.- 1936: Discharge, 54,000 second-feet 7 a.m. Mar. 20 (gage height, 5.4 feet).
Remarks.- Discharge computed from flow over dam and through gates and wheels. Flood run-off affected by storage in several lakes above; total storage capacity, about 37,000,000,000 cubic feet. Part of monthly discharge table corrected for storage. Records furnished by Central Maine Power Co.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	2,100	1,890	11,400	11	2,680	2,750	15,000	21	2,790	40,000	6,470
2	1,720	3,190	19,400	12	2,630	6,150	13,300	22	2,600	39,400	6,080
3	2,780	2,930	9,720	13	2,570	11,300	11,700	23	1,930	32,300	7,920
4	2,430	2,880	5,310	14	2,510	11,300	9,900	24	3,010	25,400	4,920
5	2,590	2,850	8,300	15	2,350	10,900	8,570	25	2,790	22,200	4,940
6	2,510	2,640	16,100	16	2,000	10,500	8,010	26	2,850	16,200	5,490
7	2,550	2,930	18,000	17	2,990	13,700	5,570	27	2,780	12,200	6,680
8	2,330	1,790	15,900	18	2,800	18,700	5,140	28	2,620	12,200	9,260
9	1,970	3,030	18,500	19	2,680	36,700	7,760	29	2,750	11,700	8,740
10	2,770	2,910	15,500	20	2,790	49,600	8,360	30		11,100	8,400
								31		11,600	
Mean monthly discharge, in second-feet (observed)...............									2,546	13,970	10,010
Mean monthly discharge, in second-feet (corrected).............									982	22,400	11,430
Run-off, in inches (corrected).................................									0.41	9.89	4.89

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	3.8	1,680	4.2	2,740	3.7	2,510	3.3	1,770	3.0	2,040	3.7	13,300
4	3.9	1,110	4.2	2,950	3.7	2,120	3.3	1,680	3.0	2,040	3.7	13,500
6	4.0	1,520	4.2	3,040	3.7	2,270	3.4	2,190	3.1	2,010	3.6	13,400
8	4.0	2,630	4.1	3,540	3.7	2,500	3.3	3,540	3.2	2,560	3.6	11,600
10	4.0	2,430	4.0	4,280	3.7	3,540	3.3	3,720	3.3	2,720	3.6	10,500
N	4.0	950	3.9	2,700	3.6	2,860	3.2	3,380	3.4	2,220	3.8	9,550
2	4.0	1,890	3.9	3,040	3.6	3,600	3.1	3,040	3.6	3,730	4.0	9,630
4	4.1	1,810	3.9	2,700	3.6	3,360	3.1	2,880	3.8	8,530	4.2	9,620
6	4.1	1,970	3.8	3,200	3.5	3,360	3.0	3,380	3.6	19,600	4.3	9,660
8	4.1	1,680	3.8	3,360	3.4	3,540	3.0	3,200	3.6	10,200	4.4	11,400
10	4.2	1,560	3.7	3,040	3.3	2,880	3.0	2,720	3.7	9,000	4.4	11,800
M	4.2	2,210	3.7	1,680	3.3	2,560	3.0	2,400	3.8	12,400	4.4	10,500
	March 14		March 15		March 16		March 17		March 18		March 19	
2	4.5	10,400	4.5	11,700	4.4	11,000	4.1	10,100	1.9	16,500	1.7	25,200
4	4.5	11,000	4.5	11,700	4.3	10,900	4.1	10,100	1.7	16,400	1.8	29,400
6	4.5	11,300	4.5	11,700	4.3	8,820	4.0	10,200	1.6	17,500	1.9	33,200
8	4.6	12,000	4.4	12,300	4.3	11,200	4.0	12,100	1.4	18,500	2.0	36,700
10	4.6	11,800	4.3	9,260	4.3	10,100	3.9	11,400	1.3	18,400	2.2	37,800
N	4.6	11,800	4.4	11,100	4.2	10,300	3.9	12,600	1.2	16,300	2.8	38,200
2	4.6	11,400	4.4	11,900	4.2	10,500	3.6	17,000	1.3	18,200	3.1	39,000
4	4.6	11,400	4.2	12,600	4.2	10,800	3.3	16,200	1.3	18,900	3.5	40,400
6	4.6	11,800	4.1	12,400	4.1	11,600	3.0	16,600	1.4	19,100	3.8	40,500
8	4.5	12,900	4.2	8,350	4.1	11,000	2.7	16,700	1.4	19,800	4.1	41,700
10	4.4	9,280	4.4	7,350	4.1	10,900	2.4	16,000	1.5	24,000	4.4	41,700
M	4.6	11,600	4.4	11,000	4.1	9,960	2.2	17,300	1.5	22,200	4.9	41,800
	March 20		March 21		March 22		March 23		March 24		March 25	
2	5.2	47,000	4.4	43,500	4.5	41,200	4.3	36,000	4.2	27,000	4.4	23,800
4	5.4	51,300	4.4	42,700	4.5	41,200	4.3	36,100	4.2	27,200	4.4	24,200
6	5.4	52,400	4.4	41,900	4.4	41,300	4.2	35,800	4.2	27,400	4.4	24,200
8	5.3	53,600	4.3	41,400	4.4	40,900	4.0	32,700	4.2	27,700	4.2	23,900
10	5.1	52,900	4.3	38,600	4.4	39,600	4.1	28,400	4.1	26,300	4.1	22,400
N	5.0	52,500	4.3	38,800	4.4	39,400	4.3	32,400	4.1	24,400	4.1	21,700
2	4.8	51,700	4.3	38,600	4.4	39,000	4.3	32,400	4.2	24,300	4.1	21,800
4	4.6	50,500	4.3	38,300	4.4	38,400	4.3	31,300	4.3	23,400	4.1	21,400
6	4.5	46,900	4.3	39,000	4.4	39,400	4.3	29,800	4.3	23,600	4.0	20,400
8	4.5	46,800	4.3	39,600	4.3	40,300	4.3	31,500	4.3	24,700	4.0	21,300
10	4.4	44,600	4.3	38,600	4.2	36,700	4.3	31,000	4.3	23,700	3.9	20,200
M	4.4	43,700	4.5	38,300	4.3	36,100	4.3	30,000	4.4	22,600	3.9	20,200

Supplemental records.- Mar. 20, 7 a.m., 5.4 ft., 54,000 sec.-ft.

Kennebec River at Bingham, Maine

Location.- Lat. 45°3'5", long. 69°53'15", at Bingham, Somerset County, 200 feet below highway bridge and half a mile below mouth of Austin Stream. Zero of gage is 330.0 feet above mean sea level.
Drainage area.- 2,710 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights used to half tenths between 6.60 and 9.10 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 4. Defined by current-meter measurements below 28,000 second-feet; extended to peak stage on basis of discharge at dam above gage, with allowance for inflow between dam and gage; verified by comparison of instantaneous and total yield of flood with records for other stations on Kennebec River.
Maxima.- 1936: Discharge, 55,200 second-feet 12:20 p.m. Mar. 20 (gage height, 14.44 feet).
1907-10, 1930-35: Discharge, 32,500 second-feet May 11, 12, 1909.
Remarks.- Flood run-off materially affected by artificial storage in several lakes, totaling about 37,000,000,000 cubic feet storage capacity. Part of monthly discharge table corrected for storage. Gage-height record furnished by Brassua Associates.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	2,270	2,040	12,500	11	2,840	2,840	15,700	21	2,970	42,000	6,970
2	2,300	3,330	19,000	12	2,790	7,090	14,700	22	2,760	43,000	6,700
3	3,380	3,070	8,490	13	2,710	14,000	13,000	23	2,520	34,400	8,210
4	2,590	3,020	5,560	14	2,640	14,200	10,400	24	3,680	26,200	5,560
5	2,750	2,990	8,510	15	2,480	12,400	9,000	25	2,940	22,700	5,510
6	2,670	2,810	16,200	16	2,140	11,700	8,500	26	2,990	17,200	6,150
7	2,710	3,380	19,200	17	3,120	14,700	6,010	27	2,940	13,200	9,630
8	2,460	2,320	16,900	18	2,940	20,200	5,510	28	2,760	13,200	8,980
9	2,120	3,330	19,600	19	2,840	39,000	7,970	29	2,890	12,800	8,890
10	2,910	2,990	16,200	20	2,970	51,600	9,020	30		12,100	9,490
								31		12,500	
Mean monthly discharge, in second-feet (observed)									2,761	15,040	10,600
Mean monthly discharge, in second-feet (corrected)									1,197	23,470	12,020
Run-off, in inches (corrected)									0.48	9.98	4.95

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	6.10	2,340	6.28	2,760	6.35	2,940	6.00	2,120	6.05	1,910	9.82	16,200
4	5.98	2,080	6.42	3,120	6.03	2,190	5.87	1,850	6.00	1,810	9.86	16,700
6	6.13	2,410	6.65	3,740	6.09	2,320	5.80	1,720	6.02	1,850	9.84	16,200
8	7.11	5,100	6.24	2,670	6.21	2,590	6.35	2,940	5.62	1,140	9.46	14,700
10	6.60	3,600	7.11	5,100	6.58	3,550	6.73	4,020	6.38	2,620	9.57	15,200
N	5.80	1,720	6.91	4,470	6.74	4,020	6.83	4,320	6.33	2,510	9.14	12,700
2	5.96	2,040	6.00	2,120	5.90	1,910	5.77	1,670	5.92	1,660	9.15	13,200
4	5.97	2,060	6.43	3,150	6.72	3,880	6.45	3,200	8.35	9,120	9.18	13,200
6	5.81	1,740	6.40	3,070	6.53	3,410	6.45	3,200	10.81	22,000	9.25	13,200
8	5.96	2,040	6.55	3,460	6.80	4,170	6.69	3,880	9.22	13,200	9.22	13,200
10	5.77	1,670	6.80	4,170	6.70	3,880	6.43	3,150	8.97	12,000	9.93	16,700
M	6.00	2,120	6.06	2,250	6.47	3,250	6.22	2,620	9.66	15,700	9.31	13,700
	March 14		March 15		March 16		March 17		March 18		March 19	
2	9.44	14,200	9.35	14,200	9.05	12,400	8.85	11,400	10.03	17,200	11.21	24,800
4	9.45	14,200	9.30	13,700	9.03	12,400	8.96	12,000	10.00	17,200	12.16	32,600
6	9.39	14,200	9.29	13,700	9.10	12,700	8.97	12,000	10.27	19,000	12.23	32,600
8	9.41	14,200	9.27	13,700	8.70	10,700	8.95	12,000	10.30	19,000	12.81	38,000
10	9.46	14,700	8.75	11,000	8.79	11,200	9.10	12,700	10.51	20,200	13.16	42,000
N	9.47	14,700	9.01	12,200	8.98	12,200	9.50	14,700	10.57	20,800	13.27	43,000
2	9.36	14,200	9.07	12,400	8.53	9,990	9.60	15,200	10.32	19,000	13.25	42,000
4	9.39	14,200	9.45	14,200	8.90	11,700	10.00	17,200	10.58	20,800	13.42	44,000
6	9.35	14,200	9.44	14,200	8.94	12,000	10.00	17,200	10.72	21,400	13.47	45,000
8	9.64	15,200	8.54	9,990	8.94	12,000	10.06	17,800	10.94	22,700	13.57	46,100
10	9.50	14,700	8.39	9,340	8.92	11,700	10.00	17,200	11.15	24,800	13.58	46,100
M	8.75	11,000	8.90	11,700	9.01	12,200	10.13	17,800	11.27	25,500	13.43	44,000
	March 20		March 21		March 22		March 23		March 24		March 25	
2	13.72	47,200	13.58	46,100	13.40	44,000	12.88	39,000	11.65	27,800	11.00	23,400
4	14.07	51,600	13.50	45,000	13.42	44,000	12.85	38,000	11.60	27,800	11.10	24,100
6	14.24	52,800	13.35	44,000	13.41	44,000	12.85	38,000	11.60	27,800	11.10	24,100
8	14.31	54,000	13.37	44,000	13.41	44,000	12.50	35,300	11.50	27,000	11.00	23,400
10	14.40	55,200	13.05	40,000	13.30	43,000	11.90	30,200	11.50	27,000	11.24	24,800
N	14.40	55,200	13.06	40,000	13.29	43,000	12.24	32,600	11.30	25,500	10.90	22,700
2	14.35	55,200	13.00	40,000	13.25	42,000	12.27	33,500	11.07	24,100	10.62	20,800
4	14.35	55,200	12.97	40,000	13.20	42,000	12.25	32,600	10.98	23,400	10.76	22,000
6	14.22	52,800	13.00	40,000	13.25	42,000	11.95	31,000	11.12	24,100	10.64	20,800
8	13.95	50,500	13.17	42,000	13.39	44,000	12.12	31,800	11.28	25,500	10.65	20,800
10	13.76	48,300	13.15	42,000	12.98	40,000	12.05	31,000	11.21	24,800	10.64	20,800
M	13.64	46,100	13.08	41,000	12.90	39,000	11.96	31,000	11.00	23,400	10.59	20,800

Supplemental records.- Mar. 20, 12:20 p.m., 14.44 ft., 55,200 sec.-ft.

Kennebec River at Waterville, Maine

<u>Location</u>.- Lat. 44°33'45", long. 69°37'10", at dam and mill of Hollingsworth & Whitney Co. at Waterville, Kennebec County, 2 miles above Sebasticook River and 3½ miles above Messalonskee Stream. Zero of gage is 47.84 feet below mean sea level.
<u>Drainage area</u>.- 4,270 square miles.
<u>Gage-height record</u>.- Water-stage recorder graph of pond elevations. Gage heights given to half tenths.
<u>Stage-discharge relation</u>.- Discharge computed from flow over dam and through logway and wheels of mill. Flashboards assumed to be all off at 1 p.m. Mar. 13.
<u>Maxima</u>.- 1936: Discharge, 154,000 second-feet 11 p.m. Mar. 19 (gage height, 135.1 feet).
1892-1935: Discharge, 157,000 second-feet Dec. 16, 1901 (gage height, 135.15 feet).
<u>Remarks</u>.- Flood run-off affected by artificial storage. Monthly-discharge table corrected for storage. Discharge Mar. 10-25 computed by engineers of U. S. Geological Survey from data furnished by Hollingsworth & Whitney Company. Discharge record for other days furnished by Hollingsworth & Whitney Co.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	3,780	3,940	22,200	11	3,980	3,790	24,600	21	4,300	90,400	14,300
2	3,570	3,620	22,900	12	3,840	9,970	25,600	22	3,810	84,300	13,500
3	3,720	3,770	22,700	13	3,800	50,800	20,200	23	3,360	71,900	13,000
4	3,770	4,140	18,300	14	3,610	59,900	18,500	24	3,660	49,000	12,300
5	3,760	4,290	11,100	15	3,510	38,600	15,400	25	3,930	38,500	7,580
6	3,710	4,180	24,600	16	1,630	29,600	14,400	26	4,130	28,900	6,810
7	3,710	4,040	36,700	17	3,600	27,600	15,400	27	4,120	25,400	6,550
8	3,560	1,720	32,000	18	3,950	43,100	15,000	28	4,240	28,100	6,890
9	2,410	4,380	29,000	19	4,140	97,900	13,300	29	3,360	26,500	9,290
10	3,850	3,710	27,200	20	4,140	140,000	14,000	30		23,000	11,800
								31		22,200	
Mean monthly discharge, in second-feet (observed).............									3,688	33,140	17,500
Mean monthly discharge, in second-feet (corrected)............									2,124	41,570	18,920
Run-off, in inches (corrected)................................									0.54	11.23	4.94

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	124.2	1,790	124.15	3,600	124.3	3,980	124.3	3,980	127.0	19,400
4	-	-	124.5	2,330	124.15	3,600	124.25	3,820	124.3	3,980	127.2	20,600
6	124.65	2,730	-	-	124.2	3,700	124.25	3,820	124.3	3,980	128.2	27,400
8	124.65	2,730	-	-	124.2	3,700	124.25	3,820	124.3	3,980	127.2	39,100
10	124.3	1,890	-	-	124.2	3,700	124.2	3,700	124.7	7,340	128.4	53,400
N	123.85	1,510	-	-	124.2	3,700	124.2	3,700	125.1	9,890	127.9	61,600
2	123.85	1,510	-	-	124.2	3,700	124.2	3,700	125.6	12,300	128.2	63,400
4	123.9	1,510	-	-	124.2	3,700	124.2	3,700	126.0	14,500	128.8	69,800
6	124.05	1,530	-	-	124.2	3,700	124.2	3,700	126.2	14,900	128.7	68,600
8	124.1	1,580	-	-	124.2	3,700	124.2	3,700	126.5	16,800	128.7	68,600
10	124.1	1,580	-	-	124.3	3,980	124.25	3,820	126.6	17,200	129.1	72,700
M	124.2	1,710	-	-	124.3	3,980	124.3	3,980	126.8	17,600	129.1	72,700
	March 14		March 15		March 16		March 17		March 18		March 19	
2	129.0	71,500	126.5	45,300	124.9	32,300	124.1	26,600	124.7	31,100	127.65	58,200
4	128.8	69,300	126.3	43,600	124.8	31,600	124.1	26,700	124.9	32,800	128.1	63,000
6	128.7	68,100	126.2	42,600	124.8	31,700	124.1	26,700	125.1	34,400	128.7	67,100
8	128.4	64,800	125.9	40,000	124.6	30,100	124.1	26,700	125.7	39,600	129.4	77,500
10	128.2	62,700	125.7	38,300	124.6	30,200	124.1	26,800	125.95	41,700	130.0	84,600
N	127.8	58,400	125.6	37,500	124.6	30,200	124.2	27,500	126.1	43,100	130.1	85,800
2	127.6	56,300	125.5	36,700	124.4	28,700	124.2	27,500	126.2	43,900	132.0	110,000
4	127.4	54,300	125.4	35,900	124.3	28,000	124.2	27,500	126.6	47,700	132.8	121,000
6	127.3	53,300	125.3	35,300	124.3	28,100	124.3	28,200	126.85	50,100	133.2	126,000
8	127.1	51,200	125.2	34,500	124.2	27,300	124.4	28,900	127.25	54,200	133.5	131,000
10	126.9	49,200	125.1	33,800	124.2	27,300	124.5	29,600	127.35	55,200	134.7	148,000
M	126.7	47,300	125.0	33,000	124.2	27,300	124.6	30,300	127.45	56,200	134.85	150,000
	March 20		March 21		March 22		March 23		March 24		March 25	
2	134.7	148,000	132.4	115,000	129.25	74,700	130.25	86,300	127.4	54,300	126.0	41,100
4	134.7	148,000	132.0	109,000	129.35	75,900	130.1	84,400	127.3	53,400	125.9	40,300
6	134.8	150,000	131.7	105,000	129.50	77,600	129.8	80,800	127.25	52,800	125.8	39,400
8	134.9	151,000	131.05	96,600	129.75	80,500	129.5	77,300	127.1	51,300	125.8	39,400
10	134.75	149,000	130.7	92,300	130.0	83,400	129.3	75,000	127.0	50,300	125.7	38,600
N	134.5	145,000	130.0	83,600	130.25	86,500	128.95	71,000	126.85	48,900	125.6	37,700
2	134.1	139,000	129.8	81,100	130.45	89,000	128.7	68,100	126.75	48,000	125.6	37,700
4	133.9	136,000	129.6	78,800	130.55	90,200	128.5	65,900	126.65	47,000	125.6	37,700
6	133.8	135,000	129.4	76,400	130.6	90,800	128.25	63,200	126.5	45,600	125.55	37,400
8	133.2	126,000	129.3	75,300	130.6	90,700	127.95	60,000	126.4	44,700	125.55	37,400
10	133.0	123,000	129.25	74,700	130.6	90,700	127.75	57,900	126.25	43,400	125.45	36,400
M	132.8	120,000	129.25	74,700	130.45	88,900	127.55	55,800	126.1	42,000	125.3	35,300

Supplemental records.- Mar. 13, 6:30 a.m., 128.6 ft.; 9 a.m., 129.8 ft.; 11:30 a.m., 131.2 ft. Mar. 19, 11 p.m., 135.1 ft., 154,000 sec.-ft.

Second Kokadjo Lake near Kokadjo, Maine

Location.- Lat. 45°41', long. 69°18', at outlet dam in T. 1, R. 12, Piscataquis County.
Drainage area.- 19 square miles.
Gage-height record.- Gage readings about once a week.
Remarks.- Usable storage capacity, 167,000,000 cubic feet. No storage in February. Records furnished by Brassua Associates.

Gage height, in feet, and contents, in millions of cubic feet, 1936

Day	March		April	
	Feet	Millions of cubic feet	Feet	Millions of cubic feet
1	-	0	8.0	160
2	-	-	-	-
3	-	-	-	-
4	-	-	-	-
5	-	-	-	-
6	-	-	8.0	160
7	-	-	-	-
8	-	-	8.0	160
9	-	-	-	-
10	-	-	-	-
11	-	-	-	-
12	-	0	-	-
13	-	-	6.0	107
14	-	-	-	-
15	-	-	-	-
16	5.0	82	-	-
17	-	-	7.0	134
18	-	-	-	-
19	-	-	-	-
20	-	-	3.3	41
21	-	-	-	-
22	-	-	-	-
23	8.0	160	3.8	52
24	-	-	-	-
25	-	-	-	-
26	-	-	-	-
27	-	-	3.5	45
28	-	-	-	-
29	-	-	-	-
30	8.0	160	6.0	107
31	-	-		

	March	April
Gain or loss in storage, in equivalent mean second-feet	+59.7	-10.0

First Kokadjo Lake near Kokadjo, Maine

Location.- Lat. 45°41', long. 69°26', at outlet dam in T. A, R. 13, Piscataquis County.
Drainage area.- 76 square miles.
Gage-height record.- Gage readings about once a week.
Remarks.- Usable storage capacity, 1,093,000,000 cubic feet. No storage in February. Records furnished by Brassua Associates.

Gage height, in feet, and contents, in millions of cubic feet, 1936

Day	March		April	
	Feet	Millions of cubic feet	Feet	Millions of cubic feet
1	-	0	7.0	801
2	-	-	-	-
3	-	-	-	-
4	-	-	-	-
5	-	-	-	-
6	-	-	7.0	801
7	-	-	-	-
8	-	-	7.0	801
9	-	-	-	-
10	-	-	-	-
11	-	-	-	-
12	-	0	-	-
13	-	-	4.0	396
14	-	-	-	-
15	-	-	-	-
16	4.5	463	-	-
17	-	-	4.0	396
18	-	-	-	-
19	-	-	-	-
20	-	-	4.3	436
21	-	-	-	-
22	-	-	-	-
23	6.5	732	4.8	503
24	-	-	-	-
25	-	-	-	-
26	-	-	-	-
27	-	-	4.6	476
28	-	-	-	-
29	-	-	-	-
30	7.0	801	4.7	490
31	-	-		

	March	April
Gain or loss in storage, in equivalent mean second-feet................................	+299	-120

Lake Moxie near The Forks, Maine

Location.- Lat. 45°21'0", long. 69°52'30", at outlet dam 4½ miles east of The Forks, Somerset County.
Drainage area.- 89 square miles.
Gage-height record.- Gage readings about once a week.
Remarks.- Usable storage capacity, 580,000,000 cubic feet. No storage in February. Records furnished by Brassua Associates.

Gage height, in feet, and contents, in millions of cubic feet, 1936

Day	March		April	
	Feet	Millions of cubic feet	Feet	Millions of cubic feet
1	-	0	14.6	694
2	-	-	-	-
3	-	-	-	-
4	-	-	-	-
5	-	-	-	-
6	-	-	14.2	658
7	-	-	-	-
8	-	-	14.2	658
9	-	-	-	-
10	-	-	-	-
11	-	-	-	-
12	0	0	-	-
13	-	-	14.2	658
14	-	-	-	-
15	-	-	-	-
16	12.0	460	-	-
17	-	-	14.1	649
18	-	-	-	-
19	-	-	-	-
20	-	-	14.6	694
21	-	-	-	-
22	-	-	-	-
23	15.3	757	13.8	622
24	-	-	-	-
25	-	-	-	-
26	-	-	-	-
27	-	-	14.6	694
28	-	-	-	-
29	-	-	-	-
30	14.0	640	14.8	712
31	-	-		

	March	April
Gain or loss in storage, in equivalent mean second-feet.............................	+259	+13.9

Dead River Pond at Dead River Dam, Maine

Location.- Lat. 45°17'40", long. 70°13'25", at Dead River Dam, T. 3, R. 4, Somerset County, 14½ miles above mouth of Dead River.
Drainage area.- 546 square miles.
Gage-height record.- Gage readings about once a week.
Remarks.- Usable storage capacity, 70,000,000 cubic feet. No storage in February. Records furnished by Brassua Associates.

Gage height, in feet, and contents, in millions of cubic feet, 1936

Day	March		April	
	Feet	Millions of cubic feet	Feet	Millions of cubic feet
1	-	0	11.0	185
2	-	-	-	-
3	-	-	-	-
4	-	-	-	-
5	-	-	-	-
6	-	-	11.0	185
7	-	-	-	-
8	-	-	11.0	185
9	-	-	-	-
10	-	-	-	-
11	-	-	-	-
12	-	0	-	-
13	-	-	11.0	185
14	-	-	-	-
15	-	-	-	-
16	8.0	95	-	-
17	-	-	11.0	185
18	-	-	-	-
19	-	-	-	-
20	-	-	11.0	185
21	-	-	-	-
22	-	-	-	-
23	11.0	185	11.0	185
24	-	-	-	-
25	-	-	-	-
26	-	-	-	-
27	-	-	11.0	185
28	-	-	-	-
29	-	-	-	-
30	12.0	225	11.0	185
31	-	-		

	March	April
Gain or loss in storage, in equivalent mean second-feet.............................	+69.1	0

Dead River at The Forks, Maine

Location.- Lat. 45°21', long. 69°59'30", 1½ miles west of The Forks, Somerset County.
Drainage area.- 878 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights used to half tenths between 3.40 and 5.80 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 20. Defined by current-meter measurements below 20,000 second-feet; extension to peak stage verified by velocity-area study near control section and comparison of peak discharge and total run-off of flood with determinations for other streams in Kennebec River Basin.
Maxima.- 1936: Discharge, 28,700 second-feet 11 p.m. Mar. 20 (gage height, 10.54 feet).
1901-7, 1910-35: Discharge, 23,800 second-feet Apr. 30, 1923.
Remarks.- Flood run-off slightly affected by artificial storage in Spencer Pond and above Dead River Dam, combined capacity, 959,000,000 cubic feet. Part of monthly discharge table corrected for storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	380	380	7,020	11	250	260	5,410	21	360	27,600	2,560
2	355	355	3,870	12	235	1,370	3,630	22	340	27,600	2,370
3	305	290	5,840	13	235	2,650	3,750	23	305	22,400	3,470
4	290	275	5,470	14	230	3,630	3,600	24	280	17,900	2,980
5	315	265	3,630	15	235	3,870	4,330	25	250	14,600	2,200
6	320	290	3,750	16	260	3,820	4,020	26	290	11,900	2,940
7	300	305	6,150	17	290	3,680	2,560	27	355	8,620	2,200
8	280	290	6,360	18	345	5,560	3,840	28	400	7,480	3,160
9	265	275	7,170	19	380	11,900	4,340	29	400	7,790	2,280
10	260	260	5,280	20	395	23,900	3,720	30		7,320	4,570
								31		7,320	
Mean monthly discharge, in second-feet (observed).............									307	7,231	4,082
Mean monthly discharge, in second-feet (corrected)............									307	7,572	3,922
Run-off, in inches (corrected)................................									0.38	9.94	4.99

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-
6	3.15	280	3.09	270	3.12	260	3.50	265	4.08	730	5.65	2,500
8	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-
N	3.18	290	3.10	270	3.13	250	3.62	265	4.47	1,410	5.45	2,650
2	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-
6	3.19	300	3.12	280	3.25	260	3.76	260	4.80	2,050	5.50	2,800
8	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-
M	3.07	270	3.12	280	3.36	270	3.88	270	5.18	2,350	5.60	2,950
	March 14		March 15		March 16		March 17		March 18		March 19	
2	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-
6	5.55	3,400	5.23	3,880	5.09	3,920	5.02	3,640	5.80	4,400	8.92	10,500
8	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-
N	5.35	3,700	5.23	3,870	5.03	3,960	5.05	3,640	6.21	5,300	9.34	11,800
2	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-
6	5.30	3,860	5.24	3,870	4.99	3,780	5.20	3,720	6.90	6,400	9.81	13,800
8	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-
M	5.30	3,990	5.18	3,840	4.98	3,600	5.40	3,740	7.68	8,100	9.94	15,200
	March 20		March 21		March 22		March 23		March 24		March 25	
2	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-
6	10.00	20,200	10.24	27,000	10.40	28,100	9.59	23,900	8.48	18,700	7.71	15,400
8	-	-	10.42	28,100	-	-	-	-	-	-	-	-
10	-	-	10.13	26,500	-	-	-	-	-	-	-	-
N	10.45	25,700	10.10	26,500	10.43	28,100	9.29	22,400	8.25	17,400	7.55	15,000
2	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-
6	10.44	28,100	10.41	28,100	10.32	27,600	9.12	21,400	8.03	16,600	7.37	14,200
8	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-
M	10.45	28,100	10.27	27,600	9.96	25,400	8.75	20,100	7.86	16,200	7.20	13,400

Supplemental records.- Mar. 20, 11 p.m., 10.54 ft., 28,700 sec.-ft.

Spencer Lake at Spencer Lake outlet, Maine

Location.- Lat. 45°21'55", long. 70°16'30", at outlet dam in T. 3, R. 5, Somerset County, 4 miles above mouth of Little Spencer Stream.
Drainage area.- 48 square miles.
Gage-height record.- Gage readings about once a week.
Remarks.- Usable storage capacity, 870,000,000 cubic feet. No storage in February. Records furnished by Brassua Associates.

Gage height, in feet, and contents, in millions of cubic feet, 1936

Day	March		April	
	Feet	Millions of cubic feet	Feet	Millions of cubic feet
1	-	0	13.0	729
2	-	-	-	-
3	-	-	-	-
4	-	-	-	-
5	-	-	-	-
6	-	-	12.0	639
7	-	-	-	-
8	-	-	12.0	639
9	-	-	-	-
10	-	-	-	-
11	-	-	-	-
12	-	0	-	-
13	-	-	12.0	639
14	-	-	-	-
15	-	-	-	-
16	8.0	315	-	-
17	-	-	12.0	639
18	-	-	-	-
19	-	-	-	-
20	-	-	12.0	639
21	-	-	-	-
22	-	-	-	-
23	10.5	511	12.0	639
24	-	-	-	-
25	-	-	-	-
26	-	-	-	-
27	-	-	12.0	639
28	-	-	-	-
29	-	-	-	-
30	13.0	729	8.0	315
31	-	-		

	March	April
Gain or loss in storage, in equivalent mean second-feet	+272	-160

Austin Stream at Bingham, Maine

<u>Location.</u>- Lat. 45°3'55", long. 69°52'55", at highway bridge in Bingham, Somerset County, three-quarters of a mile above confluence with Kennebec River. Zero of gage is 350.0 feet above mean sea level.
<u>Drainage area.</u>- 92 square miles.
<u>Gage-height record.</u>- Water-stage recorder graph except for period 6 p.m. Mar. 12 to 11 p.m. Mar. 13, when it was based on flood marks and shape of graphs at nearby stations. Gage heights used to half tenths between 9.40 and 12.80 feet; hundredths below and tenths above these limits.
<u>Stage-discharge relation.</u>- Affected by ice Feb. 1 to Mar. 15. Defined by current-meter measurements below 5,500 second-feet.
<u>Maxima.</u>- 1936: Discharge, 5,480 second-feet 7:15 p.m. Mar. 19 (gage height, 12.93 feet).
1931-35: Discharge, 5,820 second-feet Sept. 17, 1932 (gage height, 13.12 feet).
<u>Remarks.</u>- Flood run-off not materially affected by artificial storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	67	48	657	11	49	62	479	21	76	2,240	404
2	68	48	542	12	47	890	426	22	69	1,880	384
3	66	49	465	13	45	2,710	376	23	63	1,660	349
4	63	51	396	14	42	2,110	331	24	58	1,090	346
5	59	55	342	15	39	1,470	306	25	54	790	324
6	59	55	663	16	38	1,060	302	26	50	663	316
7	58	59	1,210	17	38	1,060	306	27	50	630	310
8	56	59	949	18	42	1,510	338	28	50	760	331
9	54	54	646	19	59	4,060	380	29	50	790	364
10	51	54	537	20	78	4,250	400	30		714	518
								31		719	
Mean monthly discharge, in second-feet									55.1	1,021	457
Run-off, in inches									0.65	12.80	5.54

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	-	-	7.20	75	17.01	2,920
4	-	-	-	-	-	-	7.06	56	7.25	80	16.81	2,900
6	-	-	7.01	54	7.00	53	-	-	7.37	90	16.61	2,850
8	-	-	-	-	-	-	7.06	57	7.54	110	16.41	2,800
10	-	-	-	-	-	-	-	-	7.75	150	16.21	2,750
N	-	*59	7.01	54	7.01	53	7.07	60	8.05	220	15.99	2,700
2	-	-	-	-	-	-	-	-	9.85	350	15.76	2,650
4	-	-	-	-	-	-	7.08	62	11.97	500	15.53	2,600
6	-	-	7.00	53	7.04	55	-	-	14.80	1,500	15.31	2,550
8	-	-	-	-	-	-	7.10	66	17.63	3,000	15.08	2,500
10	-	-	-	-	-	-	-	-	17.42	3,000	14.86	2,480
M	-	-	7.00	53	7.05	55	7.15	70	17.22	2,950	14.79	2,450
	March 14		March 15		March 16		March 17		March 18		March 19	
2	14.65	2,410	11.19	1,710	10.00	1,170	9.88	1,090	10.00	1,170	11.01	2,170
4	13.93	2,350	10.84	1,660	9.93	1,130	9.88	1,090	10.09	1,250	11.30	2,570
6	13.62	2,290	10.60	1,610	9.89	1,090	9.86	1,060	10.25	1,380	11.76	3,260
8	13.43	2,230	10.47	1,560	9.85	1,060	9.84	1,060	10.40	1,510	12.19	4,060
10	13.19	2,170	10.42	1,510	9.83	1,060	9.82	1,020	10.43	1,560	12.30	4,250
N	13.75	2,110	10.36	1,460	9.81	1,020	9.81	1,020	10.52	1,610	12.55	4,750
2	13.31	2,050	10.33	1,460	9.78	1,020	9.81	1,020	10.49	1,610	12.75	5,160
4	13.02	1,990	10.27	1,380	9.79	1,020	9.81	1,020	10.59	1,710	12.71	5,060
6	12.79	1,930	10.21	1,330	9.81	1,020	9.83	1,060	10.60	1,710	12.89	5,480
8	12.48	1,870	10.16	1,290	9.83	1,060	9.85	1,060	10.64	1,760	12.84	5,270
10	12.09	1,820	10.10	1,250	9.85	1,060	9.88	1,090	10.72	1,820	12.66	5,060
M	11.54	1,760	10.04	1,210	9.86	1,060	9.92	1,090	10.87	1,990	12.81	5,270
	March 20		March 21		March 22		March 23		March 24		March 25	
2	12.74	5,160	11.53	2,940	10.55	1,660	10.83	1,990	10.09	1,250	9.64	916
4	12.74	5,160	11.39	2,710	10.55	1,660	10.77	1,880	10.01	1,170	9.60	883
6	12.60	4,850	11.23	2,500	10.60	1,710	10.65	1,760	9.98	1,170	9.55	852
8	12.56	4,750	11.19	2,430	10.67	1,760	10.58	1,710	9.91	1,090	9.51	820
10	12.44	4,550	11.06	2,240	10.62	1,710	10.53	1,660	9.89	1,090	9.48	820
N	12.35	4,350	10.96	2,110	10.80	1,930	10.48	1,610	9.86	1,060	9.46	790
2	12.20	4,060	10.92	2,050	10.73	1,880	10.45	1,560	9.83	1,060	9.43	790
4	12.09	3,870	10.91	2,050	10.82	1,930	10.47	1,560	9.79	1,020	9.41	760
6	11.96	3,600	10.76	1,880	10.88	2,050	10.42	1,510	9.78	1,020	9.38	748
8	11.86	3,420	10.70	1,820	10.99	2,170	10.35	1,460	9.77	984	9.35	731
10	11.76	3,260	10.66	1,760	10.95	2,110	10.30	1,420	9.71	949	9.32	714
M	11.61	3,010	10.61	1,710	10.85	1,990	10.20	1,330	9.68	949	9.30	702

Supplemental records.- Mar. 19, 11:20 a.m., 12.78 ft., 5,270 sec.-ft. Mar. 19, 7:15 p.m., 12.93 ft., 5,480 sec.-ft. Mar. 22, 7:30 p.m., 11.02 ft., 2,170 sec.-ft.
*Mean for the day.

Carrabassett River near North Anson, Maine

Location.- Lat. 44°52', long. 69°57'10", 3 miles above North Anson, Somerset County.
Drainage area.- 351 square miles.
Gage-height record.- Water-stage recorder graph except for periods 7 p.m. Mar. 12 to noon Mar. 14, 6 p.m. Mar. 17 to 11 a.m. Mar. 20, and 6 p.m. Mar. 22 to noon Mar. 25, when it was based on flood marks and shape of stage graphs at nearby stations. Gage heights used to half tenths between 4.60 and 7.00 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 13. Defined by current-meter measurements below 12,000 second-feet; extension to peak stage verified by comparison of instantaneous and total yield of flood with other streams in Kennebec River Basin.
Maxima.- 1936: Discharge, 24,100 second-feet 6 p.m. Mar. 19 (gage height, 21.17 feet).
1925-35: Discharge, 20,100 second-feet Sept. 17, 1932 (gage height, 18.91 feet).
Remarks.- Flood run-off not materially affected by artificial storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	245	220	2,880	11	170	230	2,150	21	250	8,150	1,560
2	220	220	2,200	12	174	1,100	1,900	22	240	13,500	1,950
3	205	215	1,950	13	174	13,100	1,700	23	225	8,440	1,700
4	198	220	1,660	14	176	10,300	1,480	24	220	5,560	1,610
5	200	230	1,430	15	176	6,120	1,480	25	220	3,640	1,380
6	196	230	2,300	16	174	4,300	1,380	26	230	2,880	1,220
7	184	215	4,440	17	176	5,280	1,380	27	240	3,000	1,140
8	170	210	3,380	18	198	11,000	1,340	28	245	4,440	1,140
9	166	210	2,580	19	235	20,100	1,430	29	230	3,900	1,220
10	170	220	2,360	20	250	13,400	1,430	30		3,120	2,930
								31		3,510	
Mean monthly discharge, in second-feet									205	4,780	1,890
Run-off, in inches									0.63	15.56	6.00

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	4.20	213	4.19	210	4.23	225	4.22	219	4.40	165	16.16	9,010
4	4.21	213	4.18	207	4.21	219	4.23	228	4.48	168	17.10	10,800
6	4.17	204	4.12	190	4.20	213	4.24	242	4.55	184	17.70	12,600
8	4.13	195	4.16	201	4.19	213	4.25	242	4.66	200	18.20	14,400
10	4.10	200	4.19	210	4.20	216	4.27	259	4.82	220	18.22	15,100
N	4.14	206	4.22	219	4.24	228	4.32	283	5.03	260	17.90	15,000
2	4.15	209	4.24	225	4.25	231	4.33	266	5.25	280	17.34	14,800
4	4.17	213	4.23	222	4.21	216	4.34	242	5.70	400	16.80	14,500
6	4.19	213	4.25	225	4.27	228	4.35	225	6.50	820	16.30	14,100
8	4.22	216	4.22	219	4.23	222	4.34	201	11.12	2,100	15.60	13,600
10	4.20	216	4.10	185	4.20	207	4.34	182	13.20	5,140	14.80	13,400
M	4.21	216	4.19	210	4.21	210	4.36	171	14.80	7,280	14.10	12,900
	March 14		March 15		March 16		March 17		March 18		March 19	
2	13.60	12,500	10.10	7,430	8.28	4,860	7.84	4,160	10.40	7,860	16.00	16,000
4	13.30	12,100	9.85	6,990	8.12	4,580	7.94	4,300	10.70	8,290	16.65	16,800
6	13.00	11,600	9.62	6,700	8.02	4,440	8.10	4,580	11.15	9,010	17.30	17,900
8	12.70	11,200	9.40	6,410	7.97	4,440	8.30	4,860	11.60	9,590	18.00	18,900
10	12.38	10,800	9.29	6,260	7.87	4,300	8.38	5,000	12.00	10,200	18.60	19,800
N	12.00	10,200	9.01	5,840	7.78	4,160	8.55	5,280	12.40	10,800	19.30	20,900
2	11.75	9,880	8.75	5,560	7.72	4,030	8.62	5,280	12.90	11,500	20.00	22,000
4	11.42	9,300	8.94	5,700	7.70	4,030	8.75	5,560	13.40	12,200	20.75	23,400
6	11.12	8,870	8.75	5,560	7.69	4,030	9.10	5,980	13.85	12,800	21.17	24,100
8	10.85	8,440	8.70	5,420	7.70	4,030	9.40	6,410	14.35	13,600	20.80	23,400
10	10.60	8,150	8.55	5,280	7.71	4,030	9.70	6,850	14.90	14,400	19.95	22,000
M	10.35	7,860	8.43	5,000	7.62	3,900	10.00	7,280	15.45	15,100	18.95	20,400
	March 20		March 21		March 22		March 23		March 24		March 25	
2	18.10	19,000	10.67	8,290	15.40	15,100	11.80	9,880	9.53	6,560	7.85	4,160
4	17.15	17,700	10.55	8,150	16.05	16,000	11.60	9,590	9.38	6,410	7.75	4,160
6	16.30	16,400	10.43	7,860	16.30	16,400	11.39	9,300	9.20	6,120	7.63	3,900
8	15.40	15,100	10.35	7,860	15.90	15,800	11.18	9,010	9.03	5,840	7.53	3,770
10	14.65	13,900	10.30	7,720	15.30	15,000	11.00	8,720	8.88	5,700	7.43	3,640
N	13.90	12,900	10.25	7,570	14.47	13,800	10.78	8,440	8.71	5,420	7.35	3,640
2	13.20	11,900	10.17	7,430	13.80	12,800	10.59	8,150	8.58	5,280	7.28	3,510
4	12.60	11,000	10.00	7,280	13.20	11,900	10.40	7,860	8.45	5,000	7.29	3,510
6	12.00	10,200	10.12	7,430	12.90	11,500	10.21	7,570	8.32	4,860	7.20	3,380
8	11.30	9,160	10.60	8,150	12.60	11,000	10.04	7,280	8.20	4,720	7.13	3,250
10	10.90	8,580	12.00	10,200	12.30	10,600	9.88	7,140	8.08	4,580	7.05	3,120
M	10.80	8,440	14.00	13,100	12.00	10,200	9.70	6,850	7.97	4,440	7.00	3,120

Sandy River near Mercer, Maine

Location.- Lat. 44°42'30", long. 69°56'25", at Davis Ferry, 3 miles north of Mercer, Somerset County.
Drainage area.- 534 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights used to half tenths between 4.80 and 7.20 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 13. Defined by current-meter measurements below 7,000 second-feet; extended to peak stage by averaging discharges obtained from slope-area determinations of flood flow; verified by comparison of instantaneous and total yield of flood with records for nearby streams.
Maxima.- 1936: Discharge, 33,000 second-feet midnight Mar. 19 (gage height, 16.75 feet).
1928-35: Discharge, 16,700 second-feet Apr. 13, 1934 (gage height, 11.61 feet).
Remarks.- Flood run-off not materially affected by storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	320	280	3,970	11	184	405	3,000	21	320	12,700	2,170
2	305	265	3,000	12	180	1,980	3,250	22	285	16,600	2,310
3	300	255	2,760	13	176	18,600	2,680	23	250	10,400	1,900
4	300	285	2,540	14	164	14,000	2,540	24	225	6,980	1,780
5	315	325	2,240	15	160	7,950	2,380	25	215	5,610	1,660
6	310	320	3,850	16	156	5,610	2,310	26	230	4,260	1,500
7	255	290	7,220	17	152	6,280	2,460	27	300	4,560	1,500
8	240	280	4,970	18	160	9,870	2,680	28	365	6,510	1,440
9	215	280	3,780	19	260	25,300	2,540	29	345	5,830	1,500
10	200	315	3,080	20	325	25,500	2,310	30		4,360	2,100
								31		4,660	
Mean monthly discharge, in second-feet									249	6,479	2,714
Run-off, in inches									0.50	13.95	5.67

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	-	-	5.12	445	9.37	11,300
4	4.69	285	4.63	285	4.53	285	4.88	380	5.17	455	15.70	14,400
6	-	-	-	-	-	-	-	-	5.26	490	12.00	18,100
8	4.66	285	4.61	280	4.56	290	4.88	380	5.37	540	12.12	18,400
10	-	-	-	-	-	-	-	-	5.50	600	12.47	19,600
N	4.59	280	4.45	280	4.52	300	4.92	390	5.64	720	12.88	20,800
2	-	-	-	-	-	-	-	-	5.80	930	13.10	21,400
4	4.57	280	4.41	280	4.66	320	5.02	410	6.20	1,330	13.00	21,100
6	-	-	-	-	-	-	-	-	6.76	2,240	12.96	21,100
8	4.58	280	4.40	280	4.84	360	5.10	430	7.32	4,610	12.88	20,800
10	-	-	-	-	-	-	-	-	8.08	6,720	12.70	20,200
M	4.55	275	4.45	280	4.88	380	5.13	445	9.08	8,920	12.30	19,000
	March 14		March 15		March 16		March 17		March 18		March 19	
2	11.85	17,500	9.00	9,710	7.61	6,280	7.26	5,610	8.03	7,220	11.62	16,900
4	11.46	16,600	8.78	9,200	7.53	6,050	7.30	5,610	8.09	7,460	12.08	18,400
6	11.13	15,400	8.58	8,700	7.45	5,830	7.38	5,830	8.16	7,700	12.70	20,200
8	10.88	14,800	8.39	8,200	7.37	5,830	7.43	5,830	8.29	7,950	13.32	22,000
10	10.69	14,300	8.25	7,700	7.29	5,610	7.50	6,050	8.44	8,200	13.84	23,500
N	10.58	14,000	8.13	7,460	7.23	5,390	7.56	6,280	8.70	8,950	14.52	25,600
2	10.29	13,200	8.02	7,220	7.19	5,390	7.63	6,280	8.88	9,450	15.00	27,200
4	10.13	12,600	7.97	7,220	7.16	5,280	7.72	6,510	9.41	10,800	15.50	28,800
6	9.91	12,100	7.91	6,980	7.14	5,280	7.80	6,740	9.61	11,300	16.03	30,400
8	9.68	11,500	7.84	6,740	7.16	5,280	7.88	6,980	10.28	13,200	16.47	32,100
10	9.45	10,800	7.79	6,740	7.19	5,390	7.94	6,980	10.82	14,500	16.70	32,700
M	9.22	10,200	7.70	6,510	7.23	5,390	8.00	7,220	11.20	15,700	16.75	33,000
	March 20		March 21		March 22		March 23		March 24		March 25	
2	16.59	32,400	11.21	15,700	10.43	13,400	10.59	14,000	8.33	7,950	7.49	6,050
4	16.30	31,400	10.89	14,800	10.81	14,500	10.24	12,900	8.28	7,950	7.50	6,050
6	15.90	30,100	10.55	14,000	11.18	15,700	9.90	12,100	8.19	7,700	7.48	6,050
8	15.50	28,800	10.25	12,900	11.60	16,900	9.58	11,300	8.08	7,460	7.44	5,830
10	15.08	27,600	10.03	12,400	11.90	17,800	9.28	10,500	7.95	7,220	7.38	5,830
N	14.58	26,000	9.77	11,800	12.07	18,400	9.02	9,710	7.83	6,740	7.30	5,610
2	14.06	24,400	9.56	11,300	12.17	18,700	8.80	9,200	7.72	6,510	7.22	5,390
4	13.50	22,600	9.47	11,000	12.18	18,700	8.63	8,700	7.63	6,280	7.14	5,280
6	12.92	20,800	9.52	11,000	11.99	18,100	8.53	8,450	7.56	6,280	7.07	5,080
8	12.50	19,600	9.61	11,300	11.73	17,200	8.44	8,200	7.51	6,050	7.01	4,970
10	12.10	18,400	9.77	11,800	11.39	16,300	8.39	8,200	7.48	6,050	6.96	4,860
M	11.60	16,900	10.08	12,600	11.00	15,100	8.38	8,200	7.48	6,050	6.89	4,760

Supplemental records.- Mar. 13, 1 p.m., 13.13 ft., 21,400 sec.-ft.

Sebasticook River near Pittsfield, Maine

Location.- Lat. 44°42'55", long. 69°24'55", 1 3/4 miles above mouth of Twentyfivemile Stream and 4 miles south of Pittsfield, Somerset County. Zero of gage is 133.9 feet above mean sea level.
Drainage area.- 598 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights used to half tenths between 3.90 and 5.70 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 21. Defined by current-meter measurements below 10,000 second-feet; extended to peak stage on basis of discharge at dam just above; verified by comparison of peak discharge and total run-off of flood with determinations for other streams nearby.
Maxima.- 1936: Discharge, 14,400 second-feet at 6 a.m. Mar. 22 (gage height, 13.18 feet).
1928-35: Discharge, 9,890 second-feet (revised) Apr. 16, 1934 (gage height, 10.44 feet).
Remarks.- Flood run-off affected by artificial storage in Sebasticook Lake, Great Moose Lake, and Plymouth Pond (capacity, about 2,345,000,000 cubic feet). Great Moose Lake stored about 1,600,000,000 cubic feet in the period Mar. 4-23 and rose from an elevation of 241.67 feet to 249.97 feet.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	540	495	4,210	11	130	405	5,290	21	475	12,800	2,540
2	285	550	3,590	12	188	1,020	4,870	22	550	14,300	2,410
3	505	400	3,350	13	290	3,710	5,860	23	700	13,800	2,230
4	310	495	3,350	14	182	6,910	4,080	24	745	12,800	1,990
5	240	475	3,230	15	250	9,250	3,710	25	660	11,200	1,800
6	230	430	3,230	16	53	9,730	3,350	26	610	9,730	1,600
7	225	270	3,830	17	370	9,250	2,990	27	560	8,290	1,360
8	220	540	4,730	18	320	7,660	2,760	28	505	7,210	1,200
9	70	820	5,290	19	385	7,970	2,650	29	335	6,460	1,120
10	114	660	5,430	20	415	10,200	2,600	30		5,710	1,120
								31		5,150	
Mean monthly discharge, in second-feet									361	5,764	3,192
Run-off, in inches									0.65	11.11	5.96

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	3.89	360	4.29	740	3.50	380	3.60	390	4.02	380	7.31	2,200
4	3.94	380	4.29	740	3.78	490	3.80	400	4.12	450	7.36	2,600
6	3.98	410	4.28	780	3.94	645	3.92	410	4.16	600	7.46	2,900
8	4.00	440	4.26	900	5.04	910	4.30	440	4.70	1,150	7.84	3,200
10	4.03	500	5.21	1,010	4.93	880	4.90	620	5.08	1,450	7.98	3,440
N	4.26	560	4.98	920	4.74	810	4.71	550	4.41	600	8.08	3,750
2	4.24	580	4.83	905	4.60	740	4.59	500	4.72	1,000	8.28	4,050
4	4.22	600	4.71	885	4.53	690	4.50	395	5.51	1,900	8.49	4,350
6	4.22	620	4.63	860	4.49	650	3.32	310	5.10	1,100	8.80	4,600
8	4.28	680	4.58	830	4.45	640	3.64	250	6.08	1,000	8.87	4,900
10	4.30	740	4.53	690	4.42	610	3.83	270	6.39	1,400	9.18	5,150
M	4.30	760	3.10	330	3.20	350	3.94	300	7.32	1,800	9.42	5,730
	March 14		March 15		March 16		March 17		March 18		March 19	
2	10.66	5,700	12.22	8,600	12.60	9,720	12.88	9,800	11.95	8,070	11.30	7,450
4	10.60	6,000	12.38	8,800	12.58	9,750	12.78	9,780	11.87	7,980	11.28	7,520
6	10.58	6,200	12.54	9,000	12.48	9,750	12.69	9,750	11.82	7,850	11.32	7,580
8	10.62	6,450	12.40	9,200	12.42	9,750	12.62	9,650	11.62	7,780	11.40	7,630
10	10.68	6,750	12.48	9,330	12.42	9,750	12.51	9,500	11.39	7,700	11.48	7,750
N	10.87	7,000	12.50	9,480	12.63	9,750	12.41	9,380	11.35	7,650	11.58	7,850
2	10.98	7,200	12.60	9,550	12.65	9,780	12.30	9,200	11.47	7,600	11.62	8,000
4	11.15	7,450	12.57	9,630	13.15	9,800	12.42	9,000	11.37	7,550	11.65	8,200
6	11.43	7,700	12.57	9,680	13.10	9,800	12.38	8,800	11.34	7,500	11.72	8,380
8	11.61	7,900	12.60	9,680	13.06	9,800	12.27	8,550	11.36	7,450	11.75	8,570
10	11.90	8,130	12.61	9,680	13.10	9,800	12.12	8,300	11.40	7,430	11.85	8,730
M	12.12	8,370	12.62	9,700	13.02	9,800	12.06	8,200	11.34	7,420	11.97	8,900
	March 20		March 21		March 22		March 23		March 24		March 25	
2	12.05	9,130	12.77	11,600	13.15	14,400	12.99	14,100	12.49	13,300	11.59	11,800
4	12.13	9,380	12.85	11,800	13.15	14,400	13.01	14,100	12.40	13,100	11.56	11,800
6	12.21	9,580	12.90	12,000	13.18	14,400	12.91	13,900	12.38	13,100	11.45	11,500
8	12.28	9,800	12.94	12,200	13.13	14,300	12.88	13,900	12.30	12,900	11.47	11,600
10	12.36	10,000	12.96	12,500	13.10	14,300	12.87	13,900	12.27	12,900	11.36	11,500
N	12.42	10,200	12.98	12,800	13.10	14,300	12.80	13,800	12.21	12,800	11.28	11,300
2	12.52	10,400	13.00	13,000	13.08	14,300	12.80	13,800	12.11	12,600	11.18	11,200
4	12.56	10,600	13.03	13,200	13.08	14,300	12.78	13,800	12.01	12,400	11.05	10,800
6	12.65	10,800	13.03	13,600	13.03	14,100	12.73	13,600	11.96	12,400	10.95	10,800
8	12.65	11,000	13.10	13,800	13.05	14,100	12.67	13,600	11.83	12,100	10.84	10,500
10	12.75	11,200	13.10	14,100	13.03	14,100	12.61	13,400	11.82	12,100	10.80	10,500
M	12.73	11,400	13.13	14,300	13.01	14,100	12.52	13,300	11.75	12,100	10.75	10,500

Cobbosseecontee Lake near Manchester, Maine

Location.- Lat. 44°16'50", long. 69°53'25", near Manchester, Kennebec County. Zero of gage is about 160.0 feet above mean sea level.
Drainage area.- 133 square miles.
Remarks.- Gage-height record furnished by S. D. Warren Co.

Gage height, in feet, and contents, in millions of cubic feet, 1936

Day	February		March		April	
	Feet	Millions of cubic feet	Feet	Millions of cubic feet	Feet	Millions of cubic feet
1	6.2	1,278	-	-	8.8	1,897
2	-	-	-	-	-	-
3	-	-	-	-	8.5	1,825
4	-	-	-	-	8.3	1,777
5	-	-	-	-	-	-
6	-	-	-	-	8.0	1,705
7	-	-	6.2	1,278	8.1	1,729
8	6.0	1,230	-	-	8.1	1,729
9	-	-	-	-	8.0	1,705
10	-	-	-	-	8.0	1,705
11	-	-	-	-	8.0	1,705
12	-	-	-	-	-	-
13	-	-	-	-	8.1	1,729
14	-	-	8.2	1,753	8.1	1,729
15	5.8	1,183	-	-	8.1	1,729
16	-	-	-	-	-	-
17	-	-	8.5	1,825	8.2	1,753
18	-	-	8.7	1,873	-	-
19	-	-	9.3	2,016	-	-
20	-	-	9.9	2,156	8.0	1,705
21	-	-	10.1	2,204	-	-
22	5.7	1,160	-	-	8.0	1,705
23	-	-	11.0	2,415	-	-
24	-	-	11.0	2,415	-	-
25	-	-	10.6	2,321	8.1	1,729
26	-	-	10.2	2,227	-	-
27	-	-	10.0	2,180	8.1	1,729
28	-	-	9.8	2,133	-	-
29	6.1	1,254	-	-	8.1	1,729
30			9.4	2,039	8.0	1,705
31			-	-		

Cobbosseecontee Stream at Gardiner, Maine

Location.- Lat. 44°13'15", long. 69°47'25", at dam of Gardiner Water Power Co., in Gardiner, Kennebec County.
Drainage area.- 220 square miles.
Maxima.- 1936: Discharge, 5,020 second-feet Mar. 21; maximum mean daily discharge, 4,320 second-feet Mar. 20.
1890-1935: Mean daily discharge, 4,250 second-feet May 19, 1922.
Remarks.- Discharge determined from flow over dam and through gates and water wheels. Flood run-off materially affected by artificial storage. Records furnished by S. D. Warren Co.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	290	60	2,700	11	290	290	1,300	21	290	4,320	920
2	150	290	2,380	12	290	870	990	22	290	3,980	680
3	290	290	2,280	13	290	1,740	1,100	23	60	3,660	620
4	290	290	2,250	14	290	2,020	1,080	24	290	3,660	720
5	290	290	2,200	15	290	2,020	1,040	25	290	3,980	590
6	290	290	2,080	16	60	2,020	1,020	26	290	3,960	430
7	290	290	2,200	17	290	2,020	1,020	27	290	3,590	410
8	290	150	2,300	18	290	2,020	1,040	28	290	3,590	460
9	150	290	2,100	19	290	3,170	1,020	29	290	3,760	430
10	290	290	1,880	20	290	4,320	980	30		3,820	420
								31		3,320	
Mean monthly discharge, in second-feet									264	2,086	1,288
Run-off, in inches									1.29	10.93	6.53

Rangeley Lake at Oquossoc, Maine

Location.- Lat. 44°59', long. 70°47', at dam at outlet of Rangeley Lake at Oquossoc, Franklin County.
Drainage area.- 90 square miles.
Gage-height record.- One gage reading weekly.
Remarks.- Storage capacity, 1,339,200,000 cubic feet. Records furnished by Union Water Power Co.

Gage height, in feet, and contents, in millions of cubic feet, 1936

Day	February		March		April	
	Feet	Millions of cubic feet	Feet	Millions of cubic feet	Feet	Millions of cubic feet
1	-	-	0.83	278	-	-
2	1.00	335	-	-	-	-
3	-	-	-	-	-	-
4	-	-	-	-	-	-
5	-	-	-	-	5.42	1,815
6	-	-	-	-	-	-
7	-	-	-	-	-	-
8	-	-	.83	278	-	-
9	1.00	335	-	-	-	-
10	-	-	-	-	-	-
11	-	-	-	-	-	-
12	-	-	-	-	7.08	2,371
13	-	-	-	-	-	-
14	-	-	-	-	-	-
15	-	-	4.17	1,396	-	-
16	.83	278	-	-	-	-
17	-	-	-	-	-	-
18	-	-	-	-	-	-
19	-	-	-	-	7.25	2,428
20	-	-	-	-	-	-
21	-	-	-	-	-	-
22	-	-	-	-	-	-
23	.83	278	-	-	-	-
24	-	-	-	-	-	-
25	-	-	-	-	-	-
26	-	-	-	-	7.00	2,344
27	-	-	-	-	-	-
28	-	-	-	-	-	-
29	.83	278	6.75	2,260	-	-
30			-	-	7.42	2,485
31			6.58	2,203		

	February	March	April
Gain or loss in storage, in equivalent mean second-feet	-22.7	+719	+109

Mooselookmeguntic Lake at Upper Dam, Maine

Location.- Lat. 44°53', long. 70°52', at dam at outlet of Mooselookmeguntic Lake in township of Richardson, Oxford County.
Drainage area.- 405 square miles.
Gage-height record.- Daily gage readings.
Remarks.- Storage capacity, 8,370,000,000 cubic feet. Records furnished by Union Water Power Co.

Gage height, in feet, and contents, in millions of cubic feet, 1936

Day	February		March		April	
	Feet	Millions of cubic feet	Feet	Millions of cubic feet	Feet	Millions of cubic feet
1	-	-	-	-	-	-
2	-	-	10.2	1,233	-	-
3	13.1	3,178	-	-	-	-
4	-	-	-	-	-	-
5	-	-	-	-	-	-
6	-	-	-	-	19.05	7,331
7	-	-	-	-	-	-
8	-	-	-	-	-	-
9	-	-	9.4	701	-	-
10	12.35	2,668	-	-	-	-
11	-	-	-	-	-	-
12	-	-	9.1	502	-	-
13	-	-	9.65	867	19.0	7,295
14	-	-	10.0	1,100	-	-
15	-	-	10.2	1,233	-	-
16	-	-	10.4	1,366	-	-
17	11.6	2,164	10.7	1,566	-	-
18	-	-	10.95	1,732	-	-
19	-	-	12.7	2,906	-	-
20	-	-	14.2	3,926	19.8	7,867
21	-	-	15.4	4,746	-	-
22	-	-	16.6	5,586	-	-
23	-	-	17.6	6,296	-	-
24	10.85	1,665	18.45	6,902	-	-
25	-	-	-	-	-	-
26	-	-	-	-	-	-
27	-	-	-	-	19.35	7,545
28	-	-	-	-	-	-
29	10.35	1,333	-	-	-	-
30			19.05	7,331	19.4	7,581
31			19.1	7,366		

	February	March	April
Gain or loss in storage, in equivalent mean second-feet	-777	+2,253	+82.9

Upper and Lower Richardson Lakes at Middledam, Maine

Location.- Lat. 44°47', long. 70°55', at dam at outlet of Lower Richardson Lake at Middledam, Oxford County.
Drainage area.- 509 square miles.
Gage-height record.- Daily gage readings.
Remarks.- Storage capacity, 5,691,500,000 cubic feet. Records furnished by Union Water Power Co.

Gage height, in feet, and contents, in millions of cubic feet, 1936

Day	February		March		April	
	Feet	Millions of cubic feet	Feet	Millions of cubic feet	Feet	Millions of cubic feet
1	-	-	-	-	-	-
2	-	-	13.0	2,905	-	-
3	14.2	3,344	-	-	-	-
4	-	-	-	-	-	-
5	-	-	-	-	-	-
6	-	-	-	-	17.1	4,417
7	-	-	-	-	-	-
8	-	-	-	-	-	-
9	-	-	12.8	2,832	-	-
10	13.95	3,252	-	-	-	-
11	-	-	-	-	-	-
12	-	-	12.75	2,814	-	-
13	-	-	13.15	2,960	16.7	4,269
14	-	-	13.6	3,124	-	-
15	-	-	13.65	3,142	-	-
16	-	-	13.7	3,160	-	-
17	13.7	3,160	13.9	3,234	-	-
18	-	-	14.15	3,326	-	-
19	-	-	15.8	3,936	-	-
20	-	-	17.05	4,398	16.5	4,195
21	-	-	17.6	4,602	-	-
22	-	-	18.2	4,825	-	-
23	-	-	18.65	4,994	-	-
24	13.4	3,051	18.35	4,881	-	-
25	-	-	-	-	-	-
26	-	-	-	-	-	-
27	-	-	-	-	15.15	3,696
28	-	-	-	-	-	-
29	13.1	2,942	-	-	-	-
30			17.85	4,694	15.45	3,806
31			18.1	4,788		

	February	March	April
Gain or loss in storage, in equivalent mean second-feet	-168	+689	-379

Umbagog Lake at Errol Dam, N. H.

Location.- Lat. 44°47'15", long. 71°7'30", at dam at outlet of Umbagog Lake at Errol Dam, Coos County.
Drainage area.- 1,095 square miles.
Gage-height record.- One gage reading daily.
Remarks.- Storage capacity, 3,080,160,000 cubic feet. Records furnished by Union Water Power Co.

Gage height, in feet, and contents, in millions of cubic feet, 1936

Day	February		March		April	
	Feet	Millions of cubic feet	Feet	Millions of cubic feet	Feet	Millions of cubic feet
1	-	-	-	-	-	-
2	-	-	10.05	1,236	-	-
3	12.1	1,958	-	-	-	-
4	-	-	-	-	-	-
5	-	-	-	-	-	-
6	-	-	-	-	12.65	2,167
7	-	-	-	-	-	-
8	-	-	-	-	-	-
9	-	-	9.9	1,188	-	-
10	11.6	1,776	-	-	-	-
11	-	-	-	-	-	-
12	-	-	9.85	1,172	-	-
13	-	-	10.1	1,252	12.15	1,977
14	-	-	11.25	1,650	-	-
15	-	-	12.15	1,977	-	-
16	-	-	12.5	2,110	-	-
17	11.2	1,632	12.7	2,186	-	-
18	-	-	12.85	2,243	-	-
19	-	-	14.6	2,924	-	-
20	-	-	16.2	3,560	11.15	1,614
21	-	-	16.3	3,600	-	-
22	-	-	15.8	3,400	-	-
23	-	-	15.7	3,360	-	-
24	10.6	1,416	15.15	3,140	-	-
25	-	-	-	-	-	-
26	-	-	-	-	-	-
27	-	-	-	-	14.0	2,690
28	-	-	-	-	-	-
29	10.2	1,284	-	-	-	-
30			13.45	2,476	14.5	2,885
31			13.2	2,378		

	February	March	April
Gain or loss in storage, in equivalent mean second-feet..	-330	+409	+196

Androscoggin River at Errol Dam, N. H.

Location.- Lat. 44°47'15", long. 71°7'30", at dam at outlet of Umbagog Lake, 1 mile above Errol, Coos County.
Drainage area.- 1,095 square miles.
Stage-discharge relation.- Discharge computed from flow through gates.
Maxima.- 1936: Mean daily discharge, 12,400 second-feet Mar. 21.
1905-35: Mean daily discharge, 12,500 second-feet June 21, 1917.
Remarks.- Flood run-off affected by storage in Rangeley system of lakes, Umbagog Lake, and Aziscohos Lake (total storage capacity, about 29,600,000,000 cubic feet); monthly discharge table corrected for storage. For daily changes in storage see records for Rangeley Lake at Oquossoc, Maine; Mooselookmeguntic Lake at Upper Dam, Maine; Upper and Lower Richardson Lakes at Middledam, Maine; Umbagog Lake at Errol, N. H.; Kennebago Lake at Kennebago, Maine; and Aziscohos Lake at Aziscohos Dam, Maine. Records furnished by Union Water Power Co.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	1,400	1,570	8,130	11	1,590	1,540	4,350	21	1,530	12,400	1,430
2	1,390	1,580	8,300	12	1,650	1,540	3,900	22	1,560	11,500	1,460
3	1,390	1,580	8,130	13	1,740	788	3,990	23	1,560	11,500	1,520
4	1,370	1,540	8,040	14	1,690	210	3,150	24	1,560	11,700	1,640
5	1,380	1,510	7,740	15	1,630	830	3,040	25	1,570	11,700	1,560
6	1,400	1,510	7,510	16	1,610	1,730	2,420	26	1,560	11,400	1,500
7	1,410	1,500	7,740	17	1,610	2,340	2,370	27	1,550	11,000	1,520
8	1,440	1,520	8,040	18	1,570	3,720	2,080	28	1,540	10,300	1,540
9	1,450	1,540	6,440	19	1,560	9,280	1,350	29	1,550	9,900	1,550
10	1,600	1,540	5,540	20	1,550	11,800	1,370	30		9,820	2,840
								31		8,700	
Mean monthly discharge, in second-feet (observed)									1,531	5,454	4,006
Mean monthly discharge, in second-feet (corrected)									47	11,570	4,952
Run-off, in inches (corrected)									0.05	12.22	5.04

Androscoggin River near Gorham, N. H.

Location.- Lat. 44°26'30", long. 71°11'15", at Pulsifer Rips, 2 miles below mouth of Dead River and 4 miles above Gorham, Coos County.

Drainage area.- 1,390 square miles.

Gage-height record.- Water-stage recorder graph. Gage heights used to half tenths below and tenths above 5.60 feet.

Stage-discharge relation.- Defined by current-meter measurements below 13,000 second-feet.

Maxima.- 1936: Discharge, 19,900 second-feet 11 a.m. Mar. 22 (gage height, 9.99 feet).
1929-35: Discharge, 13,900 second-feet May 4, 1929, May 4, 1933 (gage height, 8.39 feet).

Remarks.- Mar. 9-22 approximately 16,000,000,000 cubic feet of water was stored in Rangeley system of lakes, Umbagog Lake, and Aziscohos Lake. Part of monthly discharge table corrected for storage. For daily changes in storage see records for Rangeley Lake at Oquossoc, Maine; Mooselookmeguntic Lake at Upper Dam, Maine; Upper and Lower Richardson Lakes at Middledam, Maine; Umbagog Lake at Errol, N. H.; Kennebago Lake at Kennebago, Maine; and Aziscohos Lake at Aziscohos Dam, Maine.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	1,600	1,560	10,100	11	1,560	1,610	6,580	21	1,600	18,400	2,410
2	1,560	1,560	9,120	12	1,600	2,870	4,220	22	1,600	19,500	2,480
3	1,560	1,600	8,820	13	1,600	5,160	5,160	23	1,560	17,200	2,480
4	1,600	1,600	8,240	14	1,700	3,550	4,530	24	1,600	14,300	2,410
5	1,560	1,600	7,680	15	1,700	2,480	4,120	25	1,560	12,900	2,480
6	1,600	1,560	7,680	16	1,650	2,710	3,730	26	1,560	12,100	2,410
7	1,600	1,560	9,440	17	1,650	4,740	3,370	27	1,600	11,800	2,410
8	1,560	1,560	8,820	18	1,650	12,600	3,280	28	1,600	11,800	2,340
9	1,600	1,560	7,960	19	1,600	17,600	2,700	29	1,560	11,100	2,610
10	1,600	1,610	7,120	20	1,600	18,800	2,410	30		10,400	4,930
								31		10,800	
Mean monthly discharge, in second feet (observed)									1,600	7,684	5,068
Mean monthly discharge, in second-feet (corrected)									116	13,800	6,014
Run-off, in inches (corrected)									0.09	11.45	4.83

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	3.12	1,430	3.45	1,750	3.25	1,560	3.33	1,650	3.44	1,750	5.35	4,840
4	3.26	1,560	3.36	1,650	3.26	1,560	3.32	1,600	3.51	1,800	5.40	4,950
6	3.29	1,600	3.23	1,560	3.26	1,560	3.30	1,600	3.65	1,960	5.45	5,060
8	3.29	1,600	3.25	1,560	3.26	1,560	3.30	1,600	3.95	2,340	5.50	5,160
10	3.27	1,560	3.25	1,560	3.27	1,560	3.30	1,600	4.10	2,560	5.61	5,380
N	3.27	1,560	3.25	1,560	3.35	1,650	3.30	1,600	4.10	2,560	5.50	5,160
2	3.26	1,560	3.25	1,560	3.36	1,650	3.30	1,600	4.25	2,790	5.56	5,270
4	3.27	1,560	3.25	1,560	3.36	1,650	3.30	1,600	4.56	3,280	5.51	5,160
6	3.22	1,510	3.26	1,560	3.36	1,650	3.30	1,600	4.58	3,370	5.59	5,380
8	3.20	1,510	3.27	1,560	3.37	1,650	3.30	1,600	4.78	3,730	5.55	5,270
10	3.26	1,560	3.28	1,600	3.37	1,650	3.35	1,650	4.95	4,020	5.50	5,160
M	3.42	1,700	3.27	1,560	3.35	1,650	3.35	1,650	5.10	4,320	5.41	4,950
	March 14		March 15		March 16		March 17		March 18		March 19	
2	5.20	4,530	4.15	2,640	4.12	2,560	4.65	3,460	6.58	7,960	9.83	19,100
4	5.10	4,320	4.10	2,560	4.12	2,560	4.73	3,640	6.72	8,240	9.73	18,800
6	5.00	4,120	4.00	2,410	4.11	2,560	4.85	3,820	6.95	9,120	9.63	18,400
8	4.92	3,920	4.00	2,410	4.20	2,710	4.98	4,120	7.16	9,760	9.45	17,600
10	4.81	3,730	4.00	2,410	4.15	2,640	5.05	4,220	7.46	10,800	9.34	17,200
N	4.70	3,550	3.95	2,340	4.15	2,640	5.27	4,640	7.82	11,800	9.29	17,200
2	4.56	3,280	4.00	2,410	4.20	2,710	5.30	4,740	8.22	13,200	9.25	16,900
4	4.50	3,200	3.92	2,270	4.23	2,790	5.40	4,950	8.52	14,300	9.29	17,200
6	4.41	3,030	4.10	2,560	4.22	2,710	5.80	5,830	9.14	16,500	9.32	17,200
8	4.35	2,950	4.08	2,560	4.45	3,120	6.00	6,320	9.42	17,600	9.31	17,200
10	4.29	2,870	4.10	2,560	4.44	3,120	6.15	6,850	9.83	19,100	9.33	17,200
M	4.25	2,790	4.02	2,410	4.60	3,370	6.33	7,120	9.81	19,100	9.38	17,600
	March 20		March 21		March 22		March 23		March 24		March 25	
2	9.47	18,000	9.64	18,400	9.75	19,100	9.66	18,800	8.78	15,400	8.29	13,600
4	9.56	18,400	9.59	18,400	9.83	19,100	9.60	18,400	8.71	15,000	8.24	13,200
6	9.66	18,800	9.53	18,000	9.92	19,500	9.49	18,000	8.66	15,000	8.21	13,200
8	9.71	18,800	9.50	18,000	9.98	19,900	9.43	17,600	8.59	14,700	8.19	13,200
10	9.81	19,100	9.48	18,000	9.99	19,900	9.34	17,200	8.56	14,700	8.15	13,200
N	9.90	19,500	9.43	17,600	9.99	19,900	9.26	17,200	8.48	14,300	8.11	12,900
2	9.92	19,500	9.47	18,000	9.97	19,900	9.14	16,500	8.46	14,300	8.10	12,900
4	9.88	19,500	9.50	18,000	9.94	19,500	9.07	16,500	8.43	13,900	8.07	12,900
6	9.87	19,500	9.57	18,400	9.94	19,500	9.01	16,100	8.37	13,900	8.04	12,500
8	9.82	19,100	9.62	18,400	9.86	19,500	8.96	16,100	8.37	13,900	8.00	12,500
10	9.77	19,100	9.67	18,800	9.81	19,100	8.88	15,700	8.35	13,900	7.99	12,500
M	9.69	18,800	9.70	18,800	9.72	18,800	8.88	15,700	8.30	13,600	7.95	12,500

Supplemental records.- Mar. 22, 11 a.m., 9.99 ft., 19,900 sec.-ft.

Androscoggin River at Rumford, Maine

Location.- Gages above each of two dams, lat. 44°32'45", long. 70°32'35", and in tailrace of power station of Rumford Falls Power Co., at Rumford, Oxford County.
Drainage area.- 2,090 square miles.
Stage-discharge relation.- Discharge computed from flow over dams and through wheels.
Maxima.- 1936: Discharge, 74,000 second-feet midnight Mar. 19 to 1 a.m. Mar. 20.
1892-1935: Discharge, 55,200 second-feet Apr. 15, 1895.
Remarks.- Flood run-off affected by storage in 7 lakes in headwaters. Part of monthly discharge table corrected for storage. At a point 800 feet above Rumford Falls upper dam, the pond level at peak of flood was 24.3 feet above crest of dam, resulting in a large amount of channel storage between Rumford and Gilead. Records furnished by Rumford Falls Power Co.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	1,720	1,790	15,700	11	2,030	2,000	10,600	21	1,910	37,600	5,490
2	1,760	1,810	13,400	12	1,850	16,000	8,860	22	1,640	39,800	5,580
3	1,830	1,850	12,200	13	1,850	35,600	7,960	23	1,930	31,900	5,280
4	1,830	1,820	11,100	14	1,850	22,200	7,640	24	1,850	22,900	4,950
5	1,780	1,820	10,200	15	1,880	11,700	7,000	25	1,860	19,000	4,470
6	1,870	1,830	13,100	16	1,920	9,760	6,820	26	1,870	17,100	4,850
7	1,840	1,670	17,900	17	1,990	13,300	6,310	27	1,920	16,900	4,650
8	1,820	1,890	14,300	18	1,920	31,500	6,160	28	1,870	18,300	4,630
9	1,820	1,870	11,800	19	1,920	68,300	6,250	29	1,740	17,500	5,510
10	1,620	1,910	10,800	20	1,930	58,000	5,800	30		15,700	10,700
								31		16,700	
Mean monthly discharge, in second-feet (observed)									1,840	17,420	8,667
Mean monthly discharge, in second-feet (corrected)									365	23,530	9,513
Run-off, in inches (corrected)									0.19	13.03	5.13

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2		-		-		-		-		2,000		29,500
4		-		-		-		-		2,000		30,900
6		-		-		-		-		2,100		31,700
8		-		-		-		-		2,200		33,700
10		-		-		-		-		3,400		35,600
N		*1,890		*1,870		*1,910		*2,000		4,500		37,000
2		-		-		-		-		7,600		38,000
4		-		-		-		-		9,600		38,200
6		-		-		-		-		12,300		38,000
8		-		-		-		-		18,000		37,700
10		-		-		-		-		22,200		36,600
M		-		-		-		-		27,600		35,200
	March 14		March 15		March 16		March 17		March 18		March 19	
2		34,200		16,800		10,800		9,700		15,400		44,000
4		32,600		15,800		10,500		10,000		16,400		48,400
6		31,000		14,800		10,100		10,200		17,400		52,400
8		30,200		13,800		10,300		10,600		18,100		56,100
10		38,200		13,200		9,700		10,800		20,000		60,300
N		26,600		12,600		9,600		11,400		21,600		63,900
2		25,200		12,000		9,500		12,000		23,600		66,200
4		23,800		11,600		9,500		12,600		25,000		68,100
6		22,200		11,400		9,600		13,100		27,400		70,600
8		20,700		11,300		9,600		13,500		31,600		72,500
10		19,600		11,200		9,600		14,100		35,600		73,800
M		18,400		11,000		9,700		14,700		39,500		74,000
	March 20		March 21		March 22		March 23		March 24		March 25	
2		73,800		49,500		35,100		39,700		28,300		20,800
4		73,100		47,500		37,200		38,900		27,600		20,600
6		71,700		45,400		37,500		37,700		26,900		20,500
8		69,700		43,200		37,700		36,700		26,300		19,900
10		67,300		41,400		38,300		35,600		25,100		19,500
N		65,600		39,000		39,000		34,800		24,500		19,100
2		63,000		38,200		41,000		33,700		23,900		19,300
4		61,000		37,300		41,500		32,900		23,400		19,300
6		58,700		36,000		41,500		32,100		22,600		19,100
8		56,200		35,100		41,000		30,900		22,100		18,900
10		53,800		35,300		40,700		30,200		21,600		18,500
M		51,700		34,900		40,500		29,400		21,100		18,400

Supplemental records.- Mar. 16, 7 a.m., 10,600 sec.-ft. Mar. 20, 1 a.m., 74,000 sec.-ft. Mar. 22, 5 p.m., 41,700 sec.-ft.
*Mean for the day.

Gulf Island Pond near Lewiston, Maine

Location.- Lat. 44°8'50", long. 70°12'25", at Gulf Island Dam near Lewiston, Androscoggin County. Zero of gage is at mean sea level.
Drainage area.- 2,860 square miles.
Gage-height record.- Hourly gage readings. Only gage heights for midnight are used.
Remarks.- Storage capacity, 1,856,300,000 cubic feet. Records furnished by Central Maine Power Co.

Gage heights, in feet, and contents, in millions of cubic feet, 1936

Day	February		March		April	
	Feet	Millions of cubic feet	Feet	Millions of cubic feet	Feet	Millions of cubic feet
1	258.14	1,987	258.94	2,083	258.08	1,980
2	-	-	258.12	1,984	-	-
3	-	-	257.34	1,895	-	-
4	-	-	256.70	1,826	-	-
5	-	-	256.12	1,766	-	-
6	-	-	255.64	1,717	-	-
7	257.38	1,899	257.56	1,920	258.65	2,048
8	-	-	258.94	2,083	-	-
9	-	-	258.19	1,993	-	-
10	-	-	257.62	1,927	-	-
11	-	-	257.20	1,879	-	-
12	-	-	255.54	1,707	-	-
13	-	-	259.26	2,123	-	-
14	255.96	1,749	258.60	2,042	258.10	1,982
15	-	-	257.50	1,913	-	-
16	-	-	258.03	1,974	-	-
17	-	-	258.52	2,032	-	-
18	-	-	257.70	1,936	-	-
19	-	-	263.10	2,644	-	-
20	-	-	263.90	2,763	-	-
21	257.60	1,924	262.05	2,493	257.30	1,890
22	-	-	261.34	2,395	-	-
23	-	-	262.00	2,486	-	-
24	-	-	259.70	2,178	-	-
25	-	-	258.98	2,088	-	-
26	-	-	258.60	2,042	-	-
27	-	-	258.58	2,040	-	-
28	256.45	1,800	258.64	2,047	-	-
29	257.60	1,924	258.62	2,044	-	-
30			258.40	2,018	257.12	1,870
31			257.79	1,946		

	February	March	April
Gain or loss in storage, in equivalent mean second-feet	-25	-51	-42

Androscoggin River at Gulf Island Dam, near Lewiston, Maine

Location.- Lat. 44°8'50", long. 70°12'25", in township of Lewiston, Androscoggin County, 4½ miles above mouth of Little Androscoggin River. Zero of gage is at mean sea level.

Drainage area.- 2,860 square miles.

Gage-height record.- Staff gages in pond above dam and in tailrace read each hour. Gage heights given below are for the pond; add 200 feet to convert to mean sea level datum.

Stage-discharge relation.- Discharge computed from flow over dam and through wheels and gates.

Maxima.- 1936: Discharge, 118,000 second-feet 4 a.m. Mar. 20 (gage height, 65.55 feet).

1926-35: Discharge, 53,100 second-feet Nov. 5, 1927.

Remarks.- Flood run-off affected by storage in 7 lakes in headwaters. Part of monthly discharge table corrected for storage. Records furnished by Central Maine Power Co.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	3,040	2,580	24,300	11	2,180	2,320	15,400	21	2,560	86,000	8,290
2	2,600	2,330	20,200	12	2,340	7,610	15,100	22	2,690	72,000	8,380
3	2,440	2,220	17,600	13	2,230	35,600	12,100	23	2,400	63,600	7,860
4	2,570	2,240	16,400	14	2,390	52,000	11,300	24	2,520	52,500	7,510
5	2,470	2,120	14,600	15	2,600	33,200	10,600	25	2,280	38,600	7,240
6	2,570	2,110	16,500	16	2,520	21,700	10,700	26	2,280	31,300	6,490
7	2,510	2,740	24,900	17	2,420	19,400	10,500	27	2,370	28,000	6,460
8	2,740	2,470	24,200	18	2,690	29,800	10,400	28	2,420	29,400	6,560
9	2,540	2,240	19,400	19	2,540	61,700	9,350	29	2,760	29,600	7,040
10	2,340	2,200	16,300	20	2,450	96,200	8,910	30		25,700	9,380
								31		24,900	
Mean monthly discharge, in second-feet (observed).............									2,499	27,880	12,800
Mean monthly discharge, in second-feet (corrected)............									1,015	33,990	13,750
Run-off, in inches (corrected)................................									0.38	13.72	5.37

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2		-		-		-		-	57.34	800	55.66	16,200
4		-		-		-		-	57.52	860	55.46	20,200
6		-		-		-		-	57.74	2,000	57.16	27,000
8		-		-		-		-	57.75	3,860	57.62	35,600
10		-		-		-		-	57.75	4,080	57.92	38,700
N		*2,470		*2,240		*2,200		*2,320	57.82	3,920	58.21	39,400
2		-		-		-		-	57.86	4,400	58.63	41,800
4		-		-		-		-	57.94	6,600	58.86	43,300
6		-		-		-		-	57.28	17,100	58.88	43,500
8		-		-		-		-	56.51	18,100	59.13	46,000
10		-		-		-		-	55.70	19,500	59.12	44,800
M		-		-		-		-	55.54	15,000	59.26	47,100
	March 14		March 15		March 16		March 17		March 18		March 19	
2	59.84	52,000	58.50	40,800	57.90	23,000	58.13	17,600	58.42	23,000	58.28	38,800
4	60.30	56,000	58.30	39,800	58.06	23,900	58.26	18,100	58.42	23,000	58.93	43,500
6	60.40	57,000	58.10	38,200	58.06	24,200	58.32	18,200	58.42	23,000	59.39	47,300
8	60.40	57,000	57.90	35,800	58.02	23,400	58.22	19,600	58.36	24,800	59.80	53,000
10	60.22	56,100	57.78	33,900	57.92	23,000	58.18	19,500	58.10	27,800	60.44	57,500
N	60.00	54,500	57.62	32,700	57.82	22,600	58.14	19,400	58.00	31,700	61.00	68,000
2	59.86	53,200	57.44	31,200	57.86	20,700	58.13	19,500	57.36	35,900	61.54	64,200
4	59.68	51,400	57.30	30,600	57.83	20,700	58.14	19,400	57.09	34,200	61.92	74,300
6	59.46	49,700	57.30	26,800	57.90	18,900	58.20	19,700	57.05	34,000	61.76	74,000
8	59.24	47,800	57.34	28,200	58.00	19,400	58.30	20,000	57.16	34,000	62.19	79,000
10	58.88	45,000	57.35	26,400	58.03	19,400	58.40	20,500	57.40	36,200	62.55	82,400
M	58.60	42,500	57.50	22,800	58.03	19,100	58.52	20,900	57.70	37,200	63.10	87,000
	March 20		March 21		March 22		March 23		March 24		March 25	
2	63.70	97,500	63.75	93,300	61.90	76,500	61.32	68,700	61.95	57,200	59.51	44,000
4	65.55	118,000	63.70	91,700	61.75	75,000	61.32	68,700	61.84	56,500	59.36	43,000
6	65.10	104,000	63.65	91,800	61.65	73,800	61.24	69,500	61.69	55,200	59.20	41,700
8	64.70	96,700	63.35	89,000	61.55	72,300	61.08	70,400	61.34	56,700	59.07	40,600
10	64.50	94,200	63.20	87,500	61.55	71,800	61.05	62,600	61.14	55,400	58.96	40,100
N	64.50	94,200	63.00	85,700	61.55	70,800	61.53	61,200	60.88	53,100	59.05	35,300
2	64.50	94,200	62.90	84,800	61.50	70,800	61.07	69,300	60.67	51,800	59.10	36,000
4	64.30	93,400	62.75	83,500	61.50	70,600	60.80	67,600	60.48	50,300	59.10	36,000
6	64.30	93,400	62.60	80,800	61.44	70,200	60.52	64,800	60.28	49,000	59.06	35,600
8	64.30	93,400	62.40	80,300	61.41	70,000	60.52	61,000	60.08	47,800	59.03	35,200
10	64.20	92,500	62.20	79,000	61.39	69,700	61.60	44,200	59.90	46,300	59.00	35,000
M	63.90	87,200	62.05	77,500	61.34	69,300	62.00	55,000	59.70	45,200	58.98	33,200

Supplemental records.- Mar. 23, 11 a.m., 61.46 ft., 49,200 sec.-ft.; 1 p.m., 61.30 ft., 70,800 sec.-ft.

*Mean for the day.

Androscoggin River near Auburn, Maine

Location.- Lat. 44°4'15", long. 70°12'35", 1½ miles below mouth of Little Androscoggin River and 2 miles below north bridge between Auburn and Lewiston, Androscoggin County. Zero of gage is 109.2 feet above mean sea level.

Drainage area.- 3,257 square miles.

Gage-height record.- Water-stage recorder graph except for periods 7 p.m. Mar. 13 to 3:15 p.m. Mar. 15 and 5 a.m. Mar. 20 to 2 p.m. Mar. 23, when it was based on flood marks and shape of stage graphs at stations upstream. Gage heights used to half tenths between 2.10 and 4.70 feet; hundredths below and tenths above these limits.

Stage-discharge relation.- Affected by ice Mar. 12-14. Defined by current-meter measurements below 80,000 second-feet; extended to peak stage on basis of flow computation at dams above, and comparison of peak discharge and total run-off of flood with determinations at other points in Androscoggin River Basin.

Maxima.- 1936: Discharge, 135,000 second-feet 5 a.m. Mar. 20 (gage height, 27.57 feet).

1928-35: Discharge, 45,400 second-feet (revised) Apr. 19, 1933 (gage height, 13.62 feet).

Remarks.- Flood run-off affected by storage in lakes in headwaters and on tributaries; monthly discharge table corrected for storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	1,990	1,340	28,200	11	3,380	3,860	19,200	21	3,460	104,000	12,100
2	2,260	3,840	24,500	12	3,610	9,410	19,200	22	1,990	85,000	11,000
3	3,800	3,950	22,000	13	3,470	39,500	16,500	23	2,610	56,800	10,700
4	3,530	4,110	20,500	14	3,440	61,400	15,300	24	3,510	59,300	9,790
5	3,340	3,830	17,800	15	1,400	43,100	14,500	25	3,850	44,500	8,740
6	3,610	3,640	20,500	16	1,090	29,200	14,100	26	3,500	37,500	7,410
7	3,480	1,090	28,700	17	3,570	26,100	14,100	27	3,690	33,700	9,430
8	2,450	1,300	30,200	18	3,500	36,600	10,800	28	3,540	35,200	9,210
9	1,760	3,520	25,600	19	3,590	68,100	10,900	29	1,780	35,200	8,140
10	3,880	3,640	20,500	20	3,340	114,000	12,100	30		31,700	8,650
								31		28,700	
Mean monthly discharge, in second-feet (observed)									3,049	32,680	16,010
Mean monthly discharge, in second-feet (corrected)									1,565	38,790	16,960
Run-off, in inches (corrected)									0.52	13.72	5.81

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	-	-	2.70	2,490	9.32	19,600
4	2.11	1,650	1.50	1,020	2.12	1,650	2.55	2,260	2.63	2,420	9.37	21,200
6	-	-	-	-	-	-	-	-	2.72	2,490	10.41	27,700
8	2.73	2,570	3.45	3,830	2.70	2,490	3.35	3,630	4.23	5,620	13.11	35,800
10	-	-	-	-	-	-	-	-	5.46	6,300	14.66	40,900
N	1.72	1,210	3.78	4,570	3.79	4,570	3.70	4,350	5.70	6,350	15.64	44,200
2	-	-	-	-	-	-	-	-	6.24	6,820	16.26	45,200
4	1.40	943	4.16	5,380	3.98	5,020	3.88	4,790	6.22	7,270	17.31	48,600
6	-	-	-	-	-	-	-	-	7.40	14,400	19.15	49,600
8	1.22	807	3.78	4,570	3.54	4,040	3.58	4,140	9.40	22,300	18.41	51,900
10	-	-	-	-	-	-	-	-	10.10	23,700	17.44	51,500
M	1.52	1,040	3.36	3,630	3.61	4,140	3.55	4,040	10.06	21,500	17.24	53,100
	March 14		March 15		March 16		March 17		March 18		March 19	
2	17.65	57,500	15.02	51,800	10.18	29,700	9.27	25,100	10.21	29,700	13.72	45,900
4	17.83	62,000	14.72	50,500	10.32	30,200	9.18	24,500	10.26	30,200	14.52	49,500
6	17.93	65,200	14.50	49,500	10.41	30,700	9.23	24,500	10.31	30,200	15.49	54,100
8	17.94	65,800	14.18	48,000	10.46	31,200	9.61	26,600	10.70	32,200	16.44	58,400
10	17.90	65,600	13.26	43,900	10.40	30,700	9.57	26,600	11.07	34,200	17.52	63,700
N	17.68	64,500	13.02	42,800	10.39	30,700	9.54	26,100	11.42	35,700	19.02	71,100
2	17.52	63,800	12.68	41,400	10.08	29,200	9.52	26,100	12.69	41,500	19.44	73,200
4	17.32	62,800	12.05	38,400	9.96	28,700	9.55	26,600	12.48	40,700	20.65	80,400
6	16.80	60,300	11.80	37,500	9.92	28,200	9.59	26,600	12.42	40,200	21.24	84,300
8	16.56	59,100	11.31	35,200	9.60	26,600	9.67	27,100	12.62	41,100	22.04	89,900
10	15.95	56,200	11.28	35,200	9.64	26,600	9.78	27,700	12.94	42,300	22.52	93,400
M	15.44	53,800	10.74	32,200	9.62	26,600	9.72	27,100	13.32	44,100	23.22	98,600
	March 20		March 21		March 22		March 23		March 24		March 25	
2	24.07	106,000	24.90	112,000	22.21	91,400	20.63	80,600	17.52	63,700	14.58	49,900
4	25.40	116,000	24.75	111,000	22.01	90,000	20.43	79,400	17.52	63,700	14.31	48,600
6	26.70	127,000	24.60	110,000	21.74	88,100	20.30	78,600	17.38	63,200	14.09	47,600
8	25.60	118,000	24.40	108,000	21.53	86,600	20.42	79,300	17.50	63,700	13.89	46,700
10	25.40	116,000	24.00	105,000	21.16	84,000	20.28	78,500	17.18	62,200	13.68	45,900
N	25.10	114,000	23.75	103,000	20.90	82,200	16.48	58,700	16.80	60,300	13.04	42,700
2	25.10	114,000	23.50	101,000	20.94	82,500	19.94	76,200	16.41	58,400	12.84	41,900
4	25.00	113,000	23.50	101,000	20.94	82,500	19.72	75,000	16.09	56,900	12.78	41,900
6	24.90	112,000	23.29	99,300	20.91	82,300	19.60	74,400	15.74	55,000	12.72	41,500
8	24.90	112,000	22.89	96,100	20.88	82,100	18.90	70,600	15.45	53,600	12.67	41,500
10	24.90	112,000	22.84	95,800	20.77	81,400	16.36	58,400	15.15	52,600	12.58	41,100
M	24.60	110,000	22.54	93,700	20.72	81,100	17.08	61,700	14.82	50,800	12.19	39,300

Supplemental records.- Mar. 20, 5 a.m., 27.57 ft., 135,000 sec.-ft. Mar. 23, 11 p.m., 16.24 ft., 57,400 sec.-ft. Mar. 24, 3 a.m., 17.54 ft., 63,700 sec.-ft.

Kennebago Lake at Kennebago, Maine

Location.- Lat. 45°6'10", long. 70°46'40", at dam at outlet of Kennebago Lake at Kennebago, Franklin County. Zero of gage is 1,700.0 feet above mean sea level.
Drainage area.- 112 square miles.
Gage-height record.- One gage reading weekly.
Remarks.- Storage capacity, 1,118,042,000 cubic feet. Records furnished by Union Water Power Co.

Gage height, in feet, and contents, in millions of cubic feet, 1936

Day	February		March		April	
	Feet	Millions of cubic feet	Feet	Millions of cubic feet	Feet	Millions of cubic feet
1	-	-	78.38	723	-	-
2	79.88	874	-	-	-	-
3	-	-	-	-	-	-
4	-	-	-	-	-	-
5	-	-	-	-	79.21	805
6	-	-	-	-	-	-
7	-	-	-	-	-	-
8	-	-	78.04	691	-	-
9	79.63	849	-	-	-	-
10	-	-	-	-	-	-
11	-	-	-	-	-	-
12	-	-	-	-	79.54	839
13	-	-	-	-	-	-
14	-	-	-	-	-	-
15	-	-	78.96	780	-	-
16	79.29	814	-	-	-	-
17	-	-	-	-	-	-
18	-	-	-	-	-	-
19	-	-	-	-	79.04	788
20	-	-	-	-	-	-
21	-	-	-	-	-	-
22	-	-	83.71	1,308	-	-
23	78.96	780	-	-	-	-
24	-	-	-	-	-	-
25	-	-	-	-	-	-
26	-	-	-	-	78.89	773
27	-	-	-	-	-	-
28	-	-	-	-	-	-
29	78.38	723	-	-	-	-
30			-	-	82.50	1,165
31			80.00	887		

	February	March	April
Gain or loss in storage, in equivalent mean second-feet..	-63.4	+61.2	+107

Aziscohos Lake at Aziscohos Dam, Maine

Location.- Lat. 44°57', long. 70°58', at Aziscohos Dam, Oxford County. Zero of gage is 1,000.0 feet above mean sea level.
Drainage area.- 233 square miles.
Gage-height record.- Daily gage readings.
Remarks.- Storage capacity, 9,593,000,000 cubic feet. Records furnished by Union Water Co.

Gage height, in feet, and contents, in millions of cubic feet, 1936

Day	March		April	
	Feet	Millions of cubic feet	Feet	Millions of cubic feet
1	-	-	-	-
2	487.0	0	-	-
3	-	-	-	-
4	-	-	-	-
5	-	-	-	-
6	-	-	522.7	6,020
7	-	-	-	-
8	-	-	-	-
9	494.9	301	-	-
10	-	-	-	-
11	-	-	-	-
12	495.2	330	-	-
13	496.5	465	525.0	6,660
14	498.4	692	-	-
15	498.8	744	-	-
16	499.2	798	-	-
17	499.7	867	-	-
18	502.6	1,320	-	-
19	508.2	2,430	-	-
20	508.7	2,540	526.25	7,010
21	511.2	3,110	-	-
22	513.2	3,580	-	-
23	515.2	4,060	-	-
24	516.2	4,310	-	-
25	-	-	-	-
26	-	-	-	-
27	-	-	527.0	7,220
28	-	-	-	-
29	-	-	-	-
30	519.7	5,200	527.85	7,460
31	520.1	5,310		

	March	April
Gain or loss in storage, in equivalent mean second-feet	+1, 982	+830

Magalloway River at Aziscohos Dam, Maine

Location.- Lat. 44°57', long. 70°58', at Aziscohos Dam, Oxford County, 15 miles above mouth.
Drainage area.- 233 square miles.
Maxima.- 1936: Mean daily discharge, 2,430 second-feet May 14.
1912-35: Mean daily discharge, 4,660 second-feet June 19, 1917.
Remarks.- Discharge determined from readings of gate openings. Flood run-off completely controlled by 9,593,000,000 cubic feet of artificial storage. Monthly discharge corrected for storage. Records furnished by Union Water Power Co.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	May	Day	Feb.	Mar.	Apr.	May
1	117	117	0	0	16	117	0	0	2,110
2	117	117	0	0	17	117	0	0	1,610
3	117	117	0	0	18	117	0	0	879
4	117	117	0	0	19	117	0	0	459
5	117	0	0	0	20	117	0	0	1,140
6	117	0	0	805	21	117	0	0	866
7	117	0	0	1,810	22	117	0	0	728
8	117	0	0	2,100	23	117	0	0	728
9	117	0	0	2,100	24	117	0	0	556
10	117	0	0	2,100	25	117	0	0	235
11	117	0	0	1,580	26	117	0	0	235
12	117	0	0	1,880	27	117	0	0	743
13	117	0	0	2,100	28	117	0	0	944
14	117	0	0	2,430	29	117	0	0	689
15	117	0	0	2,240	30		0	0	234
					31		0		438
Mean monthly discharge (corrected)						-7	1,997	830	1,873
Run-off, in inches (corrected)						-.03	9.88	3.97	9.27

Swift River near Roxbury, Maine

Location.- Lat. 44°38'30", long. 70°35'15", 2½ miles below Roxbury, Oxford County, and 6 miles above confluence with Androscoggin River. Zero of gage is 615.5 feet above mean sea level.
Drainage area.- 95 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights used to half tenths between 3.40 and 6.40 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 12. Defined by current-meter measurements below 5,000 second-feet; extension to peak stage verified by comparison of peak discharge and total run-off of flood with determinations for other streams in Androscoggin River Basin.
Maxima.- 1936: Discharge, 10,500 second-feet 8:30 a.m. Mar. 19 (gage height, 11.20 feet).
1929-35: Discharge, 13,000 second-feet Sept. 17, 1932 (gage height, 12.58 feet).
Remarks.- Flood run-off not materially affected by artificial storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	46	37	740	11	36	49	482	21	33	1,890	371
2	45	37	537	12	35	3,250	412	22	31	3,200	344
3	44	37	446	13	34	4,210	352	23	30	1,090	321
4	41	37	348	14	33	1,270	328	24	30	766	371
5	41	38	295	15	33	666	352	25	31	690	302
6	40	37	625	16	34	585	314	26	34	617	336
7	40	38	970	17	35	1,160	310	27	37	740	336
8	39	38	622	18	36	5,250	332	28	39	1,270	416
9	38	39	451	19	37	8,210	408	29	37	898	550
10	37	38	446	20	35	2,690	363	30		840	1,520
								31		1,040	
Mean monthly discharge, in second-feet									36.6	1,315	467
Run-off, in inches									0.42	15.91	5.49

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	1.53	38	1.52	39	1.53	37	1.57	40	1.88	105	8.66	6,350
4	1.52	37	1.52	39	1.53	37	1.58	41	2.00	125	8.37	5,900
6	1.52	37	1.52	39	1.53	37	1.59	43	2.15	295	8.24	5,600
8	1.52	37	1.52	39	1.53	37	1.60	44	5.80	470	7.98	5,300
10	1.52	37	1.52	39	1.53	38	1.60	44	6.50	840	7.60	4,690
N	1.53	38	1.52	40	1.53	38	1.60	44	8.90	2,070	7.25	4,130
2	1.53	38	1.52	40	1.53	38	1.61	45	8.96	3,360	6.90	3,720
4	1.53	38	1.52	40	1.52	38	1.62	46	10.44	6,200	6.50	3,210
6	1.53	39	1.52	39	1.52	38	1.65	49	10.54	7,520	6.20	2,850
8	1.53	39	1.52	38	1.53	39	1.67	60	10.34	7,340	5.88	2,510
10	1.53	39	1.52	38	1.54	39	1.72	68	9.64	7,120	5.58	2,200
M	1.53	39	1.52	38	1.55	40	1.80	81	9.12	6,960	5.35	2,000
	March 14		March 15		March 16		March 17		March 18		March 19	
2	5.18	1,820	3.72	791	3.19	541	4.10	1,010	5.05	1,690	9.96	8,400
4	5.00	1,650	3.62	740	3.15	523	4.25	1,100	5.60	2,200	10.14	8,600
6	4.83	1,490	3.55	715	3.12	509	4.36	1,160	6.35	3,030	10.56	9,350
8	4.69	1,410	3.50	690	3.11	505	4.40	1,200	7.12	3,990	10.96	10,000
10	4.54	1,300	3.48	690	3.10	500	4.40	1,200	7.70	4,830	11.17	10,500
N	4.40	1,200	3.44	666	3.10	500	4.35	1,160	8.20	5,600	10.71	9,760
2	4.30	1,130	3.40	641	3.12	509	4.30	1,130	8.65	6,200	10.04	8,400
4	4.19	1,070	3.38	631	3.19	541	4.30	1,130	9.24	7,120	9.29	7,280
6	4.09	1,010	3.32	603	3.30	593	4.30	1,130	9.56	7,760	8.75	6,500
8	4.00	953	3.30	593	3.51	690	4.41	1,200	9.50	7,600	8.72	6,350
10	3.90	898	3.27	579	3.74	818	4.57	1,300	9.74	7,920	8.90	6,650
M	3.81	844	3.21	551	3.95	926	4.72	1,410	9.96	8,400	8.50	6,050
	March 20		March 21		March 22		March 23		March 24		March 25	
2	7.68	4,830	4.56	1,300	7.50	4,550	4.70	1,410	3.82	844	3.70	791
4	7.16	4,130	4.43	1,240	7.50	4,550	4.56	1,300	3.78	844	3.68	791
6	6.70	3,460	4.32	1,130	7.38	4,410	4.40	1,200	3.71	791	3.62	740
8	6.30	2,970	4.25	1,100	7.17	4,130	4.29	1,130	3.66	766	3.60	740
10	6.00	2,620	4.19	1,070	6.82	3,590	4.18	1,070	3.60	740	3.55	715
N	5.70	2,300	4.19	1,070	6.46	3,210	4.08	1,010	3.58	740	3.50	690
2	5.45	2,050	4.32	1,130	6.11	2,730	4.04	982	3.55	715	3.48	690
4	5.25	1,860	4.80	1,490	5.80	2,400	4.01	953	3.54	715	3.44	666
6	5.10	1,730	5.66	2,300	5.52	2,100	4.01	953	3.58	740	3.41	641
8	4.96	1,610	6.80	3,590	5.30	1,910	4.00	953	3.66	766	3.39	641
10	4.81	1,490	7.40	4,410	5.10	1,730	3.98	953	3.70	791	3.36	641
M	4.70	1,410	7.48	4,550	4.90	1,570	3.90	898	3.72	791	3.32	593

Supplemental records.- Mar. 19, 8:30 a.m., 11.20 ft., 10,500 sec.-ft.

Little Androscoggin River near South Paris, Maine

Location.- Lat. 44°17'5", long. 70°32'10", just above Biscoe Falls and 4½ miles above South Paris, Oxford County. Zero of gage is 394.5 feet above mean sea level.
Drainage area.- 76.2 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights used to half tenths between 2.70 and 8.50 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1-28. Defined by current-meter measurements below 3,000 second-feet; extended to peak stage on basis of flow determination at dam in South Paris, and comparison of peak discharge and total run-off of flood with determinations for other streams in Androscoggin River Basin.
Maxima.- 1936: Discharge, 6,980 second-feet 11 a.m. Mar. 19 (gage height, 11.72 feet).
1913-24, 1931-35: Discharge, 3,540 second-feet Apr. 14, 1920 (gage height, 9.87 feet).
Remarks.- Flood run-off not materially affected by artificial storage. Pennesseewassee Lake, outlet of which enters Little Androscoggin River below South Paris, rose 4.8 feet from Mar. 8 to Mar. 19 and fell 2.0 feet from Mar. 19 to Mar. 31.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	81	61	505	11	54	71	552	21	67	1,820	356
2	75	59	406	12	54	1,750	603	22	64	2,770	356
3	70	60	396	13	53	4,370	482	23	63	1,370	282
4	64	63	376	14	54	2,000	449	24	62	931	240
5	61	61	337	15	54	1,080	406	25	63	771	201
6	58	58	1,000	16	54	853	396	26	63	656	189
7	56	56	1,580	17	54	1,100	438	27	66	684	175
8	54	53	864	18	63	2,360	417	28	64	1,020	158
9	54	56	629	19	67	5,740	386	29	63	832	155
10	54	60	552	20	74	3,120	346	30		642	162
								31		603	
Mean monthly discharge, in second-feet									61.5	1,133	446
Run-off, in inches									0.87	17.18	6.53

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	1.70	63	2.03	96	10.78	5,720
4	1.58	52	1.60	54	1.62	56	1.72	65	2.20	114	10.61	5,440
6	-	-	-	-	-	-	1.73	66	2.58	160	10.42	5,160
8	1.56	50	1.60	54	1.64	58	1.74	67	3.06	228	10.25	4,890
10	-	-	-	-	-	-	1.75	68	3.72	328	10.10	4,760
N	1.60	54	1.60	54	1.67	60	1.82	75	5.20	655	9.94	4,500
2	-	-	-	-	-	-	1.80	73	6.60	1,200	9.70	4,240
4	1.59	53	1.62	56	1.70	63	1.77	70	7.70	2,000	9.50	3,980
6	-	-	-	-	-	-	1.83	76	9.62	4,110	9.20	3,600
8	1.60	54	1.64	58	1.67	60	1.83	76	9.84	4,370	8.97	3,360
10	-	-	-	-	-	-	1.88	81	10.54	5,300	8.68	3,010
M	1.60	54	1.60	54	1.69	62	1.94	87	10.76	5,720	8.44	2,740
	March 14		March 15		March 16		March 17		March 18		March 19	
2	8.27	2,520	6.73	1,290	5.90	890	6.02	930	6.90	1,380	9.82	4,370
4	8.06	2,320	6.56	1,180	5.80	853	6.12	970	7.02	1,450	10.25	4,890
6	7.89	2,180	6.41	1,100	5.73	835	6.22	1,010	7.18	1,590	10.82	5,720
8	7.73	2,040	6.32	1,050	5.70	817	6.26	1,030	7.41	1,750	11.32	6,420
10	7.69	2,000	6.28	1,050	5.70	817	6.31	1,050	7.65	1,910	11.69	6,980
N	7.69	2,000	6.30	1,050	5.70	817	6.38	1,100	8.00	2,270	11.67	6,980
2	7.61	1,910	6.38	1,100	5.72	817	6.43	1,120	8.40	2,680	11.46	6,700
4	7.60	1,910	6.34	1,080	5.77	835	6.47	1,120	8.60	2,900	11.19	6,280
6	7.48	1,830	6.28	1,050	5.82	853	6.54	1,180	8.83	3,120	10.83	5,720
8	7.30	1,670	6.18	1,010	5.88	890	6.62	1,200	8.94	3,240	10.51	5,300
10	7.10	1,520	6.05	950	5.92	890	6.68	1,260	9.17	3,600	10.27	5,020
M	6.91	1,380	5.97	910	5.97	910	6.80	1,320	9.34	3,720	10.07	4,760
	March 20		March 21		March 22		March 23		March 24		March 25	
2	9.80	4,370	7.48	1,910	8.92	3,310	7.43	1,870	6.06	1,060	5.40	832
4	9.55	4,130	7.34	1,790	8.96	3,420	7.28	1,750	5.98	1,040	5.38	832
6	9.28	3,770	7.21	1,670	8.92	3,310	7.12	1,600	5.88	1,000	5.33	816
8	9.00	3,420	7.06	1,560	8.83	3,200	6.95	1,500	5.78	965	5.29	801
10	8.83	3,200	6.94	1,500	8.69	3,090	6.77	1,370	5.69	931	5.24	786
N	8.61	2,980	6.84	1,430	8.54	2,870	6.64	1,320	5.60	897	5.20	771
2	8.41	2,770	6.84	1,430	8.39	2,770	6.52	1,240	5.52	864	5.15	756
4	8.24	2,570	7.16	1,640	8.22	2,570	6.40	1,200	5.47	848	5.10	741
6	8.07	2,420	7.44	1,870	8.06	2,420	6.31	1,160	5.42	832	5.07	726
8	7.91	2,270	7.93	2,320	7.90	2,270	6.24	1,140	5.41	832	5.02	712
10	7.77	2,140	8.42	2,770	7.75	2,140	6.18	1,120	5.41	832	4.99	712
M	7.64	2,040	8.75	3,200	7.60	2,000	6.12	1,080	5.41	832	4.96	698

Supplemental records.- Mar. 13, 1 a.m., 10.80 ft., 5,720 sec.-ft. Mar. 19, 11 a.m., 11.72 ft., 6,980 sec.-ft. Mar. 21, 1 p.m., 6.81 ft., 1,400 sec.-ft.

Thompson Lake at Oxford, Maine

Location.- Lat. 44°7'55", long. 70°29'45", at Oxford, Oxford County.
Drainage area.- 46.0 square miles.
Remarks.- Storage capacity, 951,000,000 cubic feet.

Gage height, in feet, and contents, in millions of cubic feet, 1936

Day	February		March		April	
	Feet	Millions of cubic feet	Feet	Millions of cubic feet	Feet	Millions of cubic feet
1	96.6	288	-	-	-	-
2	-	-	-	-	-	-
3	-	-	-	-	-	-
4	-	-	-	-	99.2	778
5	-	-	-	-	-	-
6	-	-	-	-	-	-
7	-	-	96.4	252	-	-
8	96.6	288	-	-	-	-
9	-	-	-	-	-	-
10	-	-	-	-	-	-
11	-	-	-	-	99.7	884
12	-	-	-	-	-	-
13	-	-	-	-	-	-
14	-	-	98.9	716	-	-
15	96.5	270	-	-	-	-
16	-	-	-	-	-	-
17	-	-	-	-	-	-
18	-	-	-	-	99.8	907
19	-	-	100.0	951	-	-
20	-	-	100.5	1,065	-	-
21	-	-	100.5	1,065	-	-
22	96.4	252	100.8	1,137	-	-
23	-	-	100.7	1,113	-	-
24	-	-	100.5	1,065	-	-
25	-	-	100.0	951	99.7	884
26	-	-	-	-	-	-
27	-	-	-	-	-	-
28	-	-	99.2	778	-	-
29	96.4	252	-	-	-	-
30			-	-	-	-
31			-	-		

Sebago Lake near North Windham, Maine

Location.- Lat. 43°49'50", long. 70°27'20", at Sebago Lake Dam at outlet of lake, Cumberland County. Zero of gage is 200.0 feet above mean sea level.
Drainage area.- 436 square miles.
Gage-height record.- One gage reading daily.
Remarks.- Usable storage capacity, 9,700,000,000 cubic feet. Records furnished by S. D. Warren Co.

Gage height, in feet, and contents, in millions of cubic feet, 1936

Day	February		March		April	
	Feet	Millions of cubic feet	Feet	Millions of cubic feet	Feet	Millions of cubic feet
1	66.0	4,449	66.05	4,513	71.56	11,518
2	-	-	66.0	4,449	71.56	11,518
3	-	-	66.0	4,449	71.63	11,607
4	-	-	66.0	4,449	71.57	11,530
5	66.0	4,449	66.0	4,449	71.48	11,416
6	-	-	66.0	4,449	71.4	11,314
7	-	-	65.9	4,322	71.52	11,467
8	-	-	65.9	4,322	71.6	11,568
9	-	-	65.9	4,322	71.54	11,492
10	66.0	4,449	65.9	4,322	71.52	11,467
11	-	-	65.9	4,322	71.55	11,505
12	-	-	66.3	4,831	71.46	11,390
13	-	-	66.6	5,212	71.4	11,314
14	-	-	66.65	5,276	71.37	11,276
15	66.0	4,449	66.85	5,530	71.25	11,123
16	-	-	67.1	5,848	71.2	11,060
17	-	-	67.25	6,038	71.1	10,933
18	-	-	67.5	6,356	71.1	10,933
19	-	-	68.1	7,119	70.95	10,742
20	66.0	4,449	68.7	7,882	70.83	10,590
21	-	-	69.3	8,645	70.73	10,462
22	-	-	69.9	9,407	70.65	10,361
23	-	-	70.4	10,043	70.58	10,272
24	-	-	70.7	10,424	70.52	10,195
25	66.05	4,513	71.0	10,806	70.45	10,106
26	-	-	71.15	10,996	70.48	10,145
27	-	-	71.25	11,123	70.52	10,195
28	-	-	71.4	11,314	70.52	10,195
29	66.1	4,577	71.45	11,378	70.53	10,208
30			71.55	11,505	70.56	10,246
31			71.66	11,568		

	February	March	April
Gain or loss in storage, in equivalent mean second-feet..	+128	+2,611	-510

Presumpscot River at outlet of Sebago Lake, Maine

Location.- Lat. 43°48'50", long. 70°27'0", at outlet dam of Sebago Lake and hydroelectric plant at Eel Weir Falls, 1 mile below lake outlet, Cumberland County.
Drainage area.- 436 square miles.
Stage-discharge relation.- Discharge computed from flow through wheels and water wasted at regulating gates.
Maxima.- 1936: Mean daily discharge, 3,790 second-feet Apr. 3.
1887-1935: Mean daily discharge, 7,000 second-feet Apr. 7, 1902.
Remarks.- Diversion by Portland Water District and leakage through dam, totaling about 20 second-feet, not included in daily discharge table. Sebago Lake (area, 46 square miles) rose from elevation 265.9 feet on Mar. 11 to 271.63 feet on Apr. 3. Monthly discharge table corrected for storage and diversion. Monthly corrections for storage are made for the following lakes and ponds: Crystal Lake, Highland Lake, Wood Pond, Brandy Pond, Long Lake, Pleasant Lake, Parker Pond, Thomas Pond, Panther Pond, Rattlesnake Pond, and Sebago Lake. For daily changes in storage see records for Sebago Lake near North Windham, Maine; Brandy Pond and Long Lake near Songo Lock, Maine; and Wood Pond near Bridgton, Maine. For additional records of storage see table on this page. Records furnished by S. D. Warren Co.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	808	92	3,770	11	822	813	3,590	21	826	1,690	3,100
2	128	812	3,770	12	833	489	3,540	22	263	2,240	2,690
3	826	816	3,790	13	826	165	3,480	23	388	2,230	1,960
4	829	814	3,380	14	829	720	3,460	24	681	2,200	1,730
5	829	812	3,730	15	229	828	3,390	25	813	2,610	1,490
6	829	813	3,570	16	433	827	3,340	26	817	3,070	74
7	827	801	3,570	17	683	827	3,260	27	809	3,190	862
8	270	93	3,620	18	827	523	3,270	28	817	3,420	853
9	391	814	3,590	19	827	395	3,200	29	803	3,390	855
10	694	812	3,570	20	827	1,010	3,150	30		3,410	864
								31		3,310	
Mean monthly discharge, in second-feet (observed)									682	1,420	2,820
Mean monthly discharge, in second-feet (corrected)									996	5,012	2,082
Run-off, in inches (corrected)									2.46	13.26	5.33

Miscellaneous records of storage in Presumpscot River Basin, 1936

Name of reservoir	Location	Drainage area (square miles)	Date of observation	Gage height (feet)	Contents (millions of cubic feet)
Pleasant Lake and Parker Pond*	Casco	10.1	Feb. 29	3.4	182
			Mar. 31	5.4	289
			Apr. 30	4.8	257
Thomas Pond*	South Casco	5.3	Feb. 29	6.9	137
			Mar. 31	7.3	144
			Apr. 30	6.9	137
Panther Pond and Rattlesnake Pond*	Raymond	30	Feb. 29	9.5	212
			Mar. 31	12.2	471
			Apr. 30	11.2	375
Crystal Lake*	Harrison	9.60	Feb. 29	2.0	41
			Mar. 31	8.0	163
			Apr. 30	7.7	157
Highland Lake†	Bridgton	20.0	Feb. 29	4.7	275
			Mar. 31	8.0	468
			Apr. 30	8.0	468

* Gage-height record furnished by S. D. Warren Co.
† Gage-height record furnished by Central Maine Power Co.

Brandy Pond and Long Lake near Songo Lock, Maine

Location.- Lat. 43°56'30", long. 70°34'50", near Songo Lock, Cumberland County. Zero of gage is about 260.0 feet above mean sea level.
Drainage area.- 120 square miles.
Remarks.- Storage capacity, 2,377,500,000 cubic feet. Gage-height record furnished by S. D. Warren Co.

Gage height, in feet, and contents, in millions of cubic feet, 1936

Day	February		March		April	
	Feet	Millions of cubic feet	Feet	Millions of cubic feet	Feet	Millions of cubic feet
1	6.5	0	6.0	0	-	-
2	-	-	-	-	-	-
3	-	-	-	-	-	-
4	-	-	-	-	-	-
5	-	-	-	-	-	-
6	-	-	-	-	-	-
7	-	-	-	-	-	-
8	-	-	-	-	-	-
9	-	-	-	-	-	-
10	-	-	-	-	-	-
11	-	-	-	-	-	-
12	-	-	-	-	-	-
13	-	-	-	-	-	-
14	-	-	-	-	-	-
15	-	-	-	-	-	-
16	-	-	-	-	-	-
17	-	-	-	-	-	-
18	-	-	-	-	-	-
19	-	-	14.8	2,027	-	-
20	-	-	-	-	-	-
21	-	-	-	-	-	-
22	-	-	-	-	-	-
23	-	-	-	-	-	-
24	-	-	15.8	2,271	-	-
25	-	-	15.7	2,247	-	-
26	-	-	-	-	-	-
27	-	-	-	-	-	-
28	-	-	15.6	2,222	-	-
29	6.0	0	-	-	-	-
30			-	-	12.6	1,490
31			14.8	2,027		

Wood Pond near Bridgton, Maine

Location.- Lat. 44°1'10", long. 70°43'35", near Bridgton, Cumberland County.
Drainage area.- 3.34 square miles.
Remarks.- Storage capacity, 200,000,000 cubic feet. Gage-height record furnished by Central Maine Power Co.

Gage height, in feet, and contents, in millions of cubic feet, 1936

Day	February		March		April	
	Feet	Millions of cubic feet	Feet	Millions of cubic feet	Feet	Millions of cubic feet
1	-	-	-	-	-	-
2	-	-	-	-	-	-
3	-	-	95.3	129.5	-	-
4	-	-	-	-	-	-
5	-	-	-	-	99.8	197.2
6	-	-	-	-	-	-
7	-	-	-	-	-	-
8	-	-	-	-	-	-
9	-	-	-	-	-	-
10	-	-	95.6	134.0	-	-
11	97.8	167.1	-	-	-	-
12	-	-	-	-	-	-
13	-	-	-	-	-	-
14	-	-	-	-	-	-
15	-	-	-	-	99.8	197.2
16	-	-	97.0	155.1	-	-
17	-	-	-	-	-	-
18	97.0	155.1	-	-	-	-
19	-	-	-	-	-	-
20	-	-	-	-	99.7	195.7
21	-	-	-	-	-	-
22	-	-	-	-	-	-
23	-	-	100.8	212.3	-	-
24	-	-	-	-	-	-
25	-	-	-	-	-	-
26	96.0	140.0	-	-	-	-
27	-	-	-	-	99.7	195.7
28	-	-	-	-	-	-
29	-	-	-	-	-	-
30			99.6	194.2	-	-
31			-	-		

Saco River near Conway, N. H.

Location.- Lat. 43°59'25", long. 71°5'30", at Odell Falls, 1 3/4 miles below mouth of Swift River and Conway, Carroll County.
Drainage area.- 386 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights used to half tenths between 4.10 and 7.40 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 13. Defined by current-meter measurements below 12,000 second-feet; extended to peak stage by averaging discharges obtained from slope-area computations of flood flow; verified by comparison of peak discharge and total run-off of flood with determinations for other streams in the Saco River Basin.
Maxima.- 1936: Discharge, 40,600 second-feet 9 a.m. Mar. 19 (gage height, 16.45 feet).
1903-10, 1929-35: Discharge, about 24,000 second-feet Nov. 3, 1907 (gage height, 17.14 feet).
Remarks.- Flood run-off not materially affected by artificial storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	400	340	4,010	11	290	400	2,620	21	320	12,100	1,710
2	370	310	3,160	12	280	10,700	2,460	22	310	13,300	1,900
3	355	335	2,760	13	275	18,200	2,110	23	310	6,800	1,650
4	315	330	2,320	14	270	7,060	1,900	24	310	5,080	1,650
5	305	335	2,040	15	265	4,280	1,900	25	320	4,570	1,480
6	310	325	4,680	16	270	3,580	1,780	26	330	4,010	1,490
7	295	300	6,990	17	270	4,970	1,710	27	370	4,100	1,520
8	300	320	4,010	18	315	17,600	1,580	28	375	4,970	1,650
9	295	350	3,000	19	365	33,900	1,650	29	335	4,190	2,040
10	285	350	2,690	20	345	13,300	1,780	30		4,190	4,770
								31		4,970	
Mean monthly discharge, in second-feet									316	5,986	2,500
Run-off, in inches									0.88	17.87	7.23

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	-	-	3.67	720	13.37	23,000
4	2.75	300	2.89	355	2.86	350	2.93	365	3.95	930	12.80	22,400
6	-	-	-	-	-	-	-	-	4.20	1,170	12.25	21,600
8	2.63	260	2.87	350	2.86	345	2.95	365	4.38	1,360	11.82	20,800
10	-	-	-	-	-	-	-	-	5.93	3,560	11.45	19,800
N	2.75	300	2.86	350	2.86	345	2.98	375	7.95	7,930	11.08	18,800
2	-	-	-	-	-	-	-	-	9.80	13,200	10.69	17,800
4	2.83	330	2.86	350	2.88	350	3.02	400	11.00	17,600	10.22	16,800
6	-	-	-	-	-	-	-	-	12.60	21,600	9.80	15,200
8	2.89	350	2.84	345	2.89	350	3.13	440	14.20	23,900	9.38	13,500
10	-	-	-	-	-	-	-	-	14.28	24,100	8.90	11,600
M	2.86	340	2.84	345	2.90	360	3.42	570	13.90	23,800	8.55	10,500
	March 14		March 15		March 16		March 17		March 18		March 19	
2	8.28	9,330	6.59	4,970	5.88	3,660	6.25	4,280	7.10	6,070	15.62	37,200
4	8.03	8,440	6.48	4,770	5.85	3,580	6.33	4,480	7.25	6,310	15.92	38,500
6	7.81	7,870	6.38	4,570	5.80	3,490	6.38	4,570	7.60	7,320	16.25	39,700
8	7.66	7,590	6.28	4,380	5.78	3,490	6.45	4,670	8.24	9,030	16.40	40,600
10	7.50	7,060	6.20	4,190	5.76	3,400	6.51	4,770	9.13	11,900	16.36	40,600
N	7.38	6,800	6.13	4,100	5.75	3,400	6.59	4,970	9.97	15,100	15.94	38,500
2	7.30	6,550	6.14	4,100	5.77	3,400	6.68	5,180	10.84	18,100	15.17	35,600
4	7.18	6,310	6.08	4,010	5.82	3,490	6.75	5,280	10.91	18,500	14.14	31,100
6	7.12	6,070	6.07	3,920	5.91	3,660	6.78	5,390	13.09	27,100	13.11	27,100
8	6.98	5,840	6.02	3,830	6.01	3,830	6.81	5,390	13.97	30,700	12.38	24,300
10	6.86	5,500	5.98	3,830	6.09	4,010	6.88	5,610	14.83	33,900	12.08	23,100
M	6.70	5,180	5.93	3,740	6.18	4,190	6.98	5,840	15.40	36,400	11.87	22,300
	March 20		March 21		March 22		March 23		March 24		March 25	
2	11.39	20,400	7.79	7,870	10.66	17,700	7.78	7,870	6.88	5,610	6.47	4,670
4	10.89	18,500	7.68	7,590	10.42	16,600	7.63	7,320	6.81	5,390	6.43	4,670
6	10.36	16,600	7.60	7,320	10.31	16,200	7.52	7,060	6.75	5,280	6.42	4,570
8	9.90	14,800	7.59	7,320	10.14	15,500	7.41	6,800	6.69	5,180	6.42	4,570
10	9.48	13,300	7.82	7,870	9.89	14,800	7.33	6,550	6.63	5,080	6.42	4,570
N	9.13	11,900	8.14	8,730	9.57	13,700	7.26	6,550	6.58	4,970	6.40	4,570
2	8.84	10,900	8.91	11,200	9.23	12,300	7.20	6,310	6.52	4,770	6.38	4,570
4	8.63	10,300	9.77	14,400	8.92	11,200	7.17	6,310	6.48	4,770	6.36	4,480
6	8.44	9,640	10.63	17,300	8.68	10,600	7.14	6,070	6.49	4,770	6.33	4,480
8	8.28	9,330	11.36	20,400	8.46	9,950	7.11	6,070	6.49	4,770	6.30	4,380
10	8.12	8,730	11.62	21,200	8.23	9,030	7.04	5,840	6.49	4,770	6.27	4,280
M	7.93	8,150	11.19	19,600	7.99	8,440	6.97	5,720	6.49	4,770	6.23	4,280

Supplemental records.- Mar. 12, 9 p.m., 14.34 ft., 24,200 sec.-ft. Mar. 19, 9 a.m., 16.45 ft., 40,600 sec.-ft.

Saco River at Cornish, Maine

Location.- Lat. 43°48'30", long. 70°46'55", just above highway bridge at Cornish, York County, and half a mile below mouth of Ossipee River. Zero of gage is 263.7 feet above mean sea level.
Drainage area.- 1,298 square miles.
Gage-height record.- Water-stage recorder graph except for period 10 a.m. Mar. 15 to 2 p.m. Mar. 29, when graph was drawn from one gage reading daily and flood marks. Gage heights used to half tenths between 3.30 and 5.20 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 20. Defined by current-meter measurements below 20,000 second-feet; extended to peak stage on basis of orifice computation of flood flow at bridge below station and computation at dam 4 miles above, plus inflow from Ossipee River; verified by comparison of peak discharge and total run-off of flood with determinations at other points on Saco River.
Maxima.- 1936: Discharge, 51,300 second-feet midnight Mar. 21 to 2 a.m. Mar. 22 (gage height, 21.90 feet).
1916-35: Discharge, 23,000 second-feet May 2, 1923 (gage height, 14.72 feet).
Remarks.- Flood run-off affected by artificial storage. For daily changes in storage see records for Kezar Lake near Lovell, Maine, and Ossipee Lake at Effingham Falls, N. H. Peak flow materially reduced by channel storage above village of Hiram.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	1,820	1,270	17,100	11	1,340	1,330	12,700	21	1,350	45,600	7,000
2	1,790	1,680	15,300	12	1,350	2,300	11,500	22	1,350	45,600	6,780
3	1,780	1,270	13,900	13	1,360	6,000	10,400	23	1,350	41,500	6,470
4	1,720	1,290	13,200	14	1,370	9,010	9,720	24	1,350	37,000	6,270
5	1,600	1,300	12,200	15	1,370	12,200	8,890	25	1,340	33,400	6,020
6	1,480	1,300	12,200	16	1,360	15,000	8,470	26	1,340	30,000	5,860
7	1,410	1,290	12,000	17	1,350	15,200	8,280	27	1,330	27,300	5,390
8	1,360	1,280	12,500	18	1,350	15,200	7,800	28	1,310	25,400	4,980
9	1,340	1,310	13,000	19	1,350	25,400	7,580	29	1,280	23,200	4,810
10	1,340	1,290	12,800	20	1,350	38,800	7,290	30		21,000	4,670
								31		19,100	
Mean monthly discharge, in second-feet									1,420	16,220	9,503
Run-off, in inches									1.18	14.41	8.17

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	5.24	-	5.23	-	5.30	-	5.34	-	5.65	-	8.86	-
4	5.23	-	5.24	-	5.30	-	5.34	-	5.75	-	9.00	-
6	5.19	1,270	5.25	1,310	5.31	1,310	5.34	1,290	5.92	1,440	9.26	4,600
8	4.84	-	5.25	-	5.33	-	5.36	-	6.14	-	9.76	-
10	5.23	-	5.29	-	5.38	-	5.43	-	6.44	-	10.00	-
N	5.31	1,380	5.32	1,320	5.42	1,280	5.45	1,290	6.92	1,840	9.88	6,200
2	5.33	-	5.30	-	5.41	-	5.43	-	7.44	-	10.00	-
4	5.30	-	5.28	-	5.38	-	5.43	-	7.70	-	10.01	-
6	5.26	1,280	5.32	1,310	5.39	1,290	5.46	1,300	8.20	2,990	10.10	7,280
8	5.25	-	5.31	-	5.35	-	5.43	-	8.41	-	10.20	-
10	5.23	-	5.30	-	5.34	-	5.48	-	8.57	-	10.28	-
M	5.23	1,290	5.31	1,300	5.33	1,290	5.56	1,600	8.70	4,010	10.40	7,570
	March 14		March 15		March 16		March 17		March 18		March 19	
2	10.52	-	11.95	-	16.00	-	17.20	-	15.18	-	16.40	-
4	10.57	-	12.00	-	16.29	-	17.08	-	15.09	-	16.62	-
6	10.66	8,390	12.32	11,400	16.55	14,600	16.97	15,400	15.04	14,100	16.85	20,900
8	10.80	-	12.65	-	16.80	-	16.81	-	15.02	-	17.10	-
10	11.04	-	13.08	-	17.00	-	16.67	-	15.04	-	17.33	-
N	11.20	8,910	13.43	12,500	17.17	15,100	16.49	15,400	15.10	14,300	17.58	24,500
2	11.31	-	13.82	-	17.28	-	16.26	-	15.20	-	17.81	-
4	11.32	-	14.22	-	17.35	-	16.04	-	15.40	-	18.07	-
6	11.42	9,440	14.60	13,200	17.40	15,200	15.86	15,000	15.58	15,100	18.30	30,000
8	11.65	-	15.00	-	17.40	-	15.66	-	15.78	-	18.55	-
10	11.80	-	15.32	-	17.36	-	15.50	-	15.98	-	18.78	-
M	11.94	10,700	15.67	13,400	17.30	15,200	15.31	14,700	16.17	17,800	18.99	34,500
	March 20		March 21		March 22		March 23		March 24		March 25	
2	19.18	-	20.96	-	21.90	-	20.70	-	19.49	-	18.27	-
4	19.38	-	21.08	-	21.88	-	20.58	-	19.40	-	18.15	-
6	19.57	37,100	21.20	43,000	21.84	47,200	20.46	42,000	19.30	38,100	18.02	34,200
8	19.71	-	21.30	-	21.80	-	20.33	-	19.22	-	17.91	-
10	19.88	-	21.42	-	21.70	-	20.22	-	19.15	-	17.80	-
N	20.00	39,300	21.53	45,200	21.60	45,400	20.11	41,600	19.03	36,700	17.65	33,300
2	20.16	-	21.63	-	21.49	-	20.00	-	18.91	-	17.50	-
4	20.30	-	21.71	-	21.35	-	19.92	-	18.80	-	17.38	-
6	20.42	40,400	21.79	47,500	21.22	43,000	19.84	41,400	18.70	35,600	17.22	32,500
8	20.55	-	21.84	-	21.10	-	19.75	-	18.60	-	17.05	-
10	20.70	-	21.89	-	20.96	-	19.67	-	18.48	-	16.90	-
M	20.82	42,200	21.90	51,300	20.84	42,300	19.58	39,700	18.37	35,100	16.70	31,700

146875—37——10

Saco River at West Buxton, Maine

Location.- Lat. 43°40', long. 70°36'5", at hydroelectric plant of Cumberland County Power & Light Co., at West Buxton, York County.
Drainage area.- 1,572 square miles.
Gage-height record.- Gages in pond above dam and in tailrace read hourly to 1 p.m. Mar. 19, 1 to 6 a.m. Mar. 20, and irregularly thereafter. Gage heights given below are pond elevations. Peak stage determined from flood marks.
Stage-discharge relation.- Discharge computed from flow over dam and through wheels. Peak discharge computed from flow over dam and estimate of flow over west bank and through village of Hollis; verified by slope-area determination and comparison with records on nearby streams.
Maxima.- 1936: Discharge, 58,200 second-feet 8 a.m. Mar. 22 (gage height, 118.7 feet).
1907-16, 1919-35: Mean daily discharge, 27,800 second-feet May 2, 1923.
Remarks.- Flood run-off slightly affected by artificial storage in eight ponds, total capacity about 2,400,000,000 cubic feet. West end of dam washed out during night of Mar. 23. Records furnished by Cumberland County Power & Light Co.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	2,130	1,940	-	11	1,540	1,810	-	21	1,800	-	-
2	1,600	1,470	-	12	1,540	3,430	-	22	1,560	-	-
3	2,200	1,610	-	13	1,530	9,460	-	23	1,300	-	-
4	1,940	1,590	-	14	1,530	17,100	-	24	1,710	-	-
5	1,820	1,690	-	15	1,870	19,700	-	25	1,550	-	-
6	1,830	1,740	-	16	1,130	20,200	-	26	1,670	-	-
7	1,660	1,540	-	17	1,610	20,300	-	27	1,520	-	-
8	1,730	1,410	-	18	1,570	21,600	-	28	1,590	-	-
9	1,660	1,700	-	19	1,680	31,500	-	29	1,650	-	-
10	1,760	1,540	-	20	1,600	39,000	-	30		-	-
								31			
Mean monthly discharge, in second-feet									1,665	-	-
Run-off, in inches									1.14	-	-

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	-	-	-	-	111.0	-
4	-	-	-	-	-	-	-	-	-	-	110.9	-
6	109.5	1,110	109.4	1,140	109.0	1,080	108.8	1,140	109.5	1,590	111.4	5,360
8	-	-	-	-	-	-	-	-	-	-	111.4	-
10	-	-	-	-	-	-	-	-	-	-	111.2	-
N	109.5	2,000	109.0	2,310	109.0	2,340	108.5	1,950	109.7	3,910	111.1	9,180
2	-	-	-	-	-	-	-	-	-	-	111.3	-
4	-	-	-	-	-	-	-	-	-	-	111.5	-
6	109.5	1,700	109.4	2,260	109.2	1,900	109.3	2,330	109.7	3,880	111.5	11,000
8	-	-	-	-	-	-	-	-	-	-	111.5	-
10	-	-	-	-	-	-	-	-	-	-	111.5	-
M	109.5	1,330	109.1	2,310	109.0	1,900	109.3	2,500	110.2	3,120	111.5	12,700
	March 14		March 15		March 16		March 17		March 18		March 19	
2	111.5	-	111.6	-	111.9	-	111.8	-	111.9	-	113.4	-
4	111.5	-	111.7	-	112.0	-	111.9	-	112.0	-	113.4	-
6	112.0	10,500	111.7	17,600	112.1	19,400	111.9	18,600	112.1	19,200	113.6	26,000
8	111.4	-	111.8	-	112.0	-	111.7	-	112.0	-	113.7	-
10	111.4	-	111.8	-	111.8	-	111.7	-	112.0	-	113.9	-
N	111.9	18,700	111.8	19,200	111.8	21,200	111.7	20,500	112.0	21,600	114.1	29,900
2	111.9	-	111.9	-	111.7	-	111.8	-	112.1	-	-	-
4	112.3	-	112.0	-	111.7	-	111.8	-	112.2	-	-	-
6	112.1	20,500	112.3	20,300	111.7	20,400	111.9	21,000	112.3	22,100	-	-
8	111.6	-	112.3	-	111.6	-	111.9	-	112.4	-	-	-
10	111.4	-	112.0	-	111.6	-	111.8	-	112.6	-	-	-
M	111.5	18,900	112.0	21,800	111.6	19,900	111.3	21,000	112.6	23,600	-	-
	March 20		March 21		March 22		March 23		March 24		March 25	
2	116.4	-	-	-	-	-	-	-	-	-	-	-
4	116.9	-	-	-	-	-	-	-	-	-	-	-
6	117.1	-	117.9	-	-	-	-	-	-	-	-	-
8	-	-	-	-	118.7	58,200	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-
N	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-
M	-	-	-	-	-	-	-	-	-	-	-	-

Supplemental records.- Mar. 20, 1 a.m., 115.9 ft.; 3 a.m., 116.5 ft., 40,200 sec.-ft.; 5 a.m., 117.0 ft. Maximum pond level Mar. 23, 117.9 ft.; Mar. 24, 115.0 ft.

Kezar Lake near Lovell, Maine

Location.- Lat. 44°7'45", long. 70°56'40", near Lovell, Oxford County.
Drainage area.- 58.5 square miles.
Remarks.- Storage capacity, 359,800,000 cubic feet. Gage-height record furnished by Cumberland County Power & Light Co.

Gage height, in feet, and contents, in millions of cubic feet, 1936

Day	February		March		April	
	Feet	Millions of cubic feet	Feet	Millions of cubic feet	Feet	Millions of cubic feet
1	3.00	170.0	-	-	-	-
2	-	-	-	-	-	-
3	-	-	-	-	-	-
4	-	-	-	-	6.42	558.8
5	-	-	-	-	-	-
6	-	-	-	-	-	-
7	-	-	4.58	331.7	-	-
8	2.67	143.6	-	-	-	-
9	-	-	-	-	-	-
10	-	-	-	-	-	-
11	-	-	-	-	6.42	558.8
12	-	-	-	-	-	-
13	-	-	-	-	-	-
14	-	-	9.75	1,067.5	-	-
15	2.50	130.0	-	-	-	-
16	-	-	-	-	-	-
17	-	-	-	-	-	-
18	-	-	-	-	6.00	500.0
19	-	-	-	-	-	-
20	-	-	-	-	-	-
21	-	-	-	-	-	-
22	2.50	130.0	-	-	-	-
23	-	-	-	-	-	-
24	-	-	-	-	-	-
25	-	-	-	-	5.00	380.0
26	-	-	-	-	-	-
27	-	-	-	-	-	-
28	-	-	9.08	953.6	5.00	380.0
29	2.50	130.0	-	-	-	-
30			-	-	-	-
31			-	-		

Ossipee Lake at Effingham Falls, N. H.

Location.- Lat. 43°47'40", long. 71°3'50", at Effingham Falls, Carroll County. Zero of gage is 400.0 feet above mean sea level.
Drainage area.- 327 square miles.
Remarks.- Storage capacity, 1,000,000,000 cubic feet. Gage-height record furnished by Cumberland County Power & Light Co.

Gage height, in feet, and contents, in millions of cubic feet, 1936

Day	February		March		April	
	Feet	Millions of cubic feet	Feet	Millions of cubic feet	Feet	Millions of cubic feet
1	4.52	493.2	-	-	-	-
2	-	-	-	-	-	-
3	-	-	-	-	-	-
4	-	-	-	-	9.27	1,490.2
5	-	-	-	-	-	-
6	-	-	-	-	-	-
7	-	-	1.94	154.6	-	-
8	3.02	272.8	-	-	-	-
9	-	-	-	-	-	-
10	-	-	-	-	-	-
11	-	-	-	-	9.44	1,534.4
12	-	-	-	-	-	-
13	-	-	-	-	-	-
14	-	-	9.94	1,664.4	-	-
15	2.44	208.4	-	-	-	-
16	-	-	-	-	-	-
17	-	-	-	-	-	-
18	-	-	-	-	8.19	1,225.6
19	-	-	-	-	-	-
20	-	-	-	-	-	-
21	-	-	12.69	2,480.8	-	-
22	1.94	154.6	-	-	-	-
23	-	-	-	-	-	-
24	-	-	-	-	-	-
25	-	-	-	-	7.86	1,149.2
26	-	-	-	-	-	-
27	-	-	-	-	-	-
28	-	-	10.69	1,873.2	7.86	1,149.2
29	1.61	124.9	-	-	-	-
30			-	-	-	-
31			-	-		

Ossipee River at Cornish, Maine

Location.- Lat. 43°48'25", long. 70°47'55", at highway bridge in Cornish, York County, 1¼ miles above confluence with Saco River.
Drainage area.- 453 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights used to half tenths between 1.80 and 3.90 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 17. Defined by current-meter measurements below 8,000 second-feet; extended to peak stage on basis of flow determination at lower dam in Kezar Falls; verified by comparison of peak discharge and total run-off of flood with determinations for nearby streams.
Maxima.- 1936: Discharge, 17,200 second-feet midnight Mar. 21 (gage height, 15.32 feet).
1916-35: Discharge, 7,440 second-feet Apr. 19, 1933 (gage height, 8.42 feet).
Remarks.- Flood run-off affected by artificial storage in Ossipee and Silver Lakes, total capacity about 1,000,000,000 cubic feet. For daily changes in storage see record for Ossipee Lake at Effingham Falls, N. H.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	755	620	4,700	11	695	680	3,930	21	650	16,300	2,140
2	720	615	4,370	12	680	1,410	3,820	22	645	16,300	2,040
3	705	620	4,370	13	665	3,770	3,510	23	640	14,300	1,920
4	685	635	4,150	14	645	5,400	3,210	24	635	11,600	1,760
5	680	645	3,710	15	640	6,200	2,910	25	635	9,030	1,640
6	670	645	4,040	16	650	6,600	2,910	26	635	7,210	1,520
7	675	635	4,700	17	670	6,450	2,810	27	635	6,300	1,440
8	665	635	4,940	18	680	6,170	2,540	28	635	6,300	1,370
9	665	635	4,700	19	685	11,200	2,360	29	630	5,780	1,300
10	690	640	4,260	20	675	14,300	2,220	30		5,420	1,260
								31		5,060	
Mean monthly discharge, in second-feet									667	5,552	3,018
Run-off, in inches									1.58	14.18	7.43

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	2.47	650	2.39	600	2.47	595	2.59	625	2.94	665	6.00	2,880
4	2.40	625	2.46	635	2.41	555	2.53	610	3.02	685	6.27	3,100
6	2.43	645	2.44	620	2.52	605	2.61	640	3.22	795	6.47	3,330
8	2.41	635	2.43	610	2.59	640	2.69	670	3.41	905	6.66	3,510
10	2.31	600	2.60	700	2.74	715	2.83	760	3.63	1,040	6.84	3,690
N	2.46	685	2.57	675	2.75	770	2.79	720	3.79	1,150	7.00	3,840
2	2.51	705	2.54	655	2.69	735	2.72	680	4.02	1,300	7.04	3,870
4	2.36	615	2.53	650	2.71	690	2.77	710	4.55	1,710	7.11	3,950
6	2.37	615	2.59	675	2.63	650	2.80	720	4.94	2,020	7.26	4,100
8	2.37	610	2.40	575	2.56	615	2.69	680	5.20	2,240	7.36	4,200
10	2.34	585	2.44	590	2.59	580	2.78	685	5.48	2,490	7.43	4,280
M	2.34	580	2.46	595	2.59	580	2.83	660	5.76	2,730	7.72	4,600
	March 14		March 15		March 16		March 17		March 18		March 19	
2	8.12	4,900	8.49	5,870	8.39	6,600	8.68	6,600	7.21	5,780	9.41	8,750
4	8.20	5,100	8.57	5,940	8.40	6,600	8.66	6,600	7.15	5,780	10.04	9,620
6	8.22	5,230	8.57	6,000	8.48	6,600	8.57	6,600	7.07	5,660	10.55	10,500
8	8.40	5,300	8.56	6,070	8.47	6,600	8.43	6,600	7.07	5,660	10.95	11,100
10	8.46	5,370	8.53	6,130	8.45	6,600	8.32	6,600	7.14	5,660	11.20	11,400
N	8.55	5,430	8.56	6,200	8.45	6,600	8.30	6,600	7.22	5,780	11.34	11,600
2	8.44	5,500	8.37	6,260	8.43	6,600	8.19	6,500	7.18	5,780	11.44	11,700
4	8.21	5,550	8.25	6,330	8.72	6,600	7.85	6,380	7.38	6,040	11.58	12,000
6	8.37	5,590	8.14	6,400	8.43	6,600	7.87	6,260	7.60	6,300	11.72	12,200
8	8.46	5,630	8.37	6,460	8.82	6,600	7.76	6,140	7.93	6,690	11.90	12,500
10	8.52	5,770	8.47	6,530	8.81	6,600	7.62	6,020	8.34	7,210	12.08	12,800
M	8.43	5,810	8.40	6,600	8.72	6,600	7.42	5,900	8.85	7,910	12.17	13,000
	March 20		March 21		March 22		March 23		March 24		March 25	
2	12.25	13,000	14.12	15,700	15.28	17,200	-	-	-	-	-	-
4	12.39	13,300	14.15	15,800	15.17	17,100	13.66	15,200	11.97	12,700	10.17	9,920
6	12.53	13,400	14.17	15,800	15.04	16,800	-	-	-	-	-	-
8	12.69	13,800	14.19	15,800	14.90	16,700	13.33	14,600	11.64	12,000	9.90	9,470
10	12.86	14,000	14.19	15,800	14.77	16,600	-	-	-	-	-	-
N	13.03	14,200	14.23	15,800	14.62	16,300	13.06	14,300	11.29	11,600	9.64	9,030
2	13.21	14,500	14.41	16,100	14.49	16,200	-	-	-	-	-	-
4	13.38	14,800	14.79	16,600	14.37	16,100	12.82	13,900	11.00	11,100	9.39	8,750
6	13.59	15,000	15.13	16,900	14.24	15,800	-	-	-	-	-	-
8	13.80	15,300	15.27	17,200	14.17	15,800	12.55	13,600	10.72	10,700	9.12	8,330
10	13.93	15,400	15.31	17,200	14.01	15,600	-	-	-	-	-	-
M	14.05	15,600	15.32	17,200	13.89	15,400	12.23	13,000	10.43	10,200	8.90	8,050

Balch Pond near North Shapleigh, Maine

Location.- Lat. 43°36'20", long. 70°56'10", near North Shapleigh, York County.
Drainage area.- 13.0 square miles.
Remarks.- Storage capacity, 238,600,000 cubic feet. Gage-height record furnished by Central Maine Power Co.

Gage height, in feet, and contents, in millions of cubic feet, 1936

Day	February		March		April	
	Feet	Millions of cubic feet	Feet	Millions of cubic feet	Feet	Millions of cubic feet
1	-	-	-	-	-	-
2	-	-	5.5	164.1	-	-
3	7.5	223.7	-	-	-	-
4	-	-	-	-	8.0	238.6
5	-	-	-	-	-	-
6	-	-	-	-	-	-
7	-	-	-	-	-	-
8	-	-	-	-	-	-
9	-	-	5.4	161.1	-	-
10	7.8	232.7	5.6	167.0	-	-
11	-	-	-	-	8.0	238.6
12	-	-	-	-	-	-
13	-	-	-	-	-	-
14	-	-	-	-	-	-
15	-	-	-	-	-	-
16	-	-	6.6	196.9	-	-
17	6.9	205.8	6.6	196.9	-	-
18	-	-	7.0	208.8	-	-
19	-	-	8.0	238.6	-	-
20	-	-	9.0	268.5	8.5	253.6
21	-	-	9.6	286.4	-	-
22	-	-	9.7	289.3	-	-
23	-	-	10.0	298.3	-	-
24	6.2	184.9	10.0	298.3	-	-
25	-	-	9.8	292.3	-	-
26	-	-	9.4	280.4	-	-
27	-	-	9.0	268.5	-	-
28	-	-	8.5	253.6	9.7	289.3
29	-	-	8.0	238.6	-	-
30			7.6	226.7	-	-
31			-	-		

Mousam Lake at Emery Mills, Maine

Location.- Lat. 43°29'40", long. 70°50'50", at Emery Mills, York County.
Drainage area.- 31.0 square miles.
Remarks.- Storage capacity, 153,300,000 cubic feet. Gage-height record furnished by Sanford Mills.

Gage height, in feet, and contents, in millions of cubic feet, March 1936

Day	Feet	Millions of cubic feet	Day	Feet	Millions of cubic feet
15	6.96	60.1	22	12.00	214.7
16	-	-	23	11.75	207.0
17	-	-	24	11.42	196.9
18	-	-	25	11.00	184.0
19	10.29	162.2	26	10.62	172.3
20	11.50	199.3	27	-	-
21	-	-	28	-	-
			29	10.38	165.0

PISCATAQUA RIVER BASIN

Great East Pond above Milton Mills, N. H.

Location.- Lat. 43°34'40", long. 70°56'10", above Milton Mills, Strafford County.
Drainage area.- 12.0 square miles.
Remarks.- Storage capacity, 390,100,000 cubic feet. Gage-height record furnished by Public Service Company of New Hampshire.

Gage height, in feet, and contents, in millions of cubic feet, 1936

Day	February		March		April	
	Feet	Millions of cubic feet	Feet	Millions of cubic feet	Feet	Millions of cubic feet
1	-	-	96.25	93.8	-	-
2	96.65	123.8	-	-	-	-
3	-	-	-	-	-	-
4	-	-	-	-	-	-
5	-	-	-	-	-	-
6	-	-	-	-	100.30	414.3
7	-	-	-	-	-	-
8	96.55	116.2	95.90	67.5	-	-
9	-	-	-	-	-	-
10	-	-	-	-	-	-
11	-	-	-	-	-	-
12	-	-	-	-	100.10	398.1
13	-	-	96.85	138.8	-	-
14	-	-	97.15	162.0	-	-
15	-	-	97.35	178.0	-	-
16	96.50	112.5	-	-	-	-
17	-	-	-	-	-	-
18	-	-	99.00	310.0	-	-
19	-	-	99.35	338.0	99.80	374.0
20	-	-	99.75	370.0	-	-
21	-	-	100.00	390.0	-	-
22	-	-	100.50	430.5	-	-
23	96.25	9.38	100.60	438.6	-	-
24	-	-	100.55	434.6	-	-
25	-	-	100.60	438.6	-	-
26	-	-	100.50	430.5	99.60	358.0
27	-	-	100.45	426.4	-	-
28	-	-	100.60	438.6	-	-
29	-	-	100.55	434.6	-	-
30			100.45	426.4	-	-
31			-	-		

Wilsons Pond above Milton Mills, N. H.

Location.- Lat. 43°33'35", long. 70°56'55", above Milton Mills, Strafford County.
Drainage area.- 15.5 square miles.
Remarks.- Storage capacity, 23,000,000 cubic feet. Gage-height record furnished by Public Service Co. of New Hampshire.

Gage height, in feet, and contents, in millions of cubic feet, 1936

Day	February		March		April	
	Feet	Millions of cubic feet	Feet	Millions of cubic feet	Feet	Millions of cubic feet
1	-	-	98.70	8.0	-	-
2	99.25	14.4	-	-	-	-
3	-	-	-	-	-	-
4	-	-	-	-	-	-
5	-	-	-	-	-	-
6	-	-	-	-	100.40	27.7
7	-	-	-	-	-	-
8	99.05	12.1	98.65	7.5	-	-
9	-	-	-	-	-	-
10	-	-	-	-	-	-
11	-	-	-	-	-	-
12	-	-	-	-	100.20	25.4
13	-	-	-	-	-	-
14	-	-	100.65	30.6	-	-
15	-	-	100.65	30.6	-	-
16	98.85	9.8	-	-	-	-
17	-	-	100.65	30.6	-	-
18	-	-	100.65	30.6	-	-
19	-	-	100.40	27.7	99.90	21.9
20	-	-	101.25	37.6	-	-
21	-	-	102.15	48.0	-	-
22	-	-	102.75	55.0	-	-
23	98.85	9.8	102.10	47.5	-	-
24	-	-	102.10	47.5	-	-
25	-	-	101.40	39.3	-	-
26	-	-	101.15	36.4	99.45	16.7
27	-	-	101.00	34.7	-	-
28	-	-	100.95	34.1	-	-
29	-	-	100.85	33.0	-	-
30			100.75	31.8	-	-
31			-	-		

Horns Pond at Milton Mills, N. H.

Location.- Lat. 43°33'25", long. 70°57'15", at Milton Mills, Strafford County.
Drainage area.- 16.9 square miles.
Remarks.- Storage capacity, 48,400,000 cubic feet. Gage-height record furnished by Public Service Co. of New Hampshire.

Gage height, in feet, and contents, in millions of cubic feet, 1936

Day	February		March		April	
	Feet	Millions of cubic feet	Feet	Millions of cubic feet	Feet	Millions of cubic feet
1	-	-	95.65	12.4	-	-
2	95.00	7.3	-	-	-	-
3	-	-	-	-	-	-
4	-	-	-	-	-	-
5	-	-	-	-	99.50	44.6
6	-	-	-	-	100.35	51.9
7	-	-	-	-	-	-
8	95.00	7.3	95.85	13.9	-	-
9	-	-	-	-	-	-
10	-	-	-	-	-	-
11	-	-	-	-	-	-
12	-	-	-	-	99.55	45.0
13	-	-	97.10	24.0	-	-
14	-	-	97.40	26.6	-	-
15	-	-	97.60	28.2	-	-
16	94.90	6.6	-	-	-	-
17	-	-	98.20	33.3	-	-
18	-	-	98.35	34.6	-	-
19	-	-	99.85	47.6	99.00	40.2
20	-	-	99.85	47.6	-	-
21	-	-	100.50	53.2	-	-
22	-	-	100.60	54.1	-	-
23	95.35	10.0	100.75	55.4	-	-
24	-	-	100.60	54.1	-	-
25	-	-	100.50	53.2	-	-
26	-	-	100.50	53.2	98.65	37.2
27	-	-	100.40	52.4	-	-
28	-	-	100.40	52.4	-	-
29	-	-	100.15	50.2	-	-
30			100.00	48.9	-	-
31			-	-		

Three Ponds at Milton Mills, N. H.

Location.- Lat. 43°25'0", long. 70°59'5", at Milton Mills, Strafford County. Zero of gage is about 315 feet above mean sea level.
Drainage area.- 105 square miles.
Remarks.- Storage capacity, 580,600,000 cubic feet. Gage-height record furnished by Public Service Co. of New Hampshire.

Gage height, in feet, and contents, in millions of cubic feet, 1936

Day	February		March		April	
	Feet	Millions of cubic feet	Feet	Millions of cubic feet	Feet	Millions of cubic feet
1	99.00	520.0	93.00	207.0	99.35	541.0
2	99.00	520.0	93.25	219.0	99.15	529.0
3	99.00	520.0	93.00	207.0	99.75	565.0
4	98.85	511.5	92.85	200.1	100.25	595.8
5	98.75	505.8	92.75	195.5	100.25	595.8
6	98.50	491.5	92.65	190.9	100.35	602.0
7	98.35	483.0	92.65	190.9	100.35	602.0
8	98.15	471.6	93.15	214.2	100.15	589.4
9	98.35	483.0	93.15	214.2	100.10	586.3
10	98.35	483.0	93.10	211.8	100.25	595.8
11	98.00	463.0	92.65	190.9	100.25	595.8
12	97.50	435.5	93.00	207.0	100.10	586.3
13	97.25	421.8	98.50	491.5	100.10	586.3
14	96.90	402.7	99.50	550.0	100.15	589.4
15	96.75	394.8	99.00	520.0	100.25	595.8
16	96.40	376.2	98.65	500.0	100.15	589.4
17	96.40	376.2	99.50	550.0	100.10	586.3
18	96.35	373.6	100.00	580.0	100.10	586.3
19	96.10	360.3	101.00	643.0	100.00	580.0
20	96.00	355.0	101.25	659.2	100.00	580.0
21	95.50	329.5	100.35	602.0	100.00	580.0
22	95.00	304.0	100.35	602.0	99.95	577.0
23	95.85	347.4	100.00	580.0	99.85	571.0
24	95.50	329.5	99.50	550.0	99.65	559.0
25	95.25	316.8	99.50	550.0	99.65	559.0
26	94.00	255.0	99.00	520.0	99.90	574.0
27	93.75	243.0	99.65	559.0	100.00	580.0
28	93.50	231.0	99.00	520.0	99.85	571.0
29	93.00	207.0	99.00	520.0	99.60	556.0
30			99.00	520.0	99.40	544.0
31			99.00	520.0		

Salmon Falls River near South Lebanon, Maine

Location.- Lat. 43°19'40", long. 70°55'40", at Stair Falls, 2 1/2 miles above Little River and 1 1/2 miles south of South Lebanon, York County.
Drainage area.- 147 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights used to half tenths between 3.00 and 3.70 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Defined by current-meter measurements below 3.000 second-feet; extended to peak stage on basis of flow determination at dam 2 miles above; verified by comparison of peak discharge and total run-off of flood with determinations for other streams nearby.
Maxima.- 1936: Discharge, 5,490 second-feet 7:30 p.m. Mar. 19 (gage height, 12.31 feet).
1928-35: Discharge, 3,550 second-feet Apr. 19, 1933.
Remarks.- Flood run-off materially affected by artificial storage in Lovell Lake and Great East, Wilsons, Horns, and Three (Milton) Ponds (combined capacity, 1,155,800,000 cubic feet). Monthly discharge table corrected for effect of storage. For daily changes in storage see records for Great East Pond and Wilsons Pond above Milton Mills, N. H.; Horns Pond and Three Ponds at Milton Mills, N. H.; and Lovell Lake at Sanbornville, N. H.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	175	65	565	11	440	335	820	21	380	4,130	506
2	122	192	546	12	430	1,940	958	22	230	4,010	474
3	300	300	738	13	420	3,440	660	23	215	3,330	434
4	385	295	765	14	450	3,540	605	24	270	2,520	438
5	390	290	930	15	400	3,130	610	25	365	1,960	225
6	370	280	1,150	16	186	2,060	738	26	345	1,360	132
7	365	140	1,460	17	285	1,460	620	27	335	1,040	260
8	205	78	1,420	18	460	2,610	565	28	325	1,670	371
9	146	138	820	19	435	5,180	546	29	240	1,580	335
10	300	280	685	20	400	4,870	510	30		1,310	344
								31		1,120	
Mean monthly discharge, in second-feet (observed)									323	1,763	641
Run-off, in inches (observed)									2.37	13.83	4.86
Mean monthly discharge, in second-feet (corrected)									178	2,042	618
Run-off, in inches (corrected)									1.30	16.03	4.69

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	1.33	40	1.56	87	1.88	175	2.20	291	2.59	466	9.22	3,590
4	1.31	36	1.42	57	2.00	215	2.24	309	2.80	560	9.02	3,470
6	1.57	90	1.35	44	2.06	237	2.26	317	3.27	792	8.88	3,410
8	1.68	118	1.52	78	2.12	259	2.31	340	3.75	1,080	8.76	3,350
10	1.72	129	1.88	175	2.21	295	2.35	358	4.65	1,310	8.67	3,300
N	1.74	134	1.79	148	2.19	287	2.33	348	5.65	1,660	8.67	3,300
2	1.63	105	1.88	175	2.19	287	2.31	340	6.80	2,260	8.75	3,350
4	1.48	69	1.90	181	2.19	287	2.28	326	7.75	2,790	8.90	3,410
6	1.45	63	1.92	188	2.30	335	2.31	340	8.60	3,240	9.02	3,470
8	1.38	49	1.96	201	2.31	340	2.33	348	9.19	3,590	9.08	3,530
10	1.42	57	1.98	208	2.30	335	2.35	358	9.40	3,710	9.12	3,530
M	1.62	102	1.99	212	2.25	313	2.40	380	9.36	3,710	9.13	3,530
	March 14		March 15		March 16		March 17		March 18		March 19	
2	9.15	3,590	8.90	3,410	7.60	2,680	4.35	1,260	5.75	1,760	11.23	4,900
4	9.17	3,590	8.82	3,350	7.49	2,630	4.56	1,310	5.87	1,810	11.54	4,990
6	9.17	3,590	8.74	3,300	7.38	2,580	4.82	1,370	6.01	1,860	11.65	5,050
8	9.16	3,590	8.66	3,300	7.24	2,470	5.00	1,430	6.18	1,960	11.70	5,110
10	9.12	3,530	8.52	3,180	7.11	2,410	5.15	1,500	6.48	2,110	11.74	5,110
N	9.09	3,530	8.45	3,120	6.98	2,360	5.20	1,500	6.80	2,260	11.84	5,180
2	9.05	3,470	8.32	3,070	6.62	2,160	5.24	1,500	7.40	2,580	11.94	5,240
4	9.06	3,530	8.20	3,010	5.95	1,860	5.32	1,540	8.00	2,900	12.10	5,360
6	9.06	3,530	8.09	2,960	5.25	1,500	5.40	1,580	8.63	3,240	12.27	5,490
8	9.17	3,590	8.05	2,900	4.73	1,340	5.50	1,620	9.30	3,650	12.30	5,490
10	9.09	3,530	7.95	2,900	4.40	1,260	5.62	1,660	10.05	4,070	12.25	5,420
M	8.98	3,470	7.76	2,790	4.28	1,240	5.70	1,710	10.70	4,500	12.15	5,420
	March 20		March 21		March 22		March 23		March 24		March 25	
2	12.04	5,300	10.12	4,130	10.40	4,310	9.32	3,650	7.90	2,840	6.60	2,160
4	11.92	5,240	9.96	4,070	10.25	4,190	9.21	3,590	7.81	2,790	6.53	2,110
6	11.80	5,180	9.78	3,950	10.12	4,130	9.08	3,530	7.71	2,740	6.47	2,110
8	11.68	5,110	9.67	3,890	10.05	4,070	9.00	3,470	7.60	2,680	6.40	2,060
10	11.57	5,050	9.58	3,830	9.98	4,070	8.88	3,410	7.48	2,630	6.32	2,010
N	11.43	4,930	9.62	3,830	9.92	4,010	8.86	3,410	7.35	2,580	6.22	1,960
2	11.28	4,870	9.82	3,950	9.84	3,950	8.72	3,300	7.23	2,470	6.12	1,910
4	11.12	4,740	10.08	4,130	9.73	3,890	8.55	3,240	7.08	2,410	6.03	1,860
6	10.92	4,620	10.45	4,310	9.62	3,830	8.40	3,120	6.96	2,360	5.96	1,860
8	10.70	4,500	10.66	4,500	9.55	3,830	8.23	3,010	6.86	2,310	5.85	1,760
10	10.46	4,380	10.68	4,500	9.47	3,770	8.08	2,960	6.76	2,260	5.71	1,710
M	10.28	4,250	10.57	4,440	9.40	3,710	7.98	2,900	6.68	2,210	5.68	1,710

Supplemental records.- Mar. 19, 7:30 p.m., 12.31 ft., 5,490 sec.-ft.

Lovell Lake at Sanbornville, N. H.

Location.- Lat. 43°33'10", long. 71°1'5", at Sanbornville, Carroll County. Zero of gage is about 470 feet above mean sea level.
Drainage area.- 10.0 square miles.
Remarks.- Storage capacity, 113,700,000 cubic feet. Gage-height record furnished by Public Service Co. of New Hampshire.

Gage height, in feet, and contents, in millions of cubic feet, 1936

Day	February		March		April	
	Feet	Millions of cubic feet	Feet	Millions of cubic feet	Feet	Millions of cubic feet
1	-	-	97.40	53.2	100.05	114.2
2	98.15	70.4	-	-	-	-
3	-	-	-	-	-	-
4	-	-	-	-	-	-
5	-	-	-	-	-	-
6	-	-	-	-	-	-
7	-	-	-	-	-	-
8	98.25	72.8	97.10	46.3	-	-
9	-	-	-	-	-	-
10	-	-	-	-	-	-
11	-	-	-	-	-	-
12	-	-	-	-	99.30	96.9
13	-	-	98.40	76.2	-	-
14	-	-	98.70	83.1	-	-
15	-	-	98.85	86.6	-	-
16	97.90	64.7	-	-	-	-
17	-	-	99.00	90.0	-	-
18	-	-	98.35	75.0	-	-
19	-	-	100.00	113.0	99.40	99.2
20	-	-	99.85	109.6	-	-
21	-	-	100.10	115.4	-	-
22	-	-	100.45	123.8	-	-
23	97.65	59.0	100.10	115.4	-	-
24	-	-	99.85	109.6	-	-
25	-	-	99.60	103.8	-	-
26	-	-	99.35	98.0	99.60	103.8
27	-	-	99.10	92.3	-	-
28	-	-	99.15	93.4	-	-
29	-	-	99.10	92.3	-	-
30			99.20	94.6	-	-
31			-	-		

Lamprey River near Newmarket, N. H.

Location.- Lat. 43°6'5", long. 70°57'20", just above Packers Falls, 2 miles northwest of Newmarket, Rockingham County, and 4.8 miles above mouth.
Drainage area.- 183 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights given to half tenths between 2.80 and 4.80 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1-14. Defined by current-meter measurements below 2,200 second-feet; extended to peak stage by determination of flood flow over dam (head, 4.22 feet; C, 3.88); verified by velocity-area study near control section and drainage-area comparison of instantaneous and total yield of flood with records for nearby streams.
Maxima.- 1936: Discharge, 5,490 second-feet 2:30 p.m. Mar. 20 (gage height, 14.88 feet).
1934-1935: Discharge, 1,820 second-feet Jan. 11 (gage height, 6.75 feet).
Remarks.- Flood run-off considerably affected by artificial and natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	150	258	830	11	175	376	870	21	368	4,690	469
2	140	239	764	12	165	1,640	950	22	368	4,060	454
3	135	239	1,010	13	180	2,770	890	23	341	3,810	425
4	135	232	1,090	14	190	3,500	770	24	320	3,090	382
5	130	239	1,050	15	208	3,540	684	25	305	2,140	336
6	125	241	1,120	16	245	2,760	652	26	285	1,610	310
7	135	230	1,250	17	320	2,410	636	27	276	1,390	290
8	160	224	1,290	18	382	2,790	605	28	276	1,530	274
9	185	234	1,170	19	368	4,250	544	29	267	1,450	267
10	190	283	950	20	368	5,270	499	30		1,290	269
								31		1,050	
Mean monthly discharge, in second-feet									238	1,866	703
Run-off, in inches									1.40	11.76	4.28

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	-	-	3.95	684	8.0	2,380
4	2.35	234	2.37	239	2.44	254	2.77	333	4.45	870	8.1	2,430
6	-	-	-	-	-	-	-	-	4.75	990	8.3	2,520
8	2.32	228	2.35	234	2.50	267	2.8	341	5.3	1,210	8.4	2,560
10	-	-	-	-	-	-	-	-	5.9	1,450	8.5	2,610
N	2.29	222	2.32	228	2.55	278	2.85	354	6.6	1,760	8.7	2,700
2	-	-	-	-	-	-	-	-	7.0	1,940	9.0	2,840
4	2.24	212	2.31	226	2.64	300	2.95	382	7.1	1,980	9.3	2,970
6	-	-	-	-	-	-	-	-	7.3	2,070	9.3	2,970
8	2.27	218	2.35	234	2.70	315	3.1	425	7.5	2,160	9.4	3,020
10	-	-	-	-	-	-	3.2	454	7.7	2,250	9.6	3,100
M	2.34	232	2.40	245	2.74	325	3.35	499	7.8	2,300	9.6	3,100
	March 14		March 15		March 16		March 17		March 18		March 19	
2	9.7	3,150	11.2	3,820	9.6	3,100	8.3	2,520	8.2	2,480	10.7	3,600
4	9.8	3,200	11.1	3,780	9.4	3,020	8.1	2,430	8.1	2,430	11.0	3,740
6	9.9	3,240	11.0	3,740	9.1	2,880	8.0	2,380	8.2	2,480	11.3	3,870
8	9.9	3,240	10.8	3,640	9.0	2,840	7.9	2,340	8.3	2,520	11.6	4,000
10	9.7	3,150	10.7	3,600	8.8	2,740	7.9	2,340	8.3	2,520	11.8	4,100
N	10.6	3,560	10.6	3,560	8.8	2,740	7.9	2,340	8.4	2,560	12.0	4,180
2	10.8	3,640	10.5	3,510	8.7	2,700	7.9	2,340	8.7	2,700	12.3	4,320
4	10.4	3,460	10.5	3,510	8.7	2,700	8.1	2,430	9.1	2,880	12.6	4,460
6	11.0	3,740	10.3	3,420	8.6	2,660	8.1	2,430	9.2	2,920	12.8	4,540
8	11.3	3,870	10.2	3,380	8.5	2,610	8.1	2,430	9.7	3,150	13.0	4,630
10	11.3	3,870	10.0	3,280	8.5	2,610	8.1	2,430	10.2	3,380	13.2	4,720
M	11.3	3,870	9.8	3,200	8.4	2,560	8.2	2,480	10.4	3,460	13.4	4,820
	March 20		March 21		March 22		March 23		March 24		March 25	
2	13.7	4,950	14.1	5,130	12.1	4,230	11.4	3,920	10.6	3,560	8.2	2,480
4	13.9	5,040	13.9	5,040	12.0	4,180	11.3	3,870	10.5	3,510	8.1	2,430
6	14.2	5,180	13.7	4,950	11.9	4,140	11.3	3,870	10.3	3,420	7.9	2,340
8	14.4	5,260	13.5	4,860	11.9	4,140	11.3	3,870	10.1	3,330	7.8	2,300
10	14.5	5,310	13.2	4,720	11.8	4,100	11.3	3,870	9.9	3,240	7.6	2,200
N	14.6	5,360	13.2	4,720	11.8	4,100	11.3	3,870	9.7	3,150	7.5	2,160
2	14.8	5,440	13.2	4,720	11.7	4,050	11.2	3,820	9.5	3,060	7.4	2,120
4	14.8	5,440	12.9	4,590	11.6	4,000	11.2	3,820	9.3	2,970	7.2	2,020
6	14.7	5,400	12.6	4,460	11.5	3,960	11.1	3,780	9.0	2,840	7.1	1,980
8	14.6	5,360	12.4	4,360	11.5	3,960	11.0	3,740	8.8	2,740	7.0	1,940
10	14.5	5,310	12.4	4,360	11.5	3,960	10.9	3,690	8.6	2,660	6.9	1,890
M	14.3	5,220	12.3	4,320	11.4	3,920	10.8	3,640	8.4	2,560	6.8	1,840

Supplemental records.- Mar. 20, 2:30 p.m., 14.88 ft., 5,490 sec.ft.

Oyster River near Durham, N. H.

Location.- Lat. 43°8'55", long. 70°58', 2½ miles west of Durham, Strafford County, and 7 miles above mouth of river.
Drainage area.- 12.1 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights given to half tenths between 2.2 and 2.8 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 18. Defined by current-meter measurements below 217 second-feet; extended to peak stage by determination of flood flow over dam (head, 1.25 and 1.92 feet; C, 3.33); verified by comparison of peak discharge and total run-off of flood with records for nearby streams.
Maxima.- 1936: Discharge, 548 second-feet 8 to 10 a.m. Mar. 19 (gage height, 7.45 feet).
Remarks.- Flood run-off not affected by artificial or natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	11	17	42	11	12	28	57	21	24	251	29
2	11	16	55	12	12	280	71	22	22	294	30
3	10	16	96	13	12	255	55	23	20	165	26
4	10	15	76	14	13	208	43	24	19	106	24
5	9	15	54	15	14	172	38	25	18	94	22
6	10	17	91	16	16	160	44	26	17	78	22
7	10	15	97	17	21	161	40	27	17	79	21
8	11	13	82	18	31	240	35	28	17	140	19
9	12	12	55	19	27	471	32	29	17	93	20
10	13	19	50	20	25	234	29	30		65	21
								31		51	
Mean monthly discharge, in second-feet									15.9	122	45.9
Run-off, in inches									1.41	11.64	4.23

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	0.56	-	0.49	-	0.58	-	1.25	-	2.45	40	5.4	-
4	0.54	-	0.48	-	0.60	-	1.25	-	3.5	150	5.3	-
6	0.54	-	0.48	-	0.62	-	1.25	-	4.7	200	5.3	-
8	0.52	-	0.47	-	0.64	-	1.28	-	5.3	220	5.1	-
10	0.50	-	0.47	-	0.66	-	1.32	-	6.1	260	4.9	-
N	0.50	*13	0.47	*12	0.69	*19	1.37	*28	6.6	320	4.8	*255
2	0.50	-	0.46	-	0.75	-	1.45	-	7.0	400	4.9	-
4	0.50	-	0.44	-	0.89	-	1.55	-	7.1	420	4.9	-
6	0.50	-	0.44	-	1.15	-	1.62	-	6.9	400	4.7	-
8	0.50	-	0.48	-	1.25	-	1.71	-	6.5	360	4.5	-
10	0.50	-	0.52	-	1.27	-	1.86	-	6.0	320	4.3	-
M	0.50	-	0.56	-	1.26	-	2.10	-	5.6	270	4.1	-
	March 14		March 15		March 16		March 17		March 18		March 19	
2	3.9	-	3.2	-	3.2	-	3.0	-	3.5	160	6.4	478
4	3.7	-	3.0	-	3.1	-	3.0	-	3.5	160	6.6	492
6	3.5	-	2.9	-	3.0	-	2.9	-	3.5	160	7.2	534
8	3.4	-	2.9	-	2.9	-	2.8	-	3.5	160	7.4	548
10	3.4	-	2.9	-	2.9	-	2.75	-	3.5	160	7.4	548
N	3.5	*208	3.1	*172	2.9	*160	2.7	*161	3.6	170	7.0	520
2	3.6	-	3.2	-	3.0	-	2.8	-	3.7	200	6.6	492
4	3.7	-	3.4	-	3.1	-	3.1	-	4.0	230	6.1	457
6	3.8	-	3.5	-	3.1	-	3.4	-	4.6	280	5.7	429
8	3.9	-	3.6	-	3.1	-	3.5	-	5.1	350	5.2	393
10	3.6	-	3.4	-	3.1	-	3.5	-	5.8	400	4.7	353
M	3.4	-	3.3	-	3.1	-	3.5	-	6.5	450	4.3	321
	March 20		March 21		March 22		March 23		March 24		March 25	
2	4.0	297	2.5	177	4.8	361	2.8	201	1.97	124	1.66	92
4	3.7	273	2.4	168	4.7	353	2.7	193	1.92	118	1.66	92
6	3.5	257	2.35	163	4.5	337	2.6	185	1.88	114	1.68	94
8	3.4	249	2.35	163	4.3	321	2.5	177	1.85	111	1.72	98
10	3.2	233	2.5	177	4.2	313	2.4	168	1.82	108	1.74	100
N	3.1	225	3.0	217	4.0	297	2.3	158	1.79	105	1.72	98
2	3.0	217	4.1	305	3.8	281	2.25	153	1.76	102	1.70	96
4	2.9	209	4.5	337	3.6	265	2.20	148	1.74	100	1.69	95
6	2.9	209	4.5	337	3.4	249	2.15	143	1.73	99	1.67	93
8	2.9	209	4.6	345	3.3	241	2.10	138	1.71	97	1.66	92
10	2.7	193	4.6	345	3.1	225	2.05	132	1.69	95	1.65	91
M	2.6	185	4.7	353	3.0	217	2.00	127	1.67	93	1.63	89

*Mean for the day.

East Branch of Pemigewasset River near Lincoln, N. H.

Location.- Lat. 44°3'40", long. 71°37'0", 1 1/8 miles below Hancock Branch and 2 3/4 miles northeast of Lincoln, Grafton County.
Drainage area.- 104 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights given to half tenths between 4.20 and 7.50 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 3, Mar. 7, 8, 12. Defined by current-meter measurements below 2,970 second-feet; extended to peak stage by determination of flood flow over dam (head, 6.2 feet; C, 3.55) 1 mile below station; verified by drainage-area comparison of instantaneous and total yield of flood with records for other streams in Merrimack River Basin.
Maxima.- 1936: Discharge, 17,000 second-feet 1 a.m. Mar. 19 (gage height, 9.80 feet).
1928-35: Discharge, 8,000 second-feet May 3, 1929 (gage height, 7.47 feet).
Remarks.- Flood run-off not materially affected by artificial or natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	100	55	988	11	60	84	550	21	60	4,570	329
2	95	54	750	12	58	6,560	480	22	60	4,050	388
3	90	54	616	13	55	3,950	426	23	58	1,810	333
4	85	53	493	14	55	1,390	394	24	58	1,160	338
5	80	53	432	15	55	805	383	25	58	1,110	292
6	70	53	2,380	16	52	871	358	26	55	976	310
7	70	52	2,020	17	52	2,720	324	27	55	988	310
8	68	52	976	18	55	10,900	292	28	60	1,240	388
9	65	51	690	19	58	11,200	292	29	55	940	814
10	60	53	616	20	60	4,460	297	30		1,000	2,960
								31		1,410	
Mean monthly discharge, in second-feet									64.2	2,023	674
Run-off, in inches									0.67	22.48	7.23

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	1.91	-	-	-	-	-	1.71	55	2.48	302	6.1	5,840
4	2.28	-	-	-	-	-	-	-	2.70	416	6.2	6,100
6	2.59	-	-	-	-	-	1.73	58	6.5	5,500	6.05	5,710
8	2.55	-	-	-	-	-	-	-	5.8	6,500	5.8	5,080
10	1.78	-	-	-	-	-	1.74	60	6.5	6,900	5.55	4,480
N	1.71	*52	*1.68	*51	*1.70	*53	-	-	7.2	8,900	5.3	3,920
2	1.69	-	-	-	-	-	1.80	71	7.6	10,100	5.1	3,480
4	-	-	-	-	-	-	-	-	7.6	10,100	4.9	3,080
6	1.68	-	-	-	-	-	2.00	118	7.3	9,200	4.75	2,790
8	-	-	-	-	-	-	-	-	6.8	7,740	4.6	2,520
10	-	-	-	-	-	-	2.35	242	6.5	6,900	4.45	2,260
M	1.68	-	-	-	-	-	-	-	6.2	6,100	4.35	2,100
	March 14		March 15		March 16		March 17		March 18		March 19	
2	4.25	1,950	3.40	920	3.14	693	4.08	1,710	5.15	3,590	9.7	16,600
4	4.13	1,780	3.37	892	3.13	685	4.25	1,950	5.50	4,360	9.3	15,100
6	4.04	1,660	3.35	873	3.13	685	4.4	2,180	6.0	5,580	8.9	13,600
8	3.95	1,540	3.33	854	3.14	693	4.55	2,430	6.6	7,180	8.7	12,900
10	3.88	1,460	3.30	826	3.15	701	4.65	2,610	7.4	9,500	8.4	11,800
N	3.82	1,380	3.28	809	3.18	724	4.65	2,610	7.9	11,000	8.1	10,700
2	3.76	1,310	3.27	800	3.24	774	4.75	2,790	8.4	12,600	7.8	9,680
4	3.70	1,240	3.24	774	3.32	845	4.9	3,080	9.0	14,400	7.6	9,000
6	3.65	1,180	3.21	749	3.40	920	5.0	3,280	9.5	16,000	7.6	9,000
8	3.58	1,110	3.19	732	3.55	1,080	5.0	3,280	9.3	15,400	7.7	9,340
10	3.53	1,050	3.17	717	3.70	1,240	5.05	3,380	9.3	15,400	7.6	9,000
M	3.46	980	3.16	709	3.84	1,410	5.05	3,380	9.5	16,000	7.35	8,150
	March 20		March 21		March 22		March 23		March 24		March 25	
2	7.05	7,130	5.53	2,630	6.55	5,520	5.43	2,390	4.93	1,350	4.76	1,080
4	6.85	6,480	5.46	2,460	6.45	5,210	5.37	2,250	4.90	1,300	4.77	1,100
6	6.65	5,840	5.41	2,340	6.45	5,210	5.30	2,100	4.86	1,240	4.79	1,130
8	6.45	5,210	5.36	2,230	6.35	4,910	5.25	1,990	4.84	1,200	4.80	1,140
10	6.30	4,760	5.36	2,230	6.25	4,610	5.19	1,860	4.82	1,170	4.82	1,170
N	6.15	4,310	5.43	2,390	6.1	4,160	5.15	1,780	4.79	1,130	4.82	1,170
2	6.0	3,880	5.80	3,320	6.0	3,880	5.13	1,740	4.77	1,100	4.80	1,140
4	5.9	3,600	7.05	7,130	5.87	3,520	5.09	1,660	4.76	1,080	4.79	1,130
6	5.82	3,380	7.6	9,000	5.77	3,240	5.05	1,580	4.75	1,070	4.77	1,100
8	5.74	3,160	7.3	7,980	5.67	2,980	5.02	1,520	4.76	1,080	4.76	1,080
10	5.66	2,960	7.0	6,960	5.58	2,750	4.99	1,460	4.76	1,080	4.75	1,070
M	5.60	2,800	6.75	6,160	5.50	2,560	4.95	1,390	4.76	1,080	4.74	1,060

Supplemental records.- Mar. 12, 5 a.m., 8.1 ft.; 7a.m., 7.6 ft. (ice jams). Mar. 19, 1:00 a.m., 9.80 ft., 17,000 sec. ft (flood crest).
*Mean for the day.

Pemigewasset River at Plymouth, N. H.

Location.- Lat. 43°45'35", long. 71°41'10" just below bridge in Plymouth, Grafton County, a third of a mile below mouth of Bakers River.

Drainage area.- 622 square miles.

Gage-height record.- Water-stage recorder graph except for period 10:00 p.m. Mar. 18 to 11:00 a.m. Mar. 27, when it was based on flood marks, observed gage readings, and shape of stage graphs at nearby stations. Gage heights given to half tenths between 1.9 and 3.4 feet; hundredths below and tenths above these limits.

Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 15. Defined by current-meter measurements below 32,500 second-feet; extended to peak stage by determination of flood flow over dam (head, 15.0 feet; C, 3.8); verified by drainage-area comparison of instantaneous and total yield of flood with records for other streams in Merrimack River Basin.

Maxima.- 1936: Discharge, 65,400 second-feet 8:00 a.m. Mar. 19 (gage height 29.0 feet).

1903-1935: Discharge, 60,000 second-feet Nov. 4, 1927 (gage height, 27.4 feet, from flood marks).

Remarks.- Flood run-off not materially affected by artificial storage or natural pondage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	500	345	4,510	11	330	500	3,400	21	320	11,800	1,820
2	495	330	3,400	12	330	10,000	3,560	22	315	16,600	2,280
3	485	330	3,320	13	315	35,000	2,970	23	310	9,080	1,950
4	445	335	2,700	14	310	19,500	2,530	24	305	6,100	1,780
5	400	340	2,210	15	315	8,500	2,360	25	315	6,000	1,610
6	365	340	6,140	16	320	4,870	2,210	26	330	5,050	1,550
7	370	320	10,000	17	310	10,200	2,210	27	345	4,900	1,490
8	370	305	5,400	18	320	29,100	2,010	28	360	6,560	1,490
9	340	325	3,790	19	350	57,300	1,840	29	355	5,400	1,710
10	335	350	3,400	20	345	27,400	1,840	30		4,720	5,010
								31		5,350	
Mean monthly discharge, in second-feet									355	9,266	3,016
Run-off, in inches									.62	17.18	5.41

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	1.90	-	2.5	-	22.6	-
4	-	-	-	-	-	-	1.90	-	2.7	-	22.6	-
6	-	-	-	-	-	-	1.95	-	3.0	-	22.4	-
8	-	-	-	-	-	-	1.95	-	4.0	-	22.0	-
10	-	-	-	-	-	-	2.0	-	13.6	-	21.5	-
N	*1.70	*305	*1.71	*325	*1.80	*350	2.0	*500	14.1	*10,000	21.0	*35,000
2	-	-	-	-	-	-	2.05	-	15.7	-	20.4	-
4	-	-	-	-	-	-	2.1	-	18.1	-	19.6	-
6	-	-	-	-	-	-	2.15	-	20.1	-	19.0	-
8	-	-	-	-	-	-	2.2	-	21.5	-	18.3	-
10	-	-	-	-	-	-	2.25	-	21.9	-	17.4	-
M	-	-	-	-	-	-	2.35	-	22.5	-	16.7	-
	March 14		March 15		March 16		March 17		March 18		March 19	
2	15.9	-	10.3	-	4.4	4,620	5.8	6,520	10.7	15,000	26.0	56,000
4	15.2	-	9.8	-	4.3	4,490	6.2	7,100	11.2	16,100	27.4	60,300
6	14.4	-	9.4	-	4.3	4,490	6.7	7,850	11.7	17,200	28.5	63,800
8	13.8	-	9.1	-	4.3	4,490	7.2	8,620	12.3	18,500	29.0	65,400
10	13.3	-	8.8	-	4.3	4,490	7.6	9,260	13.3	20,700	28.9	65,100
N	13.0	*19,500	8.5	*8,500	4.3	4,490	8.0	9,900	14.4	23,400	28.5	63,800
2	12.7	-	6.2	-	4.4	4,620	8.3	10,400	15.7	26,600	27.4	60,300
4	12.3	-	5.4	-	4.6	4,880	8.6	10,900	17.3	31,000	26.3	56,900
6	11.8	-	5.1	-	4.7	5,010	9.0	11,600	19.3	36,600	25.2	53,600
8	11.4	-	4.9	-	4.9	5,270	9.4	12,400	21.6	43,000	24.2	50,600
10	11.0	-	4.7	-	5.2	5,680	9.8	13,100	23.4	48,300	23.2	47,700
M	10.6	-	4.6	-	5.4	5,960	10.4	14,400	24.8	52,400	22.0	44,200
	March 20		March 21		March 22		March 23		March 24		March 25	
2	21.0	41,300	9.9	13,300	12.0	17,800	8.2	10,200	6.5	7,650	4.6	5,210
4	19.9	38,200	9.2	12,000	12.6	19,200	7.9	9,740	6.3	7,390	4.7	5,350
6	19.0	35,700	8.8	11,300	13.1	20,300	7.7	9,420	6.0	7,020	4.8	5,490
8	18.1	33,200	8.3	10,400	13.3	20,700	7.6	9,260	5.8	6,780	4.9	5,620
10	17.2	30,700	7.9	9,740	13.1	20,300	7.5	9,100	5.5	6,400	5.1	5,880
N	16.2	28,000	7.7	9,420	12.5	18,900	7.5	9,100	5.2	6,010	5.2	6,010
2	15.3	25,600	7.7	9,420	11.8	17,400	7.5	9,100	5.0	5,750	5.3	6,140
4	14.4	23,400	8.2	10,200	11.0	15,600	7.5	9,100	4.8	5,490	5.4	6,270
6	13.5	21,200	9.0	11,600	10.0	13,500	7.4	8,940	4.7	5,350	5.5	6,400
8	12.5	18,900	9.8	13,100	9.5	12,600	7.2	8,640	4.6	5,210	5.5	6,400
10	11.6	17,000	10.7	15,000	9.0	11,600	7.0	8,340	4.5	5,070	5.5	6,400
M	10.8	15,200	11.4	16,500	8.6	10,900	6.8	8,060	4.5	5,070	5.4	6,270

*Mean for the day.

Pemigewasset River at Bristol, N. H.

Location.- Lat. 43°35'50", long. 71°43'5", at dam of Public Service Co., half a mile above mouth of Danforth Brook and 1 mile northeast of Bristol, Grafton County.
Drainage area.- 746 square miles.
Gage-height record.- Graph constructed from hourly observed gage readings. Gage heights given to tenths.
Stage-discharge relation.- Affected by flash boards on dam prior to 3 p.m. Mar. 18 and after 9 a.m. Mar. 24. Discharge ascertained from flow over dam (C, 3.8) and through wheels and gates.
Maxima.- 1936: Discharge, 71,400 second-feet 11 a.m. Mar. 19 (gage height, 15.0 feet).
Previously known maximum discharge, 62,300 second-feet Nov. 4, 1927.
Remarks.- Flood run-off affected by storage in Squam Lake. Records computed from basic data furnished by Public Service Co. of New Hampshire.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	-	-	-	11	-	-	-	21	-	16,800	-
2	-	-	-	12	-	11,000	-	22	-	22,700	-
3	-	-	-	13	-	39,100	-	23	-	12,300	-
4	-	-	-	14	-	17,200	-	24	-	7,040	-
5	-	-	-	15	-	8,830	-	25	-	6,940	-
6	-	-	-	16	-	6,670	-	26	-	-	-
7	-	-	-	17	-	11,500	-	27	-	-	-
8	-	-	-	18	-	27,200	-	28	-	-	-
9	-	-	-	19	-	64,200	-	29	-	-	-
10	-	-	-	20	-	34,800	-	30	-	-	-
								31		-	
Mean monthly discharge, in second-feet									-	-	-
Run-off, in inches									-	-	-

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	-	-	1.0	92	11.9	42,500
4	-	-	-	-	-	-	-	-	1.3	121	12.3	44,900
6	-	-	-	-	-	-	-	-	1.9	429	12.3	45,000
8	-	-	-	-	-	-	-	-	2.5	3,110	12.2	44,800
10	-	-	-	-	-	-	-	-	2.1	3,540	11.9	43,400
N	-	-	-	-	-	-	-	-	2.2	4,860	11.5	41,200
2	-	-	-	-	-	-	-	-	3.6	4,230	11.2	39,700
4	-	-	-	-	-	-	-	-	5.7	6,730	10.8	37,600
6	-	-	-	-	-	-	-	-	8.0	15,300	10.4	35,500
8	-	-	-	-	-	-	-	-	9.0	21,300	10.0	33,700
10	-	-	-	-	-	-	-	-	9.8	32,800	9.5	31,300
M	-	-	-	-	-	-	-	-	11.2	39,500	9.1	29,300
	March 14		March 15		March 16		March 17		March 18		March 19	
2	8.6	27,000	3.8	10,500	2.8	7,560	3.1	6,720	6.1	16,600	13.0	58,100
4	8.2	25,200	3.6	9,770	2.8	7,520	3.6	7,580	6.0	16,300	13.7	62,700
6	7.7	23,300	3.4	9,420	2.7	7,660	3.8	8,420	6.1	17,300	14.5	68,100
8	7.0	20,400	3.2	9,030	2.4	7,610	3.8	8,630	6.3	18,200	14.7	69,400
10	6.1	17,600	3.0	8,720	1.9	6,620	4.0	9,300	6.3	21,200	14.8	69,800
N	5.5	15,700	2.8	8,230	1.8	6,440	4.5	10,800	6.3	21,700	15.0	70,300
2	5.1	14,500	2.9	8,440	1.7	6,170	5.1	12,200	6.5	22,600	14.8	68,500
4	4.9	13,900	3.3	9,200	1.8	6,000	5.5	13,100	7.3	27,500	14.5	66,700
6	4.7	13,300	3.1	8,980	1.9	5,710	6.1	14,600	8.2	31,800	14.2	64,600
8	4.4	12,500	2.7	8,370	2.1	5,910	6.2	14,800	9.1	36,400	13.6	61,000
10	4.1	11,700	2.5	7,920	2.3	6,300	6.4	15,400	10.5	43,900	13.0	57,400
M	4.0	11,400	2.6	7,410	2.8	6,540	6.8	16,100	12.1	53,100	12.3	54,200
	March 20		March 21		March 22		March 23		March 24		March 25	
2	11.7	49,500	7.2	20,000	6.0	19,700	5.5	18,900	3.9	8,520	5.8	6,190
4	11.2	46,500	6.8	18,400	6.4	22,600	4.9	16,500	3.9	8,580	5.8	6,450
6	10.8	44,400	6.4	16,900	6.7	24,000	5.2	12,500	3.9	8,670	5.9	6,660
8	10.2	41,800	6.1	15,800	6.8	24,600	5.3	13,600	3.8	8,920	5.9	6,780
10	9.6	39,000	5.6	14,400	6.7	24,600	5.0	12,600	3.8	6,900	5.9	7,000
N	9.1	36,300	5.0	17,300	6.6	24,100	4.9	12,000	4.2	6,520	5.9	7,090
2	8.5	33,500	4.5	15,300	6.6	24,000	4.8	11,900	4.5	5,260	6.0	7,140
4	8.0	30,800	4.4	14,800	6.5	23,300	4.5	11,000	5.0	5,720	6.0	7,190
6	7.6	28,900	4.6	15,900	6.4	23,300	4.3	10,100	5.4	5,980	6.0	7,160
8	7.3	24,700	5.4	14,000	6.1	22,000	4.2	9,920	5.6	6,490	6.1	7,290
10	7.4	21,500	5.4	19,200	5.8	20,800	4.0	9,450	5.6	6,590	6.1	7,380
M	7.4	21,300	5.5	19,000	5.7	19,600	3.9	9,100	5.6	6,280	6.0	6,940

Supplemental records.- Mar. 19, 11 a.m., 15.0 ft., 71,400 sec.-ft.

Merrimack River at Franklin Junction, N. H.

Location.- Lat. 43°25'25", long. 71°39'10", at railroad bridge at Franklin Junction, Merrimack County, 1 mile below confluence of Pemigewasset and Winnipesaukee Rivers. Zero of gage is 250.4 feet above mean sea level.

Drainage area.- 1,507 square miles.

Gage-height record.- Water-stage recorder graph except for period 4:00 a.m. Mar. 19 to 2:30 p.m. Mar. 26, when it was based on observed gage readings, flood marks, and shape of constructed graph at Sewalls Falls, 18 miles downstream. Gage heights given to half tenths between 4.30 and 6.50 feet; hundredths below and tenths above these limits.

Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 4. Defined by current-meter measurements below 30,000 second-feet; extended to peak stage by velocity-area study at control section and drainage-area comparison of instantaneous and total yield of flood with records for other streams in Merrimack River Basin.

Maxima.- 1936: Discharge, 83,000 second-feet 2 to 4 p.m. Mar. 19 (gage height, 36.4 feet).

1903-1935: Discharge, 63,000 second-feet (revised) Nov. 5, 1927 (gage height, 30.85 feet).

Remarks.- Flood run-off affected by artificial and natural storage in Winnipesaukee, Squam, and Newfound Lakes. For daily changes in storage see record for Lake Winnipesaukee outlet at Lakeport, N. H.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	1,650	1,750	12,100	11	1,580	2,000	10,400	21	1,750	24,300	6,970
2	1,800	1,800	10,800	12	1,600	10,200	10,600	22	1,600	26,200	6,970
3	1,720	1,800	10,600	13	1,800	45,100	10,200	23	1,750	22,000	6,970
4	1,650	1,750	10,200	14	1,700	29,000	9,060	24	1,800	15,900	7,350
5	1,600	1,880	9,250	15	1,400	15,500	8,490	25	1,800	14,800	6,210
6	1,740	1,780	11,100	16	1,500	11,800	8,300	26	1,750	14,800	5,640
7	1,600	1,720	19,800	17	1,600	13,800	8,490	27	1,730	13,800	4,720
8	1,550	1,720	14,700	18	1,700	30,200	7,920	28	1,720	15,300	4,720
9	1,740	1,940	11,900	19	1,800	73,700	7,350	29	1,700	14,500	5,080
10	1,620	2,050	10,800	20	1,800	48,500	7,160	30		13,000	7,580
								31		12,600	
Mean monthly discharge, in second-feet									1,681	15,650	9,048
Run-off, in inches									1.21	11.99	6.69

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	-	-	5.55	2,360	20.3	32,100
4	-	-	-	-	-	-	5.2	-	5.7	2,560	23.2	39,900
6	-	-	-	-	-	-	-	-	5.9	2,850	24.1	42,400
8	-	-	-	-	-	-	5.1	-	6.4	3,600	25.2	45,500
10	-	-	-	-	-	-	-	-	6.7	4,060	25.9	47,600
N	*5.0	*1,720	*5.2	*1,940	*5.3	*2,050	5.2	*2,000	8.0	6,400	26.6	49,700
2	-	-	-	-	-	-	-	-	10.1	10,400	26.7	50,000
4	-	-	-	-	-	-	5.25	-	11.2	12,500	26.5	49,400
6	-	-	-	-	-	-	-	-	12.3	14,600	26.2	48,500
8	-	-	-	-	-	-	5.3	-	13.5	17,000	25.8	47,300
10	-	-	-	-	-	-	-	-	15.5	21,000	25.2	45,500
M	-	-	-	-	-	-	5.4	-	17.6	25,600	24.5	43,500
	March 14		March 15		March 16		March 17		March 18		March 19	
2	23.8	41,500	14.6	19,200	11.5	13,000	10.6	11,300	14.3	18,600	29.2	57,700
4	22.8	38,700	14.0	18,000	11.2	12,500	10.6	11,300	15.1	20,200	30.6	62,300
6	21.9	36,200	13.5	17,000	11.0	12,100	10.7	11,500	15.8	21,700	32.0	67,100
8	20.8	33,400	13.1	16,200	10.9	11,900	11.0	12,100	16.3	22,800	33.4	71,900
10	19.9	31,100	12.8	15,600	10.8	11,700	11.2	12,500	16.8	23,900	34.6	76,300
N	18.9	28,700	12.5	15,000	10.8	11,700	11.5	13,000	17.1	24,500	35.6	80,000
2	18.0	26,500	12.2	14,400	10.8	11,700	11.8	13,600	18.6	27,900	36.4	83,000
4	17.3	25,000	11.9	13,800	10.7	11,500	12.1	14,200	19.7	30,600	36.4	83,000
6	16.7	23,600	12.1	14,200	10.7	11,500	12.6	15,200	21.5	35,200	35.8	80,700
8	16.1	22,300	12.2	14,400	10.5	11,200	13.0	16,000	23.3	40,100	34.8	77,000
10	15.6	21,300	12.1	14,200	10.5	11,200	13.5	17,000	25.3	45,800	34.0	74,100
M	15.1	20,200	11.8	13,600	10.5	11,200	13.8	17,600	27.1	51,200	33.2	71,200
	March 20		March 21		March 22		March 23		March 24		March 25	
2	32.2	67,800	18.6	27,900	17.8	26,100	17.1	24,500	14.3	18,600	12.1	14,200
4	31.2	64,400	17.6	25,600	17.9	26,300	17.0	24,300	14.0	18,000	12.2	14,400
6	30.2	61,000	17.2	24,700	18.0	26,500	16.8	23,900	13.7	17,400	12.3	14,600
8	29.0	57,100	16.9	23,900	18.1	26,700	16.6	23,400	13.4	16,800	12.4	14,800
10	27.6	52,700	16.6	23,400	18.1	26,700	16.3	22,800	13.2	16,400	12.4	14,800
N	26.6	49,700	16.4	23,000	18.1	26,700	16.1	22,300	12.9	15,800	12.5	15,000
2	25.6	46,700	16.4	23,000	18.0	26,500	15.8	21,700	12.7	15,400	12.5	15,000
4	24.4	43,200	16.4	23,000	18.0	26,500	15.6	21,300	12.4	14,800	12.5	15,000
6	23.2	39,900	16.4	23,000	17.8	26,100	15.4	20,800	12.3	14,600	12.5	15,000
8	22.0	36,500	16.8	23,900	17.7	25,800	15.2	20,400	12.2	14,400	12.5	15,000
10	20.8	33,400	17.2	24,700	17.5	25,400	14.9	19,800	12.1	14,200	12.5	15,000
M	19.3	29,600	17.4	25,200	17.3	25,000	14.6	19,200	12.1	14,200	12.5	15,000

*Mean for the day.

Merrimack River at Garvins Falls, N. H.

Location.- Lat. 43°10'0", long. 71°30'35", at dam of Public Service Co., 0.8 mile below mouth of Turkey River and 4 3/4 miles below upper highway bridge at Concord, Merrimack County.
Drainage area.- 2,427 square miles.
Gage-height record.- Graph constructed from hourly gage readings. Gage heights given to half tenths.
Stage-discharge relation.- Affected by flash boards prior to 1 a.m. Mar. 13. Discharge ascertained from flow over dam (C, 2.8 to 3.6) and through wheels and gates.
Maxima.- 1936: Discharge, 122,000 second-feet 2 a.m. Mar. 20 (gage height, 14.2 feet).
1927: Discharge, 64,600 second-feet (revised) Nov. 5 (gage height, 9.9 feet).
Remarks.- Flood run-off affected by artificial and natural storage in Winnipesaukee, Squam, and Newfound Lakes. For daily changes in storage see record for Lake Winnipesaukee outlet at Lakeport, N. H. Records computed from basic data furnished by Public Service Co. of New Hampshire.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	-	-	-	11	-	-	-	21	-	69,600	-
2	-	-	-	12	-	6,880	-	22	-	56,900	-
3	-	-	-	13	-	36,500	-	23	-	52,900	-
4	-	-	-	14	-	48,200	-	24	-	38,300	-
5	-	-	-	15	-	34,200	-	25	-	28,900	-
6	-	-	-	16	-	26,500	-	26	-	-	-
7	-	-	-	17	-	24,200	-	27	-	-	-
8	-	-	-	18	-	32,200	-	28	-	-	-
9	-	-	-	19	-	82,300	-	29	-	-	-
10	-	-	-	20	-	109,000	-	30	-	-	-
								31		-	
Mean monthly discharge, in second-feet											
Run-off, in inches											

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	-	-	3.5	4,300	4.15	18,900
4	-	-	-	-	-	-	-	-	3.6	4,740	4.5	20,800
6	-	-	-	-	-	-	-	-	3.8	5,200	4.9	23,300
8	-	-	-	-	-	-	-	-	3.9	5,630	5.3	26,400
10	-	-	-	-	-	-	-	-	4.1	6,260	5.5	27,600
N	-	-	-	-	-	-	-	-	4.3	6,880	6.5	34,800
2	-	-	-	-	-	-	-	-	4.5	7,680	7.5	42,400
4	-	-	-	-	-	-	-	-	4.5	7,680	7.9	45,800
6	-	-	-	-	-	-	-	-	4.6	8,040	8.2	48,400
8	-	-	-	-	-	-	-	-	4.75	8,640	8.25	48,800
10	-	-	-	-	-	-	-	-	4.85	9,100	8.35	49,700
M	-	-	-	-	-	-	-	-	4.75	8,440	8.5	51,100
	March 14		March 15		March 16		March 17		March 18		March 19	
2	8.6	51,900	7.1	39,000	5.8	29,200	5.0	24,100	5.25	26,200	7.95	46,300
4	8.55	51,200	6.9	37,400	5.7	28,600	4.9	23,400	5.3	26,500	8.5	51,000
6	8.7	52,500	7.0	38,100	5.6	27,800	4.9	23,400	5.4	27,200	9.0	55,700
8	8.6	51,500	6.9	37,200	5.4	27,000	4.9	23,700	5.55	28,200	9.6	61,200
10	8.45	50,800	6.7	35,700	5.3	26,400	4.95	24,000	5.65	28,900	10.7	72,000
N	8.4	50,300	6.5	34,100	5.3	26,400	4.95	24,000	5.8	29,900	11.7	82,000
2	8.3	49,400	6.5	34,500	5.2	25,800	4.95	24,000	6.1	31,800	12.2	88,000
4	8.05	47,100	6.25	32,600	5.3	26,400	4.95	24,000	6.25	32,800	12.5	94,000
6	7.9	45,900	6.2	32,100	5.2	25,800	4.95	24,000	6.5	34,800	12.7	98,000
8	7.75	44,600	6.0	30,400	5.15	25,200	5.05	24,800	6.8	37,000	13.2	106,000
10	7.5	42,500	5.9	29,700	5.1	24,900	5.1	25,200	7.2	40,200	13.7	115,000
M	7.3	40,800	5.95	30,000	5.05	24,500	5.25	26,200	7.55	43,000	13.9	118,000
	March 20		March 21		March 22		March 23		March 24		March 25	
2	14.2	122,000	11.4	87,000	8.65	57,300	8.8	58,500	7.4	44,900	5.8	31,000
4	14.05	121,000	11.2	84,600	8.6	56,800	8.7	57,600	7.3	44,000	5.8	31,000
6	14.05	121,000	10.8	80,100	8.7	57,800	8.65	57,100	7.2	43,000	5.8	31,000
8	13.8	117,000	10.2	73,700	8.5	55,800	8.55	56,000	6.9	40,400	5.6	29,400
10	13.7	116,000	9.8	69,500	8.4	54,800	8.5	55,500	6.7	38,600	5.5	28,600
N	13.5	113,000	9.7	68,500	8.4	54,800	8.4	54,400	6.6	37,800	5.5	28,600
2	13.1	108,000	9.6	67,400	8.5	55,800	8.5	53,400	6.55	37,200	5.5	28,600
4	12.8	104,000	9.3	64,300	8.7	57,800	8.1	51,500	6.55	37,200	5.5	28,600
6	12.4	99,200	9.1	62,200	8.7	57,800	7.9	49,600	6.4	36,000	5.3	27,000
8	12.3	97,900	8.9	60,200	8.7	57,800	7.8	48,600	6.2	34,300	5.3	27,000
10	12.0	94,000	8.75	58,800	8.7	57,800	7.6	46,700	6.2	34,400	5.4	27,800
M	11.8	91,600	8.7	58,300	8.8	58,700	7.55	46,300	5.9	31,800	5.4	27,800

Merrimack River at Manchester, N. H.

Location.- Lat. 43°0'10", long. 71°28'10", at dam of Amoskeag Manufacturing Co. in Manchester, Hillsborough County, 2 miles above Piscataquog River and 9½ miles below Suncook River.

Drainage area.- 2,854 square miles.

Gage-height record.- Graph constructed from hourly gage readings. Gage heights given to half tenths.

Stage-discharge relation.- Affected by flash boards on dam prior to 11 a.m. Mar. 11. Discharge ascertained from flow over dam (C, 3.6) and through wheels and gates.

Maxima.- 1936: Discharge, 144,000 second-feet 4 to 8 a.m. Mar. 20 (gage height, 17.1 feet).

1924-35: Discharge, 70,300 second-feet (revised) Nov. 5, 1927 (gage height, 11.2 feet).

Remarks.- Flood run-off affected by storage in Winnipesaukee, Squam, and Newfound Lakes. Records computed from basic data furnished by Amoskeag Manufacturing Co.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1				11				21		89,500	
2				12		9,780		22		68,500	
3				13		41,800		23		64,200	
4				14		59,200		24		43,500	
5				15		40,600		25		31,600	
6				16		29,800		26			
7				17		25,600		27			
8				18		36,600		28			
9				19		96,900		29			
10				20		132,000		30			
								31			
Mean monthly discharge, in second-feet											
Run-off, in inches											

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2									2.8	4,210	6.0	19,600
4									2.85	4,350	6.25	21,300
6									2.65	5,400	6.55	30,500
8									2.6	5,460	6.9	33,600
10									2.75	5,630	6.55	31,900
N									3.75	9,280	6.7	32,100
2									4.3	10,700	7.1	36,600
4									4.7	12,200	9.9	61,700
6									4.9	13,200	9.55	57,500
8									5.0	14,100	9.6	58,500
10									5.25	15,200	9.6	58,400
M									5.65	17,600	9.85	59,800
	March 14		March 15		March 16		March 17		March 18		March 19	
2	10.1	61,600	8.65	47,800	6.9	33,100	6.05	26,400	6.3	28,300	9.6	57,500
4	10.1	61,700	8.4	46,600	6.75	31,800	6.0	26,100	6.4	28,700	10.0	62,400
6	10.15	62,300	8.25	44,800	6.65	31,000	5.9	25,700	6.45	29,500	10.5	66,400
8	10.1	61,800	8.2	44,500	6.55	31,200	5.85	25,700	6.5	30,400	11.4	74,300
10	10.0	61,200	8.0	42,600	6.35	30,400	5.75	25,300	6.55	32,300	12.0	82,800
N	10.0	61,500	7.85	41,200	6.3	30,100	5.7	24,200	6.6	33,600	12.7	90,700
2	9.9	60,700	7.6	39,000	6.25	29,800	5.7	24,400	6.9	35,500	13.4	98,800
4	9.9	60,500	7.5	38,100	6.2	29,000	5.75	24,700	7.3	38,500	14.7	116,000
6	9.7	59,700	7.35	37,300	6.1	28,300	5.9	25,800	7.5	39,300	15.2	120,000
8	9.3	56,600	7.2	36,400	6.1	28,300	5.85	25,700	7.85	44,000	15.8	127,000
10	9.0	52,700	7.1	34,800	6.2	27,800	5.95	26,100	8.3	48,000	16.2	131,000
M	8.9	50,600	7.0	34,000	6.1	26,900	6.1	26,800	9.0	51,700	16.7	134,000
	March 20		March 21		March 22		March 23		March 24		March 25	
2	16.8	136,000	14.45	114,000	10.5	69,600	10.8	70,600	8.9	51,100	7.1	35,800
4	17.1	144,000	14.0	108,000	10.4	68,500	10.8	70,600	8.8	50,100	7.0	35,000
6	17.1	144,000	13.65	103,000	10.45	68,500	10.7	69,600	8.6	48,200	6.85	33,300
8	17.1	144,000	13.3	98,800	10.45	66,500	10.6	70,300	8.4	47,800	6.55	32,900
10	16.8	138,000	12.8	93,400	10.45	66,500	10.5	68,700	8.05	45,000	6.45	32,200
N	16.6	134,000	12.6	91,200	10.5	67,600	10.3	66,700	7.8	43,200	6.4	31,800
2	16.4	131,000	12.2	86,700	10.5	67,600	10.2	65,300	7.7	42,800	6.3	31,100
4	16.1	128,000	11.85	82,300	10.5	67,600	10.0	62,800	7.5	40,900	6.15	30,000
6	15.7	126,000	11.3	79,000	10.6	68,600	9.8	60,600	7.4	40,100	6.1	29,700
8	15.5	124,000	11.0	74,800	10.7	70,400	9.4	56,800	7.3	39,300	6.1	29,400
10	15.2	120,000	10.7	72,000	10.7	70,400	9.2	54,900	7.15	37,700	6.0	28,600
M	14.8	118,000	10.6	70,500	10.8	70,600	9.2	54,000	7.1	35,800	6.3	29,000

Merrimack River below Concord River at Lowell, Mass.

Location.- Lat. 42°38'50", long. 71°18'5", at Lowell, Middlesex County, 1,100 feet below mouth of Concord River. Zero of gage is 5.18 feet above mean sea level.

Drainage-area.- Total above gage, 4,635 square miles; net area exclusive of diverted parts of Nashua and Sudbury Rivers and Lake Cochituate Basins, 4,424 square miles.

Gage-height record.- Water-stage recorder graph except for periods 1 a.m. Mar. 20 to 1 p.m. Mar. 22 and 7 a.m. Mar. 25 to 5 p.m. Apr. 5, when it was based on flood marks and on graphs constructed from several gage readings daily at Boott Mills, 2,300 feet upstream, at Merrimack Manufacturing Co.'s plant, 3,400 feet upstream, and at Pawtucket Dam, 11,000 feet upstream. Gage heights given to half tenths between 40.50 and 44.70 feet; hundredths below and tenths above these limits.

Stage-discharge relation.- Defined by current-meter measurements below 147,000 second-feet; extended to peak stage by study of flow characteristics at high-water control section; verified by drainage-area comparison of instantaneous and total yield of flood at other gaging stations on Merrimack River.

Maxima.- 1936: Discharge, 173,000 second-feet from 7 to 11 p.m. Mar. 20 (gage height, 68.4 feet).

1923-35: Discharge, 76,800 second-feet (revised) Nov. 5, 1927 (gage height, 56.5 feet).

Maximum discharge previously known, 108,000 second-feet (revised) Apr. 23, 1852 (gage height, 60.6 feet, present site and datum).

Remarks.- Flood run-off affected by artificial and natural storage in Winnipesaukee, Squam, and Newfound Lakes.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	4,400	4,560	29,700	11	4,610	6,690	25,900	21	5,150	150,000	16,200
2	4,790	5,320	25,800	12	3,740	17,800	25,600	22	3,960	108,000	15,000
3	6,160	5,080	26,900	13	3,700	60,400	25,600	23	4,740	96,800	14,000
4	4,740	4,990	28,400	14	4,490	87,900	24,400	24	5,300	72,800	14,100
5	4,420	5,540	26,400	15	3,120	69,800	22,200	25	4,920	52,700	13,600
6	4,620	5,340	24,700	16	3,620	52,500	20,700	26	5,000	45,500	12,700
7	5,060	4,880	32,000	17	4,660	44,400	20,800	27	5,060	40,400	12,300
8	3,590	4,890	38,900	18	4,820	51,200	20,000	28	4,960	40,400	10,600
9	3,920	5,500	34,200	19	5,280	104,000	18,000	29	4,300	42,200	10,100
10	5,240	5,550	28,700	20	4,800	161,000	16,800	30		38,000	10,500
								31		32,800	
Mean monthly discharge, in second-feet									4,592	46,030	21,490
Run-off, in inches									1.12	11.99	5.42

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	43.25	5,210	43.05	4,640	42.75	3,880	43.1	4,780	44.2	8,680	50.0	35,900
4	43.3	5,360	43.05	4,640	43.0	4,510	43.25	5,210	44.4	9,460	50.5	38,700
6	43.4	5,680	43.2	5,060	43.25	5,210	43.4	5,680	44.6	10,200	51.1	42,100
8	43.45	5,850	43.65	6,560	43.7	6,750	43.8	7,130	45.1	12,200	51.6	44,900
10	43.2	5,060	43.7	6,750	43.75	6,940	43.9	7,510	45.4	13,500	52.2	48,300
N	43.0	4,510	43.45	5,850	43.45	5,850	43.65	6,560	45.7	14,800	52.4	49,500
2	42.95	4,380	43.6	6,380	43.6	6,380	43.8	7,130	46.1	16,600	52.7	51,300
4	42.95	4,380	43.65	6,560	43.65	6,560	43.9	7,510	46.6	18,800	53.9	59,000
6	43.0	4,510	43.3	5,360	43.35	5,520	43.75	6,940	47.2	21,600	58.0	87,800
8	43.05	4,640	43.35	5,520	43.45	5,850	44.05	8,100	48.2	26,400	58.3	90,000
10	43.05	4,640	43.3	5,360	43.4	5,680	44.15	8,480	48.8	29,500	58.2	89,300
M	43.05	4,640	42.75	3,880	42.95	4,380	44.05	8,100	49.3	32,100	58.0	87,800
	March 14		March 15		March 16		March 17		March 18		March 19	
2	58.0	87,800	57.3	82,600	53.9	59,000	52.0	47,100	51.4	43,700	55.6	70,500
4	58.0	87,800	56.9	79,600	53.7	57,600	51.9	46,500	51.5	44,300	56.6	77,500
6	58.0	87,800	56.5	76,800	53.4	55,700	51.7	45,400	51.6	44,900	57.4	83,300
8	58.1	88,600	56.1	74,000	53.3	55,000	51.7	45,400	51.8	46,000	58.4	90,800
10	58.1	88,600	55.7	71,200	53.1	53,800	51.6	44,900	52.0	47,100	59.4	98,300
N	58.2	89,300	55.4	69,100	52.9	52,500	51.5	44,300	52.2	48,300	60.1	104,000
2	58.2	89,300	55.2	67,700	52.7	51,300	51.4	43,700	52.5	50,100	60.8	109,000
4	58.1	88,600	55.0	66,300	52.6	50,700	51.3	43,200	52.9	52,500	61.5	115,000
6	58.1	88,600	54.8	64,900	52.5	50,100	51.3	43,200	53.1	53,800	62.1	120,000
8	58.0	87,800	54.5	62,800	52.3	48,900	51.3	43,200	53.6	57,000	62.7	124,000
10	57.8	86,300	54.3	61,600	52.2	48,300	51.3	43,200	54.3	61,600	63.2	128,000
M	57.6	84,800	54.2	60,900	52.0	47,100	51.3	43,200	54.9	65,600	63.8	133,000
	March 20		March 21		March 22		March 23		March 24		March 25	
2	64.4	138,000	68.0	170,000	62.1	120,000	59.7	101,000	57.8	86,300	54.1	60,200
4	65.0	143,000	67.8	168,000	61.6	116,000	59.6	99,800	57.3	82,600	53.9	59,000
6	65.6	148,000	67.6	166,000	61.4	114,000	59.6	99,800	57.1	81,000	53.7	57,600
8	66.1	153,000	67.2	163,000	61.0	111,000	59.6	99,800	56.7	78,200	53.3	55,800
10	66.7	158,000	66.9	160,000	60.8	109,000	59.5	99,000	56.4	76,100	52.9	52,500
N	67.3	164,000	66.4	155,000	60.5	107,000	59.5	99,000	56.0	73,300	52.7	51,300
2	67.8	168,000	65.8	150,000	60.4	106,000	59.4	98,300	55.7	71,200	52.6	50,700
4	68.1	171,000	65.2	145,000	60.2	104,000	59.2	96,800	55.4	69,100	52.5	50,100
6	68.2	172,000	64.6	140,000	60.0	103,000	58.9	94,600	55.1	67,000	52.4	49,500
8	68.4	173,000	63.9	134,000	59.9	102,000	58.8	93,800	54.8	64,900	52.3	48,900
10	68.4	173,000	63.3	129,000	59.9	102,000	58.4	90,800	54.5	62,800	52.3	48,900
M	68.2	172,000	62.6	124,000	59.8	101,000	58.2	89,300	54.3	61,600	52.2	48,300

Supplemental records.- Mar. 20, 7 to 11 p.m., 68.4 ft., 173,000 sec.-ft.

Merrimack River at Lawrence, Mass.

Location.- Lat. 42°42'20", long. 71°9'10", at dam of Essex Co., in Lawrence, Essex County.
Drainage area.- Total above dam, 4,672 square miles; net area exclusive of diverted parts of Nashua and Sudbury Rivers and Lake Cochituate Basins, 4,461 square miles.
Gage-height record.- Graph constructed from several gage readings daily, furnished by J. R. Baldwin, Chief Engineer of Essex Co. Gage heights given to tenths.
Stage-discharge relation.- Affected by flash boards on dam Mar. 1-13. Rating curve established by relationship with flow at gaging station at Lowell, Mass., and by determination of peak flow over Essex Co.'s dam*; verified by drainage-area comparison of instantaneous and total yield of flood at other gaging stations on Merrimack River.
Maxima.- 1936: Discharge, 174,000 second-feet 8 p.m. Mar. 20 to 4 a.m. Mar. 21 (gage height, 48.0 feet).
1879-1935: Discharge, 105,000 second-feet Mar. 3, 1896 (gage height, 43.90 feet).
Maximum discharge previously known, 108,000 second-feet Apr. 23, 1852 (gage height, 44.12 feet).
Remarks.- Flood run-off affected by artificial and natural storage in Winnipesaukee, Squam, and Newfound Lakes.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	-	-	-	11	-	-	-	21	-	156,000	-
2	-	-	-	12	-	18,000	-	22	-	108,000	-
3	-	-	-	13	-	61,000	-	23	-	95,600	-
4	-	-	-	14	-	88,600	-	24	-	74,300	-
5	-	-	-	15	-	72,800	-	25	-	54,600	-
6	-	-	-	16	-	55,400	-	26	-	-	-
7	-	-	-	17	-	45,000	-	27	-	-	-
8	-	-	-	18	-	51,300	-	28	-	-	-
9	-	-	-	19	-	101,000	-	29	-	-	-
10	-	-	-	20	-	159,000	-	30	-	-	-
								31	-	-	-
Mean monthly discharge, in second-feet											
Run-off, in inches											

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	-	-	39.0	-	40.9	-
4	-	-	-	-	-	-	-	-	39.2	-	41.0	-
6	-	-	-	-	-	-	-	-	39.2	-	41.1	-
8	-	-	-	-	-	-	-	-	39.3	-	41.0	
10	-	-	-	-	-	-	-	-	39.5	-	41.1	+46,900
N	-	-	-	-	-	-	-	-	39.6	**18,000	41.3	-
2	-	-	-	-	-	-	-	-	39.8	-	41.3	-
4	-	-	-	-	-	-	-	-	40.0	-	41.0	-
6	-	-	-	-	-	-	-	-	40.3	-	42.7	85,900
8	-	-	-	-	-	-	-	-	40.5	-	43.0	90,400
10	-	-	-	-	-	-	-	-	40.7	-	43.0	90,400
M	-	-	-	-	-	-	-	-	40.8	-	43.0	90,400
	March 14		March 15		March 16		March 17		March 18		March 19	
2	42.9	88,900	42.5	82,900	41.1	61,900	40.2	49,200	39.9	45,000	41.7	70,900
4	42.9	88,900	42.5	82,900	41.0	60,400	40.1	47,800	39.9	45,000	42.1	76,900
6	42.9	88,900	42.3	79,900	40.9	59,000	40.0	46,400	39.9	45,000	42.6	84,400
8	42.9	88,900	42.1	76,900	40.8	57,600	40.0	46,400	39.9	45,000	42.9	88,900
10	42.9	88,900	42.0	75,400	40.8	57,600	39.9	45,000	40.0	46,400	43.2	93,600
N	42.9	88,900	41.8	72,400	40.7	56,200	39.8	43,600	40.1	47,800	43.6	100,000
2	43.0	90,400	41.7	70,900	40.6	54,800	39.8	43,600	40.2	49,200	43.9	105,000
4	43.0	90,400	41.6	69,400	40.5	53,400	39.7	42,200	40.4	52,000	44.2	110,000
6	42.9	88,900	41.5	67,900	40.4	52,000	39.8	43,600	40.6	54,800	44.5	115,000
8	42.8	87,400	41.4	66,400	40.3	50,600	39.8	43,600	40.8	57,600	44.8	120,000
10	42.8	87,400	41.3	64,900	40.3	50,600	39.8	43,600	41.1	61,900	45.0	123,000
M	42.7	85,900	41.2	63,400	40.3	50,600	39.9	45,000	41.4	66,400	45.3	128,000
	March 20		March 21		March 22		March 23		March 24		March 25	
2	45.5	132,000	48.0	174,000	45.1	125,000	43.6	100,000	42.7	85,900	41.0	60,400
4	45.9	139,000	48.0	174,000	44.8	120,000	43.5	98,400	42.6	84,400	40.9	59,000
6	46.4	147,000	47.9	173,000	44.5	115,000	43.5	98,400	42.4	81,000	40.9	59,000
8	46.5	149,000	47.7	169,000	44.3	112,000	43.5	98,400	42.3	79,900	40.8	57,600
10	46.8	154,000	47.5	166,000	44.1	108,000	43.5	98,400	42.1	76,900	40.7	56,200
N	47.2	161,000	47.2	161,000	44.0	106,000	43.4	96,800	42.0	75,400	40.6	54,800
2	47.4	164,000	46.9	156,000	43.8	103,000	43.4	96,800	41.8	72,400	40.5	53,400
4	47.7	169,000	46.6	151,000	43.8	103,000	43.3	95,200	41.7	70,900	40.4	52,000
6	47.9	173,000	46.3	146,000	43.7	102,000	43.2	93,600	41.6	69,400	40.4	52,000
8	48.0	174,000	46.0	140,000	43.6	100,000	43.1	92,000	41.4	66,400	40.3	50,600
10	48.0	174,000	45.7	135,000	43.6	100,000	43.0	90,400	41.3	64,900	40.3	50,600
M	48.0	174,000	45.3	128,000	43.6	100,000	42.9	88,900	41.2	63,400	40.2	49,200

*No flow through gates during flood period Mar. 12-25.
**Mean for the day.
+Mean for the period 2 a.m. to 4 p.m.

Bakers River near Rumney, N. H.

Location.- Lat. 43°47'45", long. 71°50'45", 0.3 mile above mouth of Halls Brook and 1¾ miles southwest of Rumney, Grafton County.
Drainage area.- 143 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights given to half tenths between 3.7 and 7.4 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 9. Defined by current-meter measurements below 2,900 second-feet; extended to peak stage by slope-area determination of flood flow (n, 0.035 to 0.060); verified by drainage-area comparison of instantaneous and total yield of flood with records for other streams in Merrimack River Basin.
Maxima.- 1936: Discharge, 19,100 second-feet 8 p.m. Mar. 18 to 1 a.m. Mar. 19 (gage height, 14.49 feet).
1928-35: Discharge, 14,200 second-feet (revised) Apr. 12, 1934 (gage height, 12.28 feet).
Maximum discharge known, 25,900 second-feet Nov. 3, 1927 (gage height, 17.4 feet, from flood marks).
Remarks.- Flood run-off not materially affected by artificial or natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	86	50	715	11	50	126	770	21	50	3,870	438
2	84	48	575	12	48	9,590	742	22	48	3,080	515
3	82	48	620	13	48	10,700	605	23	48	1,420	398
4	76	48	510	14	47	4,920	538	24	48	1,050	356
5	64	50	434	15	45	1,740	528	25	47	1,250	314
6	58	55	1,620	16	42	1,010	533	26	46	1,050	300
7	58	50	1,530	17	42	2,790	528	27	50	1,080	281
8	56	50	955	18	44	12,000	430	28	55	1,260	281
9	54	58	688	19	50	12,600	406	29	50	955	324
10	52	63	688	20	52	3,820	386	30		890	742
								31		955	
Mean monthly discharge, in second-feet									54.5	2,473	592
Run-off, in inches									0.41	19.94	4.62

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	-	-	2.57	370	11.9	13,400
4	-	-	-	-	-	-	1.55	.88	3.55	760	11.7	12,900
6	-	-	-	-	-	-	-	-	4.35	1,200	11.6	12,700
8	-	-	-	-	-	-	1.58	94	6.1	2,660	11.5	12,500
10	-	-	-	-	-	-	-	-	10.4	10,200	11.2	11,900
N	*1.36	*50	*1.38	*58	*1.41	*63	1.64	107	11.3	12,100	11.0	11,500
2	-	-	-	-	-	-	-	-	12.0	13,600	10.6	10,600
4	-	-	-	-	-	-	1.78	139	12.7	15,100	10.3	10,000
6	-	-	-	-	-	-	-	-	13.0	15,800	9.9	9,200
8	-	-	-	-	-	-	1.91	172	12.7	15,100	9.6	8,600
10	-	-	-	-	-	-	-	-	12.4	14,400	9.3	8,000
M	-	-	-	-	-	-	2.18	244	12.1	13,800	9.1	7,600
	March 14		March 15		March 16		March 17		March 18		March 19	
2	8.8	7,030	6.25	2,680	4.05	860	5.55	1,940	6.85	3,540	14.4	18,900
4	8.6	6,650	6.15	2,560	3.95	800	5.95	2,320	7.0	3,770	14.3	18,700
6	8.4	6,270	6.05	2,440	3.95	800	6.2	2,620	7.3	4,260	13.7	17,300
8	8.2	5,890	5.95	2,320	3.95	800	6.25	2,680	8.0	5,510	12.9	15,600
10	8.1	5,700	5.75	2,120	3.95	800	6.25	2,680	9.3	8,000	12.1	13,800
N	7.8	5,140	5.45	1,850	4.0	830	6.25	2,680	10.8	11,000	11.5	12,500
2	7.6	4,780	4.95	1,470	4.1	890	6.25	2,680	12.6	14,900	10.8	11,000
4	7.3	4,260	4.7	1,290	4.25	988	6.3	2,750	13.7	17,300	10.2	9,800
6	7.05	3,850	4.5	1,150	4.45	1,120	6.5	3,020	14.3	18,700	9.8	9,000
8	6.8	3,460	4.4	1,080	4.65	1,260	6.65	3,240	14.5	19,100	9.6	8,600
10	6.55	3,090	4.3	1,020	4.85	1,400	6.75	3,380	14.5	19,100	9.5	8,400
M	6.4	2,880	4.15	922	5.15	1,620	6.8	3,460	14.5	19,100	9.4	8,200
	March 20		March 21		March 22		March 23		March 24		March 25	
2	9.0	7,410	5.6	1,980	7.7	4,960	5.35	1,770	4.55	1,180	4.35	1,050
4	8.6	6,650	5.5	1,890	7.15	4,010	5.25	1,690	4.5	1,150	4.45	1,120
6	8.0	5,510	5.4	1,810	6.9	3,610	5.1	1,580	4.45	1,120	4.55	1,180
8	7.5	4,600	5.35	1,770	6.85	3,540	5.0	1,500	4.4	1,080	4.7	1,290
10	7.05	3,850	5.3	1,730	6.85	3,540	4.9	1,430	4.35	1,050	4.8	1,360
N	6.7	3,310	5.35	1,770	6.65	3,240	4.8	1,360	4.3	1,020	4.8	1,360
2	6.45	2,950	6.0	2,380	6.4	2,880	4.8	1,360	4.25	988	4.8	1,360
4	6.2	2,620	7.25	4,180	6.2	2,620	4.75	1,320	4.25	988	4.75	1,360
6	6.05	2,440	8.6	6,650	6.0	2,380	4.7	1,290	4.25	988	4.70	1,360
8	5.95	2,320	9.4	8,200	5.85	2,220	4.65	1,260	4.25	988	4.65	1,260
10	5.8	2,170	9.2	7,800	5.7	2,070	4.65	1,260	4.3	1,020	4.55	1,180
M	5.7	2,070	8.4	6,270	5.55	1,940	4.6	1,220	4.35	1,050	4.55	1,180

*Mean for the day.

Smith River near Bristol, N. H.

Location.- Lat. 43°34'0", long. 71°44'50", in Hill Township, 1 3/4 miles southwest of Bristol, Grafton County.
Drainage area.- 85.8 square miles.
Gage-height record.- Water-stage recorder graph except for period 8 p.m. Mar. 18 to 10 a.m. Mar. 27, when it was based on flood marks, occasional observed gage readings, and shape of stage graphs at nearby stations. Gage heights given to half tenths between 4.70 and 6.20 feet; hundredths below and tenths above these limits.
Stage-discharge relation. - Defined by current-meter measurements below 2,640 second-feet; extended to peak stage by determinations of flood flow by contracted opening (surface drop, 8.29 feet) at gaging station and over dam (head, 4.78 feet; C, 2.5 to 3.6) 7 miles upstream; verified by a drainage-area comparison of instantaneous and total yield of flood with records at other streams in Merrimack River Basin.
Maxima.- 1936: Discharge, 8,100 second-feet 8 a.m. Mar. 19 (gage height, 16.09 feet).
1918-1935: Discharge, 5,800 second-feet Nov. 4, 1927 (gage height, 7.02 feet, former site and datum, from flood marks).
Remarks.- Flood run-off not materially affected by artificial storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	64	54	376	11	50	80	438	21	54	3,320	254
2	60	54	332	12	50	1,310	487	22	54	2,710	246
3	60	54	372	13	51	2,700	419	23	52	1,630	214
4	59	54	357	14	51	2,000	360	24	52	1,260	192
5	60	57	310	15	52	1,150	326	25	51	1,270	172
6	60	58	702	16	50	945	345	26	52	940	160
7	57	58	1,020	17	52	1,200	372	27	54	710	150
8	56	58	880	18	55	3,510	302	28	54	746	142
9	52	58	564	19	54	6,890	278	29	54	647	138
10	52	60	430	20	53	3,960	254	30		526	158
								31		441	
Mean monthly discharge, in second-feet									54.3	1,242	358
Run-off, in inches									0.68	16.72	4.65

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	2.17	-	3.13	168	7.5	2,190
4	-	-	-	-	-	-	-	-	3.40	218	8.2	2,470
6	-	-	-	-	-	-	2.29	-	3.52	243	8.3	2,510
8	-	-	-	-	-	-	-	-	4.55	578	8.4	2,550
10	-	-	-	-	-	-	2.38	-	5.30	1,000	8.6	2,630
N	*2.03	*58	*2.03	*58	*2.09	*60	-	*80	6.05	1,460	8.8	2,700
2	-	-	-	-	-	-	2.37	-	7.0	1,960	8.9	2,740
4	-	-	-	-	-	-	-	-	7.2	2,060	9.4	2,970
6	-	-	-	-	-	-	2.43	-	7.0	1,960	9.5	3,020
8	-	-	-	-	-	-	2.50	-	7.0	1,960	9.5	3,020
10	-	-	-	-	-	-	2.66	-	7.2	2,060	9.2	2,870
M	-	-	-	-	-	-	2.90	-	7.2	2,060	8.8	2,700
	March 14		March 15		March 16		March 17		March 18		March 19	
2	8.4	2,550	5.95	1,400	5.25	970	5.4	1,060	6.15	1,520	15.9	7,900
4	8.0	2,390	5.8	1,310	5.2	940	5.45	1,090	6.4	1,660	15.9	7,900
6	7.6	2,230	5.65	1,210	5.2	940	5.45	1,090	6.6	1,770	16.0	8,000
8	7.4	2,140	5.55	1,150	5.2	940	5.45	1,090	7.0	1,960	16.1	8,100
10	7.2	2,060	5.5	1,120	5.15	910	5.5	1,120	7.7	2,270	15.9	7,900
N	7.0	1,960	5.45	1,090	5.2	940	5.55	1,150	8.5	2,590	15.5	7,500
2	7.0	1,960	5.5	1,120	5.2	940	5.55	1,150	9.4	2,970	15.0	7,000
4	6.9	1,920	5.55	1,150	5.15	910	5.65	1,210	10.6	3,600	14.5	6,520
6	6.7	1,820	5.5	1,120	5.15	910	5.75	1,280	12.0	4,490	14.0	6,060
8	6.5	1,720	5.45	1,090	5.2	940	5.85	1,340	13.3	5,450	13.5	5,620
10	6.4	1,660	5.4	1,060	5.25	970	5.95	1,400	14.2	6,240	13.1	5,290
M	6.2	1,560	5.3	1,000	5.35	1,030	6.05	1,460	15.6	7,600	12.5	4,840
	March 20		March 21		March 22		March 23		March 24		March 25	
2	12.2	4,630	10.0	3,280	10.7	3,660	7.0	1,960	5.8	1,310	5.8	1,310
4	11.9	4,420	9.9	3,220	10.2	3,380	6.8	1,870	5.8	1,310	5.8	1,310
6	11.8	4,350	9.8	3,170	9.7	3,120	6.6	1,770	5.7	1,240	5.8	1,310
8	11.6	4,220	9.7	3,120	9.2	2,870	6.5	1,720	5.7	1,240	5.8	1,310
10	11.5	4,160	9.6	3,070	9.0	2,780	6.4	1,660	5.7	1,240	5.8	1,310
N	11.3	4,020	9.6	3,070	8.8	2,700	6.3	1,610	5.7	1,240	5.8	1,310
2	11.1	3,900	9.6	3,070	8.6	2,630	6.3	1,610	5.7	1,240	5.8	1,310
4	10.9	3,780	9.8	3,170	8.3	2,510	6.2	1,560	5.7	1,240	5.8	1,310
6	10.7	3,660	10.2	3,380	8.0	2,390	6.1	1,500	5.7	1,240	5.7	1,240
8	10.5	3,550	10.7	3,660	7.7	2,270	6.1	1,500	5.7	1,240	5.6	1,180
10	10.4	3,500	11.0	3,840	7.4	2,140	6.0	1,440	5.8	1,310	5.6	1,180
M	10.1	3,330	11.0	3,840	7.2	2,060	5.9	1,380	5.8	1,310	5.5	1,120

*Mean for the day.

A. DESTRUCTION OF HIGHWAY AND RAILROAD BRIDGES ON MERRIMACK RIVER AT HOOKSET, N. H.

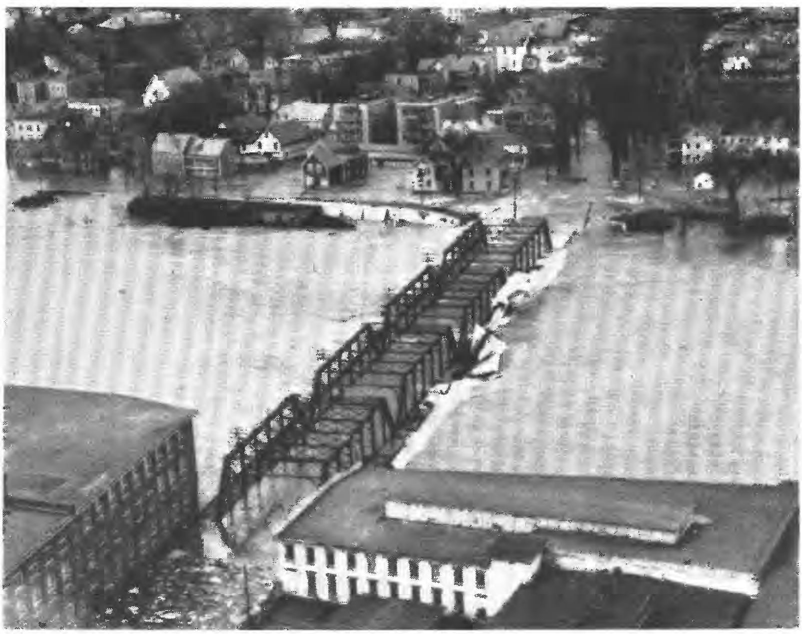
Courtesy of the Union Leader, Manchester, N. H.

B. WASH-OUT AT RAILROAD BRIDGE ON MERRIMACK RIVER AT GOFFS FALLS, BELOW MANCHESTER, N. H.

Courtesy of Lew A. Cummings, Manchester, N. H.

A. SCENE ON MERRIMACK RIVER AT LOWELL, MASS., LOOKING TOWARD THE CENTRALVILLE BRIDGE FROM A POINT BELOW THE MOODY STREET BRIDGE.

The flood has reached the top of the first-story windows. Courtesy of Massachusetts Department of Public Health.



B. MERRIMACK RIVER AT THE GRANITE STREET BRIDGE, MANCHESTER, N. H.

Oil tanks on upstream side of bridge. Released oil caused considerable damage. Courtesy of International News Photo, Inc.

Lake Winnipesaukee outlet at Lakeport, N. H.

Location.- Lat. 43°32'55", long. 72°27'55", at outlet of Lake Winnipesaukee just above highway bridge across Paugus Bay in Lakeport, Belknap County.
Drainage area.- 363 square miles.
Stage-discharge relation.- Discharge determined from gage readings and record of velocity obtained by a recording current meter operated continuously at a selected point in a measuring flume or by computing flow through wheels and gates just below flume.
Remarks.- Flood run-off almost completely stored in Winnipesaukee, Wentworth, and Mirror Lakes; slightly affected by storage in other small lakes and ponds. Mean daily and monthly discharges for March corrected for storage in Winnipesaukee and Wentworth Lakes (normal total capacity, about 7,700,000,000 cubic feet). Discharges for February and April not adjusted for storage because of insufficient data.

Mean discharge (second-feet) and gain or loss in storage (millions of cubic feet), 1936

Day	February			March			April		
	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge
1	840	-	-	960	-55.8	314	2,810	-	-
2	840	-	-	980	-60.7	277	2,810	-	-
3	835	-	-	1,040	-64.2	297	2,820	-	-
4	840	-	-	1,040	-65.6	281	2,770	-	-
5	835	-	-	1,030	-65.6	271	2,790	-	-
6	850	-	-	1,050	-65.6	291	2,860	-	-
7	835	-	-	1,060	-65.6	301	2,880	-	-
8	850	-	-	1,050	-65.6	291	2,870	-	-
9	840	-	-	1,040	-65.6	281	2,830	-	-
10	820	-	-	1,100	-54.2	357	2,830	-	-
11	835	-	-	680	+122.3	2,100	2,790	-	-
12	835	-	-	680	+949.5	11,700	2,790	-	-
13	817	-	-	123	+1,453.0	16,900	2,830	-	-
14	883	-	-	33	+628.5	7,300	2,760	-	-
15	1,000	-	-	262	+321.0	3,980	2,750	-	-
16	946	-	-	224	+209.5	2,640	2,760	-	-
17	960	-	-	211	+321.0	3,930	2,690	-	-
18	945	-	-	245	+919.0	10,900	2,790	-	-
19	945	-	-	178	+2,368.8	27,600	2,540	-	-
20	960	-	-	300	+696.8	8,360	2,460	-	-
21	980	-	-	1,250	+314.2	4,890	2,470	-	-
22	1,030	-	-	1,660	+410.9	6,420	2,430	-	-
23	1,020	-	-	1,830	+193.3	4,070	2,350	-	-
24	896	-	-	1,870	+101.4	3,040	2,330	-	-
25	910	-	-	2,690	-17.6	2,490	2,410	-	-
26	920	-	-	2,640	-33.1	2,260	2,370	-	-
27	920	-	-	2,650	-61.5	1,940	2,410	-	-
28	960	-	-	2,860	0	2,860	2,080	-	-
29	960	-	-	2,850	-41.9	2,360	1,990	-	-
30				2,880	-69.6	2,070	1,610	-	-
31				2,890	-10.8	2,760			

	February	March	April
Mean monthly discharge, in second-feet (observed)	900	1,270	2,596
Gain or loss in storage, in millions of cubic feet	-	8,136.2	-
Mean monthly discharge, in second-feet (corrected)	-	4,307	-
Run-off, in inches (corrected)	-	13.72	-

Contoocook River at Penacook, N. H.

Location.- Lat. 43°17'10", long. 71°36'0", in Penacook, Merrimack County, half a mile above mouth.
Drainage area.- 766 square miles.
Gage-height record.- Water-stage recorder graph except for period 2 p.m. Mar. 19 to 4 a.m. Mar. 21, when it was based on flood marks and shape of stage graphs at nearby stations. Gage heights given to half tenths between 3.40 and 6.00 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 13. Defined by current-meter measurements below 16,000 second-feet; extended to peak stage by velocity-area study at control section and drainage-area comparison of instantaneous and total yield of flood with records for other streams in Merrimack River Basin.
Maxima.- 1936: Discharge, 46,800 second-feet 6 a.m. Mar. 20 (gage height, 14.26 feet).
1928-1935: Discharge, 17,600 second-feet Apr. 20, 1933 (gage height, 7.86 feet).
Remarks.- Flood run-off not materially affected by artificial storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	640	480	4,490	11	620	520	4,220	21	520	30,500	2,360
2	600	460	3,980	12	700	2,400	4,220	22	480	24,000	2,190
3	460	500	4,100	13	620	7,500	4,220	23	450	20,700	2,010
4	570	530	4,360	14	550	11,800	3,980	24	450	14,700	1,840
5	510	560	3,980	15	580	10,700	3,500	25	500	10,100	1,740
6	550	620	4,100	16	470	8,540	3,380	26	510	8,500	1,530
7	590	560	6,370	17	480	7,540	3,500	27	520	7,580	1,390
8	600	520	7,010	18	560	10,100	3,260	28	530	7,900	1,420
9	590	470	6,210	19	600	33,500	2,910	29	510	7,880	1,390
10	550	540	5,030	20	550	43,100	2,520	30		6,700	1,320
								31		5,600	
Mean monthly discharge, in second-feet......................									547	9,197	3,418
Run-off, in inches.....................................									0.77	13.83	4.98

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	-	-	2.79	-	4.65	-
4	-	-	-	-	-	-	-	-	2.91	-	4.95	-
6	-	-	-	-	-	-	-	-	3.05	-	5.3	**4,810
8	-	-	-	-	-	-	-	-	3.27	-	5.5	-
10	-	-	-	-	-	-	-	-	3.39	-	5.55	-
N	*2.60	*520	*2.52	*470	*2.60	*540	*2.54	*520	3.65	*2,400	5.6	8,070
2	-	-	-	-	-	-	-	-	3.85	-	5.8	8,750
4	-	-	-	-	-	-	-	-	3.95	-	5.9	9,090
6	-	-	-	-	-	-	-	-	4.15	-	6.0	9,450
8	-	-	-	-	-	-	-	-	4.4	-	6.1	9,810
10	-	-	-	-	-	-	-	-	4.7	-	6.2	10,200
M	-	-	-	-	-	-	-	-	5.0	-	6.3	10,600
	March 14		March 15		March 16		March 17		March 18		March 19	
2	6.5	11,300	6.6	11,700	6.0	9,450	5.5	7,730	5.5	7,730	8.3	19,200
4	6.6	11,700	6.6	11,700	5.9	9,090	5.5	7,730	5.5	7,730	9.3	23,800
6	6.7	12,100	6.5	11,300	5.9	9,090	5.5	7,730	5.6	8,070	9.8	26,100
8	6.7	12,100	6.5	11,300	5.8	8,750	5.45	7,570	5.65	8,240	10.3	28,400
10	6.5	11,300	6.4	10,900	5.8	8,750	5.4	7,410	5.7	8,410	10.9	31,100
N	6.5	11,300	6.4	10,900	5.75	8,580	5.4	7,410	5.8	8,750	11.3	33,000
2	6.7	12,100	6.4	10,900	5.7	8,410	5.4	7,410	6.0	9,450	11.9	35,700
4	6.6	11,700	6.3	10,600	5.7	8,410	5.4	7,410	6.2	10,200	12.3	37,600
6	6.6	11,700	6.2	10,200	5.6	8,070	5.4	7,410	6.5	11,300	12.6	39,000
8	6.7	12,100	6.2	10,200	5.6	8,070	5.4	7,410	6.7	12,100	13.0	40,800
10	6.7	12,100	6.1	9,810	5.55	7,900	5.45	7,570	7.1	13,800	13.4	42,600
M	6.7	12,100	6.0	9,450	5.55	7,900	5.5	7,730	7.6	16,000	13.8	44,500
	March 20		March 21		March 22		March 23		March 24		March 25	
2	14.0	45,400	12.1	36,600	9.6	25,200	9.1	22,800	8.0	17,800	6.6	11,500
4	14.2	46,300	11.8	35,300	9.5	24,700	9.0	22,400	7.8	16,900	6.5	11,100
6	14.3	46,800	11.6	34,400	9.5	24,700	9.0	22,400	7.7	16,400	6.4	10,700
8	14.1	45,800	11.4	33,400	9.4	24,200	8.9	21,900	7.6	16,000	6.4	10,700
10	13.9	44,900	11.1	32,000	9.4	24,200	8.8	21,500	7.5	15,500	6.3	10,300
N	13.8	44,500	10.8	30,700	9.3	23,800	8.7	21,000	7.4	15,100	6.2	9,860
2	13.5	43,100	10.5	29,300	9.3	23,800	8.6	20,600	7.2	14,200	6.2	9,860
4	13.3	42,200	10.3	28,400	9.3	23,800	8.5	20,100	7.1	13,700	6.1	9,440
6	13.1	41,200	10.1	27,400	9.2	23,300	8.4	19,600	7.0	13,300	6.1	9,440
8	12.8	39,900	9.9	26,500	9.2	23,300	8.3	19,200	6.9	12,800	6.1	9,440
10	12.7	39,400	9.8	26,100	9.2	23,300	8.2	18,700	6.8	12,400	6.1	9,440
M	12.3	37,600	9.7	25,600	9.2	23,300	8.1	18,200	6.7	12,000	6.0	9,020

*Mean for the day.
**Mean for the period 2 to 10 a.m.

North Branch of Contoocook River near Antrim, N. H.

Location.- Lat. 43°4'55", long. 71°58'40", at North Branch, Hillsborough County, 4 miles northwest of Antrim and 6 miles above confluence with Contoocook River.
Drainage area.- 54.8 square miles.
Gage-height record.- Graph constructed from twice-daily gage readings and flood marks. Gage heights given to half tenths between 1.30 and 3.10 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 13. Defined by current-meter measurements below 1,590 second-feet; extended to peak stage by slope-area determination of flood flow (n, 0.030 to 0.040); verified by velocity-area study near control section and drainage-area comparison of instantaneous and total yield of flood with records for other streams in Merrimack River Basin.
Maxima.- 1936: Discharge, 6,160 second-feet 2 to 4 p.m. Mar. 19 (gage height, 9.30 feet).
1924-1935: Discharge, 2,370 second-feet Apr. 19, 1933 (gage height, 6.55 feet).
Remarks.- Flood run-off slightly affected by artificial and natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	40	31	395	11	30	43	319	21	46	1,750	180
2	38	30	369	12	28	400	319	22	43	1,870	162
3	36	30	344	13	28	1,100	319	23	40	1,440	144
4	36	30	319	14	30	1,300	295	24	38	856	128
5	36	32	272	15	32	1,070	261	25	32	696	113
6	34	30	344	16	35	723	272	26	35	610	100
7	33	30	452	17	35	613	272	27	32	610	90
8	31	28	553	18	41	1,620	250	28	35	732	84
9	29	27	485	19	47	5,570	229	29	32	665	79
10	30	28	395	20	47	3,380	200	30		560	74
								31		475	
Mean monthly discharge, in second-feet									35.5	851	261
Run-off, in inches									0.70	17.87	5.31

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	1.62	-	2.55	-	5.3	-
4	-	-	-	-	-	-	-	-	2.85	-	5.3	-
6	-	-	-	-	-	-	-	-	3.2	-	5.3	-
8	-	-	-	-	-	-	1.7	-	3.6	-	5.3	-
10	-	-	-	-	-	-	-	-	4.0	-	5.3	-
N	*1.55	*28	*1.55	*27	*1.55	*28	1.75	*43	4.3	*400	5.3	*1,100
2	-	-	-	-	-	-	-	-	4.5	-	5.3	-
4	-	-	-	-	-	-	1.8	-	4.8	-	5.3	-
6	-	-	-	-	-	-	-	-	4.9	-	5.2	-
8	-	-	-	-	-	-	1.95	-	5.1	-	5.2	-
10	-	-	-	-	-	-	-	-	5.2	-	5.2	-
M	-	-	-	-	-	-	2.3	-	5.2	-	5.2	-
	March 14		March 15		March 16		March 17		March 18		March 19	
2	5.2	1,210	5.3	1,280	4.6	854	4.1	630	4.2	670	8.0	4,220
4	5.2	1,210	5.3	1,280	4.5	804	4.1	630	4.3	714	8.3	4,640
6	5.2	1,210	5.2	1,210	4.5	804	4.0	590	4.3	714	8.6	5,060
8	5.3	1,280	5.1	1,140	4.4	758	4.0	590	4.5	804	8.8	5,360
10	5.3	1,280	5.0	1,080	4.4	758	4.0	590	4.7	908	9.0	5,680
N	5.3	1,280	5.0	1,080	4.3	714	4.0	590	5.0	1,080	9.2	6,000
2	5.4	1,360	4.9	1,020	4.3	714	4.0	590	5.3	1,280	9.3	6,160
4	5.4	1,360	4.9	1,020	4.2	670	4.0	590	5.8	1,680	9.3	6,160
6	5.4	1,360	4.8	964	4.2	670	4.1	630	6.3	2,120	9.3	6,160
8	5.4	1,360	4.8	964	4.2	670	4.1	630	6.8	2,640	9.2	6,000
10	5.4	1,360	4.7	908	4.1	630	4.1	630	7.2	3,120	9.1	5,840
M	5.3	1,280	4.6	854	4.1	630	4.2	670	7.6	3,660	8.9	5,520
	March 20		March 21		March 22		March 23		March 24		March 25	
2	8.6	5,060	5.9	1,760	6.1	1,920	5.8	1,680	5.0	1,080	4.4	758
4	8.4	4,780	5.8	1,680	6.1	1,920	5.8	1,680	4.9	1,020	4.3	714
6	8.2	4,500	5.7	1,600	6.1	1,920	5.7	1,600	4.8	964	4.3	714
8	7.9	4,080	5.7	1,600	6.1	1,920	5.6	1,520	4.7	908	4.3	714
10	7.6	3,660	5.8	1,680	6.1	1,920	5.6	1,520	4.6	854	4.3	714
N	7.4	3,380	5.8	1,680	6.1	1,920	5.5	1,440	4.6	854	4.3	714
2	7.2	3,120	5.9	1,760	6.0	1,840	5.5	1,440	4.5	804	4.2	670
4	7.0	2,880	5.9	1,760	6.0	1,840	5.4	1,360	4.4	758	4.2	670
6	6.8	2,640	6.0	1,840	6.0	1,840	5.4	1,360	4.4	758	4.2	670
8	6.5	2,320	6.0	1,840	6.0	1,840	5.3	1,280	4.4	758	4.2	670
10	6.3	2,120	6.0	1,840	5.9	1,760	5.2	1,210	4.4	758	4.2	670
M	6.2	2,020	6.1	1,920	5.9	1,760	5.1	1,140	4.4	758	4.2	670

*Mean for the day.

Blackwater River near Webster, N. H.

Location.- Lat. 43°17'50", long. 71°41'40", 0.2 mile west of Dingit Corner, 2½ miles southeast of Webster, and 6½ miles above mouth of river.
Drainage area.- 129 square miles.
Gage-height record.- Water-stage recorder graph except for period 1 a.m. Mar. 13 to 11 a.m. Mar. 24, when it was based on flood marks and shape of stage graphs at nearby stations. Gage heights given to half tenths between 5.10 and 8.40 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 10. Defined by current-meter measurements below 534 second-feet; extended to peak stage by slope-area determination of flood flow (n, 0.035 to 0.060); verified by drainage-area comparison of instantaneous and total yield of flood with records for other streams in Merrimack River Basin.
Maxima.- 1936: Discharge, 17,000 second-feet 8 p.m. Mar. 19 (gage height, 11.78 feet).
1918-1935: Discharge, 2,920 second-feet Apr. 14, 1934 (gage height, 16.31 feet, former site and datum near Contoocook).
Remarks.- Flood run-off not materially affected by artificial or natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	100	84	821	11	80	114	752	21	84	3,210	406
2	98	84	713	12	79	411	765	22	84	3,560	375
3	95	84	688	13	79	2,540	835	23	82	3,510	354
4	95	85	700	14	80	4,450	752	24	81	2,420	315
5	97	88	670	15	80	2,210	634	25	80	1,750	289
6	96	90	798	16	76	1,470	576	26	82	1,540	272
7	93	90	1,400	17	82	1,430	618	27	84	1,420	254
8	88	90	1,730	18	85	2,320	658	28	84	1,380	241
9	85	92	1,240	19	84	12,600	559	29	84	1,380	232
10	82	98	905	20	83	7,220	462	30		1,180	230
								31		961	
Mean monthly discharge, in second-feet									85.6	1,870	641
Run-off, in inches									0.72	16.72	5.54

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	-	-	2.99	143	4.93	856
4	-	-	-	-	-	-	-	-	3.09	161	5.03	926
6	-	-	-	-	-	-	2.77	-	3.21	184	5.2	1,050
8	-	-	-	-	-	-	-	-	3.35	211	5.4	1,200
10	-	-	-	-	-	-	-	-	3.61	267	5.7	1,440
N	*2.68	*90	*2.71	*92	*2.76	*98	2.79	*114	3.91	348	6.0	1,730
2	-	-	-	-	-	-	-	-	4.13	422	6.5	2,290
4	-	-	-	-	-	-	2.83	-	4.34	508	6.85	2,750
6	-	-	-	-	-	-	-	-	4.47	566	7.35	3,490
8	-	-	-	-	-	-	2.86	-	4.59	634	7.9	4,430
10	-	-	-	-	-	-	-	-	4.70	700	8.15	4,910
M	-	-	-	-	-	-	2.85	-	4.83	786	8.4	5,420
	March 14		March 15		March 16		March 17		March 18		March 19	
2	8.4	5,420	6.95	2,890	5.9	1,630	5.65	1,400	5.8	1,540	8.4	5,420
4	8.5	5,630	6.8	2,680	5.85	1,580	5.65	1,400	5.85	1,580	9.0	6,730
6	8.4	5,420	6.7	2,550	5.8	1,540	5.65	1,400	5.9	1,630	9.6	8,130
8	8.35	5,320	6.6	2,420	5.75	1,490	5.65	1,400	5.95	1,680	10.2	9,650
10	8.2	5,010	6.55	2,360	5.75	1,490	5.65	1,400	6.05	1,780	10.9	11,900
N	8.05	4,720	6.45	2,230	5.7	1,440	5.65	1,400	6.15	1,880	11.4	14,400
2	7.85	4,340	6.35	2,110	5.7	1,440	5.7	1,440	6.35	2,110	11.7	16,300
4	7.7	4,070	6.25	2,000	5.7	1,440	5.7	1,440	6.55	2,360	11.7	16,300
6	7.5	3,730	6.2	1,940	5.7	1,440	5.7	1,440	6.75	2,620	11.7	16,300
8	7.3	3,410	6.1	1,830	5.65	1,400	5.7	1,440	7.0	2,960	11.8	17,000
10	7.2	3,260	6.05	1,780	5.65	1,400	5.75	1,490	7.35	3,490	11.6	15,600
M	7.05	3,040	5.95	1,680	5.65	1,400	5.75	1,490	7.8	4,250	11.3	13,800
	March 20		March 21		March 22		March 23		March 24		March 25	
2	10.9	11,900	7.85	4,340	6.45	2,230	7.8	4,250	6.95	2,890	6.2	1,940
4	10.5	10,500	7.75	4,160	6.4	2,170	7.65	3,980	6.85	2,750	6.15	1,880
6	10.2	9,650	7.6	3,900	6.4	2,170	7.55	3,820	6.8	2,680	6.15	1,880
8	9.9	8,860	7.5	3,730	6.4	2,170	7.45	3,650	6.75	2,620	6.1	1,830
10	9.5	7,890	7.35	3,490	6.45	2,230	7.4	3,570	6.7	2,550	6.05	1,780
N	9.1	6,960	7.2	3,260	6.75	2,620	7.4	3,570	6.65	2,480	6.0	1,730
2	8.8	6,280	7.0	2,960	7.5	3,730	7.35	3,490	6.55	2,360	6.0	1,730
4	8.5	5,630	6.85	2,750	8.25	5,110	7.25	3,340	6.5	2,290	5.95	1,680
6	8.2	5,010	6.75	2,620	8.4	5,420	7.2	3,260	6.45	2,230	5.95	1,680
8	8.1	4,810	6.7	2,550	8.35	5,320	7.15	3,180	6.35	2,110	5.9	1,630
10	8.0	4,620	6.6	2,420	8.15	4,910	7.05	3,040	6.3	2,050	5.9	1,630
M	7.95	4,520	6.55	2,360	8.0	4,620	7.0	2,960	6.25	2,000	5.85	1,580

*Mean for the day.

Suncook River at North Chichester, N. H.

Location.- Lat. 43°15'25", long. 71°22'10", at North Chichester, Merrimack County, 2½ miles above mouth of Little Suncook River.
Drainage area.- 157 square miles.
Gage-height record.- Water-stage recorder graph except for periods Feb. 17 to Mar. 9, when there was no record, and 10 a.m. Mar. 12 to 4 p.m. Mar. 20, when it was based on flood marks and shape of stage graphs at nearby stations. Gage heights given to half tenths between 3.10 and 4.20 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 14. Defined by current-meter measurements below 4,780 second-feet; extended to peak stage by averaging discharges obtained from slope-area (n, 0.030) and contracted-opening (surface drop, 0.51 foot) methods; verified by velocity-area study near control section and drainage-area comparison of instantaneous and total yield of flood with records for other streams in Merrimack River Basin.
Maxima.- 1936: Discharge, 12,900 second-feet noon Mar. 19 (gage height, 15.27 feet).
1918-1935: Discharge, 6,580 second-feet (revised) Apr. 7, 1923 (gage height, 13.0 feet).
Remarks.- Flood flow not materially affected by artificial or natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	115	43	794	11	108	350	830	21	135	3,840	332
2	60	108	699	12	84	1,500	830	22	94	5,310	322
3	115	106	890	13	120	5,200	780	23	45	3,410	311
4	145	85	948	14	144	4,100	680	24	110	2,280	297
5	105	105	730	15	100	3,250	592	25	105	1,880	139
6	130	124	825	16	45	2,760	630	26	85	1,540	134
7	140	95	1,220	17	115	2,660	692	27	105	1,340	279
8	108	43	1,080	18	107	4,020	586	28	125	1,880	273
9	62	100	1,020	19	86	11,000	503	29	94	1,640	261
10	128	150	921	20	110	5,710	407	30		1,240	287
								31		948	
Mean monthly discharge, in second-feet									104	2,155	610
Run-off, in inches									0.71	15.79	4.34

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	5.6	-	5.5	-	6.8	-	12.6	-
4	-	-	-	-	-	-	-	-	7.3	-	12.6	-
6	-	-	-	-	4.9	-	4.9	-	8.4	-	12.6	-
8	-	-	-	-	-	-	-	-	9.4	-	12.6	-
10	-	-	-	-	-	-	-	-	9.9	-	12.6	-
N	-	*43	-	*100	6.1	*150	6.0	*350	10.4	*1,500	12.6	*5,200
2	-	-	-	-	-	-	-	-	10.9	-	12.6	-
4	-	-	-	-	6.0	-	6.2	-	11.3	-	12.6	-
6	-	-	-	-	-	-	-	-	11.7	-	12.6	-
8	-	-	-	-	6.0	-	6.3	-	12.0	-	12.6	-
10	-	-	-	-	-	-	-	-	12.3	-	12.5	-
M	-	-	-	-	6.0	-	6.8	-	12.5	-	12.5	-
	March 14		March 15		March 16		March 17		March 18		March 19	
2	12.4	-	11.1	3,680	10.3	2,930	9.9	2,630	10.2	2,850	13.5	7,630
4	12.3	-	11.0	3,570	10.2	2,850	9.9	2,630	10.3	2,930	14.1	9,190
6	12.2	-	10.9	3,460	10.2	2,850	9.9	2,630	10.4	3,010	14.6	10,600
8	12.1	-	10.8	3,360	10.2	2,850	9.9	2,630	10.5	3,090	15.0	11,900
10	12.0	-	10.8	3,360	10.1	2,770	9.9	2,630	10.7	3,270	15.2	12,600
N	11.9	*4,100	10.7	3,270	10.1	2,770	9.9	2,630	10.9	3,460	15.3	12,900
2	11.8	-	10.6	3,180	10.0	2,700	9.9	2,630	11.1	3,680	15.2	12,600
4	11.7	-	10.5	3,090	10.0	2,700	9.9	2,630	11.4	4,060	15.1	12,200
6	11.6	-	10.5	3,090	10.0	2,700	10.0	2,700	11.7	4,480	15.0	11,900
8	11.4	-	10.4	3,010	10.0	2,700	10.0	2,700	12.1	5,070	14.7	11,000
10	11.3	-	10.4	3,010	10.0	2,700	10.0	2,700	12.5	5,700	14.5	10,400
M	11.2	-	10.3	2,930	9.9	2,630	10.1	2,770	13.0	6,580	14.2	9,470
	March 20		March 21		March 22		March 23		March 24		March 25	
2	13.9	8,640	11.1	3,850	12.1	5,080	11.6	4,420	9.5	2,600	8.4	2,010
4	13.5	7,630	11.0	3,750	12.3	5,380	11.4	4,180	9.4	2,540	8.3	1,960
6	13.2	6,970	10.8	3,550	12.4	5,540	11.2	3,960	9.3	2,480	8.3	1,960
8	12.9	6,390	10.7	3,460	12.4	5,540	11.0	3,750	9.2	2,430	8.3	1,960
10	12.7	6,040	10.6	3,370	12.4	5,540	10.8	3,550	8.9	2,260	8.3	1,960
N	12.4	5,540	10.5	3,280	12.4	5,540	10.6	3,370	8.9	2,260	8.2	1,910
2	12.2	5,230	10.7	3,460	12.4	5,540	10.5	3,280	8.9	2,260	8.2	1,910
4	11.9	4,800	11.0	3,750	12.4	5,540	10.3	3,120	8.8	2,210	8.0	1,810
6	11.8	4,670	11.3	4,070	12.3	5,380	10.1	2,970	8.7	2,160	8.0	1,810
8	11.6	4,420	11.5	4,300	12.1	5,080	9.9	2,840	8.6	2,110	7.9	1,760
10	11.4	4,180	11.7	4,540	12.0	4,940	9.8	2,780	8.5	2,060	7.9	1,760
M	11.2	3,960	11.8	4,670	11.8	4,670	9.7	2,720	8.4	2,010	7.8	1,720

*Mean for the day.

Souhegan River at Merrimack, N. H.

Location.- Lat. 42°51'25", long. 71°30'30", at head of Atherton Falls at Merrimack, Hillsborough County, 1½ miles above confluence with Merrimack River.
Drainage area.- 171 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights given to half tenths between 4.10 and 6.10 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 28 to Mar. 1. Defined by current-meter measurements below 7,200 second-feet; extended to peak stage by velocity-area study at measuring section and drainage-area comparison of instantaneous and total yield of flood with records for other streams in Merrimack River Basin.
Maxima.- 1936: Discharge, 16,900 second-feet 8 a.m. Mar. 19 (gage height, 16.2 feet).
1909-1935: Discharge, 9,260 second-feet (revised) Apr. 8, 1924 (gage height, 11.82 feet).
Remarks.- Flood run-off not materially affected by artificial or natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	189	145	942	11	135	393	819	21	253	3,120	452
2	187	145	793	12	154	2,030	1,140	22	230	4,370	420
3	175	167	1,080	13	167	6,920	1,040	23	205	3,120	395
4	145	181	1,420	14	170	3,480	910	24	185	2,030	350
5	162	201	1,080	15	130	2,410	760	25	165	1,900	312
6	167	253	1,010	16	128	2,180	722	26	140	1,940	276
7	164	236	1,910	17	140	2,220	793	27	150	1,600	258
8	164	207	1,390	18	178	4,400	667	28	155	1,900	244
9	125	184	1,040	19	239	14,200	556	29	150	1,780	224
10	130	236	832	20	270	6,090	502	30		1,390	212
								31		1,180	
Mean monthly discharge, in second-feet									171	2,278	752
Run-off, in inches									1.08	15.33	4.91

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	-	-	3.78	501	10.6	7,340
4	-	-	-	-	-	-	-	-	3.93	568	10.6	7,340
6	-	-	-	-	-	-	-	-	4.2	700	10.6	7,340
8	-	-	-	-	-	-	-	-	4.5	860	10.6	7,340
10	-	-	-	-	-	-	-	-	4.8	1,040	10.6	7,340
N	*3.04	*207	*2.96	*184	*3.13	*236	*3.54	*393	5.2	1,320	10.6	7,340
2	-	-	-	-	-	-	-	-	5.55	1,560	10.6	7,340
4	-	-	-	-	-	-	-	-	5.9	1,820	10.5	7,190
6	-	-	-	-	-	-	-	-	6.5	2,300	10.3	6,890
8	-	-	-	-	-	-	-	-	7.1	2,820	9.9	6,290
10	-	-	-	-	-	-	-	-	8.2	4,020	9.6	5,860
M	-	-	-	-	-	-	-	-	10.3	6,890	9.3	5,440
	March 14		March 15		March 16		March 17		March 18		March 19	
2	8.8	4,760	7.1	2,820	6.4	2,220	6.3	2,140	6.9	2,630	13.4	11,900
4	8.5	4,380	6.9	2,630	6.4	2,220	6.3	2,140	7.1	2,820	14.9	14,600
6	8.1	3,900	6.8	2,540	6.4	2,220	6.2	2,060	7.3	3,020	15.8	16,200
8	7.9	3,670	6.7	2,460	6.4	2,220	6.2	2,060	7.5	3,230	16.2	16,900
10	7.7	3,450	6.6	2,380	6.3	2,140	6.3	2,140	7.6	3,340	16.1	16,700
N	7.5	3,230	6.5	2,300	6.3	2,140	6.3	2,140	7.8	3,560	15.8	16,200
2	7.5	3,230	6.5	2,300	6.5	2,300	6.3	2,140	8.0	3,780	15.4	15,500
4	7.5	3,230	6.5	2,300	6.3	2,140	6.6	2,380	8.3	4,140	14.9	14,600
6	7.4	3,120	6.5	2,300	6.3	2,140	6.6	2,380	8.7	4,630	14.2	13,300
8	7.3	3,020	6.5	2,300	6.3	2,140	6.5	2,300	9.3	5,440	13.7	12,400
10	7.2	2,920	6.5	2,300	6.3	2,140	6.5	2,300	10.2	6,740	13.1	11,400
M	7.1	2,820	6.5	2,300	6.3	2,140	6.7	2,460	11.9	9,420	12.6	10,600
	March 20		March 21		March 22		March 23		March 24		March 25	
2	12.0	9,500	7.7	3,450	7.8	3,560	8.3	4,140	6.5	2,300	5.9	1,820
4	11.5	8,780	7.6	3,340	8.1	3,900	8.1	3,900	6.4	2,220	5.9	1,820
6	11.1	8,140	7.5	3,230	8.3	4,140	7.9	3,670	6.3	2,140	5.9	1,820
8	10.6	7,340	7.4	3,120	8.5	4,380	7.8	3,560	6.3	2,140	5.9	1,820
10	10.2	6,740	7.3	3,020	8.6	4,500	7.6	3,340	6.2	2,060	5.9	1,820
N	9.7	6,000	7.3	3,020	8.7	4,630	7.4	3,120	6.1	1,980	5.9	1,820
2	9.3	5,440	7.2	2,920	8.8	4,760	7.2	2,920	6.1	1,980	5.95	1,860
4	8.9	4,890	7.2	2,920	8.8	4,760	7.1	2,820	6.05	1,940	6.0	1,900
6	8.6	4,500	7.2	2,920	8.7	4,630	6.9	2,630	6.05	1,940	6.1	1,980
8	8.3	4,140	7.3	3,020	8.6	4,500	6.8	2,540	6.0	1,900	6.1	1,980
10	8.1	3,900	7.4	3,120	8.5	4,380	6.7	2,460	5.95	1,860	6.2	2,060
M	7.9	3,670	7.6	3,340	8.4	4,260	6.6	2,380	5.95	1,860	6.2	2,060

*Mean for the day.

North Nashua River near Leominster, Mass.

Location.- Lat. 42°30'10", long. 71°43'20", 1 1/3 miles above mouth of Wekepeke Brook, 2 1/2 miles southeast of Leominster, Worcester County, and 6.1 miles above confluence with South Branch of Nashua River. Zero of gage is 270.04 feet above mean sea level.
Drainage area.- 107 square miles.
Gage-height record.- Water-stage recorder graph except for period 11 a.m. to midnight Mar. 12 and noon Mar. 18 to 4:30 a.m. Mar 19, when it was based on flood marks and shape of available water-stage recorder graph. Gage heights given to half tenths between 2.80 and 4.10 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 6. Defined by current-meter measurements below 5,500 second-feet; extended to peak stage by determination of flood flow over dam (head, 10.2 feet, 53% submerged; C, 3.1); verified by drainage-area comparison of instantaneous and total yield of flood records for other streams in Merrimack River basin.
Maxima.- 1936: Discharge, 16,300 second-feet 8 p.m. Mar. 18 (gage height, 20.53 feet).
Remarks.- Flood run-off affected by some artificial storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	94	103	443	11	143	360	790	21	210	1,960	329
2	90	162	438	12	126	3,340	680	22	110	1,780	306
3	125	155	713	13	131	2,480	610	23	140	1,180	288
4	153	170	650	14	132	1,430	497	24	180	847	272
5	164	235	580	15	128	1,120	425	25	120	818	196
6	148	227	940	16	118	1,290	498	26	137	720	133
7	148	118	660	17	150	1,610	448	27	162	594	202
8	133	116	555	18	206	7,530	365	28	158	650	207
9	142	184	520	19	202	6,590	331	29	110	728	195
10	139	285	510	20	193	1,930	347	30		690	181
								31		565	
Mean monthly discharge, in second-feet									145	1,289	444
Run-off, in inches									1.47	13.83	4.63

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	2.16	102	2.28	117	3.05	226	4.1	319	8.5	580	17.45	3,380
4	2.10	95	2.26	114	3.0	219	4.0	313	10.5	785	17.3	3,200
6	2.27	115	2.26	114	3.05	226	4.1	319	13.0	1,110	17.15	3,020
8	2.38	129	2.28	117	3.05	226	4.1	319	15.5	1,600	17.0	2,860
10	2.12	97	2.6	160	3.15	238	4.4	334	17.3	3,200	16.8	2,650
N	2.17	103	2.85	198	3.7	294	4.5	339	18.05	4,260	16.65	2,500
2	2.31	120	2.9	205	3.9	307	4.7	349	18.5	5,100	16.5	2,350
4	2.39	131	3.25	250	4.3	329	5.1	366	18.7	5,500	16.35	2,200
6	2.37	128	3.35	262	4.7	349	5.5	385	18.6	5,300	16.25	2,120
8	2.37	128	3.2	244	4.6	344	5.8	400	18.3	4,710	16.1	1,980
10	2.34	124	3.15	238	4.4	334	6.1	416	18.0	4,180	15.9	1,820
M	2.30	119	3.1	232	4.2	324	6.8	458	17.7	3,720	15.7	1,690
	March 14		March 15		March 16		March 17		March 18		March 19	
2	15.6	1,640	14.0	1,270	13.5	1,190	14.9	1,430	16.35	2,200	18.7	13,600
4	15.5	1,600	13.9	1,250	13.6	1,210	14.9	1,430	16.45	2,300	17.9	12,200
6	15.3	1,530	13.7	1,220	13.8	1,240	15.0	1,450	16.55	2,400	17.1	10,600
8	15.2	1,500	13.4	1,170	13.9	1,250	15.1	1,480	16.7	2,550	16.2	8,780
10	15.0	1,450	13.1	1,130	14.0	1,270	15.2	1,500	17.05	2,920	15.4	7,110
N	14.8	1,410	12.7	1,070	14.2	1,300	15.2	1,500	17.65	3,750	14.8	5,910
2	14.7	1,390	12.4	1,030	14.2	1,300	15.3	1,530	18.6	5,250	14.2	4,730
4	14.5	1,350	12.2	1,010	14.3	1,320	15.4	1,560	19.5	8,750	13.8	4,030
6	14.5	1,350	12.2	1,010	14.4	1,330	15.6	1,640	20.2	13,100	13.4	3,450
8	14.4	1,330	12.5	1,040	14.5	1,350	15.8	1,750	20.5	16,300	13.1	3,090
10	14.3	1,320	12.8	1,080	14.6	1,370	16.05	1,940	20.3	16,000	12.9	2,870
M	14.2	1,300	13.2	1,140	14.7	1,390	16.2	2,070	19.5	14,800	12.7	2,660
	March 20		March 21		March 22		March 23		March 24		March 25	
2	12.5	2,460	11.4	1,530	12.2	2,180	11.2	1,390	10.5	955	10.0	720
4	12.4	2,370	11.4	1,530	12.1	2,090	11.1	1,320	10.5	955	10.0	720
6	12.2	2,180	11.4	1,530	12.0	2,000	11.1	1,320	10.5	955	10.0	720
8	12.1	2,090	11.5	1,600	11.9	1,920	11.0	1,250	10.4	900	10.1	735
10	12.0	2,000	11.6	1,680	11.8	1,840	10.9	1,190	10.4	900	10.2	790
N	11.9	1,920	11.9	1,920	11.8	1,840	10.9	1,190	10.4	900	10.3	845
2	11.8	1,840	12.1	2,090	11.7	1,760	10.8	1,130	10.3	845	10.4	900
4	11.7	1,760	12.3	2,280	11.6	1,680	10.8	1,130	10.2	790	10.4	900
6	11.6	1,680	12.4	2,370	11.5	1,600	10.8	1,130	10.2	790	10.4	900
8	11.6	1,680	12.4	2,370	11.4	1,530	10.7	1,070	10.1	735	10.4	900
10	11.5	1,600	12.4	2,370	11.3	1,460	10.6	1,010	10.0	720	10.3	845
M	11.4	1,530	12.3	2,280	11.3	1,460	10.6	1,010	10.0	720	10.3	845

Nashua River at East Pepperell, Mass.

Location.- Lat. 42°40'0", long. 71°34'35", 200 feet downstream from power station of Nashua River Paper Co. in East Pepperell, Middlesex County.

Drainage area.- 433 square miles; net (exclusive of diverted parts on South Branch of Nashua River above Clinton, Mass.) 324 square miles.

Gage-height record.- Water-stage recorder graph except for period 3 a.m. Mar. 19 to 11 a.m. Mar. 23, when it was based on occasional observed gage readings, flood marks, and shape of available water-stage recorder graph. Gage heights given to half-tenths between 3.90 and 5.80 feet; hundredths below and tenths above these limits.

Stage-discharge relation.- Defined by current-meter measurements below 11,800 second-feet; extended to peak stage by velocity-area study at control section; verified by drainage-area comparison of instantaneous and total yield of flood with records for other streams in Merrimack River Basin.

Maxima.- 1936: Discharge, 20,900 second-feet 2 to 6 a.m. Mar. 20 (gage height, 19.1 feet).

Remarks.- Flood run-off considerably affected by artificial storage and diversions on 109 square miles on South Branch of Nashua River; slightly affected by artificial and natural storage on other parts.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	217	22	2,350	11	355	1,040	1,980	21	622	12,500	1,370
2	27	618	2,450	12	439	2,280	2,010	22	177	8,860	1,200
3	288	476	2,420	13	418	5,840	2,140	23	24	6,370	1,000
4	419	599	2,360	14	416	7,320	2,080	24	663	4,310	790
5	508	647	2,200	15	296	4,700	1,940	25	569	3,300	690
6	600	850	2,080	16	103	3,690	1,890	26	460	2,870	892
7	673	262	2,500	17	375	3,150	1,850	27	463	2,750	543
8	167	22	2,400	18	832	3,750	1,700	28	613	2,700	682
9	25	842	2,300	19	460	14,200	1,580	29	246	2,800	677
10	274	764	2,020	20	548	19,400	1,460	30		2,650	671
								31		2,260	
Mean monthly discharge, in second-feet									389	3,930	1,674
Run-off, in inches									-	-	-

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	1.92	21	-	-	3.76	1,060	3.73	1,030	3.80	1,100	9.1	4,200
4	1.92	21	1.95	22	3.33	647	3.73	1,030	3.83	1,130	9.3	4,300
6	2.00	25	3.83	1,130	3.33	647	3.73	1,030	3.85	1,150	9.6	4,450
8	1.95	22	-	-	3.33	647	3.72	1,020	3.95	1,240	10.0	4,650
10	-	-	-	-	3.33	647	3.33	647	3.53	830	10.4	4,890
N	1.95	22	3.80	1,100	3.33	647	3.76	1,060	4.8	1,910	10.8	5,160
2	-	-	-	-	3.33	647	3.76	1,060	5.6	2,420	11.4	5,790
4	-	-	-	-	3.33	647	3.76	1,060	6.7	3,050	11.9	6,490
6	-	-	-	-	3.62	920	3.76	1,060	7.2	3,300	12.2	6,930
8	-	-	-	-	3.61	910	3.76	1,060	7.7	3,530	12.5	7,380
10	-	-	-	-	3.61	910	3.72	1,020	8.1	3,700	12.7	7,700
M	1.95	22	3.78	1,080	3.74	1,040	3.73	1,030	8.6	3,950	13.0	8,180
	March 14		March 15		March 16		March 17		March 18		March 19	
2	13.1	8,350	11.2	5,540	9.3	4,300	7.2	3,300	6.9	3,150	11.4	5,790
4	13.1	8,350	10.9	5,240	8.9	4,100	7.1	3,250	6.9	3,150	12.1	6,780
6	13.0	8,180	10.6	5,020	8.6	3,950	7.0	3,200	7.0	3,200	13.0	8,180
8	12.9	8,020	10.4	4,890	8.3	3,800	6.9	3,150	7.0	3,200	14.0	9,880
10	12.8	7,860	10.2	4,770	8.1	3,700	6.8	3,100	7.2	3,300	15.0	11,700
N	12.6	7,540	10.0	4,650	7.9	3,610	6.8	3,100	7.4	3,400	16.0	13,600
2	12.5	7,380	9.9	4,600	7.8	3,570	6.6	3,000	7.8	3,570	17.0	15,600
4	12.3	7,080	9.7	4,500	7.8	3,570	6.9	3,150	8.3	3,800	18.1	18,100
6	12.1	6,780	9.5	4,400	7.6	3,490	6.9	3,150	8.9	4,100	18.7	19,700
8	11.9	6,490	9.3	4,300	7.5	3,450	6.9	3,150	9.4	4,350	18.9	20,300
10	11.6	6,070	9.2	4,250	7.4	3,400	6.9	3,150	10.1	4,710	19.0	20,600
M	11.4	5,790	9.3	4,300	7.3	3,350	6.9	3,150	10.7	5,090	19.0	20,600
	March 20		March 21		March 22		March 23		March 24		March 25	
2	19.1	20,900	17.2	16,000	14.0	9,880	12.6	7,540	10.7	5,060	8.7	3,610
4	19.1	20,900	16.8	15,200	13.9	9,710	12.4	7,230	10.5	4,880	8.6	3,540
6	19.1	20,900	16.5	14,600	13.8	9,540	12.3	7,080	10.3	4,720	8.5	3,480
8	19.0	20,600	16.1	13,800	13.7	9,370	12.2	6,930	10.1	4,560	8.4	3,420
10	18.9	20,300	15.8	13,200	13.6	9,200	12.0	6,630	10.0	4,490	8.3	3,350
N	18.8	20,000	15.4	12,400	13.5	9,030	11.9	6,490	9.8	4,350	8.2	3,280
2	18.7	19,700	15.1	11,900	13.4	8,860	11.7	6,210	9.6	4,210	8.2	3,280
4	18.5	19,200	14.8	11,300	13.2	8,520	11.6	6,070	9.4	4,070	8.1	3,220
6	18.3	18,700	14.6	11,000	13.1	8,350	11.5	5,930	9.3	4,000	8.0	3,160
8	18.1	18,100	14.4	10,600	13.0	8,180	11.3	5,660	9.1	3,870	7.9	3,090
10	17.8	17,400	14.3	10,400	12.9	8,020	11.1	5,430	9.0	3,800	7.9	3,090
M	17.5	16,700	14.1	10,100	12.7	7,700	10.9	5,240	8.8	3,680	7.8	3,020

South Branch of Nashua River at Clinton, Mass.

Location.- Lat. 42°24'15", long. 71°41'25", at Wachusett Dam, 1 mile south of Clinton, Worcester County.

Drainage area.- Total above Wachusett Dam, 118.19 square miles; net, exclusive of Pine Hill drainage area, 108.84 square miles. Prior to 1907, 119 square miles at site 2 miles downstream.

Stage-discharge relation.- Discharge computed from flow over spillway and through Venturi meter.

Maxima.- 1936: Observed discharge, 4,680 second-feet 3:30 p.m. Mar. 19. Discharge corrected for storage and diversions, 11,100 second-feet 11:30 p.m. Mar. 18 (total drainage area contributing).

1896-1935: Discharge, 9,550 second-feet 11 p.m. Feb. 13, 1900 (prior to completion of Wachusett Reservoir), at site 2 miles downstream.

Remarks.- Flow regulated by storage in Wachusett Reservoir and other ponds. Discharge corrected for diversions into and from reservoir, and for storage. Records furnished by water division of the Metropolitan District Commission.

Mean discharge (second-feet) and gain or loss in storage (millions of cubic feet), 1936

Day	February			March			April		
	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge
1	2.2	-1.7	97	4.0	+6.5	80	355	-12.7	433
2	4.2	+8.2	105	4.2	-4.9	176	335	+5.4	623
3	4.0	-9.9	117	4.0	-1.6	216	381	0	590
4	4.2	-1.6	211	4.2	-6.5	157	416	+7.2	560
5	4.0	-12.9	82	4.2	0	235	456	+10.9	540
6	4.0	-9.9	118	4.3	-4.9	178	576	+19.9	1,000
7	4.2	-9.8	119	2.3	0	127	646	-3.6	778
8	2.6	-3.3	79	4.3	+9.8	118	538	-16.3	544
9	4.2	+13.1	156	4.2	-3.3	196	369	-9.0	477
10	4.0	-11.5	99	4.3	+1.6	253	329	-3.6	513
11	4.0	-9.8	118	4.3	+100.4	1,300	371	+18.1	668
12	4.0	-11.4	99	4.3	+504.8	4,860	493	+10.9	585
13	4.0	-6.5	157	2.5	+303.1	1,940	448	-12.7	518
14	4.0	-3.2	195	3.6	+136.7	1,030	359	-16.3	395
15	2.9	-1.6	100	5.1	+89.9	1,040	349	+7.2	659
16	4.0	+17.9	212	6.8	+83.1	969	346	-1.8	556
17	4.0	-4.9	198	8.2	+108.3	1,260	294	-16.3	323
18	4.0	-1.6	236	739	+580.9	7,160	275	+1.8	377
19	4.2	-4.9	199	4,090	-3.7	3,740	309	+5.4	348
20	4.0	+13.1	155	2,740	-67.6	1,770	326	+1.8	327
21	4.0	+11.4	136	2,170	-14.6	1,840	48	+3.6	324
22	2.9	+11.5	136	1,870	-32.8	1,390	22	0	257
23	4.2	+9.9	118	1,320	-47.2	961	22	0	263
24	4.2	-8.2	140	921	-25.4	824	21	-5.4	214
25	4.0	-6.6	157	753	-16.3	766	21	+7.2	221
26	4.0	-8.2	140	620	-14.5	659	21	+12.7	168
27	4.2	-6.5	159	609	+18.1	1,000	21	-5.4	213
28	4.2	-6.5	158	796	+9.1	942	21	-5.4	216
29	2.5	+1.6	137	818	-5.4	707	21	-5.4	213
30				637	-21.7	598	21	-7.2	192
31				477	-19.9	467			

	February	March	April
Mean monthly discharge, in second-feet (observed)	3.82	601	274
Gain or loss in storage, in millions of cubic feet	-53.8	+1,662.0	-9.0
Mean monthly discharge, in second-feet (corrected)	143	1,192	436
Run-off from net area, in inches (corrected)	1.41	12.68	4.47

Asnebumskit Brook Basin at outlets of Pine Hill and Kendall Reservoirs, near Eagleville, Mass.

Location.- Outlet of Pine Hill Reservoir, lat. 42°21'5", long. 71°54'25", 1½ miles southwest of Eagleville, Worcester County.
Outlet of Kendall Reservoir, lat. 42°21'0", long. 71°53'15", 1 mile south of Eagleville, Worcester County.
Drainage area.- 9.43 square miles (tributary to Quinapoxet River).
Stage-discharge relation.- Observed discharge is combined flow for water supply of City of Worcester, and wastage which is determined by weir rating.
Remarks.- Daily and monthly discharges corrected for storage in Pine Hill and Kendall Reservoirs. Discharge and storage figures compiled from basic data furnished by the Department of Public Health of Massachusetts and City of Worcester.

Mean discharge (second-feet) and gain or loss in storage (millions of cubic feet), 1936

Day	February			March			April		
	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge
1	0	+0.33	3.8	21	-0.60	14	28	+1.40	44
2	0	+.51	5.9	21	-.20	18	28	+1.00	40
3	0	+.87	10	21	+.13	22	44	-1.54	27
4	0	+.83	9.6	21	-.07	20	54	+.33	58
5	0	+.68	7.9	21	0	21	41	+1.74	62
6	0	+.48	5.6	21	-.27	18	58	+.94	69
7	0	+.60	6.9	21	-.80	11	75	-.60	68
8	0	+.82	9.5	21	-.40	16	60	-.27	56
9	0	+.87	10	21	+1.34	36	42	+.40	47
10	0	+.67	7.8	21	+18.58	236	29	+1.74	49
11	0	+.40	4.6	21	+37.16	451	29	+1.27	44
12	0	+.40	4.6	0	+22.59	262	34	+.07	35
13	0	+.47	5.4	0	+8.42	98	37	+.20	40
14	0	+.47	5.4	0	+6.42	74	29	+.53	36
15	0	+.60	6.9	0	+5.35	62	25	+.33	29
16	0	+.67	7.8	0	+12.57	146	26	-.40	21
17	0	+3.01	35	0	+27.67	320	37	-.27	34
18	0	+2.54	29	292	+18.85	510	35	-.07	35
19	21	+.27	24	307	-12.03	168	24	0	24
20	21	-.40	16	187	-3.21	150	21	-.33	17
21	21	-.87	11	173	-3.48	133	21	-.67	13
22	21	-.87	11	104	-2.34	77	34	-.60	27
23	21	-.80	11	69	-.80	59	28	-.60	21
24	21	-.33	17	57	-.27	54	15	-.47	9.5
25	21	-.47	15	53	-.67	45	15	-.27	12
26	21	-.40	16	47	+1.40	64	15	-.20	13
27	21	-.47	15	70	+.94	81	15	-.20	13
28	21	-1.07	8.3	75	-2.14	50	15	-.13	13
29	21	-.94	9.8	48	-1.20	34	15	-.33	11
30				40	-.74	32	15	-.40	10
31				33	-.33	29			

	February	March	April
Mean monthly discharge, in second-feet (observed)	7.97	57.6	31.5
Gain or loss in storage, in millions of cubic feet	+8.87	+131.87	+2.60
Mean monthly discharge, in second-feet (corrected)	11.4	107	32.6
Run-off, in inches (corrected)	1.30	13.03	3.86

Sudbury River at Framingham Center, Mass.

Location.- Lat. 42°17'30", long. 71°26'40", at dam of Framingham Reservoir No. 1, half a mile above outlet of Farm Pond and three-quarters of a mile southwest of Framingham Center, Middlesex County.
Drainage area.- 75.2 square miles since 1881.
Stage-discharge relation.- Discharge is combined flow over dam and through Venturi meter.
Maxima.- 1936: Mean daily discharge, 1,960 second-feet Mar. 12.
1875-1935: Mean daily discharge, 2,050 second-feet Feb. 14, 1886.
Remarks.- Mean monthly discharge corrected for storage and diversions into dam and from reservoir. Records furnished by water division of the Metropolitan District Commission.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	47	92	341	11	50	295	380	21	147	1,000	181
2	41	92	442	12	49	1,960	359	22	152	987	126
3	44	94	454	13	49	1,550	365	23	165	822	117
4	66	90	400	14	63	1,300	335	24	175	715	105
5	94	109	396	15	49	956	323	25	176	719	82
6	116	103	442	16	52	595	338	26	148	686	73
7	94	95	442	17	90	586	327	27	131	670	69
8	68	92	439	18	104	864	318	28	120	680	69
9	59	102	428	19	117	1,360	307	29	96	633	74
10	58	150	428	20	139	1,130	298	30		569	73
								31		503	
Mean monthly discharge, in second-feet (observed)									95.1	632	284
Gain or loss in storage, in millions of cubic feet									-137.6	+130.1	-37.9
Mean monthly discharge, in second-feet (corrected)									95.0	753	271
Run-off, in inches (corrected)									1.36	11.53	4.02

Lake Cochituate outlet at Cochituate, Mass.

Location.- Lat. 42°18'45", long. 71°23'15", at outlet three-eighths of a mile north of Cochituate railroad station, Middlesex County, and 1¼ miles above confluence with Sudbury River.
Drainage area.- 17.58 square miles since 1911.
Stage-discharge relation.- Discharge is combined flow over dam and through Venturi meter.
Maxima.- 1936: Mean daily discharge, 248 second-feet Mar. 22.
1898-1935: Mean daily discharge, 240 second-feet Mar. 2, 1900.
Remarks.- Mean monthly discharge corrected for storage and diversions into and from Lake Cochituate. Records furnished by water division of the Metropolitan District Commission.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	0	82	55	11	0	38	59	21	73	246	45
2	0	79	55	12	0	189	60	22	71	248	45
3	0	76	57	13	26	214	60	23	69	243	45
4	0	33	57	14	26	219	60	24	23	235	25
5	0	33	57	15	26	218	60	25	23	228	24
6	0	34	58	16	26	216	84	26	88	113	26
7	0	34	58	17	79	212	82	27	93	112	26
8	0	34	59	18	78	215	81	28	90	114	26
9	0	34	59	19	76	234	80	29	86	113	26
10	0	35	59	20	75	243	79	30		111	26
								31		55	
Mean monthly discharge, in second-feet (observed)									35.4	138	53.1
Gain or loss in storage, in millions of cubic feet									-29.3	+38.8	+2.6
Mean monthly discharge, in second feet (corrected)									25.0	158	58.0
Run-off, in inches (corrected)									1.53	10.36	3.68

Ipswich River near Ipswich, Mass.

Location.- Lat. 42°39'35", long. 70°53'35", 200 feet below Willowdale Dam, 1½ miles below Howlett Brook, and 4 miles above Ipswich, Essex County. Zero of gage is 20.63 feet above mean sea level.

Drainage area.- 124 square miles exclusive of Suntaug Lake.

Gage-height record.- Water-stage recorder graph. Gage heights given to half tenths between 5.20 and 6.20 feet; hundredths below and tenths above these limits.

Stage-discharge relation.- Defined by current-meter measurements below 2,530 second-feet.

Maxima.- 1936: Discharge, 2,610 second-feet 2 p.m. Mar. 15 (gage height, 7.70 feet).
1930-1935: Discharge, 1,580 second-feet Mar. 7, 1934 (gage height, 6.06 feet).

Remarks.- Flood run-off considerably affected by natural storage; slightly affected by diversions.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	174	240	670	11	110	347	577	21	134	1,690	386
2	160	232	626	12	108	971	591	22	136	1,600	368
3	149	229	670	13	112	1,900	584	23	141	1,440	350
4	141	236	692	14	112	2,330	564	24	149	1,260	332
5	134	247	685	15	108	2,490	534	25	165	1,100	319
6	130	251	670	16	106	2,250	516	26	184	978	314
7	125	266	648	17	114	1,970	492	27	212	880	306
8	120	266	648	18	120	1,810	456	28	209	902	298
9	114	270	626	19	125	1,730	440	29	225	895	286
10	110	286	591	20	130	1,720	410	30		850	274
								31		768	
Mean monthly discharge, in second-feet									140	1,045	497
Run-off, in inches									1.22	9.72	4.47

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	4.21	314	4.56	486	6.05	1,560
4	-	-	-	-	-	-	4.21	314	4.65	540	6.2	1,660
6	4.07	259	4.10	270	4.11	274	4.21	314	4.75	605	6.3	1,720
8	-	-	-	-	-	-	4.21	314	4.86	685	6.4	1,790
10	-	-	-	-	-	-	4.22	319	5.00	790	6.4	1,790
N	4.08	262	4.10	270	4.12	278	4.24	328	5.17	918	6.6	1,920
2	-	-	-	-	-	-	4.26	336	5.3	1,020	6.6	1,920
4	-	-	-	-	-	-	4.28	345	5.45	1,130	6.8	2,050
6	4.11	274	4.11	274	4.17	298	4.31	359	5.6	1,240	6.9	2,120
8	-	-	-	-	-	-	4.35	377	5.75	1,340	6.9	2,120
10	-	-	-	-	-	-	4.41	405	5.85	1,420	6.9	2,120
M	4.10	270	4.11	274	4.20	310	4.48	440	5.95	1,480	6.8	2,050
	March 14		March 15		March 16		March 17		March 18		March 19	
2	6.8	2,050	-	-	-	-	-	-	-	-	-	-
4	6.8	2,050	7.5	2,490	7.3	2,370	6.8	2,050	6.5	1,860	6.3	1,720
6	6.7	1,980	-	-	-	-	-	-	-	-	-	-
8	6.7	1,980	7.4	2,430	7.2	2,310	-	-	-	-	-	-
10	7.1	2,240	-	-	-	-	-	-	-	-	-	-
N	7.4	2,430	7.4	2,430	7.1	2,240	6.7	1,980	6.5	1,860	6.3	1,720
2	7.5	2,490	7.7	2,610	-	-	-	-	-	-	-	-
4	7.6	2,550	7.6	2,550	7.0	2,180	-	-	-	-	-	-
6	7.6	2,550	7.6	2,550	-	-	-	-	-	-	-	-
8	-	-	7.5	2,490	6.9	2,120	6.6	1,920	6.4	1,790	6.3	1,720
10	7.6	2,550	-	-	-	-	-	-	-	-	-	-
M	-	-	7.4	2,430	6.9	2,120	-	-	-	-	-	-
	March 20		March 21		March 22		March 23		March 24		March 25	
2	-	-	-	-	-	-	-	-	-	-	-	-
4	6.3	1,720	6.2	1,660	6.2	1,660	5.95	1,480	5.75	1,340	5.5	1,160
6	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	5.7	1,310	5.45	1,130
10	-	-	6.2	1,660	6.15	1,620	-	-	-	-	-	-
N	6.3	1,720	6.3	1,720	6.1	1,590	5.9	1,450	5.65	1,280	5.4	1,090
2	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	6.3	1,720	6.05	1,560	5.85	1,420	5.6	1,240	5.4	1,090
6	-	-	-	-	-	-	-	-	-	-	-	-
8	6.3	1,720	6.2	1,660	6.05	1,560	5.8	1,380	5.55	1,200	5.35	1,050
10	-	-	-	-	-	-	-	-	-	-	-	-
M	-	-	-	-	6.0	1,520	5.8	1,380	5.5	1,160	5.3	1,020

Outlets of Winchester Reservoirs near Winchester, Mass.

Location.- Northern outlet, lat. 42°27'55", long. 71°7'10", in Town of Winchester. Southern outlet, lat. 42°26'20", long. 71°07'10", in City of Medford, Middlesex County.
Drainage area.- 1.25 square miles (tributary to Mystic River).
Stage-discharge relation.- Observed discharge is combined flow of wastage, leakage, and water consumption by Town of Winchester.
Remarks.- Discharge and storage figures compiled from basic data furnished by the Town of Winchester, Mass. Discharge corrected for storage in Winchester Reservoirs.

Mean discharge (second-feet) and gain or loss in storage (millions of cubic feet), 1936

Day	February			March			April		
	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge
1	1.4	-0.07	0.6	1.4	-0.05	0.8	1.4	+0.13	2.9
2	1.4	-.04	1.0	1.4	0	1.4	1.3	+.07	2.1
3	1.4	-.04	1.0	1.6	0	1.6	1.4	+.07	2.2
4	1.6	-.04	1.2	1.4	+.13	2.9	1.4	+.13	2.9
5	1.4	-.04	1.0	1.3	+.13	2.8	1.2	+.13	2.7
6	1.3	-.04	.8	1.4	+.13	2.9	1.8	+.13	3.3
7	1.5	-.04	1.1	1.4	+.27	4.5	2.2	+.13	3.7
8	1.3	-.04	.8	1.4	+.40	6.0	2.8	+.13	4.3
9	1.3	0	1.3	1.4	+.67	9.2	2.2	+.27	5.4
10	1.3	0	1.3	1.2	+.80	10	2.8	+.20	5.1
11	1.4	+.07	2.2	1.4	+3.21	39	2.9	+.13	4.4
12	1.8	+.13	3.3	1.4	+4.68	56	4.3	+.13	5.8
13	1.3	+.20	3.6	1.6	+2.01	25	4.0	+.20	6.3
14	1.1	+.40	5.7	1.3	+.80	11	3.4	-.06	2.7
15	1.4	+.53	7.6	1.3	+.53	7.4	3.2	-.06	2.4
16	1.4	+.53	7.6	1.3	+.40	5.9	3.6	-.06	2.9
17	1.4	+.40	6.0	1.5	+.67	9.3	3.2	-.06	2.4
18	1.4	+.13	2.9	1.4	+1.74	22	2.7	-.06	2.0
19	1.3	+.20	3.6	1.5	+1.60	20	2.0	-.06	1.3
20	1.4	+.13	2.9	2.4	+.67	10	1.5	-.06	.8
21	1.4	+.13	2.9	7.3	+.27	10	1.8	-.04	1.3
22	1.3	+.13	2.9	9.3	+.27	12	1.9	-.04	1.4
23	1.3	+.13	2.9	7.1	-.13	5.6	1.9	-.04	1.4
24	1.3	+.07	2.1	6.4	-.13	4.9	1.4	-.04	1.0
25	1.6	0	1.6	6.4	-.13	4.9	1.4	-.04	1.0
26	1.5	0	1.5	5.5	0	5.5	1.2	-.04	.7
27	1.4	-.05	.8	5.0	+.07	5.8	1.2	-.04	.7
28	1.2	-.05	.6	9.2	+.07	10	1.8	-.09	.7
29	1.4	-.05	.8	6.3	0	6.3	1.3	-.05	.7
30				4.0	0	4.0	1.2	-.05	.6
31				4.3	0	4.3			

	February	March	April
Mean monthly discharge, in second-feet (observed)...........	1.39	3.22	2.15
Gain or loss in storage, in millions of cubic feet..........	+2.68	+19.08	+0.96
Mean monthly discharge, in second-feet (corrected)..........	2.47	10.4	2.50
Run-off, in inches (corrected)..............................	2.14	9.59	2.23

Charles River at Waltham, Mass.

Location.- Lat. 42°22'20", long. 71°14'5", 600 feet below Moody Street Bridge in Waltham, Middlesex County, and a third of a mile above mouth of Clematis Brook. Zero of gage is 20.02 feet above mean sea level.
Drainage area.- 225 square miles, not including 23 square miles, drainage area of Stony Brook.
Gage-height record.- Water-stage recorder graph. Gage heights given to hundredths below and half tenths above 2.70 feet.
Stage-discharge relation.- Defined by current-meter measurements below 2,130 second-feet; extended to peak stage by study of flow characteristics at control section; verified by comparison of peak discharge and total run-off of flood with determinations for nearby streams.
Maxima.- 1936: Discharge, 2,540 second-feet 4 a.m. to 6 a.m. Mar. 19 (gage height, 4.79 feet).
1931-35: Discharge, 1,520 second-feet (revised) Apr. 19, 1933 (gage height, 3.92 feet).
Remarks.- Flood run-off affected by artificial and natural storage and by diversions.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	226	256	1,130	11	176	546	880	21	219	2,290	671
2	176	256	1,100	12	117	1,400	910	22	237	2,230	649
3	176	256	1,090	13	111	1,770	880	23	200	2,170	632
4	173	279	1,020	14	146	1,820	852	24	210	2,050	561
5	171	299	970	15	55	1,930	852	25	226	1,880	474
6	171	307	970	16	94	2,050	825	26	226	1,720	490
7	120	312	970	17	204	2,110	798	27	230	1,620	484
8	188	324	940	18	271	2,230	770	28	226	1,570	468
9	95	346	910	19	228	2,480	715	29	248	1,430	442
10	128	403	880	20	185	2,350	693	30		1,310	417
								31		1,200	
Mean monthly discharge, in second-feet									180	1,329	781
Run-off, in inches									-	-	-

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	1.94	320	1.98	337	2.04	364	2.25	468	2.7	715	4.2	1,820
4	1.94	320	1.98	337	2.05	369	2.26	474	2.9	825	4.15	1,770
6	1.94	320	1.98	337	2.05	369	2.27	479	3.05	910	4.15	1,770
8	1.94	320	1.99	342	2.06	374	2.28	484	3.25	1,030	4.15	1,770
10	1.94	320	2.00	346	2.07	378	2.63	676	3.5	1,200	4.15	1,770
N	1.94	320	2.00	346	2.08	383	2.41	556	3.7	1,350	4.15	1,770
2	1.95	324	2.00	346	2.11	397	2.36	528	3.85	1,480	4.1	1,720
4	1.95	324	2.01	351	2.15	417	2.36	528	4.05	1,670	4.1	1,720
6	1.96	329	2.01	351	2.18	432	2.40	550	4.3	1,930	4.15	1,770
8	1.96	329	2.02	355	2.20	442	2.43	566	4.3	1,930	4.1	1,720
10	1.97	333	2.02	355	2.22	453	2.48	594	4.25	1,880	4.15	1,770
M	1.97	333	2.03	360	2.23	458	2.57	644	4.2	1,820	4.15	1,770
	March 14		March 15		March 16		March 17		March 18		March 19	
2	4.15	1,770	4.25	1,880	4.35	1,990	4.45	2,110	4.45	2,110	4.75	2,480
4	4.15	1,770	4.25	1,880	4.4	2,050	4.45	2,110	4.45	2,110	4.8	2,540
6	4.15	1,770	4.25	1,880	4.4	2,050	4.45	2,110	4.45	2,110	4.8	2,540
8	4.15	1,770	4.25	1,880	4.4	2,050	4.45	2,110	4.45	2,110	4.7	2,410
10	4.15	1,770	4.25	1,880	4.4	2,050	4.45	2,110	4.45	2,110	4.75	2,480
N	4.15	1,770	4.3	1,930	4.4	2,050	4.45	2,110	4.45	2,110	4.7	2,410
2	4.2	1,820	4.3	1,940	4.4	2,050	4.45	2,110	4.55	2,230	4.75	2,480
4	4.3	1,930	4.3	1,940	4.45	2,110	4.45	2,110	4.55	2,230	4.75	2,480
6	4.25	1,880	4.3	1,940	4.45	2,110	4.45	2,110	4.6	2,290	4.75	2,480
8	4.25	1,880	4.35	1,990	4.45	2,110	4.45	2,110	4.7	2,410	4.75	2,480
10	4.25	1,880	4.35	1,990	4.45	2,110	4.45	2,110	4.7	2,410	4.75	2,480
M	4.25	1,880	4.35	1,990	4.45	2,110	4.45	2,110	4.75	2,480	4.75	2,480
	March 20		March 21		March 22		March 23		March 24		March 25	
2	4.75	2,480	4.6	2,290	4.6	2,290	4.5	2,170	4.4	2,050	4.3	1,930
4	4.75	2,480	4.55	2,230	4.6	2,290	4.5	2,170	4.4	2,050	4.3	1,930
6	4.7	2,410	4.55	2,230	4.6	2,290	4.45	2,110	4.4	2,050	4.3	1,930
8	4.7	2,410	4.55	2,230	4.6	2,290	4.45	2,110	4.4	2,050	4.3	1,930
10	4.7	2,410	4.6	2,290	4.55	2,230	4.55	2,230	4.45	2,110	4.3	1,930
N	4.7	2,410	4.65	2,350	4.55	2,230	4.6	2,290	4.4	2,050	4.25	1,880
2	4.65	2,350	4.6	2,290	4.55	2,230	4.55	2,230	4.4	2,050	4.25	1,880
4	4.65	2,350	4.6	2,290	4.5	2,170	4.5	2,170	4.35	1,990	4.2	1,820
6	4.65	2,350	4.6	2,290	4.5	2,170	4.5	2,170	4.35	1,990	4.2	1,820
8	4.6	2,290	4.6	2,290	4.5	2,170	4.45	2,110	4.35	1,990	4.2	1,820
10	4.6	2,290	4.6	2,290	4.5	2,170	4.45	2,110	4.3	1,930	4.15	1,770
M	4.6	2,290	4.6	2,290	4.5	2,170	4.45	2,110	4.35	1,990	4.15	1,770

Mother Brook at Dedham, Mass.

Location.- Lat. 42°15'20", long. 71°9'55", in Dedham, Norfolk County, 0.3 mile below point of diversion. Zero of gage is 0.03 foot below mean sea level.
Gage-height record.- Graph constructed from two gage readings daily. Gage heights given to tenths. Add 70.0 feet to all gage heights to convert to mean sea level.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 9. Defined by current-meter measurements below 883 second-feet.
Maxima.- 1936: Discharge, 900 second-feet 4 a.m. Mar. 19 (gage height, 21.37 feet).
1931-35: Discharge, 467 second-feet Apr. 17, 1935 (gage height, 19.29 feet).
Remarks.- Entire flow is a diversion from Charles River.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	75	87	407	11	45	181	299	21	76	856	199
2	69	89	388	12	45	297	299	22	75	862	189
3	62	95	369	13	45	505	282	23	75	838	180
4	57	96	351	14	50	655	282	24	75	801	171
5	54	106	333	15	57	781	266	25	76	747	162
6	54	107	316	16	54	854	266	26	79	663	153
7	54	110	316	17	66	850	250	27	81	602	145
8	51	116	316	18	84	834	235	28	83	582	137
9	49	130	299	19	80	874	222	29	85	522	129
10	45	157	299	20	77	856	210	30		483	129
								31		445	
Mean monthly discharge, in second-feet									64.8	490	253
Run-off, in inches											

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	17.1	-	17.1	-	17.2	153	17.4	171	17.7	199	19.1	426
4	17.1	-	17.1	-	17.2	153	17.4	171	17.8	210	19.2	445
6	17.1	-	17.1	-	17.2	153	17.4	171	17.9	222	19.3	464
8	17.1	-	17.1	-	17.2	153	17.4	171	18.1	250	19.3	464
10	17.1	-	17.1	-	17.2	153	17.5	180	18.2	266	19.4	483
N	17.1	*116	17.1	*130	17.2	153	17.5	180	18.3	282	19.5	502
2	17.1	-	17.1	-	17.2	153	17.5	180	18.4	299	19.6	522
4	17.1	-	17.1	-	17.3	162	17.5	180	18.5	316	19.6	522
6	17.1	-	17.1	-	17.3	162	17.6	189	18.7	351	19.7	542
8	17.1	-	17.1	-	17.3	162	17.6	189	18.8	369	19.7	542
10	17.1	-	17.1	-	17.3	162	17.6	189	18.9	388	19.8	562
M	17.1	-	17.1	-	17.3	162	17.7	199	19.0	407	19.9	582
	March 14		March 15		March 16		March 17		March 18		March 19	
2	19.9	582	20.6	726	21.1	834	21.2	856	21.1	834	21.3	878
4	20.0	602	20.7	747	21.2	856	21.2	856	21.1	834	21.4	900
6	20.1	622	20.7	747	21.2	856	21.2	856	21.1	834	21.3	878
8	20.1	622	20.8	768	21.2	856	21.2	856	21.0	812	21.3	878
10	20.2	642	20.8	768	21.2	856	21.2	856	21.0	812	21.3	878
N	20.3	663	20.8	768	21.2	856	21.2	856	21.0	812	21.2	856
2	20.3	663	20.9	790	21.2	856	21.2	856	21.0	812	21.2	856
4	20.3	663	20.9	790	21.2	856	21.2	856	21.1	834	21.2	856
6	20.4	684	21.0	812	21.2	856	21.2	856	21.1	834	21.3	878
8	20.4	684	21.0	812	21.2	856	21.1	834	21.2	856	21.3	878
10	20.5	705	21.0	812	21.2	856	21.1	834	21.2	856	21.3	878
M	20.6	726	21.1	834	21.2	856	21.1	834	21.3	878	21.3	878
	March 20		March 21		March 22		March 23		March 24		March 25	
2	21.2	856	21.2	856	21.2	856	21.2	856	21.0	812	20.9	790
4	21.2	856	21.2	856	21.2	856	21.2	856	21.0	812	20.9	790
6	21.2	856	21.2	856	21.2	856	21.2	856	21.0	812	20.9	790
8	21.2	856	21.2	856	21.3	878	21.2	856	21.0	812	20.8	768
10	21.2	856	21.2	856	21.3	878	21.1	834	21.0	812	20.8	768
N	21.2	856	21.2	856	21.3	878	21.1	834	21.0	812	20.8	768
2	21.2	856	21.2	856	21.2	856	21.1	834	20.9	790	20.7	747
4	21.2	856	21.2	856	21.2	856	21.1	834	20.9	790	20.6	726
6	21.2	856	21.2	856	21.2	856	21.1	834	20.9	790	20.5	705
8	21.2	856	21.2	856	21.2	856	21.1	834	20.9	790	20.5	705
10	21.2	856	21.2	856	21.2	856	21.0	812	20.9	790	20.5	705
M	21.2	856	21.2	856	21.2	856	21.0	812	20.9	790	20.5	705

*Mean for the day.

Stony Brook at outlet of Stony Brook Reservoir, near Waltham, Mass.

Location.- Lat. 42°21'15", long. 71°15'50", at outlet of Stony Brook Reservoir, 0.2 mile above confluence of Stony Brook and Charles River and 2.0 miles southwest of Moody Street Bridge in Waltham, Middlesex County.

Drainage area.- 23.6 square miles.

Stage-discharge relation.- Observed discharge is sum of flow over dam and diversion for water supply of City of Cambridge, but does not include a low undetermined flow through gate house to a mill pond.

Remarks.- Discharge and storage figures compiled from basic data furnished by Department of Public Health of Massachusetts and City of Cambridge. Discharge corrected for storage in Stony Brook Reservoir and Upper and Lower Hobbs Brook Reservoirs.

Mean discharge (second-feet) and gain or loss in storage (millions of cubic feet), 1936

Day	February			March			April		
	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge
1	19	+0.02	19	20	+0.61	27	79	+0.97	90
2	19	+.04	19	20	+.45	25	72	+.44	77
3	19	-.11	18	20	+.87	30	89	+.92	100
4	19	+.01	19	20	+1.18	34	96	+2.64	127
5	19	+.08	20	24	+1.01	36	90	+2.64	121
6	19	-.09	18	27	+.89	37	85	+2.74	117
7	21	-.09	20	25	+.48	31	102	+.31	106
8	19	-.29	16	23	+.95	34	107	-.35	103
9	19	-.35	15	23	+1.06	35	99	-.41	94
10	19	-.38	15	27	+1.46	44	89	0	89
11	19	-.78	10	45	+3.33	84	88	+.07	89
12	19	-.67	11	443	+12.10	585	95	+.06	96
13	21	-.58	14	428	+17.71	633	97	-.06	96
14	21	-.49	15	270	+9.85	384	91	-.16	89
15	19	-.10	18	195	+8.78	297	83	-.10	82
16	19	+.91	30	153	+1.76	173	84	-.06	83
17	19	+2.52	48	139	+15.20	315	78	-.16	76
18	19	+4.03	66	132	+20.70	372	66	-.60	59
19	19	+4.18	67	254	-4.88	198	61	-1.01	49
20	19	+4.42	70	231	+.64	238	56	-1.01	44
21	19	+4.17	67	174	+5.46	237	54	-.35	50
22	19	+4.07	66	155	+4.68	209	50	+.73	58
23	19	+3.68	62	125	+1.56	143	69	+.16	71
24	21	+3.24	59	106	+2.51	135	68	-.22	65
25	21	+2.04	45	73	+3.47	113	64	-.38	60
26	21	+.61	28	119	+.98	130	60	-.38	56
27	23	+.61	30	121	+4.62	174	58	-.22	55
28	21	+.46	26	145	+6.54	221	58	-.44	53
29	20	+.57	27	117	+1.78	138	55	0	55
30				104	+1.28	119	51	-.22	48
31				87	+1.13	100			

	February	March	April
Mean monthly discharge, in second-feet (observed)...........	19.7	124	76.5
Gain or loss in storage, in millions of cubic feet..........	+31.73	+128.16	+5.55
Mean monthly discharge, in second-feet (corrected)..........	32.3	172	78.6
Run-off, in inches (corrected).............................	1.48	8.40	3.72

Taunton River at State Farm, Mass.

Location.- Lat. 41°56'5", long. 70°57'20", at State Farm, Plymouth County, 1 mile upstream from mouth of Saw Mill Brook. Zero of gage is 9.61 feet above mean sea level.
Drainage area.- 260 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights given to half tenths between 5.10 and 6.30 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Defined by current-meter measurements below 2,990 second-feet; verified by drainage-area comparison of instantaneous and total yield of flood with nearby streams.
Maxima.- 1936: Discharge, 3,020 second-feet 10 a.m. to 6 p.m. Mar. 14 (gage height, 10.64 feet).
1929-35: Discharge, 3,050 second-feet Apr. 14, 1935 (gage height, 10.68 feet); discharge of 3,100 second-feet formerly published for Apr. 15, 1933 (gage height, 10.40 feet) revised to 2,960 second-feet.
Remarks.- Flood run-off affected by some artificial and natural storage; slightly affected by diversions.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	338	690	1,120	11	300	1,440	1,250	21	608	2,040	716
2	324	664	1,050	12	281	2,170	1,350	22	603	2,000	742
3	309	743	1,180	13	271	2,440	1,350	23	578	1,860	716
4	304	1,040	1,220	14	271	2,940	1,220	24	523	1,600	664
5	333	1,300	1,120	15	252	2,820	1,120	25	483	1,400	614
6	348	1,400	1,120	16	266	2,480	1,080	26	508	1,190	558
7	343	1,300	1,400	17	328	2,030	975	27	553	1,060	619
8	328	1,120	1,550	18	558	1,670	874	28	639	1,380	583
9	300	1,050	1,400	19	664	1,970	822	29	664	1,550	563
10	276	1,190	1,250	20	619	2,160	795	30		1,400	548
								31		1,250	
Mean monthly discharge, in second-feet									420	1,592	986
Run-off, in inches									1.62	6.12	3.79

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	6.2	1,200	5.95	1,080	6.0	1,100	6.5	1,350	7.2	1,700	8.8	2,400
4	6.15	1,180	5.95	1,080	6.05	1,120	6.6	1,400	7.5	1,840	8.7	2,360
6	6.15	1,180	5.9	1,050	6.05	1,120	6.6	1,400	7.7	1,930	8.6	2,320
8	6.15	1,180	5.9	1,050	6.05	1,120	6.6	1,400	7.9	2,020	8.6	2,320
10	6.1	1,150	5.9	1,050	6.1	1,150	6.7	1,450	8.1	2,110	8.7	2,360
N	6.1	1,150	5.85	1,020	6.1	1,150	6.7	1,450	8.3	2,200	8.8	2,400
2	6.05	1,120	5.85	1,020	6.15	1,180	6.7	1,450	8.5	2,280	8.9	2,440
4	6.0	1,100	5.85	1,020	6.25	1,220	6.7	1,450	8.7	2,360	9.0	2,480
6	5.95	1,080	5.9	1,050	6.3	1,250	6.8	1,500	8.9	2,440	9.1	2,520
8	5.95	1,080	5.9	1,050	6.4	1,300	6.8	1,500	9.0	2,480	9.2	2,560
10	5.95	1,080	5.95	1,080	6.4	1,300	6.9	1,550	9.0	2,480	9.4	2,620
M	5.95	1,080	5.95	1,080	6.5	1,350	7.0	1,600	8.9	2,440	9.5	2,660
	March 14		March 15		March 16		March 17		March 18		March 19	
2	9.7	2,730	10.3	2,930	9.4	2,620	8.4	2,240	7.4	1,800	7.3	1,750
4	9.9	2,800	10.2	2,900	9.3	2,590	8.3	2,200	7.3	1,750	7.4	1,800
6	10.2	2,900	10.2	2,900	9.2	2,560	8.2	2,160	7.2	1,700	7.5	1,840
8	10.4	2,960	10.1	2,870	9.2	2,560	8.1	2,110	7.1	1,650	7.6	1,880
10	10.6	3,020	10.0	2,840	9.1	2,520	8.0	2,060	7.1	1,650	7.7	1,930
N	10.6	3,020	10.0	2,840	9.0	2,480	7.9	2,020	7.0	1,600	7.8	1,980
2	10.6	3,020	9.9	2,800	8.9	2,440	7.8	1,980	7.0	1,600	7.9	2,020
4	10.6	3,020	9.8	2,760	8.8	2,400	7.7	1,930	6.9	1,550	8.0	2,060
6	10.6	3,020	9.7	2,730	8.7	2,360	7.6	1,880	7.0	1,600	8.0	2,060
8	10.5	2,990	9.6	2,700	8.6	2,320	7.6	1,880	7.0	1,600	8.1	2,110
10	10.5	2,990	9.6	2,700	8.5	2,280	7.5	1,840	7.1	1,650	8.1	2,110
M	10.4	2,960	9.5	2,660	8.4	2,240	7.4	1,800	7.2	1,700	8.2	2,160
	March 20		March 21		March 22		March 23		March 24		March 25	
2	8.2	2,160	8.0	2,060	7.9	2,020	7.7	1,930	7.2	1,700	6.8	1,500
4	8.2	2,160	8.0	2,060	7.9	2,020	7.7	1,930	7.2	1,700	6.7	1,450
6	8.2	2,160	8.0	2,060	7.9	2,020	7.7	1,930	7.1	1,650	6.7	1,450
8	8.3	2,200	8.0	2,060	7.9	2,020	7.6	1,880	7.1	1,650	6.7	1,450
10	8.3	2,200	8.0	2,060	7.9	2,020	7.6	1,880	7.1	1,650	6.7	1,450
N	8.2	2,160	8.0	2,060	7.9	2,020	7.6	1,880	7.0	1,600	6.6	1,400
2	8.2	2,160	8.0	2,060	7.9	2,020	7.5	1,840	7.0	1,600	6.6	1,400
4	8.2	2,160	7.9	2,020	7.9	2,020	7.4	1,800	7.0	1,600	6.6	1,400
6	8.1	2,110	7.9	2,020	7.8	1,980	7.4	1,800	6.9	1,550	6.5	1,350
8	8.1	2,110	7.9	2,020	7.8	1,980	7.3	1,750	6.9	1,550	6.5	1,350
10	8.1	2,110	7.9	2,020	7.8	1,980	7.3	1,750	6.8	1,500	6.5	1,350
M	8.1	2,110	7.9	2,020	7.8	1,980	7.2	1,700	6.8	1,500	6.4	1,300

Wading River near Norton, Mass.

Location.- Lat. 41°56'50", long. 71°10'40", 200 feet below highway bridge, three-quarters of a mile above confluence with Rumford River, and 1½ miles southeast of Norton, Bristol County. Zero of gage is 49.63 feet above mean sea level.
Drainage area.- 42.4 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights given to half tenths between 7.00 and 8.80 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 8. Defined by current-meter measurements below 491 second-feet; extended to peak stage by study of flow characteristics at control section; verified by comparison of peak discharge and total run-off of flood with determinations for nearby stations.
Maxima.- 1936: Discharge, 1,030 second-feet 10 p.m. Mar. 12 to 8 a.m. Mar. 13 (gage height, 10.01 feet).
1925-35: Discharge, 798 second-feet (revised) June 11, 1931 (gage height, 9.25 feet).
Remarks.- Flood run-off affected by artificial and natural storage and by diversions.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	54	118	203	11	56	295	256	21	170	485	126
2	48	122	192	12	50	740	244	22	137	456	114
3	51	130	284	13	46	978	235	23	132	382	105
4	50	160	259	14	47	750	213	24	131	321	98
5	51	195	216	15	41	591	177	25	118	264	86
6	49	215	266	16	38	443	182	26	112	245	51
7	45	200	337	17	98	383	181	27	110	235	76
8	46	170	305	18	190	394	160	28	114	305	76
9	40	177	221	19	195	628	144	29	122	305	73
10	46	221	226	20	200	566	136	30		263	73
								31		230	
Mean monthly discharge, in second-feet									89.2	354	177
Run-off, in inches									2.26	9.63	4.65

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	6.57	-	6.48	165	6.61	188	6.93	249	7.5	370	10.0	1,030
4	6.60	-	6.47	163	6.62	190	6.95	253	7.7	416	10.0	1,030
6	6.64	-	6.47	163	6.62	190	6.97	257	7.95	474	10.0	1,030
8	6.70	-	6.46	161	6.63	192	6.99	261	8.15	521	10.0	1,030
10	6.96	-	6.48	165	6.68	201	7.00	263	8.45	596	9.9	1,000
N	6.59	*170	6.53	173	6.84	232	7.1	284	8.9	715	9.9	1,000
2	6.51	-	6.57	181	6.85	234	7.3	326	9.4	854	9.8	970
4	6.50	-	6.61	188	6.87	237	7.3	326	9.6	910	9.8	970
6	6.50	-	6.64	194	6.90	243	7.3	326	9.8	970	9.7	940
8	6.51	-	6.65	196	6.92	247	7.3	326	9.9	1,000	9.7	940
10	6.51	-	6.62	190	6.92	247	7.3	326	10.0	1,030	9.6	910
M	6.50	-	6.61	188	6.92	247	7.4	348	10.0	1,030	9.5	882
	March 14		March 15		March 16		March 17		March 18		March 19	
2	9.4	854	8.65	648	8.1	509	7.65	404	7.4	348	8.3	558
4	9.3	826	8.65	648	8.05	497	7.6	393	7.35	337	8.35	570
6	9.3	826	8.6	635	8.0	485	7.6	393	7.35	337	8.45	596
8	9.2	798	8.55	622	8.0	485	7.6	393	7.35	337	8.5	609
10	9.1	770	8.55	622	7.8	439	7.55	382	7.35	337	8.5	609
N	9.1	770	8.5	609	7.6	393	7.55	382	7.35	337	8.55	622
2	9.0	742	8.45	596	7.65	404	7.6	393	7.4	348	8.6	635
4	9.0	742	8.4	583	7.75	428	7.55	382	7.5	370	8.65	648
6	8.8	688	8.3	558	7.75	428	7.55	382	7.6	393	8.7	661
8	8.7	661	8.25	546	7.75	428	7.55	382	8.05	497	8.75	674
10	8.7	661	8.15	521	7.7	416	7.45	359	8.25	546	8.8	688
M	8.7	661	8.1	509	7.65	404	7.4	348	8.25	546	8.7	661
	March 20		March 21		March 22		March 23		March 24		March 25	
2	8.7	661	7.65	404	7.55	382	7.85	450	7.3	326	6.98	259
4	8.65	648	7.75	428	7.65	404	7.8	439	7.35	337	6.99	261
6	8.55	622	7.85	450	7.8	439	7.75	428	7.4	348	6.99	261
8	8.5	609	7.85	450	7.85	450	7.7	416	7.4	348	6.99	261
10	8.45	596	7.9	462	7.85	450	7.7	416	7.4	348	6.99	261
N	8.4	583	8.2	533	7.85	450	7.7	416	7.4	348	7.00	263
2	8.35	570	8.4	583	7.85	450	7.65	404	7.4	348	7.05	274
4	8.3	558	8.35	570	7.85	450	7.6	393	7.35	337	7.05	274
6	8.25	546	8.2	533	8.1	509	7.2	305	7.2	305	7.05	274
8	8.2	533	8.1	509	8.15	521	7.15	294	7.1	284	7.00	263
10	7.95	474	8.0	485	8.05	497	7.2	305	7.00	263	6.98	259
M	7.6	393	7.7	416	7.95	474	7.25	316	7.00	263	6.95	253

*Mean for the day.

Rumford River at outlet of Norton Reservoir, near Norton, Mass.

Location.- Lat. 41°59'10", long. 71°11'20", 1¼ miles north of Norton, Bristol County, and 3⅜ miles above confluence with Wading River.
Drainage area.- 17.4 square miles.
Stage-discharge relation.- Computed from weir rating.
Maxima.- 1936: Mean daily observed discharge, 271 second-feet Mar. 13 and 14; maximum mean daily discharge corrected for storage, 424 second-feet Mar. 13.
Remarks.- Flood run-off affected by some artificial and natural storage above Norton Reservoir. Daily and monthly tables corrected for storage in Norton Reservoir only.

Mean discharge (second-feet) and gain or loss in storage (millions of cubic feet), 1936

Day	February			March			April		
	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge
1	11	0	11	68	-1.44	51	73	+0.50	79
2	11	0	11	68	0	68	81	+.25	84
3	11	0	11	68	+1.68	87	92	+.75	101
4	11	0	11	68	+2.40	96	81	-1.50	64
5	11	0	11	68	+1.94	90	73	-1.75	53
6	11	0	11	69	+1.50	86	66	-.50	60
7	11	0	11	75	+1.00	87	66	+.25	69
8	11	0	11	75	0	75	58	-.50	52
9	11	+.50	17	75	0	75	55	-.50	49
10	15	+.75	24	40	+3.00	75	55	-.50	49
11	20	+.50	26	30	+8.25	125	51	-.25	48
12	18	0	18	110	+9.75	223	48	-.50	42
13	20	+.50	26	271	+13.24	424	44	0	44
14	25	+.75	34	271	-6.63	194	44	-.50	38
15	25	+.75	34	220	-3.32	182	48	-2.00	25
16	30	+1.00	42	172	-2.80	140	30	-.75	21
17	75	0	75	151	-1.00	139	28	-.50	22
18	91	-.75	82	172	+3.54	213	25	-.25	22
19	90	-2.00	67	206	-.76	197	25	-.25	22
20	83	-1.50	66	162	-2.02	139	22	-.25	19
21	79	-1.50	62	151	-1.25	137	20	-.25	17
22	75	-1.25	61	141	-2.25	115	18	-.50	12
23	71	-1.50	54	119	-2.50	90	15	-.50	9
24	68	-1.22	54	92	-.75	83	13	-.50	7
25	68	-1.44	51	92	-1.50	75	11	-.50	5
26	68	-1.20	54	81	-1.00	69	11	+1.50	28
27	68	-.24	65	81	-1.00	69	30	+1.75	50
28	68	-.48	62	73	+.25	76	25	-.25	22
29	68	0	68	66	+1.75	86	22	-1.00	10
30				81	-.25	78	20	0	20
31				73	-.75	64			

	February	March	April
Mean monthly discharge, in second-feet (observed)...........	42.2	113	41.7
Gain or loss in storage, in millions of cubic feet..........	-8.33	+19.08	-9.00
Mean monthly discharge, in second-feet (corrected)..........	39.0	120	38.1
Run-off, in inches (corrected).............................	2.42	7.96	2.44

Blackstone River at Worcester, Mass.

Location.- Lat. 42°14'0", long. 71°50'10", at Webster Street Bridge, Worcester, Worcester County, three-quarters of a mile above Tatnuck Brook. Zero of gage is 472.86 feet above mean sea level.
Drainage area.- 31.3 square miles.
Gage-height record.- Water-stage recorder graph except for period 4 p.m. Mar. 18 to 1 p.m. Mar. 19, when it was based on flood marks and shape of available water-stage recorder graph. Gage heights given to half tenths between 2.90 and 5.80 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Defined by current-meter measurements below 550 second-feet; extended to peak stage by drainage-area comparison of instantaneous and total yield of flood with records for other streams in Blackstone River Basin.
Maxima.- 1936: Discharge, 2,520 second-feet midnight Mar. 18 (gage height, 8.58 feet).
1923-35: Discharge, 1,020 second-feet Jan. 10, 1935 (gage height, 5.52 feet).
Remarks.- Flood run-off affected by some artificial and natural storage; slightly affected by diversions.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	37	26	102	11	25	120	115	21	42	454	74
2	28	38	104	12	24	952	140	22	35	472	70
3	26	49	133	13	25	831	129	23	30	320	70
4	24	46	145	14	25	372	108	24	28	231	64
5	37	62	115	15	30	248	102	25	27	214	45
6	28	58	166	16	34	229	131	26	26	164	41
7	37	41	226	17	44	270	118	27	29	148	62
8	34	25	201	18	64	1,060	96	28	31	211	74
9	26	42	160	19	68	1,490	74	29	26	201	40
10	25	72	133	20	61	647	80	30		176	45
								31		136	
Mean monthly discharge, in second-feet									33.7	303	105
Run-off, in inches									1.16	11.16	3.74

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	1.06	28	0.97	22	1.24	39	1.72	84	2.90	252	5.8	1,160
4	1.05	27	.96	22	1.24	39	1.73	85	3.35	346	5.7	1,120
6	1.03	26	.96	22	1.24	39	1.73	85	3.9	483	5.5	1,040
8	1.01	25	.98	23	1.27	42	1.73	85	4.5	660	5.4	995
10	1.00	24	1.19	35	1.48	60	1.86	100	5.2	915	5.3	955
N	1.00	24	1.37	50	1.65	77	2.01	118	5.6	1,080	5.1	875
2	.00	24	1.51	63	1.81	94	2.11	130	6.0	1,250	4.8	765
4	.99	24	1.59	71	1.94	110	2.17	138	6.1	1,300	4.6	695
6	.99	24	1.51	63	1.90	105	2.15	136	6.2	1,340	4.45	645
8	.98	23	1.37	50	1.79	92	2.09	128	6.1	1,300	4.35	615
10	.98	23	1.30	44	1.74	86	2.20	142	6.0	1,250	4.2	570
M	.97	22	1.25	40	1.72	84	2.67	211	6.0	1,250	4.1	540
	March 14		March 15		March 16		March 17		March 18		March 19	
2	4.0	511	3.05	282	2.70	216	2.90	252	2.85	243	8.2	2,320
4	3.9	483	3.05	282	2.70	216	2.85	243	2.90	252	7.6	2,020
6	3.8	456	3.05	282	2.70	216	2.90	252	2.95	262	7.3	1,860
8	3.7	430	3.0	272	2.70	216	2.90	252	3.05	282	6.9	1,660
10	3.6	404	2.95	262	2.73	221	2.85	243	3.35	346	6.7	1,560
N	3.5	380	2.90	252	2.75	225	3.0	272	3.95	497	6.4	1,430
2	3.35	346	2.85	243	2.80	234	3.15	302	5.2	915	6.3	1,380
4	3.2	313	2.78	230	2.85	243	3.3	335	6.3	1,380	6.1	1,300
6	3.1	292	2.73	221	2.85	243	3.15	302	7.0	1,720	5.9	1,200
8	3.05	282	2.70	216	2.85	243	3.0	272	7.6	2,020	5.75	1,140
10	3.05	282	2.70	216	2.75	225	2.95	262	8.2	2,320	5.6	1,070
M	3.05	282	2.70	216	2.90	252	2.90	252	8.6	2,520	5.4	980
	March 20		March 21		March 22		March 23		March 24		March 25	
2	5.2	900	4.0	445	4.25	530	3.83	391	3.32	254	3.17	220
4	5.1	860	3.95	429	4.25	530	3.79	379	3.30	249	3.19	224
6	4.95	800	3.9	413	4.25	530	3.75	368	3.27	242	3.18	222
8	4.8	740	3.9	413	4.2	512	3.70	353	3.25	238	3.18	222
10	4.65	680	3.95	429	4.15	495	3.65	339	3.20	226	3.21	228
N	4.55	640	3.95	429	4.15	495	3.60	325	3.20	226	3.22	231
2	4.45	602	4.0	445	4.1	478	3.54	309	3.24	235	3.20	226
4	4.30	547	4.1	478	4.0	445	3.48	293	3.21	228	3.18	222
6	4.25	530	4.1	478	3.95	429	3.44	283	3.20	226	3.14	213
8	4.2	512	4.1	478	3.9	413	3.40	273	3.16	218	3.06	197
10	4.15	495	4.15	495	3.9	413	3.38	268	3.15	216	3.00	185
M	4.05	462	4.2	512	3.85	398	3.35	261	3.15	216	2.98	181

Blackstone River at Northbridge, Mass.

Location.- Lat. 42°9'20", long. 71°39'15", at Paul Whitin Co. dam in Northbridge, Worcester County. Zero of gage is at mean sea level.

Drainage area.- 137 square miles.

Gage-height record.- Graph constructed from one to several gage readings daily. Gage heights given to half tenths. Add 200 feet to gage heights given below to convert to gage zero and mean sea level.

Stage-discharge relation.- Rating curve computed for dam by using heads ranging from 0 to 5.65 feet with a value of C of 3.5; checked at low stages by current-meter measurements. No flow reported through wheels during flood period.

Maxima.- 1936: Discharge, 7,510 second-feet 8 a.m. to noon Mar. 19 (gage height, 73.12 feet).

Remarks.- Records of discharge computed from basic data furnished by the Blackstone Valley Planning Flood Control, Works Progress Administration Project, sponsored by the Commonwealth of Massachusetts, Department of Public Health.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1				11		962		21		1,560	
2				12		4,530		22		1,010	
3				13		3,540		23		868	
4				14		2,070		24		998	
5				15		1,460		25			
6				16		1,110		26			
7				17		1,010		27			
8				18		2,750		28			
9				19		6,840		29			
10		530		20		3,160		30			
								31			
Mean monthly discharge, in second-feet											
Run-off, in inches											

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2					68.4	520	68.5	600	70.4	2,780	71.4	4,350
4					68.4	520	68.5	600	70.8	3,370	71.3	4,180
6					68.4	520	68.5	600	71.1	3,850	71.2	4,010
8					68.4	520	68.55	640	71.5	4,520	71.1	3,850
10					68.4	520	68.6	680	71.6	4,690	71.0	3,690
N					68.4	520	68.65	725	71.75	4,950	70.95	3,610
2					68.4	520	68.7	770	71.9	5,220	70.85	3,450
4					68.4	520	68.8	860	71.95	5,310	70.8	3,370
6					68.4	520	69.0	1,060	71.9	5,220	70.7	3,220
8					68.45	560	69.2	1,280	71.8	5,040	70.6	3,070
10					68.45	560	69.5	1,620	71.7	4,860	70.5	2,920
M					68.45	560	69.9	2,110	71.55	4,600	70.4	2,780
	March 14		March 15		March 16		March 17		March 18		March 19	
2	70.3	2,640	69.5	1,620	69.2	1,280	68.95	1,010	69.15	1,220	72.7	6,710
4	70.2	2,500	69.5	1,620	69.15	1,220	68.9	960	69.2	1,280	72.9	7,110
6	70.1	2,370	69.45	1,560	69.1	1,170	68.9	960	69.3	1,390	73.0	7,310
8	70.0	2,240	69.45	1,560	69.1	1,170	68.9	960	69.4	1,500	73.1	7,510
10	69.9	2,110	69.4	1,500	69.05	1,120	68.9	960	69.5	1,620	73.1	7,510
N	69.85	2,040	69.4	1,500	69.06	1,120	68.9	960	69.65	1,800	73.1	7,510
2	69.8	1,980	69.35	1,440	69.0	1,060	68.9	960	69.85	2,040	73.0	7,310
4	69.75	1,920	69.3	1,390	69.0	1,060	68.95	1,010	70.2	2,500	72.9	7,110
6	69.7	1,860	69.3	1,390	69.0	1,060	68.95	1,010	70.7	3,220	72.7	6,710
8	69.65	1,800	69.25	1,340	68.95	1,010	69.0	1,060	71.5	4,520	72.5	6,330
10	69.6	1,740	69.25	1,340	68.95	1,010	69.05	1,120	72.1	5,580	72.2	5,760
M	69.55	1,680	69.2	1,280	68.95	1,010	69.1	1,170	72.5	6,330	71.9	5,220
	March 20		March 21		March 22		March 23		March 24		March 25	
2	71.6	4,690	69.8	1,980	69.1	1,170	68.8	860	68.85	910		
4	71.35	4,260	69.7	1,860	69.1	1,170	68.8	860	68.85	910		
6	71.15	3,930	69.65	1,800	69.05	1,120	68.8	860	68.9	960		
8	70.95	3,610	69.55	1,680	69.0	1,060	68.8	860	68.9	960		
10	70.8	3,370	69.5	1,620	68.95	1,010	68.8	860	68.9	960		
N	70.65	3,140	69.45	1,560	68.95	1,010	68.8	860	68.9	960		
2	70.5	2,920	69.4	1,500	68.9	960	68.8	860	68.95	1,010		
4	70.35	2,710	69.35	1,440	68.9	960	68.8	860	68.95	1,010		
6	70.25	2,570	69.3	1,390	68.9	960	68.8	860	69.0	1,060		
8	70.1	2,370	69.25	1,340	68.85	910	68.8	860	69.0	1,060		
10	70.0	2,240	69.2	1,280	68.85	910	68.85	910	69.0	1,060		
M	69.9	2,110	69.15	1,220	68.85	910	68.85	910	69.05	1,120		

Blackstone River at Blackstone, Mass.

Location.- Lat. 42°1'0", long. 71°32'15", at Saranac Dam in Blackstone, Worcester County, one-third of a mile below downstream mouth of Branch River. Zero of gage is at mean sea level.
Drainage area.- 354 square miles.
Gage-height record.- Graph constructed from one to several readings daily. Gage heights given to half tenths; add 100.00 feet to convert to mean sea level.
Stage-discharge relation.- Defined by current-meter measurements below 2,650 second-feet; extended to peak stage by determination of flood flow over dam (head, 9.03 feet; C, 3.5); verified by comparison of peak discharge and total run-off of flood with determinations for other stations on Blackstone River.
Maxima.- 1936: Discharge, 13,600 second-feet 6 p.m. Mar. 19 (gage height, 68.61 feet).
Remarks.- Records of discharge computed from basic data furnished by the Blackstone Valley Planning Flood Control, Works Progress Administration Project, sponsored by the Commonwealth of Massachusetts, Department of Public Health.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1				11		2,510		21		7,720	
2				12		8,090		22		5,570	
3				13		11,000		23		4,000	
4				14		6,460		24		3,210	
5				15		3,360		25		3,050	
6				16		2,080		26			
7				17		1,940		27			
8				18		3,790		28			
9				19		12,100		29			
10				20		10,700		30			
								31			
Mean monthly discharge, in second-feet											
Run-off, in inches											

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2							61.6	1,690	63.25	4,050	67.8	12,100
4							61.7	1,810	63.55	4,540	67.9	12,300
6							61.8	1,940	63.9	5,130	67.9	12,300
8							61.85	2,000	64.25	5,750	67.7	12,000
10							61.95	2,140	64.75	6,650	67.55	11,700
N							62.05	2,270	65.3	7,640	67.4	11,400
2							62.2	2,480	66.0	8,900	67.2	11,000
4							62.3	2,620	66.5	9,800	67.0	10,700
6							62.5	2,900	66.85	10,400	66.8	10,300
8							62.65	3,120	67.2	11,000	66.6	9,980
10							62.85	3,420	67.4	11,400	66.35	9,530
M							63.05	3,730	67.6	11,800	66.1	9,080
	March 14		March 15		March 16		March 17		March 18		March 19	
2	65.8	8,540	63.5	4,450	62.2	2,480	61.7	1,810	62.05	2,270	65.9	8,720
4	65.55	8,090	63.35	4,210	62.1	2,340	61.7	1,810	62.15	2,410	66.5	9,800
6	65.35	7,730	63.2	3,970	62.05	2,270	61.7	1,810	62.25	2,550	67.0	10,700
8	65.1	7,280	63.05	3,730	62.0	2,200	61.7	1,810	62.35	2,690	67.4	11,400
10	64.9	6,920	62.95	3,580	61.95	2,140	61.7	1,810	62.5	2,900	67.7	12,000
N	64.7	6,560	62.8	3,350	61.9	2,070	61.75	1,880	62.65	3,120	68.0	12,500
2	64.5	6,200	62.7	3,200	61.85	2,000	61.8	1,940	62.8	3,350	68.3	13,000
4	64.3	5,840	62.6	3,050	61.8	1,940	61.8	1,940	63.0	3,650	68.5	13,400
6	64.1	5,480	62.5	2,900	61.8	1,940	61.85	2,000	63.3	4,130	68.6	13,600
8	63.95	5,220	62.4	2,760	61.75	1,880	61.9	2,070	63.8	4,960	68.55	13,500
10	63.8	4,960	62.3	2,620	61.75	1,880	61.95	2,140	64.4	6,020	68.45	13,300
M	63.65	4,700	62.25	2,550	61.75	1,880	62.0	2,200	65.2	7,460	68.3	13,000
	March 20		March 21		March 22		March 23		March 24		March 25	
2	68.15	12,800	66.0	8,900	64.65	6,470	63.6	4,620	62.85	3,420	62.6	3,050
4	67.95	12,400	65.85	8,630	64.55	6,290	63.5	4,450	62.8	3,350	62.6	3,050
6	67.7	12,000	65.7	8,360	64.45	6,110	63.45	4,370	62.8	3,350	62.6	3,050
8	67.5	11,600	65.6	8,180	64.4	6,020	63.35	4,210	62.75	3,280	62.6	3,050
10	67.25	11,100	65.5	8,000	64.3	5,840	63.3	4,130	62.7	3,200	62.6	3,050
N	67.05	10,800	65.4	7,820	64.2	5,660	63.25	4,050	62.7	3,200	62.6	3,050
2	66.85	10,400	65.3	7,640	64.1	5,480	63.15	3,890	62.7	3,200	62.6	3,050
4	66.7	10,200	65.15	7,370	64.0	5,300	63.1	3,810	62.65	3,120	62.6	3,050
6	66.5	9,800	65.05	7,190	63.9	5,130	63.05	3,730	62.65	3,120	62.6	3,050
8	66.35	9,530	64.95	7,010	63.8	4,960	63.0	3,650	62.65	3,120	62.6	3,050
10	66.2	9,260	64.85	6,830	63.75	4,880	62.95	3,580	62.65	3,120	62.6	3,050
M	66.1	9,080	64.75	6,650	63.65	4,700	62.9	3,500	62.6	3,050	62.6	3,050

Blackstone River at Woonsocket, R. I.

Location.- Lat. 42°0'20", long. 71°30'5", in Woonsocket, Providence County, 50 feet below mouth of Peters River. Zero of gage is 107.42 feet above mean sea level.
Drainage area.- 416 square miles.
Gage-height record.- Water-stage recorder graph except for period 8:30 p.m. Mar. 12 to 11:30 a.m. Mar. 13 and 7 a.m. to 4 p.m. Mar. 19, when it was based on flood marks and shape of available water-stage recorder graph. Gage heights given to half tenths between 3.20 and 5.50 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Defined by current-meter measurements below 15,000 second-feet; verified by drainage-area comparison of instantaneous and total yield of flood with records for nearby streams.
Maxima.- 1936: Discharge, 15,000 second-feet 1 p.m. to 6 p.m. Mar. 19 (gage height, 14.40 feet).
1929-1935: Discharge, 8,220 second-feet June 11, 1931 (gage height, 9.80 feet).
Maximum discharge previously known, 14,700 second-feet November 1927 (gage height, 14.0 feet).
Remarks.- Flood run-off affected by some artificial and natural storage; slightly affected by diversions.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	385	474	2,150	11	458	2,060	2,000	21	748	7,360	1,030
2	315	628	2,000	12	437	9,750	2,100	22	508	6,510	1,030
3	471	661	2,350	13	417	12,900	2,000	23	440	5,080	990
4	517	695	2,300	14	410	7,630	1,800	24	543	3,700	878
5	393	881	2,000	15	271	4,700	1,720	25	592	3,320	772
6	555	910	2,150	16	217	3,840	1,800	26	598	3,100	648
7	521	729	2,990	17	506	3,200	1,620	27	630	2,770	824
8	306	575	2,770	18	787	4,700	1,440	28	663	3,320	733
9	267	762	2,400	19	818	14,000	1,270	29	481	3,320	746
10	406	1,240	2,150	20	802	11,800	1,150	30		2,880	850
								31		2,450	
Mean monthly discharge, in second-feet									499	4,060	1,622
Run-off, in inches									1.29	11.25	4.46

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	2.84	643	2.66	550	3.25	888	4.35	1,740	6.1	3,490	13.9	14,200
4	2.59	515	2.68	560	3.3	920	4.45	1,840	6.7	4,180	13.9	14,200
6	2.70	570	2.68	560	3.35	955	4.45	1,840	7.6	5,300	13.8	14,100
8	2.86	653	3.00	732	3.55	1,100	4.6	1,970	9.4	7,660	13.7	14,000
10	2.79	616	3.2	856	3.65	1,190	4.5	1,880	10.4	9,060	13.6	13,800
N	2.78	611	3.17	837	3.6	1,140	4.5	1,880	11.0	9,900	13.4	13,500
2	2.77	606	3.12	805	3.6	1,140	4.55	1,920	11.8	11,100	13.0	12,900
4	2.51	479	3.11	798	3.75	1,260	4.65	2,020	12.5	12,200	12.8	12,600
6	2.78	611	3.11	798	3.95	1,420	4.75	2,100	12.9	12,800	12.5	12,200
8	2.80	621	3.06	768	4.1	1,540	4.85	2,200	13.3	13,400	12.2	11,700
10	2.59	515	3.35	955	4.2	1,620	5.15	2,480	13.6	13,800	11.8	11,100
M	2.48	465	3.3	920	4.25	1,660	5.5	2,830	13.8	14,100	11.4	10,500
	March 14		March 15		March 16		March 17		March 18		March 19	
2	11.1	10,000	7.6	5,300	6.7	4,180	6.1	3,490	5.6	2,940	11.4	10,500
4	10.8	9,620	7.5	5,170	6.6	4,060	6.1	3,490	5.6	2,940	12.3	11,800
6	10.5	9,200	7.4	5,040	6.6	4,060	6.0	3,380	5.6	2,940	13.0	12,900
8	10.2	8,780	7.3	4,910	6.7	4,180	6.0	3,380	5.8	3,160	13.7	14,000
10	9.9	8,360	7.2	4,780	6.5	3,940	5.9	3,270	5.8	3,160	14.1	14,600
N	9.5	7,800	7.2	4,780	6.4	3,820	5.8	3,160	6.1	3,490	14.3	14,800
2	9.2	7,380	7.1	4,660	6.4	3,820	5.8	3,160	6.5	3,940	14.4	15,000
4	8.8	6,860	7.0	4,540	6.3	3,710	5.7	3,050	7.0	4,540	14.4	15,000
6	8.4	6,340	6.9	4,420	6.2	3,600	5.7	3,050	7.8	5,560	14.4	15,000
8	8.1	5,950	6.8	4,300	6.2	3,600	5.7	3,050	8.8	6,860	14.3	14,800
10	7.9	5,690	6.8	4,300	6.2	3,600	5.6	2,940	9.5	7,800	14.2	14,700
M	7.8	5,560	6.7	4,180	6.1	3,490	5.6	2,940	10.4	9,060	14.0	14,400
	March 20		March 21		March 22		March 23		March 24		March 25	
2	13.9	14,200	10.0	8,500	8.9	6,990	7.9	5,690	6.6	4,040	-	-
4	13.7	14,000	9.7	8,080	8.9	6,990	7.8	5,560	6.5	3,920	6.0	3,320
6	13.5	13,600	9.4	7,660	8.9	6,990	7.7	5,430	6.5	3,920	-	-
8	13.2	13,200	9.2	7,380	8.8	6,860	7.7	5,430	6.6	4,040	6.0	3,320
10	12.9	12,800	9.2	7,380	8.7	6,730	7.6	5,300	6.4	3,800	-	-
N	12.5	12,200	9.1	7,250	8.7	6,730	7.6	5,300	6.3	3,680	6.0	3,320
2	12.2	11,700	9.0	7,120	8.5	6,470	7.5	5,170	6.3	3,680	-	-
4	11.8	11,100	8.9	6,990	8.4	6,340	7.3	4,910	6.2	3,560	6.0	3,320
6	11.4	10,500	8.9	6,990	8.3	6,210	7.3	4,910	6.2	3,560	-	-
8	11.0	9,900	8.9	6,990	8.2	6,080	7.1	4,650	6.1	3,440	6.0	3,320
10	10.7	9,480	8.9	6,990	8.1	5,950	6.9	4,400	6.1	3,440	-	-
M	10.3	8,920	8.9	6,990	8.0	5,820	6.7	4,160	6.0	3,320	5.9	3,210

Mumford River at Uxbridge, Mass.

Location.- Lat. 42°4'30", long. 71°37'35", at New England Power Co. Plant in Uxbridge, Worcester County, one-half mile above confluence with Blackstone River. Zero of gage is at mean sea level.
Drainage area.- 57 square miles.
Gage-height record.- Graph constructed from one to several readings daily. Gage heights given to half tenths; add 200.00 feet to gage heights given below to convert to gage zero and mean sea level.
Stage-discharge relation.- Defined by current-meter measurements below 1,270 second-feet; extended to peak stage by comparison of peak discharge and total run-off of flood with determinations for other streams in Blackstone River Basin.
Maxima.- 1936: Discharge, 3,570 second-feet 1:15 p.m. Mar. 19 (gage height, 26.09 feet).
Remarks.- Records of discharge computed from basic data furnished by the Blackstone Valley Planning Flood Control, Works Progress Administration Project, sponsored by the Commonwealth of Massachusetts, Department of Public Health.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1				11		318		21		944	
2				12		1,170		22		858	
3				13		1,460		23		649	
4				14		1,030		24		521	
5				15		822		25		472	
6				16		555		26			
7				17		478		27			
8				18		949		28			
9				19		2,800		29			
10				20		1,560		30			
								31			
Mean monthly discharge, in second-feet											
Run-off, in inches											

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2							19.8	275	21.05	475	23.9	1,930
4							19.8	275	21.3	540	23.85	1,900
6							19.8	275	21.55	638	23.5	1,690
8							19.8	275	21.80	750	23.3	1,570
10							19.8	275	22.1	890	23.15	1,480
N							19.85	282	22.4	1,040	23.05	1,420
2							19.95	298	22.7	1,210	22.95	1,360
4							20.1	320	23.0	1,390	22.85	1,300
6							20.25	342	23.35	1,600	22.8	1,270
8							20.4	365	23.6	1,750	22.7	1,210
10							20.6	397	23.75	1,840	22.65	1,180
M							20.85	440	23.85	1,900	22.6	1,150
	March 14		March 15		March 16		March 17		March 18		March 19	
2	22.55	1,120	22.2	940	21.65	682	21.0	465	21.4	575	23.5	1,690
4	22.5	1,090	22.15	915	21.6	660	21.0	465	21.5	615	23.8	1,870
6	22.5	1,090	22.1	890	21.5	615	20.95	456	21.6	660	24.2	2,130
8	22.45	1,060	22.05	865	21.45	595	20.95	456	21.7	705	24.7	2,480
10	22.4	1,040	22.0	840	21.4	575	20.95	456	21.85	772	25.4	3,010
N	22.4	1,040	22.0	840	21.35	556	21.0	465	22.0	840	26.0	3,490
2	22.35	1,020	21.95	818	21.3	540	21.0	465	22.15	915	26.05	3,530
4	22.35	1,020	21.9	795	21.2	510	21.05	475	22.35	1,020	25.9	3,410
6	22.3	990	21.85	772	21.15	498	21.1	485	22.55	1,120	25.75	3,290
8	22.25	965	21.8	750	21.1	485	21.15	498	22.75	1,240	25.5	3,090
10	22.25	965	21.75	728	21.05	475	21.2	510	23.0	1,390	25.3	2,930
M	22.2	940	21.7	705	21.0	465	21.3	540	23.25	1,540	25.0	2,690
	March 20		March 21		March 22		March 23		March 24		March 25	
2	24.7	2,480	22.25	965	22.2	940	21.8	750	21.35	558	21.1	485
4	24.4	2,270	22.25	965	22.15	915	21.75	728	21.3	540	21.1	485
6	24.1	2,060	22.2	940	22.15	915	21.7	705	21.3	540	21.1	485
8	23.8	1,870	22.2	940	22.1	890	21.7	705	21.25	525	21.05	475
10	23.5	1,690	22.2	940	22.1	890	21.65	682	21.25	525	21.05	475
N	23.25	1,540	22.2	940	22.05	865	21.6	660	21.25	525	21.05	475
2	23.0	1,390	22.2	940	22.0	840	21.55	638	21.2	510	21.0	465
4	22.8	1,270	22.2	940	22.0	840	21.5	615	21.2	510	21.0	465
6	22.6	1,150	22.2	940	21.95	818	21.45	595	21.2	510	21.0	465
8	22.45	1,060	22.2	940	21.95	818	21.4	575	21.2	510	21.0	465
10	22.35	1,020	22.2	940	21.9	795	21.4	575	21.15	498	21.0	465
M	22.3	990	22.2	940	21.85	772	21.35	558	21.15	498	20.95	456

Supplemental records.- Mar. 19, 1:15 p.m., 26.09 ft., 3,570 sec.-ft.

146875—37——13

Abbott Run at Adamsdale, R. I.

Location.- Lat. 41°54'55", long. 71°23'5", at outlet of Cumberland Mills Pond at Adamsdale, Providence County, 0.6 mile below mouth of Millers River.
Drainage area.- 26.9 square miles.
Gage-height record.- Water-stage recorder graph except for period Feb. 1-28, when graph was based on daily readings, and for period Feb. 29 to Mar. 6, when there was no record. Gage heights given to half tenths between 63.30 and 64.30 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Defined by weir ratings.
Maxima.- 1936: Discharge, 1,040 second-feet midnight Mar. 12-13 (gage height, 64.9 feet).
Remarks.- Discharge for period Feb. 29 to Mar. 6 was estimated. Flood run-off affected by some artificial and natural storage. Records computed from basic data furnished by City of Pawtucket, Thomas E. Harding, City Engineer.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	56	65	112	11	54	108	129	21	81	345	71
2	56	64	130	12	52	570	127	22	79	291	66
3	54	63	145	13	52	803	114	23	77	249	58
4	54	62	123	14	52	477	109	24	75	227	52
5	52	61	107	15	52	328	111	25	73	205	51
6	52	60	147	16	72	278	111	26	72	173	51
7	52	59	140	17	87	233	104	27	70	173	53
8	54	57	127	18	87	284	99	28	68	152	54
9	54	69	122	19	85	372	98	29	66	122	56
10	52	97	123	20	83	373	98	30		125	55
								31		120	
Mean monthly discharge, in second-feet									64.6	215	98.1
Run-off, in inches									2.59	9.21	4.07

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	62.70	59	62.72	63	62.85	87	62.96	110	63.35	206	64.8	995
4	62.68	56	62.72	63	62.85	87	62.93	103	63.5	249	64.7	950
6	62.68	56	62.72	63	62.85	87	62.90	97	63.65	296	64.6	905
8	62.67	54	62.71	61	62.84	85	62.87	91	63.8	344	64.5	860
10	62.67	54	62.70	59	62.83	83	62.86	89	63.9	378	64.5	860
N	62.67	54	62.70	59	62.83	83	62.86	89	64.0	413	64.4	815
2	62.67	54	62.73	64	62.86	89	62.86	89	64.15	467	64.3	784
4	62.68	56	62.76	70	62.90	97	62.86	89	64.5	603	64.4	744
6	62.69	58	62.79	75	62.96	110	62.93	103	64.6	905	64.2	744
8	62.71	61	62.82	81	63.00	118	62.98	114	64.7	950	64.0	659
10	62.72	63	62.84	85	63.02	123	63.10	142	64.8	995	64.0	659
M	62.72	63	62.86	89	63.00	118	63.23	175	64.9	1,040	64.0	659
	March 14		March 15		March 16		March 17		March 18		March 19	
2	63.9	619	63.25	369	63.00	289	62.85	245	62.80	213	63.6	472
4	63.8	579	63.25	369	63.00	289	62.85	245	62.80	213	63.5	434
6	63.7	541	63.20	353	63.00	289	62.85	245	62.80	213	63.4	401
8	63.6	503	63.15	337	63.00	289	62.85	245	62.80	213	63.3	368
10	63.55	484	63.15	337	63.00	289	62.85	245	62.80	213	63.20	336
N	63.55	470	63.10	321	63.00	289	62.85	228	62.85	228	63.20	336
2	63.5	451	63.10	321	62.95	274	62.85	228	62.90	242	63.20	336
4	63.45	435	63.10	321	62.95	274	62.85	228	62.95	257	63.20	336
6	63.45	435	63.05	305	62.95	274	62.85	228	63.10	304	63.20	336
8	63.4	418	63.05	305	62.90	259	62.85	228	63.3	368	63.20	353
10	63.35	401	63.05	305	62.90	259	62.80	213	63.5	434	63.25	369
M	63.3	385	63.00	289	62.90	259	62.80	213	63.7	510	63.3	385
	March 20		March 21		March 22		March 23		March 24		March 25	
2	63.3	385	63.15	337	63.10	321	62.95	255	62.90	240	62.80	211
4	63.35	401	63.15	337	63.10	321	62.95	255	62.90	240	62.80	211
6	63.3	385	63.15	337	63.10	321	62.90	240	62.90	240	62.80	211
8	63.3	385	63.15	337	63.10	321	62.90	240	62.90	240	62.80	211
10	63.3	385	63.20	353	63.05	305	62.90	240	62.85	226	62.80	211
N	63.3	385	63.20	353	63.05	286	62.90	240	62.85	226	62.80	211
2	63.25	369	63.20	353	63.05	286	62.95	255	62.85	226	62.80	211
4	63.25	369	63.20	353	63.00	270	62.95	255	62.85	226	62.80	211
6	63.20	353	63.20	353	63.00	270	62.95	255	62.85	226	62.80	211
8	63.20	353	63.20	353	63.00	270	62.95	255	62.80	211	62.75	197
10	63.20	353	63.15	337	63.00	270	62.95	255	62.80	211	62.70	183
M	63.20	353	63.15	337	62.95	255	62.90	240	62.80	211	62.70	183

Pawtuxet River at outlet of Scituate Reservoir, at Kent, R. I.

Location.- Lat. 41°45'15", long. 71°35'5", at outlet of Scituate Reservoir, a quarter of a mile south of Kent, Providence County, and 2 miles below confluence of Ponaganset and Moswansicut Rivers.
Drainage area.- 92.8 square miles.
Stage-discharge relation.- Discharge determined from flow over weir and through Venturi meters.
Remarks.- Flood run-off controlled by storage in Scituate Reservoir (capacity 4,932,000,000 cubic feet) and by storage in other small reservoirs and ponds. Mean daily and monthly discharges corrected for gain or loss in storage in Scituate Reservoir. Basic data furnished by Rhode Island Department of Public Works, Scituate Reservoir Division.

Mean discharge (second-feet) and gain or loss in storage (millions of cubic feet), 1936

Day	February			March			April		
	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge
1	43	+5.3	104	49	+14.7	219	423	-10.3	304
2	41	+4.0	87	166	+5.3	227	442	+11.8	579
3	146	-4.0	100	179	+5.3	240	489	+6.0	558
4	153	0	153	166	+6.7	244	463	-10.4	343
5	147	-4.0	101	169	+12.0	308	419	-1.5	402
6	146	-2.7	115	161	+9.4	270	663	+58.0	1,330
7	135	-2.7	104	42	+16.0	227	882	0	882
8	46	+2.7	77	46	+19.1	267	752	-23.0	486
9	47	+12.0	186	171	+11.8	308	613	-10.8	488
10	146	-4.0	100	169	+42.6	662	570	-4.5	518
11	146	-6.7	68	175	+178.9	2,250	561	+3.1	597
12	146	-5.3	85	335	+388.9	4,840	568	-1.6	549
13	150	0	150	356	+98.6	1,500	537	-9.2	431
14	137	+4.0	183	356	+40.5	825	474	-10.4	354
15	42	+4.0	88	361	+22.5	621	433	-4.4	382
16	50	+17.4	251	373	+15.0	547	410	-8.8	308
17	133	+18.7	349	376	+16.4	566	387	-10.3	268
18	153	+18.7	369	1,550	+208.1	3,960	372	-10.3	253
19	152	+9.4	261	2,400	-20.1	2,170	371	-13.2	218
20	143	+9.4	252	1,200	-15.4	1,020	388	-17.6	184
21	136	+9.4	245	1,190	+9.2	1,300	373	-10.4	253
22	42	+12.0	181	1,110	-24.6	825	384	-15.0	210
23	48	+13.4	203	855	-23.0	589	375	-16.4	185
24	147	+4.0	193	688	-12.3	546	374	-19.5	148
25	148	+2.7	179	602	-9.2	496	352	-22.5	92
26	147	+5.3	208	546	-7.8	456	361	-11.9	223
27	147	+6.7	225	556	+17.0	753	372	-18.0	164
28	132	+8.0	225	683	+6.1	754	373	-19.4	148
29	41	+16.0	226	652	-9.2	546	360	-16.6	168
30				566	-13.9	405	275	-13.4	120
31				503	-10.6	380			

	February	March	April
Mean monthly discharge, in second-feet (observed)	113	540	461
Gain or loss in storage, in millions of cubic feet	+153.7	+998.0	-230.5
Mean monthly discharge, in second-feet (corrected)	175	914	372
Run-off, in inches (corrected)	2.04	11.36	4.47

Willimantic River near South Coventry, Conn.

Location.- Lat. 41°45', long. 72°16', 700 feet above highway bridge, 2 miles southeast of South Coventry, Tolland County, and 2½ miles above mouth of Hop River.
Drainage area.- 121 square miles.
Gage-height record.- Water-stage recorder graph except for period Feb. 1-4.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 11. Defined by current-meter measurements to 1,160 second-feet; extended to peak stage using determination of flood flow over spillway of dam 3 miles upstream (C, 3.33, 3.39) and study of overflow conditions.
Maxima.- 1936: Discharge, 7,880 second-feet 4 p.m. Mar. 12 (gage height, 12.19 feet).
1931-35: Discharge, 4,200 second-feet (revised) Mar. 6, 1934 (gage height, 10.3 feet).
Remarks.- Discharge Feb. 1-4 determined by hydrographic comparison with nearby stations.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	85	200	438	11	120	780	538	21	130	1,320	309
2	80	200	428	12	110	5,320	627	22	120	1,270	314
3	100	190	585	13	110	2,840	562	23	100	879	295
4	120	190	560	14	120	1,140	472	24	120	678	268
5	120	260	448	15	95	786	445	25	160	669	223
6	120	260	766	16	80	660	480	26	220	630	234
7	100	240	1,010	17	120	603	428	27	220	612	261
8	85	240	714	18	190	2,450	368	28	220	849	208
9	70	240	535	19	180	4,540	336	29	220	681	212
10	95	340	525	20	140	1,520	326	30		558	219
								31		482	
Mean monthly discharge, in second-feet									129	1,020	438
Run-off, in inches									1.15	9.72	4.04

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	-	-	8.23	1,790	10.75	5,000
4	-	-	-	-	3.89	280	5.28	680	8.76	2,190	10.35	4,280
6	-	-	-	-	-	-	-	-	9.32	2,810	9.94	3,660
8	-	-	-	-	3.67	260	5.30	690	10.17	4,000	9.59	3,140
10	-	-	-	-	-	-	-	-	10.96	5,420	9.30	2,790
N	*3.88	*240	*3.63	*240	3.72	260	5.29	687	11.54	6,580	9.06	2,500
2	-	-	-	-	-	-	5.37	711	12.03	7,560	8.84	2,270
4	-	-	-	-	4.03	340	5.53	759	12.19	7,880	8.60	2,050
6	-	-	-	-	-	-	5.75	825	12.13	7,760	8.37	1,870
8	-	-	-	-	5.07	480	6.01	903	11.90	7,300	8.18	1,760
10	-	-	-	-	-	-	6.44	1,040	11.62	6,740	7.96	1,640
M	-	-	-	-	5.21	600	7.10	1,280	11.22	5,940	7.72	1,520
	March 14		March 15		March 16		March 17		March 18		March 19	
2	7.40	1,390	-	-	-	-	-	-	5.10	630	11.64	6,780
4	7.24	1,330	5.83	849	-	-	5.03	609	5.15	645	11.60	6,700
6	7.05	1,260	-	-	5.31	693	-	-	5.22	666	11.42	6,340
8	6.89	1,200	5.69	807	-	-	4.97	592	5.45	735	11.11	5,720
10	6.75	1,150	-	-	-	-	-	-	6.14	942	10.76	5,020
N	6.60	1,100	5.50	750	5.12	636	4.95	588	7.86	1,590	10.38	4,320
2	6.47	1,060	-	-	-	-	-	-	8.92	2,350	10.00	3,750
4	6.37	1,020	5.60	780	-	-	5.07	621	9.64	3,210	9.69	3,280
6	6.33	1,010	-	-	5.11	633	-	-	10.25	4,120	9.40	2,910
8	6.22	967	5.27	681	-	-	5.07	621	10.83	5,160	9.12	2,570
10	6.04	912	-	-	-	-	-	-	11.21	5,920	8.86	2,290
M	5.94	882	5.44	732	5.05	615	5.10	630	11.51	6,520	8.66	2,100
	March 20		March 21		March 22		March 23		March 24		March 25	
2	8.46	1,940	6.74	1,140	7.57	1,460	-	-	-	-	-	-
4	8.28	1,820	6.69	1,130	7.49	1,430	6.23	970	5.40	720	-	-
6	8.10	1,710	6.65	1,120	7.39	1,390	-	-	-	-	5.13	639
8	7.90	1,610	6.72	1,140	7.30	1,350	6.04	912	5.29	687	-	-
10	7.75	1,540	6.96	1,230	7.20	1,310	-	-	-	-	-	-
N	7.60	1,470	7.30	1,350	7.12	1,280	5.87	861	5.20	660	5.16	648
2	7.46	1,410	7.57	1,460	7.00	1,240	-	-	-	-	-	-
4	7.35	1,370	7.69	1,510	6.90	1,200	5.75	825	5.23	669	-	-
6	7.25	1,330	7.71	1,520	6.77	1,160	-	-	-	-	5.39	717
8	7.07	1,260	7.70	1,510	6.66	1,120	5.65	795	5.19	657	-	-
10	6.97	1,230	7.66	1,490	6.56	1,090	-	-	-	-	-	-
M	6.81	1,170	7.60	1,470	6.45	1,050	5.51	753	5.16	648	5.28	684

Supplemental records.- Mar. 10, 1 a.m., 3.76 ft. (ice), 225 sec.-ft. Mar. 19, 2:45 a.m., 11.65 ft., 6,800 sec.-ft.

*Mean for the day.

Shetucket River near Willimantic, Conn.

Location.- Lat. 41°41'58", long. 72°10'53", at Bingham Bridge, 1 mile below confluence of Willimantic and Natchaug Rivers and 1½ miles below Willimantic, Windham County.
Drainage area.- 401 square miles.
Gage-height record.- Water-stage recorder graph except for periods Mar. 12-16, 20-23, when it was based on partial gage-height record, high-water marks, and inspections by engineers and temporary observer, and Mar. 24-30, when there was no record.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 8. Defined by current-meter measurements to 3,050 second-feet; extended to peak stage using determination of flood flow over spillways of dams 9 and 12 miles downstream, correlated with combined flow at gaging stations on three main headwater streams..
Maxima.- 1936: Discharge, 23,900 second-feet 6 p.m. Mar. 12 (gage height, 18.35 feet, from flood marks).
1904-5, 1933-35: Discharge, 10,800 second-feet Mar. 6, 1934 (gage height, 11.7 feet).
Remarks.- Discharge Mar. 24-30 determined from combined flow of Hop, Willimantic, and Natchaug Rivers.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	320	720	1,470	11	320	3,020	1,980	21	480	5,260	990
2	300	710	1,370	12	310	16,000	2,240	22	440	5,860	980
3	320	680	1,940	13	300	14,500	1,950	23	410	3,620	910
4	360	700	1,960	14	310	5,680	1,640	24	440	2,700	814
5	360	960	1,500	15	260	3,220	1,440	25	650	2,300	696
6	340	960	2,330	16	310	2,530	1,540	26	780	2,100	720
7	320	830	4,780	17	410	2,250	1,380	27	820	2,000	730
8	300	780	3,000	18	650	6,340	1,210	28	780	3,300	725
9	270	710	2,100	19	640	19,000	1,100	29	780	2,600	650
10	300	1,160	1,890	20	530	8,270	1,040	30		1,950	723
								31		1,710	
Mean monthly discharge, in second-feet									442	3,949	1,527
Run-off, in inches									1.19	11.36	4.25

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	5.76	2,200	8.66	5,610	16.8	20,700
4	-	-	-	-	-	-	5.94	2,370	9.55	6,930	16.1	19,200
6	-	-	-	-	4.07	922	6.10	2,530	10.66	8,770	15.45	17,900
8	-	-	-	-	-	-	6.27	2,700	11.75	10,700	14.8	16,600
10	-	-	-	-	-	-	6.38	2,810	13.30	13,600	14.15	15,300
N	*3.92	*780	*3.70	*710	4.25	1,030	6.20	2,630	15.35	17,700	13.5	14,000
2	-	-	-	-	-	-	6.67	3,130	17.0	21,100	12.9	12,900
4	-	-	-	-	-	-	6.74	3,200	18.1	23,400	12.35	11,800
6	-	-	-	-	4.72	1,350	6.93	3,410	18.35	23,900	11.8	10,800
8	-	-	-	-	-	-	7.12	3,630	18.25	23,700	11.35	9,980
10	-	-	-	-	-	-	7.53	4,130	18.0	23,200	10.9	9,180
M	-	-	-	-	5.57	2,030	7.96	4,670	17.45	22,000	10.5	8,500
	March 14		March 15		March 16		March 17		March 18		March 19	
2	10.1	7,820	-	-	-	-	-	-	5.76	2,200	17.75	22,700
4	9.75	7,250	7.1	3,610	-	-	-	-	5.76	2,200	17.95	23,100
6	9.4	6,700	-	-	-	-	-	-	5.79	2,230	17.85	22,900
8	9.1	6,250	6.9	3,380	-	-	-	-	5.95	2,380	17.55	22,300
10	8.85	5,880	-	-	-	-	-	-	6.33	2,760	16.95	21,000
N	8.55	5,460	6.7	3,160	*6.1	*2,530	*5.81	*2,250	6.82	3,290	16.25	19,500
2	8.3	5,110	-	-	-	-	-	-	7.76	4,410	15.6	18,200
4	8.1	4,850	6.55	3,000	-	-	-	-	9.28	6,520	14.96	16,900
6	7.9	4,590	-	-	-	-	-	-	10.41	8,350	14.40	15,800
8	7.7	4,330	6.45	2,880	-	-	-	-	12.44	12,000	13.77	14,500
10	7.5	4,090	-	-	-	-	-	-	15.5	18,000	13.24	13,500
M	7.35	3,910	6.35	2,780	-	-	-	-	17.1	21,300	12.75	12,600
	March 20		March 21		March 22		March 23		March 24		March 25	
2	12.23	11,600	8.45	5,320	9.35	6,620	-	-	-	-	-	-
4	11.73	10,700	8.25	5,040	9.4	6,700	7.6	4,210	-	-	-	-
6	11.25	9,800	8.1	4,850	9.4	6,700	-	-	-	-	-	-
8	10.82	9,040	8.0	4,720	9.3	6,550	7.3	3,850	-	-	-	-
10	10.45	8,420	8.0	4,720	9.15	6,320	-	-	-	-	-	-
N	10.26	8,090	8.05	4,780	8.95	6,020	7.05	3,550	-	*2,700	-	*2,300
2	9.86	7,430	8.15	4,920	8.8	5,810	-	-	-	-	-	-
4	9.55	6,930	8.3	5,110	8.6	5,530	6.85	3,320	-	-	-	-
6	9.3	6,550	8.5	5,390	8.4	5,250	-	-	-	-	-	-
8	9.05	6,180	8.8	5,810	8.2	4,980	6.7	3,160	-	-	-	-
10	8.85	5,880	9.05	6,180	8.05	4,780	-	-	-	-	-	-
M	8.65	5,600	9.25	6,480	7.9	4,590	6.55	3,000	-	-	-	-

*Mean for the day.

Hop River near Columbia, Conn.

Location.- Lat. 41°43'25", long. 72°18'5", 1,000 feet below abandoned mill and dam, a quarter of a mile below Hop River depot, 2 miles north of Columbia, Tolland County, and 3½ miles above confluence of Hop and Willimantic Rivers.

Drainage area.- 76.2 square miles.

Gage-height record.- Water-stage recorder graph except for period 10 a.m. to 2:30 p.m. Mar. 12, when it was based on high-water marks and partial gage-height record.

Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 2, Mar. 7, 8. Defined by current-meter measurements to 1,740 second-feet; extended to peak stage using determinations of flood flow over spillways of dams below confluence of Hop and Willimantic Rivers, adjusted for flow of Willimantic River above Hop River and intermediate drainage area.

Maxima.- 1936: Discharge, 3,300 second-feet noon Mar. 12 (gage height, 13.85 feet, from flood marks).
1932-35: Discharge, 1,970 second-feet (revised) Nov. 10, 1932 (gage height, 10.7 feet); maximum gage height, 11.9 feet Mar. 5, 1934 (ice jam).

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	65	150	238	11	55	769	375	21	85	950	186
2	60	140	238	12	55	2,680	386	22	75	861	186
3	60	137	361	13	55	1,510	314	23	70	570	145
4	65	138	284	14	50	782	257	24	80	446	126
5	65	221	236	15	50	516	250	25	120	392	108
6	60	197	534	16	48	397	259	26	160	343	114
7	60	160	798	17	70	353	233	27	170	324	115
8	55	140	499	18	95	1,200	226	28	160	615	103
9	55	135	367	19	110	1,780	210	29	160	412	99
10	55	304	371	20	100	988	192	30		314	95
								31		273	
Mean monthly discharge, in second-feet									81.7	587	265
Run-off, in inches									1.15	8.88	3.88

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	6.37	598	9.66	1,600	10.90	2,050
4	-	-	-	-	4.44	189	6.60	655	11.26	2,190	10.52	1,900
6	-	-	-	-	-	-	6.80	705	12.84	2,840	10.17	1,770
8	-	-	-	-	4.64	223	6.76	695	13.43	3,110	9.87	1,670
10	-	-	-	-	-	-	6.78	700	13.66	3,210	9.58	1,570
N	*4.26	*140	*4.08	*135	4.85	260	6.82	710	13.85	3,300	9.33	1,480
2	-	-	-	-	-	-	6.89	728	13.70	3,230	9.04	1,380
4	-	-	-	-	5.20	327	6.95	742	13.28	3,040	8.79	1,290
6	-	-	-	-	-	-	7.19	807	12.80	2,820	8.56	1,220
8	-	-	-	-	5.75	446	7.40	870	12.27	2,600	8.34	1,150
10	-	-	-	-	-	-	8.08	1,070	11.76	2,390	8.14	1,090
M	-	-	-	-	6.26	570	8.80	1,300	11.34	2,230	7.94	1,030
	March 14		March 15		March 16		March 17		March 18		March 19	
2	-	-	-	-	-	-	-	-	5.31	351	11.70	2,370
4	7.60	930	-	-	-	-	-	-	5.31	351	11.34	2,230
6	-	-	6.20	555	5.62	417	5.33	355	5.35	359	10.96	2,070
8	7.27	831	-	-	-	-	-	-	5.55	401	10.56	1,910
10	-	-	-	-	-	-	-	-	6.40	605	10.19	1,780
N	7.01	758	6.02	511	5.52	394	5.31	351	7.82	996	9.91	1,680
2	-	-	-	-	-	-	-	-	8.56	1,220	9.70	1,610
4	6.77	698	-	-	-	-	-	-	9.60	1,580	9.52	1,550
6	-	-	5.84	468	5.42	373	5.32	353	11.04	2,110	9.35	1,490
8	6.58	650	-	-	-	-	-	-	11.98	2,480	9.16	1,420
10	-	-	-	-	-	-	-	-	12.09	2,530	8.96	1,350
M	6.41	608	5.73	442	5.38	365	5.31	351	11.99	2,490	8.77	1,280
	March 20		March 21		March 22		March 23		March 24		March 25	
2	-	-	7.00	755	8.22	1,120	-	-	-	-	-	-
4	8.39	1,170	6.96	745	8.00	1,050	-	-	-	-	-	-
6	-	-	6.95	742	7.80	990	6.43	612	5.86	472	5.50	390
8	8.04	1,060	7.06	770	7.60	930	-	-	-	-	-	-
10	-	-	7.32	846	7.42	876	-	-	-	-	-	-
N	7.74	972	7.55	915	7.26	828	6.25	568	5.77	451	5.54	399
2	-	-	7.71	963	-	-	-	-	-	-	-	-
4	7.48	894	8.01	1,050	6.99	752	-	-	-	-	-	-
6	-	-	8.41	1,170	-	-	6.10	550	5.62	417	5.52	394
8	7.23	819	8.62	1,240	6.77	698	-	-	-	-	-	-
10	-	-	8.58	1,220	-	-	-	-	-	-	-	-
M	7.06	770	8.43	1,180	6.60	655	5.97	499	5.54	399	5.48	386

Supplemental records.- Mar. 11, 9 p.m., 7.90 ft., 1,020 sec.-ft. Mar. 12, 3:20 a.m., 10.30 ft., 1,820 sec.-ft.; noon, 13.85 ft., 3,300 sec.-ft. Mar. 18, 6:40 p.m., 11.40 ft., 2,250 sec.-ft.; 7 p.m., 11.80 ft., 2,410 sec.-ft.

*Mean for the day.

Natchaug River at Willimantic, Conn.

Location.- Lat. 41°43'14", long. 72°11'53", 200 feet below New York, New Haven & Hartford Railroad bridge and 1 mile northeast of Willimantic, Windham County.
Drainage area.- 169 square miles.
Gage-height record.- Water-stage recorder graph.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 8. Defined by current-meter measurements to 2,230 second-feet; extended to peak stage using determination of flood flow over spillway of dam 2 miles upstream (C, 3.4) correlated with run-off from above as computed from flood-flow determinations over spillways for dams on head water streams.
Maxima.- 1936: Discharge resulting from dam failure upstream, 14,200 second-feet 9:10 p.m. Mar. 18 (gage height, 13.57 feet); natural peak discharge, 12,700 second-feet 1 a.m. Mar. 19 (gage height, 13.28 feet).
1930-35: Discharge, 4,100 second-feet Jan. 10, 1935 (gage height, 10.1 feet).
Remarks.- Small diversions for water supply of Willimantic pumped from reservoir 2 miles upstream. Mean monthly diversions: February, 1.38 second-feet; March, 1.50 second-feet; April, 1.3 second-feet (estimated).

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	140	300	604	11	120	1,260	818	21	220	2,140	405
2	130	300	570	12	120	7,830	942	22	200	2,230	399
3	130	280	826	13	110	5,300	782	23	200	1,360	360
4	140	300	798	14	110	2,110	670	24	200	1,040	327
5	140	380	615	15	120	1,330	612	25	300	950	298
6	130	400	1,030	16	130	1,090	643	26	320	885	287
7	130	340	1,880	17	180	974	573	27	340	802	284
8	130	320	1,160	18	300	3,920	506	28	320	1,470	265
9	120	348	854	19	280	8,280	464	29	320	1,180	251
10	120	514	798	20	240	2,920	430	30		850	240
								31		694	
Mean monthly discharge, in second-feet									188	1,681	623
Run-off, in inches									1.20	11.47	4.12

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	-	-	6.81	2,140	12.15	8,150
4	-	-	-	-	-	-	4.50	1,020	7.59	2,560	11.85	7,250
6	-	-	-	-	2.92	412	-	-	8.71	3,220	11.57	6,640
8	-	-	-	-	-	-	4.85	1,170	10.45	4,680	11.26	6,020
10	-	-	-	-	-	-	-	-	12.08	7,940	10.95	5,420
N	*2.82	*320	*2.71	*348	3.05	458	4.96	1,220	12.85	10,700	10.64	4,960
2	-	-	-	-	-	-	-	-	13.10	11,800	10.29	4,490
4	-	-	-	-	-	-	5.19	1,330	13.20	12,300	9.92	4,120
6	-	-	-	-	3.45	598	-	-	13.16	12,100	9.53	3,780
8	-	-	-	-	-	-	5.47	1,460	12.98	11,200	9.09	3,460
10	-	-	-	-	-	-	-	-	12.76	10,300	8.72	3,220
M	-	-	-	-	4.10	850	6.18	1,820	12.46	9,140	8.37	3,010
	March 14		March 15		March 16		March 17		March 18		March 19	
2	8.04	2,810	-	-	-	-	4.35	950	4.28	922	13.25	12,600
4	7.71	2,630	-	-	-	-	4.44	979	4.33	942	13.16	12,100
6	7.40	2,460	5.41	1,440	4.77	1,140	4.46	997	4.38	962	12.97	11,200
8	7.08	2,280	-	-	-	-	4.50	1,020	4.59	1,060	12.69	10,100
10	6.80	2,130	-	-	-	-	4.45	992	5.01	1,240	12.38	8,840
N	6.56	2,010	5.14	1,300	4.69	1,100	4.43	984	5.76	1,610	12.03	7,790
2	6.34	1,900	-	-	-	-	-	-	7.03	2,260	11.74	6,980
4	6.14	1,800	-	-	-	-	4.38	962	8.65	3,180	11.45	6,400
6	6.00	1,730	4.94	1,210	4.57	1,050	-	-	10.74	5,110	11.14	5,780
8	5.87	1,660	-	-	-	-	4.34	946	12.49	9,260	10.85	5,280
10	5.79	1,620	-	-	-	-	-	-	13.40	13,300	10.50	4,750
M	5.70	1,580	4.81	1,150	4.47	1,000	4.34	946	13.27	12,600	10.18	4,380
	March 20		March 21		March 22		March 23		March 24		March 25	
2	9.83	4,040	6.40	1,930	7.92	2,750	-	-	-	-	-	-
4	9.44	3,710	6.25	1,860	7.80	2,680	5.61	1,540	-	-	4.28	922
6	9.03	3,420	6.19	1,820	7.62	2,580	-	-	4.63	1,070	-	-
8	8.65	3,180	6.20	1,830	7.40	2,460	5.38	1,420	-	-	4.25	910
10	8.31	2,980	6.29	1,880	7.15	2,320	-	-	-	-	-	-
N	8.00	2,790	6.41	1,940	6.94	2,210	5.20	1,330	4.51	1,020	4.34	946
2	7.71	2,630	6.63	2,040	-	-	-	-	-	-	-	-
4	7.43	2,480	6.92	2,200	6.54	2,000	5.05	1,260	-	-	4.42	979
6	7.16	2,330	7.29	2,400	-	-	-	-	4.40	970	-	-
8	6.93	2,200	7.61	2,580	6.20	1,830	4.92	1,200	-	-	4.42	979
10	6.72	2,090	7.85	2,710	-	-	-	-	-	-	-	-
M	6.56	2,010	7.95	2,760	5.87	1,660	4.80	1,150	4.32	938	4.39	966

Supplemental records.- Mar. 12, 4:30 p.m., 13.21 ft., 12,400 sec.-ft. Mar. 18, 8:30 p.m., 12.68 ft., 10,000 sec.-ft.; 9:10 p.m., 13.57 ft., 14,200 sec.-ft.; 11 p.m., 13.26 ft., 12,600 sec.-ft. Mar. 19, 1 a.m., 13.28 ft., 12,700 sec.-ft.
*Mean for the day.

Quinebaug River at Quinebaug, Conn.

Location.- Lat. 42°1'20", long. 71°57'15", at Quinebaug, Windham County, 500 feet above highway bridge and a quarter of a mile below Massachusetts-Connecticut State line.
Drainage area.- 157 square miles.
Gage-height record.- Water-stage recorder graph.
Stage-discharge relation.- Affected by ice Feb. 1-21, Mar. 12, and by aquatic growth Feb. 22 to Mar. 10. Defined by current-meter measurements below 1,700 second-feet; extended to peak stage using determinations of flood flow through submerged bridge opening 300 feet downstream (C, 0.72) and over spillway of dam a quarter of a mile upstream (C, 3.37), and by comparison with records of station at Putnam. Sharp reversal in rating curve between 9.4 and 11.5 feet results from constricted channel at bridge below.
Maxima.- 1936: Discharge, 9,400 second-feet 8:30 p.m. Mar. 18 (gage height, 13.44 feet).
1931-35: Discharge, 2,310 second-feet Mar. 5, 1934 (gage height, 6.4 feet).

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	140	165	699	11	160	736	699	21	200	2,850	436
2	160	254	606	12	150	5,480	776	22	185	2,310	418
3	190	234	782	13	160	5,040	721	23	191	1,650	396
4	150	202	721	14	150	2,810	633	24	257	1,250	354
5	130	258	595	15	130	1,860	622	25	186	1,070	320
6	120	242	880	16	130	1,390	650	26	178	952	316
7	110	220	1,070	17	240	1,210	595	27	200	910	341
8	100	208	910	18	280	4,210	520	28	229	1,160	312
9	130	249	743	19	260	7,190	475	29	194	1,030	267
10	180	392	682	20	240	4,540	450	30		880	275
								31		776	
Mean monthly discharge, in second-feet									177	1,669	575
Run-off, in inches									1.22	12.26	4.10

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	2.96	268	3.72	638	6.07	2,340	9.28	6,100
4	2.78	195	2.93	254	2.97	272	3.66	607	6.46	2,520	9.11	5,860
6	-	-	-	-	2.98	277	3.65	601	7.21	3,470	9.00	5,710
8	2.74	180	3.07	314	3.27	403	3.74	652	9.93	6,730	8.86	5,510
10	-	-	-	-	3.12	336	3.64	598	10.50	6,850	8.56	5,100
N	2.79	197	3.02	293	3.07	314	3.69	627	10.65	6,860	8.43	4,930
2	-	-	-	-	3.20	371	3.74	655	10.70	6,860	8.37	4,850
4	2.87	230	2.79	197	3.18	361	3.78	680	10.46	6,820	8.22	4,660
6	-	-	-	-	3.39	464	3.92	756	10.03	6,760	8.10	4,500
8	2.89	238	2.92	250	3.59	567	4.13	880	9.66	6,560	7.87	4,220
10	-	-	-	-	3.79	677	4.49	1,110	9.61	6,520	7.57	3,870
M	2.88	234	2.93	254	3.80	682	5.16	1,580	9.62	6,530	7.42	3,700
	March 14		March 15		March 16		March 17		March 18		March 19	
2	-	-	-	-	-	-	-	-	4.59	1,190	12.40	8,240
4	6.95	3,190	-	-	-	-	-	-	4.62	1,210	12.04	7,760
6	-	-	5.70	2,020	5.00	1,480	4.65	1,240	4.68	1,260	11.76	7,340
8	6.73	2,970	-	-	-	-	-	-	4.86	1,380	11.63	7,180
10	-	-	-	-	-	-	-	-	5.34	1,730	11.56	7,110
N	6.51	2,750	5.43	1,800	4.86	1,380	4.59	1,190	6.43	2,490	11.37	7,000
2	-	-	-	-	-	-	-	-	7.55	3,840	11.10	6,940
4	6.41	2,650	-	-	-	-	-	-	9.35	6,200	10.80	6,880
6	-	-	5.28	1,680	4.75	1,300	4.53	1,150	12.25	8,060	10.50	6,850
8	6.14	2,410	-	-	-	-	-	-	13.35	9,200	10.16	6,780
10	-	-	-	-	-	-	-	-	13.35	9,200	9.84	6,690
M	5.94	2,230	5.14	1,580	4.71	1,280	4.60	1,200	12.91	8,700	9.55	6,460
	March 20		March 21		March 22		March 23		March 24		March 25	
2	9.27	6,090	6.65	2,890	-	-	-	-	-	-	-	-
4	9.00	5,710	6.62	2,860	-	-	-	-	-	-	4.42	1,070
6	8.74	5,350	-	-	6.25	2,500	5.40	1,780	4.77	1,320	-	-
8	8.51	5,030	6.50	2,740	-	-	-	-	-	-	4.54	1,160
10	8.24	4,680	-	-	-	-	-	-	-	-	-	-
N	8.09	4,490	6.66	2,900	6.02	2,300	5.23	1,640	4.64	1,230	4.44	1,090
2	7.80	4,140	-	-	-	-	-	-	-	-	-	-
4	7.57	3,870	6.70	2,940	-	-	-	-	-	-	4.37	1,040
6	7.39	3,670	-	-	5.84	2,140	5.07	1,530	4.60	1,200	-	-
8	7.17	3,430	6.59	2,830	-	-	-	-	-	-	4.32	1,010
10	7.00	3,240	-	-	-	-	-	-	-	-	-	-
M	6.94	3,180	6.48	2,720	5.59	1,930	4.90	1,410	4.48	1,120	4.32	1,010

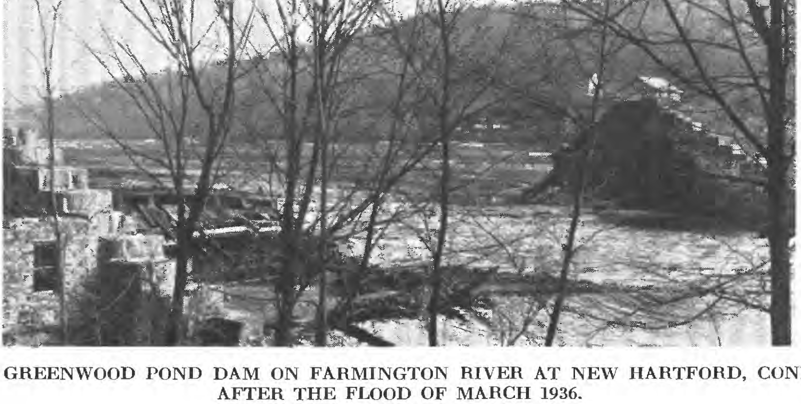
Supplemental records.- Mar. 12, 3 p.m., 10.80 ft., 6,850 sec.-ft. Mar. 18, 8:30 p.m., 13.44 ft., 9,400 sec.-ft.

A. QUINEBAUG RIVER AT PUTNAM, CONN., NEAR THE PEAK OF THE FLOOD ON MARCH 19, 1936, SHOWING SUBMERGENCE OF THE GAGING STATION.

B. FLOOD WATER OF QUINEBAUG RIVER PASSING OVER THE DAM OF THE AMES WORSTED CO. AT SOUTHBRIDGE, MASS., MARCH 19, 1936, A FEW HOURS AFTER THE PEAK OF THE FLOOD.

Courtesy of Gertrude S. Cleveland, Quinebaug, Conn.

A. DAMAGE TO HIGHWAY BRIDGE CROSSING WILD AMMONOOSUC RIVER ABOUT 1 MILE BELOW BATH, N. H.



B. GREENWOOD POND DAM ON FARMINGTON RIVER AT NEW HARTFORD, CONN., AFTER THE FLOOD OF MARCH 1936.

Looking upstream from point on right bank.

Quinebaug River at Putnam, Conn.

Location.- Lat. 41°54'30", long. 71°54'30", at Putnam, Windham County, 600 feet below mouth of Muddy Brook and 3 miles below junction of Quinebaug and French Rivers.

Drainage area.- 331 square miles.

Gage-height record.- Water-stage recorder graph except for periods Mar. 12-15, 19-22, when it was based on partial gage-height graph, flood marks, records at Belding-Hemingway Co. dam at Putnam, and information obtained from local residents.

Stage-discharge relation.- Affected by ice Feb. 1-4, 11-15, 19-25. Defined by current-meter measurements to 2,010 second-feet; extended to peak stage using determination of flood flow over spillway of dam 1 mile upstream (C, 3.70) and inflow from Muddy Brook determined by computation of flow over spillway of dam 2 miles above mouth (C, 3.39).

Maxima.- 1936: Discharge, 17,200 second-feet 2:45 p.m. Mar. 19 (gage height, 17.28 feet, from flood marks).

1929-35: Discharge, 6,830 second-feet (revised) Mar. 6, 1934 (gage height, 10.9 feet).

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	260	391	1,620	11	380	1,530	1,780	21	550	6,600	990
2	320	571	1,550	12	360	8,520	1,900	22	380	5,800	950
3	440	570	1,760	13	400	9,900	1,770	23	460	4,600	905
4	340	562	1,740	14	360	7,130	1,550	24	600	3,250	830
5	294	678	1,500	15	340	4,500	1,510	25	550	2,780	777
6	269	682	1,980	16	344	3,250	1,540	26	533	2,540	815
7	252	493	2,970	17	682	2,720	1,330	27	542	2,380	710
8	236	534	2,610	18	730	5,980	1,210	28	538	3,120	570
9	236	664	2,120	19	700	15,400	1,140	29	433	2,840	668
10	428	813	1,790	20	650	9,400	1,050	30		2,330	673
								31		1,900	
Mean monthly discharge, in second-feet									435	3,627	1,410
Run-off, in inches									1.41	12.64	4.75

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	-	-	7.25	2,840	13.8	10,900
4	-	-	-	-	3.58	562	5.09	1,310	7.80	3,340	13.8	10,900
6	-	-	-	-	-	-	-	-	9.00	4,570	13.6	10,600
8	-	-	-	-	3.75	632	5.08	1,310	10.50	6,320	13.25	10,100
10	-	-	-	-	-	-	-	-	12.40	8,850	12.9	9,570
N	*3.51	*534	*3.82	*664	4.24	860	5.43	1,520	13.58	10,600	12.7	9,270
2	-	-	-	-	-	-	-	-	14.5	12,100	12.7	9,270
4	-	-	-	-	4.38	930	5.53	1,580	14.75	12,500	12.8	9,420
6	-	-	-	-	-	-	-	-	14.45	12,000	12.85	9,500
8	-	-	-	-	4.52	1,000	5.84	1,780	14.15	11,500	12.85	9,500
10	-	-	-	-	-	-	6.15	2,000	13.8	10,900	12.7	9,270
M	-	-	-	-	4.81	1,150	6.86	2,530	13.75	10,900	12.4	8,850
	March 14		March 15		March 16		March 17		March 18		March 19	
2	-	-	-	-	-	-	-	-	6.97	2,620	17.15	16,900
4	11.95	8,220	9.55	5,180	7.92	3,450	7.25	2,840	6.97	2,620	16.85	16,300
6	-	-	-	-	-	-	-	-	6.96	2,610	16.6	15,800
8	11.5	7,610	9.2	4,790	7.80	3,340	7.10	2,720	6.99	2,630	16.4	15,500
10	-	-	-	-	-	-	-	-	7.14	2,750	16.1	14,900
N	11.1	7,090	8.87	4,430	7.60	3,160	7.05	2,680	7.80	3,340	15.9	14,500
2	-	-	8.67	4,210	-	-	-	-	9.10	4,680	16.9	16,400
4	10.7	6,570	8.36	3,890	7.56	3,120	7.13	2,740	10.30	6,080	17.05	16,700
6	-	-	8.21	3,740	-	-	-	-	12.30	8,710	16.4	15,500
8	10.3	6,080	8.14	3,670	7.42	3,000	7.02	2,660	14.4	11,900	15.85	14,400
10	-	-	8.10	3,630	-	-	-	-	15.85	14,400	15.35	13,500
M	9.9	5,600	8.05	3,580	7.31	2,900	6.98	2,620	17.1	16,800	14.9	12,800
	March 20		March 21		March 22		March 23		March 24		March 25	
2	14.4	11,900	10.9	6,830	10.55	6,380	-	-	-	-	-	-
4	14.0	11,300	10.7	6,570	10.45	6,260	9.45	5,060	7.99	3,520	7.23	2,830
6	13.6	10,600	10.55	6,380	10.4	6,200	-	-	-	-	-	-
8	13.25	10,100	10.45	6,260	10.3	6,080	9.3	4,900	7.80	3,340	7.16	2,770
10	12.95	9,640	10.4	6,200	10.2	5,960	-	-	-	-	-	-
N	12.6	9,130	10.45	6,260	10.15	5,900	9.13	4,710	7.71	3,260	7.20	2,800
2	12.3	8,710	10.65	6,500	10.05	5,780	-	-	-	-	-	-
4	12.05	8,360	10.8	6,700	10.0	5,720	8.76	4,310	7.54	3,110	7.16	2,770
6	11.8	8,010	10.85	6,760	9.85	5,540	-	-	-	-	-	-
8	11.5	7,610	10.8	6,700	9.75	5,420	8.43	3,960	7.38	2,960	7.07	2,700
10	11.3	7,350	10.75	6,640	9.7	5,360	-	-	-	-	-	-
M	11.1	7,090	10.65	6,500	9.6	5,240	8.20	3,730	7.28	2,870	7.02	2,660

Supplemental records.- Mar. 19, 1 a.m., 17.25 ft., 17,100 sec.-ft.; 2:45 p.m., 17.28 ft., 17,200 sec.-ft.

*Mean for the day.

Quinebaug River at Jewett City, Conn.

Location.- Lat. 41°35'55", long. 71°59'5", at Jewett City, New London County, 1,000 feet below railroad bridge and 570 feet below outlet of canal from Slater Mills (mouth of Pachaug River).

Drainage area.- 711 square miles.

Gage-height record.- Water-stage recorder graph except for periods Mar. 12-23, when a graph was drawn based on partial gage-height graph at station, gage-height record at Aspinook Co. dam 1 mile upstream and at Connecticut Light & Power Co. dam 6 miles downstream, high-water marks, and gage readings by engineers and observer.

Stage-discharge relation.- Defined by current-meter measurements to gage height 11.9 feet; extended to peak stage on basis of flow determination over spillway of dam 1 mile upstream (C, 3.32) plus inflow of Pachaug River determined from peak discharge computation for dam 1¼ miles above mouth (C, 3.42), and determination of flow over spillway of dam 6 miles downstream (C, 3.25).

Maxima.- 1936: Discharge, 29,200 second-feet 8 to 10 p.m. Mar. 19 (gage height, 24.0 feet, from flood marks).
1918-35: Discharge, 13,100 second-feet Jan. 11, 1935 (gage height, 17.0 feet).

Remarks.- The Ashland Corporation of Jewett City reported that all reservoirs in the Pachaug River Basin, with the exception of Beach Pond, were full and overflowing prior to and during the March flood period.

Mean discharge, in second-feet, October 1935 to April 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
1	310	168	1,300	218	774	1,120	3,280
2	312	42	1,160	277	628	1,250	3,010
3	285	35	994	451	837	1,390	3,450
4	208	227	794	936	894	1,410	3,520
5	56	285	482	1,790	808	1,750	3,100
6	35	248	507	1,870	889	1,860	3,950
7	384	266	372	1,690	757	1,480	6,550
8	409	50	236	1,290	564	1,280	5,880
9	408	34	512	1,210	614	1,420	4,550
10	401	33	532	1,580	699	2,080	3,910
11	318	245	626	1,760	825	3,490	3,720
12	64	282	574	1,400	767	12,100	3,920
13	33	265	530	1,420	768	20,700	3,750
14	288	250	380	1,480	792	13,600	3,300
15	328	46	323	1,440	556	8,580	2,950
16	304	33	482	3,750	560	6,130	2,890
17	332	36	790	4,420	878	4,750	2,800
18	202	370	708	2,860	1,360	6,980	2,390
19	59	362	631	1,810	1,540	25,300	2,290
20	33	425	676	1,450	1,480	24,100	2,180
21	292	411	414	1,650	1,380	14,100	1,990
22	284	268	194	1,500	1,130	11,500	1,920
23	322	344	466	1,660	1,010	8,700	1,780
24	286	176	415	1,370	1,150	6,140	1,680
25	214	371	193	1,140	1,140	5,130	1,440
26	70	468	484	996	1,140	4,590	1,520
27	32	507	460	1,010	1,230	4,240	1,630
28	236	108	117	1,120	1,390	5,410	1,370
29	280	1,180	120	1,050	1,280	5,730	1,320
30	282	1,910	479	956		4,730	1,350
31	287		410	880		3,800	

Month	Mean	Run-off in inches
1935		
October	237	0.38
November	315	.49
December	528	.86
1936		
January	1,498	2.43
February	960	1.46
March	6,930	11.24
April	2,913	4.57

Quinebaug River at Jewett City, Conn.--Continued

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	-	-	11.43	5,450	21.4	22,000
4	-	-	-	-	-	-	8.84	2,880	12.02	6,150	21.4	22,000
6	-	-	-	-	7.52	1,810	-	-	12.73	7,060	21.5	22,300
8	-	-	-	-	-	-	9.12	3,130	13.62	8,270	21.79	23,000
10	-	-	-	-	-	-	-	-	14.68	9,820	21.4	22,000
N	*6.78	*1,280	*6.99	*1,420	8.00	2,190	9.52	3,490	15.64	11,300	21.2	21,600
2	-	-	-	-	-	-	-	-	16.91	13,400	20.8	20,700
4	-	-	-	-	-	-	9.74	3,690	18.00	15,300	20.2	19,400
6	-	-	-	-	8.20	2,350	-	-	18.95	17,000	20.1	19,200
8	-	-	-	-	-	-	10.17	4,100	19.8	18,600	19.9	18,800
10	-	-	-	-	-	-	-	-	20.45	19,900	19.4	17,900
M	-	-	-	-	8.51	2,600	10.87	4,840	21.0	21,100	18.9	16,900
	March 14		March 15		March 16		March 17		March 18		March 19	
2	18.65	16,500	-	-	-	-	-	-	10.3	4,230	20.0	19,000
4	18.5	16,200	14.5	9,550	-	-	10.99	4,970	10.25	4,180	21.0	21,100
6	18.3	15,800	-	-	12.35	6,560	-	-	10.3	4,230	21.7	22,800
8	18.0	15,300	14.15	9,020	-	-	11.01	4,990	10.4	4,330	22.2	24,000
10	17.6	14,600	-	-	-	-	-	-	10.6	4,540	22.7	25,400
N	16.9	13,400	13.8	8,520	11.96	6,080	10.85	4,820	11.0	4,980	23.1	26,500
2	16.45	12,700	-	-	-	-	-	-	11.4	5,420	23.4	27,400
4	16.1	12,100	13.5	8,100	-	-	10.7	4,650	12.0	6,130	23.7	28,300
6	15.8	11,600	-	-	11.59	5,640	-	-	14.48	9,520	23.9	28,900
8	15.5	11,100	13.15	7,610	-	-	10.4	4,330	15.90	11,700	24.0	29,200
10	15.2	10,600	-	-	-	-	-	-	17.37	14,200	24.0	29,200
M	14.9	10,200	12.8	7,150	11.20	5,200	10.3	4,230	18.7	16,600	23.9	28,900
	March 20		March 21		March 22		March 23		March 24		March 25	
2	23.7	28,300	18.7	16,600	-	-	-	-	-	-	-	-
4	23.5	27,700	18.20	15,700	16.20	12,200	14.7	9,850	12.37	6,590	11.11	5,100
6	23.25	26,900	17.80	15,000	-	-	-	-	-	-	-	-
8	23.0	26,200	17.52	14,500	15.90	11,700	14.35	9,320	12.19	6,360	11.21	5,210
10	22.6	25,100	17.25	14,000	-	-	-	-	-	-	-	-
N	22.3	24,300	17.00	13,600	15.70	11,400	13.95	8,730	12.01	6,140	11.16	5,160
2	21.95	23,400	16.80	13,300	-	-	13.75	8,450	-	-	-	-
4	21.6	22,500	16.70	13,100	15.45	11,000	13.4	7,960	11.81	5,900	11.08	5,070
6	21.15	21,400	16.60	12,900	-	-	13.22	7,710	-	-	-	-
8	20.7	20,400	16.52	12,800	15.3	10,800	13.07	7,500	11.47	5,500	10.97	4,950
10	20.2	19,400	16.45	12,700	-	-	12.91	7,290	-	-	-	-
M	19.55	18,100	16.38	12,500	15.1	10,500	12.68	6,990	11.31	5,320	10.82	4,780

*Mean for the day.

Moosup River at Moosup, Conn.

Location.- Lat. 41°42'40", long. 71°53'15", at outlet of tailrace from Aldrich Bros. mill, 100 feet above New York, New Haven & Hartford Railroad bridge at Moosup, Windham County.

Drainage area.- 83.5 square miles.

Gage-height record.- Water-stage recorder graph.

Stage-discharge relation.- Affected by ice Feb. 1-24, Mar. 5. Defined by current-meter measurements to gage height 4.1 feet; extended on basis of determinations of flow over spillway of dam a quarter of a mile upstream for gage heights 6.9 feet and 8.2 feet (C, 3.7).

Maxima.- 1936: Discharge, 4,080 second-feet (natural) 1 p.m. Mar. 12 (gage height, 8.18 feet); maximum stage, 8.35 feet 4:15 p.m. Mar. 12, resulted from sharp, short rise of unknown origin.

1932-35: Discharge, 2,190 second-feet Jan. 10, 1935 (gage height, 6.6 feet).

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	80	190	294	11	90	768	458	21	100	1,010	204
2	55	190	308	12	90	3,420	488	22	90	870	195
3	80	179	430	13	90	2,380	428	23	75	630	182
4	90	198	382	14	90	1,040	358	24	110	469	177
5	95	260	312	15	70	659	320	25	136	424	162
6	100	268	708	16	50	502	314	26	155	392	166
7	95	236	955	17	80	397	280	27	173	386	178
8	75	210	682	18	110	1,600	247	28	206	621	158
9	48	236	466	19	90	2,770	227	29	190	562	149
10	75	412	423	20	85	1,370	214	30		422	136
								31		338	
Mean monthly discharge, in second-feet									99.1	755	333
Run-off, in inches									1.28	10.42	4.45

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	March 8 Feet	March 8 Sec.ft.	March 9 Feet	March 9 Sec.ft.	March 10 Feet	March 10 Sec.ft.	March 11 Feet	March 11 Sec.ft.	March 12 Feet	March 12 Sec.ft.	March 13 Feet	March 13 Sec.ft.
2	-	-	-	-	-	-	-	-	5.90	1,990	7.43	3,310
4	-	-	-	-	-	-	3.51	584	6.40	2,390	7.20	3,090
6	-	-	-	-	-	-	-	-	7.19	3,080	6.96	2,870
8	-	-	-	-	-	-	3.74	676	7.74	3,620	6.73	2,670
10	-	-	-	-	-	-	-	-	8.00	3,880	6.50	2,470
N	*2.31	*210	*2.42	*236	*3.03	*412	3.67	648	8.16	4,060	6.26	2,280
2	-	-	-	-	-	-	-	-	8.15	4,040	6.05	2,110
4	-	-	-	-	-	-	3.92	754	8.10	3,990	5.85	1,950
6	-	-	-	-	-	-	-	-	8.00	3,880	5.65	1,800
8	-	-	-	-	-	-	4.26	920	7.93	3,810	5.45	1,660
10	-	-	-	-	-	-	-	-	7.82	3,100	5.27	1,540
M	-	-	-	-	-	-	5.35	1,600	7.65	3,530	5.11	1,430

Hour	March 14 Feet	March 14 Sec.ft.	March 15 Feet	March 15 Sec.ft.	March 16 Feet	March 16 Sec.ft.	March 17 Feet	March 17 Sec.ft.	March 18 Feet	March 18 Sec.ft.	March 19 Feet	March 19 Sec.ft.
2	-	-	-	-	-	-	-	-	2.80	340	6.98	2,890
4	4.84	1,250	-	-	-	-	-	-	2.86	358	6.98	2,890
6	-	-	3.80	700	-	-	-	-	2.91	373	7.08	2,980
8	4.61	1,120	-	-	-	-	-	-	3.35	522	7.21	3,100
10	-	-	-	-	-	-	-	-	3.50	580	7.20	3,090
N	4.44	1,010	3.71	664	*3.29	*502	*2.99	*397	4.75	1,200	7.11	3,010
2	-	-	-	-	-	-	-	-	5.70	1,840	6.97	2,880
4	4.23	905	-	-	-	-	-	-	6.60	2,550	6.79	2,720
6	-	-	3.60	620	-	-	-	-	7.20	3,090	6.60	2,550
8	4.09	835	-	-	-	-	-	-	7.48	3,360	6.36	2,360
10	-	-	-	-	-	-	-	-	7.40	3,280	6.15	2,190
M	3.95	768	3.50	580	-	-	-	-	7.13	3,030	5.93	2,010

Hour	March 20 Feet	March 20 Sec.ft.	March 21 Feet	March 21 Sec.ft.	March 22 Feet	March 22 Sec.ft.	March 23 Feet	March 23 Sec.ft.	March 24 Feet	March 24 Sec.ft.	March 25 Feet	March 25 Sec.ft.
2	5.72	1,850	4.30	940	-	-	-	-	-	-	-	-
4	5.52	1,710	4.26	920	-	-	-	-	-	-	-	-
6	5.35	1,600	4.21	895	4.29	935	-	-	-	-	-	-
8	5.21	1,500	4.27	925	-	-	-	-	-	-	-	-
10	5.05	1,380	4.41	996	-	-	-	-	-	-	-	-
N	4.90	1,290	4.52	1,060	4.16	870	*3.62	*630	*3.20	*469	*3.07	*424
2	4.82	1,240	4.57	1,090	-	-	-	-	-	-	-	-
4	4.70	1,170	4.58	1,100	-	-	-	-	-	-	-	-
6	4.62	1,120	4.54	1,070	4.04	810	-	-	-	-	-	-
8	4.51	1,060	4.50	1,050	-	-	-	-	-	-	-	-
10	4.43	1,010	4.44	1,010	-	-	-	-	-	-	-	-
M	4.37	975	4.40	990	3.89	740	-	-	-	-	-	-

Supplemental records.- Mar. 12, 1 p.m., 8.18 ft., 4,080 sec.-ft.; 4:15 p.m., 8.35 ft.; 4:30 p.m., 8.05 ft., 3,940 sec.-ft. Mar. 18, 1 a.m., 2.90 ft., 370 sec.-ft.; 9 a.m., 3.33 ft., 516 sec.-ft.; 8:30 p.m., 7.49 ft., 3,370 sec.-ft.; 9 p.m., 7.48 ft., 3,360 sec.-ft.

*Mean for the day.

Yantic River at Yantic, Conn.

Location.- Lat. 41°33'35", long. 72°7'20", 700 feet below stone-arch highway bridge at Yantic, New London County, and 1 mile below Susquetonscut Brook.
Drainage area.- 8.6 square miles.
Gage-height record.- Water-stage recorder graph except for periods Feb. 1-11, 2 p.m. Mar. 14 to 2 p.m. Mar. 15, noon Apr. 6 to 10 a.m. Apr. 7.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 8. Defined by current-meter measurements below 283 second-feet; extended to peak stage using determination of flood flow over spillway of dam, 2½ miles upstream (C, 3.63).
Maxima.- 1936: Discharge, 6,300 second-feet 10:30 a.m. Mar. 12 (gage height, 11.32 feet).
1930-35: Discharge, 2,350 second-feet Jan. 10, 1935 (gage height, 8.9 feet); maximum gage height, 10.83 Mar. 5 or 6, 1934, from flood marks (ice jam).
Remarks.- Gage heights for period 2 p.m. Mar. 14 to 2 p.m. Mar. 15 and discharge for period of missing record determined by comparison with records of Salmon River near East Hampton.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	55	200	272	11	60	1,030	557	21	140	1,030	201
2	40	220	286	12	65	4,100	520	22	130	936	197
3	50	190	442	13	65	1,610	432	23	130	584	183
4	50	200	375	14	60	770	360	24	140	433	167
5	60	300	294	15	34	532	336	25	110	389	148
6	65	300	1,290	16	55	431	344	26	130	345	156
7	60	240	1,460	17	110	377	303	27	150	360	166
8	55	210	790	18	160	1,660	262	28	220	669	147
9	35	247	516	19	180	2,100	242	29	220	518	139
10	35	578	531	20	160	1,030	229	30		388	132
								31		317	
Mean monthly discharge, in second-feet......................									97.4	719	383
Run-off, in inches..									1.19	9.36	4.82

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	5.49	877	8.80	2,460	8.62	2,330
4	-	-	2.80	-	3.79	402	5.44	862	9.47	3,070	8.34	2,150
6	-	-	-	-	-	-	5.40	850	10.07	3,860	8.03	1,970
8	-	-	2.77	-	4.10	475	5.38	844	10.80	5,100	7.74	1,820
10	-	-	3.12	-	-	-	5.62	917	11.30	6,250	7.53	1,720
N	*2.90	*210	2.99	*247	4.00	451	5.59	907	11.22	6,050	7.18	1,540
2	-	-	3.00	-	-	-	5.55	895	10.89	5,280	6.85	1,400
4	-	-	3.07	-	4.92	701	5.98	1,050	10.53	4,560	6.64	1,320
6	-	-	2.55	-	-	-	5.97	1,050	10.34	4,260	6.20	1,140
8	-	-	3.12	-	5.44	862	6.37	1,210	9.97	3,710	6.13	1,110
10	-	-	3.48	-	-	-	7.12	1,510	9.40	2,990	6.00	1,060
M	2.84	-	3.65	372	5.50	880	7.93	1,920	8.98	2,590	5.84	996
	March 14		March 15		March 16		March 17		March 18		March 19	
2	-	-	-	-	-	-	-	-	3.64	369	9.34	2,920
4	5.56	898	4.5	580	3.99	-	3.71	-	3.69	380	9.03	2,630
6	-	-	-	-	-	-	-	-	3.72	386	8.77	2,440
8	5.31	823	4.35	538	3.93	-	3.70	-	3.82	409	8.56	2,290
10	-	-	-	-	4.32	-	4.00	-	4.60	605	8.45	2,220
N	5.10	755	4.3	525	4.09	*431	3.88	*377	6.33	1,190	8.22	2,080
2	-	-	-	-	3.75	-	3.50	-	8.10	2,010	7.93	1,920
4	4.95	710	4.29	522	3.99	-	3.74	-	9.33	2,910	7.78	1,840
6	-	-	-	-	3.85	-	3.80	-	9.60	3,230	7.40	1,650
8	4.75	650	4.15	488	3.50	-	3.39	-	9.71	3,370	7.21	1,560
10	-	-	-	-	3.69	-	3.51	-	9.65	3,300	7.03	1,470
M	4.6	605	4.05	463	3.73	-	3.59	359	9.50	3,110	6.85	1,400
	March 20		March 21		March 22		March 23		March 24		March 25	
2	-	-	5.18	779	-	-	-	-	-	-	-	-
4	6.47	1,250	5.19	782	6.18	1,130	4.78	-	4.02	-	3.75	-
6	-	-	5.20	785	-	-	-	-	-	-	-	-
8	6.15	1,120	5.31	823	5.92	1,030	4.64	-	3.96	-	3.77	-
10	-	-	5.70	945	-	-	5.00	-	4.35	-	3.94	-
N	5.93	1,030	6.20	1,140	5.65	928	4.65	*584	4.05	*433	3.90	*389
2	-	-	6.48	1,250	-	-	4.55	-	3.96	-	3.78	-
4	5.62	917	6.55	1,280	5.35	835	4.45	-	3.96	-	3.85	-
6	-	-	6.52	1,270	-	-	3.90	-	3.50	-	3.30	-
8	5.27	810	6.47	1,250	5.11	758	4.00	-	3.60	-	3.48	-
10	-	-	6.41	1,220	-	-	4.08	-	3.70	-	3.58	-
M	5.17	776	6.35	1,200	4.93	704	4.07	-	3.72	-	3.60	-

Supplemental records.- Mar. 9, 9 a.m., 3.27 ft.; 1 p.m., 2.30 ft. Mar. 12, 3 a.m., 9.30 ft., 2,880 sec.-ft.; 10:30 a.m., 11.32 ft., 6,300 sec.-ft. Mar. 16, 7 p.m., 3.40 ft. Mar. 17, 7 p.m., 3.28 ft. Mar. 18, 9 a.m., 4.05 ft., 463 sec.-ft. Mar. 19, 3 a.m., 9.27 ft., 2,850 sec.-ft. Mar. 23, 1 p.m., 4.18 ft. Mar. 24, 1 p.m., 3.57 ft. Mar. 25, 9 a.m., 4.22 ft.; 1 p.m., 3.39 ft.

Connecticut River at First Connecticut Lake, near Pittsburg, N. H.

Location.- Lat. 45°5'15", long. 71°17'35", a quarter of a mile below dam at First Connecticut Lake and 6 miles northeast of Pittsburg, Coos County.

Drainage area.- 83.0 square miles.

Gage-height record.- Water-stage recorder graph.

Stage-discharge relation.- Affected by ice Mar. 1, 2, 6-8, 17-22. Defined by current-meter measurements below 1,620 second-feet.

Maxima.- 1936: Discharge observed, 1,320 second-feet 8 p.m. May 8 to noon May 9 (gage height, 3.62 feet); mean daily discharge corrected for storage, 3,620 second-feet Mar. 19.

1917-35: Discharge observed, 1,810 second-feet noon May 27, 1930 (gage height, 4.02 feet); maximum gage-height, 6.35 feet 11:30 a.m. May 5, 1925 (caused by backwater during logging operations).

Remarks.- Flood run-off completely stored in First and Second Connecticut Lakes (total capacity 3,840,000,000 cubic feet). Basic data on storage in First and Second Connecticut Lakes furnished by Connecticut River Power Co.

Mean discharge (second-feet) and gain or loss in storage (millions of cubic feet), 1936

Day	March			April			May		
	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge
1	88	-4.2	39	12	+55.4	653	14	+192.2	2,240
2	78	-4.1	31	12	+43.6	517	15	+182.0	2,120
3	70	-3.6	28	12	+39.7	471	167	+177.7	2,220
4	64	-3.1	28	12	+28.1	337	584	+117.3	1,940
5	58	-2.0	35	12	+24.4	294	909	+53.1	1,520
6	54	-2.0	31	13	+53.0	626	1,070	-22.4	811
7	50	-2.0	27	13	+69.6	819	1,050	-12.0	911
8	47	-1.0	35	12	+45.4	537	1,100	+15.6	1,280
9	43	-1.0	31	12	+21.4	260	1,320	+10.4	1,440
10	40	0	40	12	+17.5	215	1,320	-29.0	984
11	40	+7.9	131	12	+20.2	246	1,300	-18.8	1,080
12	27	+67.5	808	13	+22.2	270	1,300	-13.3	1,150
13	7.6	+73.4	858	13	+20.4	249	1,300	+17.1	1,500
14	6.6	+54.6	639	13	+14.1	176	1,300	+30.6	1,650
15	6.6	+54.6	639	14	+16.2	202	1,300	+3.0	1,340
16	6.6	+68.2	796	14	+16.6	206	1,250	-47.7	700
17	8.2	+100.5	1,170	14	+20.9	256	1,050	-40.0	587
18	9.4	+208.7	2,430	14	+20.8	255	442	-3.1	406
19	10	+312.2	3,620	13	+22.6	275	200	+48.4	760
20	10	+186.8	2,170	13	+19.0	233	428	+39.9	890
21	11	+174.4	2,030	13	+16.7	206	570	0	570
22	11	+154.7	1,800	13	+14.8	184	570	-21.2	325
23	11	+100.7	1,180	13	+10.6	136	474	-6.7	396
24	11	+49.3	582	13	+10.5	135	344	-6.7	266
25	11	+40.1	475	13	+10.6	136	252	-6.7	174
26	11	+30.4	363	13	+10.5	135	165	0	165
27	11	+42.1	498	13	+15.2	189	151	+12.0	290
28	12	+47.6	563	13	+21.6	263	187	+12.0	326
29	12	+35.4	422	14	+67.9	800	233	+6.7	311
30	12	+36.0	429	14	+171.7	2,000	245	-5.3	184
31	12	+62.4	734				245	-5.3	184

	March	April	May
Mean monthly discharge, in second-feet (observed)	27.4	12.9	673
Gain or loss in storage, in millions of cubic feet	+1,884.5	+941.2	+679.8
Mean monthly discharge, in second-feet (corrected)	731	376	927
Run-off, in inches (corrected)	10.16	5.05	12.91

Connecticut River at North Stratford, N. H.

Location.- Lat. 44°44'55", long. 71°37'55", in North Stratford, Coos County, 400 feet below mouth of Nulhegan River. Zero of gage is 880.00 feet above mean sea level.
Drainage area.- 796 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights given to half tenths between 4.50 and 7.00 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 17. Defined by current-meter measurements below 14,400 second-feet; extended to peak stage by study of flow characteristics at control section; verified by comparison of peak discharge and total run-off of flood with determinations at other gaging stations on Connecticut River.
Maxima.- 1936: Discharge, 28,400 second-feet 2 to 10 p.m. Mar. 19 (gage height, 14.64 feet); maximum gage height, 16.66 feet 4:30 a.m. Mar. 13 (ice jam).
1930-35: Discharge, 21,700 second-feet (revised) Apr. 25, 1934 (gage height, 12.73 feet).
Remarks.- Flood flow affected by 3,840,000,000 cubic feet of storage capacity.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	920	360	6,270	11	630	800	3,470	21	640	13,300	2,420
2	800	320	4,040	12	650	1,700	3,380	22	600	15,100	2,420
3	750	310	3,200	13	650	5,400	2,640	23	450	11,600	2,070
4	740	310	2,430	14	640	5,300	2,280	24	440	6,620	2,000
5	790	380	2,000	15	670	5,800	2,140	25	410	5,100	1,820
6	750	350	4,030	16	660	7,500	2,140	26	390	4,570	1,820
7	750	340	8,900	17	710	10,000	2,350	27	370	4,570	1,940
8	700	340	6,270	18	700	21,000	2,560	28	360	5,810	2,140
9	640	360	3,740	19	690	28,000	2,950	29	400	5,120	3,520
10	600	450	3,290	20	650	22,900	2,720	30		4,360	9,140
								31		5,810	
Mean monthly discharge, in second-feet									626	6,254	3,338
Run-off, in inches									0.85	9.06	4.68

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	4.95	-	4.9	-	5.0	-	5.4	-	5.6	-	16.1	-
4	5.0	-	4.85	-	5.0	-	5.45	-	5.8	-	16.5	-
6	5.0	-	4.9	-	5.0	-	5.45	-	5.8	-	12.5	-
8	5.0	-	4.95	-	5.0	-	5.5	-	5.85	-	13.1	-
10	5.05	-	5.0	-	5.0	-	5.55	-	5.8	-	13.4	-
N	5.1	*340	5.0	*360	5.1	*450	5.6	*800	6.45	*1,700	13.5	*5,400
2	4.9	-	5.0	-	5.1	-	5.6	-	6.65	-	13.5	-
4	4.9	-	5.0	-	5.1	-	5.55	-	8.0	-	12.8	-
6	5.0	-	5.0	-	5.15	-	5.6	-	8.2	-	13.5	-
8	5.0	-	5.0	-	5.2	-	5.6	-	8.9	-	13.7	-
10	4.95	-	5.0	-	5.25	-	5.65	-	9.3	-	13.8	-
M	4.95	-	5.0	-	5.3	-	5.65	-	9.8	-	14.0	-
	March 14		March 15		March 16		March 17		March 18		March 19	
2	14.1	-	13.2	-	11.0	-	12.0	-	11.0	16,400	14.2	26,900
4	14.2	-	13.1	-	10.9	-	11.9	-	11.0	16,400	14.3	27,300
6	14.2	-	12.9	-	10.8	-	11.8	-	11.7	18,500	14.4	27,600
8	14.2	-	12.7	-	10.8	-	11.8	-	11.8	18,800	14.5	28,000
10	14.1	-	12.5	-	11.8	-	9.5	-	11.9	19,200	14.5	28,000
N	14.1	*5,300	12.2	*5,800	12.6	*7,500	11.4	*10,000	12.1	19,800	14.5	28,000
2	13.9	-	11.9	-	12.9	-	11.3	-	12.4	20,800	14.6	28,400
4	13.8	-	11.7	-	12.8	-	10.9	-	12.8	22,100	14.6	28,400
6	13.7	-	11.5	-	12.7	-	10.6	-	13.2	23,400	14.6	28,400
8	13.6	-	11.4	-	12.5	-	10.2	-	13.5	24,500	14.6	28,400
10	13.5	-	11.3	-	12.4	-	10.2	-	13.8	25,500	14.6	28,400
M	13.4	-	11.1	-	12.3	-	10.9	-	14.0	26,200	14.5	28,000
	March 20		March 21		March 22		March 23		March 24		March 25	
2	14.3	27,300	10.9	16,100	10.1	13,700	10.5	14,900	8.1	8,420	6.8	5,350
4	14.2	26,900	10.6	15,200	10.4	14,600	10.3	14,300	7.9	7,940	6.8	5,350
6	14.0	26,200	10.4	14,600	10.5	14,900	10.0	13,500	7.8	7,700	6.8	5,350
8	13.8	25,500	10.1	13,700	10.5	14,900	9.8	12,900	7.6	7,220	6.75	5,240
10	13.6	24,800	9.9	13,200	10.5	14,900	9.6	12,300	7.5	6,980	6.7	5,120
N	13.3	23,800	9.7	12,600	10.6	15,200	9.4	11,800	7.3	6,500	6.7	5,120
2	13.0	22,800	9.5	12,100	10.7	15,500	9.2	11,200	7.2	6,270	6.7	5,120
4	12.7	21,700	9.5	12,100	10.7	15,500	9.0	10,700	7.1	6,040	6.65	5,010
6	12.4	20,800	9.5	12,100	10.8	15,800	8.8	10,200	7.0	5,810	6.6	4,900
8	12.0	19,500	9.6	12,300	10.8	15,800	8.6	9,680	6.9	5,580	6.6	4,900
10	11.6	18,200	9.7	12,600	10.7	15,500	8.4	9,160	6.85	5,460	6.6	4,900
M	11.3	17,300	9.8	12,900	10.6	15,200	8.2	8,660	6.85	5,460	6.55	4,790

*Mean for the day.

Connecticut River near Dalton, N. H.

Location.- Lat. 44°24'35", long. 71°43'5", at highway bridge 800 feet below dam and 1 1/3 miles below Dalton, Coos County.
Drainage area.- 1,538 square miles; 1,604 square miles at former site at Waterford, Vt.
Gage-height record.- Graph constructed from several chain-gage readings daily. Gage heights given to half tenths between 7.40 and 9.60 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 10. Defined by current-meter measurements below 44,000 second-feet; verified by drainage-area comparison of instantaneous and total yield of flood at other gaging stations on Connecticut River.
Maxima.- 1936: Discharge, 48,300 second-feet 1 to 4 a.m. Mar. 20 (gage height, 25.6 feet).
1927-35: Discharge, 43,800 second-feet Apr. 9, 1928 (gage height, 667.45 feet, former site and datum).
Remarks.- Flood run-off affected by 4,030,000,000 cubic feet of storage capacity above station.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	1,400	850	11,200	11	760	1,070	7,100	21	1,100	37,900	5,300
2	850	400	11,000	12	780	2,150	6,740	22	950	31,400	4,820
3	920	540	8,800	13	820	8,560	6,560	23	720	28,300	4,660
4	1,050	550	6,600	14	800	10,900	5,300	24	700	22,000	4,200
5	1,100	560	5,480	15	980	10,900	4,820	25	700	15,400	3,920
6	980	630	5,660	16	800	11,300	4,660	26	680	11,300	3,780
7	1,050	900	10,400	17	920	14,600	4,980	27	620	10,200	3,780
8	1,140	450	12,500	18	880	23,300	5,300	28	550	10,600	3,780
9	700	500	10,200	19	890	43,300	5,660	29	800	10,900	4,500
10	720	580	7,820	20	830	46,500	5,660	30		9,980	8,180
								31		9,760	
Mean monthly discharge, in second-feet									869	12,140	6,445
Run-off, in inches									0.61	9.10	4.68

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	7.5	-	6.83	-	7.06	-	6.92	590	7.8	1,150	10.9	4,820
4	7.29	-	6.96	-	7.06	-	6.94	600	7.85	1,190	11.5	5,840
6	7.16	-	7.08	-	7.06	-	6.98	620	7.95	1,280	12.0	6,740
8	6.96	-	7.16	-	7.06	-	7.06	663	8.05	1,360	12.7	8,000
10	6.81	-	7.16	-	7.06	-	7.75	1,110	8.2	1,500	13.2	8,940
N	6.65	*450	7.08	*500	7.06	*580	8.25	1,540	8.75	2,040	13.4	9,340
2	6.53	-	7.06	-	7.05	-	8.55	1,840	8.9	2,200	13.6	9,760
4	6.46	-	7.04	-	7.02	-	8.5	1,790	9.05	2,360	13.7	9,980
6	6.46	-	7.04	-	6.98	-	8.4	1,690	9.1	2,420	13.9	10,400
8	6.51	-	7.04	-	6.96	-	8.2	1,500	9.5	2,900	14.0	10,600
10	6.62	-	7.05	-	6.93	-	8.0	1,320	9.9	3,380	14.0	10,600
M	6.71	-	7.05	-	6.92	-	7.85	1,190	10.4	4,060	14.0	10,600
	March 14		March 15		March 16		March 17		March 18		March 19	
2	14.0	10,600	14.0	10,600	14.2	11,100	14.7	12,200	17.2	18,900	22.6	37,200
4	14.0	10,600	14.0	10,600	14.2	11,100	14.8	12,500	17.4	19,500	23.2	39,300
6	14.0	10,600	14.0	10,600	14.2	11,100	14.9	12,700	17.5	19,800	23.8	41,500
8	14.0	10,600	14.0	10,600	14.2	11,100	15.1	13,200	17.7	20,400	24.1	42,600
10	14.0	10,600	14.0	10,600	14.2	11,100	15.4	13,900	17.9	21,100	24.3	43,300
N	14.0	10,600	14.0	10,600	14.2	11,100	15.5	14,100	18.1	21,700	24.5	44,100
2	14.1	10,900	14.1	10,900	14.2	11,100	15.8	14,900	18.4	22,700	24.7	44,900
4	14.2	11,100	14.2	11,100	14.3	11,300	16.0	15,400	18.6	23,300	24.9	45,600
6	14.2	11,100	14.2	11,100	14.3	11,300	16.4	16,600	19.0	24,600	25.0	46,000
8	14.2	11,100	14.2	11,100	14.4	11,500	16.6	17,100	20.2	28,700	25.1	46,400
10	14.1	10,900	14.2	11,100	14.5	11,700	16.8	17,700	21.5	33,200	25.2	46,800
M	14.0	10,600	14.2	11,100	14.6	12,000	17.0	18,300	22.0	35,000	25.3	47,100
	March 20		March 21		March 22		March 23		March 24		March 25	
2	25.6	48,300	24.2	43,000	21.3	32,500	20.6	30,000	19.1	24,900	17.0	18,300
4	25.6	48,300	24.0	42,200	21.2	32,100	20.5	29,700	18.9	24,300	16.8	17,700
6	25.5	47,900	23.6	40,800	21.2	32,100	20.4	29,400	18.8	24,000	16.6	17,100
8	25.4	47,500	23.3	39,700	21.1	31,800	20.3	29,000	18.6	23,300	16.4	16,600
10	25.3	47,100	23.0	38,600	21.0	31,400	20.2	28,700	18.4	22,700	16.2	16,000
N	25.3	47,100	22.7	37,500	21.0	31,400	20.1	28,300	18.3	22,400	16.0	15,400
2	25.2	46,800	22.4	36,400	20.9	31,100	20.0	28,000	18.1	21,700	15.8	14,900
4	25.1	46,400	22.2	35,700	20.9	31,100	19.9	27,700	17.9	21,100	15.6	14,400
6	24.9	45,600	21.9	34,600	20.9	31,100	19.7	27,000	17.7	20,400	15.4	13,900
8	24.8	45,200	21.8	34,300	20.8	30,700	19.6	26,600	17.6	20,100	15.3	13,700
10	24.6	44,500	21.6	33,600	20.8	30,700	19.4	26,000	17.4	19,500	15.1	13,200
M	24.4	43,700	21.5	33,200	20.7	30,400	19.3	25,600	17.2	18,900	15.0	12,900

Supplemental records.- Mar. 20, 1 to 4 a.m., 25.6 ft., 48,300 sec.-ft.
*Mean for the day.

Connecticut River at outlet of Fifteenmile Falls Reservoir, near Barnet, Vt.

Location.- Lat. 44°19'30", long. 72°0'5", at Frank D. Comerford Hydro-Electric Plant at outlet of Fifteenmile Falls Reservoir, 1¼ miles above mouth of Passumpsic River and 4½ miles east of Barnet, Caledonia County.
Drainage area.- 1,650 square miles.
Stage-discharge relation.- Discharge computed from flow over dam and through wheels and gates.
Maxima.- 1936: Discharge, 55,000 second-feet 3:30 a.m. Mar. 20 (no change in water-surface elevation in reservoir for several hours before and after peak discharge).
Remarks.- Flood run-off affected by a total storage capacity of 5,470,000,000 cubic feet. Mean daily and monthly discharges corrected for gain or loss in storage in Fifteenmile Falls Reservoir only.

Mean discharge (second-feet) and gain or loss in storage (millions of cubic feet), 1936

Day	February			March		
	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge
1	0	+123.6	1,431	8	+75.3	880
2	0	+102.0	1,180	1,758	-117.4	399
3	1,754	-88.9	725	1,766	-106.1	538
4	1,666	-47.7	1,114	1,450	-78.8	538
5	1,025	+8.6	1,125	1,400	-72.5	561
6	1,233	-21.6	983	1,046	-37.3	614
7	1,037	0	1,037	0	+67.6	782
8	145	+91.5	1,204	0	+76.6	886
9	95	+80.7	1,029	1,900	-125.6	446
10	1,625	-85.2	639	1,204	-62.5	481
11	1,416	-56.8	759	1,233	-57.3	570
12	1,183	-34.5	784	3,866	-146.3	2,173
13	1,279	-38.3	836	8,237	+90.6	9,286
14	1,425	-54.3	796	8,612	+290.1	11,970
15	8	+92.6	1,080	9,191	+233.2	11,890
16	0	+91.2	1,056	11,740	+46.7	12,280
17	1,225	-35.1	819	18,400	0	18,400
18	1,283	-34.6	882	27,040	+70.8	27,860
19	1,491	-51.3	897	48,220	+90.7	49,270
20	1,300	-42.0	814	51,530	0	51,530
21	800	+16.9	996	42,100	-27.6	41,780
22	0	+102.4	1,185	34,090	-26.8	33,780
23	0	+74.8	866	29,080	-44.9	28,560
24	1,366	-57.4	702	23,000	-62.2	22,280
25	1,550	-73.4	700	17,020	-64.8	16,270
26	1,225	-46.6	686	12,840	-79.5	11,920
27	1,125	-41.6	643	10,260	+16.4	10,450
28	516	0	516	10,110	+84.7	11,090
29	0	+66.8	773	12,010	0	12,010
30				11,540	-95.9	10,430
31				9,858	-4.1	9,810

	February	March
Mean monthly discharge, in second-feet (observed)	889	13,240
Run-off, in inches (observed)	0.58	9.25
Gain or loss in storage, in millions of cubic feet	+41.8	-66.9
Mean monthly discharge, in second-feet (corrected)	905	13,220
Run-off, in inches (corrected)	0.59	9.24

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Connecticut River at outlet of Fifteenmile Falls Reservoir, near Barnet, Vt.--Contd.

Mean discharge (second-feet) and gain or loss in storage (millions of cubic feet), 1936

Day	April			May		
	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge
1	11,120	0	11,120	11,660	+140.0	13,280
2	10,720	+25.1	11,010	16,360	0	16,360
3	11,580	-246.0	8,733	17,220	0	17,220
4	7,850	81.6	6,905	18,600	0	18,600
5	1,025	+426.3	5,948	17,510	0	17,510
6	6,145	-17.2	5,946	14,310	0	14,310
7	9,054	+144.8	10,730	11,360	-135.5	9,792
8	12,260	+72.6	13,100	9,571	-161.7	7,699
9	11,450	-41.5	10,970	7,221	-16.1	7,035
10	9,308	-102.9	8,117	3,521	+321.9	7,247
11	7,725	-21.9	7,471	7,492	-62.1	6,773
12	6,266	+88.6	7,292	6,670	-73.7	5,817
13	8,066	-123.2	6,640	6,425	+47.5	6,975
14	7,854	-191.7	5,635	9,891	-98.3	8,753
15	5,521	-40.0	5,058	10,580	+55.3	11,220
16	5,233	0	5,233	9,645	+162.9	11,530
17	6,137	-74.0	5,280	9,329	4.5	9,381
18	4,371	+102.0	5,552	8,983	-167.6	7,043
19	2,871	+255.8	5,832	7,116	-105.1	5,899
20	5,604	0	5,604	6,879	-85.4	5,891
21	6,375	-99.3	5,226	7,629	-67.0	6,853
22	5,929	-71.2	5,105	7,237	-76.5	6,352
23	5,650	-77.5	4,753	3,600	+131.5	5,122
24	5,412	-110.0	4,139	87	+356.6	4,214
25	2,979	+94.0	4,067	5,337	-158.4	3,504
26	0	+335.4	3,882	4,142	-96.8	3,022
27	4,229	-40.0	3,766	3,408	-65.3	2,652
28	5,037	-112.6	3,734	3,475	-40.1	3,011
29	4,495	-8.6	4,395	3,117	+11.9	3,255
30	7,333	+17.0	7,530	567	+211.7	3,017
31				695	+187.0	2,859

	April	May
Mean monthly discharge, in second-feet (observed)............	6,587	8,053
Run-off, in inches (observed)................................	4.45	5.63
Gain or loss in storage, in millions of cubic feet...........	+101.4	+221.2
Mean monthly discharge, in second-feet (corrected)...........	6,626	8,135
Run-off, in inches (corrected)...............................	4.48	5.68

Connecticut River at McIndoes Falls, Vt.

Location.- Lat. 44°15'40", long. 72°3'35", at Connecticut River Hydro-Electric Plant just east of McIndoes Falls, Caledonia County.
Drainage area.- 2,200 square miles.
Stage-discharge relation.- Discharge computed from flow over dam and through wheels and gates.
Maxima.- 1936: Discharge, 68,000 second-feet 8 a.m. Mar. 20 (no change in water-surface elevation in reservoir for several hours before and after peak discharge).
Remarks.- Flood run-off affected by a total storage capacity of 5,650,000,000 cubic feet. Mean daily and monthly discharge corrected for gain or loss in storage in pond above station only. Basic data furnished by Connecticut River Power Co.

Mean discharge (second-feet) and gain or loss in storage (millions of cubic feet), 1936

Day	February			March		
	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge
1	1,384	-105.2	166	430	-13.0	279
2	522	-16.3	333	1,642	+49.4	2,214
3	1,400	+67.0	2,175	1,886	+17.3	2,086
4	1,681	+32.2	2,054	1,824	+2.2	1,850
5	1,614	-28.0	1,290	1,697	+8.7	1,798
6	1,624	-8.2	1,529	1,649	-21.9	1,396
7	1,606	-28.9	1,271	1,187	-95.2	85
8	647	-16.0	462	373	+4.4	424
9	420	0	420	1,310	+99.7	2,464
10	1,080	+92.2	2,147	1,666	-6.6	1,590
11	1,901	-15.5	1,722	1,733	0	1,733
12	1,609	-11.2	1,479	7,722	-33.2	7,338
13	1,633	-8.5	1,535	17,460	+66.5	18,230
14	1,633	+12.8	1,781	14,910	-31.1	14,550
15	521	-20.0	289	13,160	-6.0	13,090
16	410	-13.9	249	15,560	+22.5	15,820
17	1,486	+6.0	1,555	28,350	+7.8	28,440
18	1,639	0	1,639	41,630	+27.6	41,950
19	1,559	+28.9	1,893	60,690	+13.8	60,850
20	1,583	+6.3	1,656	64,520	-25.9	64,220
21	1,318	-21.3	1,072	52,090	-5.2	52,030
22	436	-11.8	299	43,390	0	43,390
23	434	-15.5	255	35,860	-6.9	35,780
24	1,382	+38.0	1,822	27,060	-32.0	26,690
25	1,592	+25.9	1,892	20,860	-32.0	20,490
26	1,583	-2.2	1,557	16,090	-21.6	15,840
27	1,602	-6.7	1,525	13,360	0	13,350
28	1,373	-47.8	820	13,480	0	13,480
29	432	-3.7	389	14,220	-13.8	14,060
30				13,860	+9.5	13,970
31				12,760	+29.4	13,100

	February	March
Mean monthly discharge, in second-feet (observed)	1,245	17,500
Run-off, in inches (observed)	0.61	9.16
Gain or loss in storage, in millions of cubic feet	-71.4	+14.4
Mean monthly discharge, in second-feet (corrected)	1,216	17,500
Run-off, in inches (corrected)	0.60	9.16

Connecticut River at White River Junction, Vt.

Location.- Lat. 43°38'50", long. 72°18'45", below railroad bridge at White River Junction, Windsor County, just below mouth of White River. Zero of gage is 321.59 feet above mean sea level.

Drainage area.- 4,068 square miles.

Gage-height record.- Water-stage recorder graph prior to noon Mar. 12; thereafter, graph constructed from several chain-gage readings daily. Gage heights given to half tenths between 4.50 and 7.50 feet; hundredths below and tenths above these limits.

Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 12. Defined by current-meter measurements below 70,100 second-feet; extended to peak stage by velocity-area study near control section; verified by drainage-area comparison of instantaneous and total yield of flood at other gaging stations on Connecticut River.

Maxima.- 1936: Discharge, 120,000 second-feet 3 to 4 a.m. Mar. 19 (gage height, 32.6 feet at water-stage recorder site and 33.4 feet at chain-gage site, both gages at same datum).

1911-35: Discharge, 136,000 second-feet (revised) Nov. 4, 1927 (gage height, 35.0 feet, water-stage recorder site).

Remarks.- Flood run-off affected by 5,810,000,000 cubic feet of storage capacity above station.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	2,720	1,610	26,200	11	1,280	3,260	23,000	21	2,720	94,800	14,200
2	2,150	1,320	24,400	12	2,680	20,500	22,600	22	2,540	86,800	15,700
3	1,730	1,460	24,800	13	2,910	45,100	20,600	23	1,600	70,600	14,500
4	1,460	2,640	23,700	14	2,720	41,100	18,700	24	1,300	56,000	13,200
5	2,600	3,230	18,600	15	2,680	32,800	16,900	25	1,320	48,600	11,600
6	2,850	3,050	19,600	16	1,610	31,000	16,000	26	2,420	40,100	9,120
7	2,750	2,660	29,200	17	1,300	50,500	16,000	27	2,600	32,700	7,560
8	2,630	2,150	29,600	18	1,480	93,900	15,400	28	2,680	30,500	9,120
9	1,920	1,800	28,100	19	2,550	115,000	13,300	29	2,580	27,600	10,500
10	1,510	1,550	25,800	20	2,700	105,000	12,200	30		26,600	13,200
								31		27,000	
Mean monthly discharge, in second-feet									2,207	35,510	18,110
Run-off, in inches									0.59	10.06	4.96

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	March 8 Feet	March 8 Sec.ft.	March 9 Feet	March 9 Sec.ft.	March 10 Feet	March 10 Sec.ft.	March 11 Feet	March 11 Sec.ft.	March 12 Feet	March 12 Sec.ft.	March 13 Feet	March 13 Sec.ft.
2	6.75	-	6.4	-	5.7	-	6.55	-	8.5	-	18.4	41,800
4	6.75	-	6.3	-	5.7	-	6.7	-	9.4	†5,000	18.7	43,000
6	6.7	-	6.25	-	5.7	-	6.8	-	10.4	-	19.0	44,300
8	6.7	-	6.15	-	5.7	-	6.9	-	12.0	-	19.3	45,600
10	6.6	-	6.1	-	5.7	-	7.0	-	13.8	†12,000	19.4	46,100
N	6.5	*2,150	6.05	*1,800	5.8	*1,550	7.0	*3,260	16.2	-	19.5	46,500
2	6.55	-	6.0	-	5.65	-	7.05	-	19.4	-	19.5	46,500
4	6.6	-	5.9	-	5.8	-	7.3	-	18.1	†25,000	19.4	46,100
6	6.7	-	5.9	-	6.2	-	7.5	-	17.9	-	19.4	46,100
8	6.75	-	5.9	-	6.5	-	7.7	-	17.9	39,700	19.3	45,600
10	6.7	-	5.85	-	6.55	-	7.9	-	18.0	40,100	19.2	45,200
M	6.55	-	5.75	-	6.5	-	8.1	-	18.2	40,900	19.1	44,700

Hour	March 14 Feet	March 14 Sec.ft.	March 15 Feet	March 15 Sec.ft.	March 16 Feet	March 16 Sec.ft.	March 17 Feet	March 17 Sec.ft.	March 18 Feet	March 18 Sec.ft.	March 19 Feet	March 19 Sec.ft.
2	19.0	44,300	17.1	36,500	15.4	30,100	18.3	41,400	24.1	68,800	33.3	119,000
4	18.9	43,900	16.9	35,700	15.3	29,800	19.0	44,300	25.0	73,500	33.4	120,000
6	18.8	43,500	16.6	34,600	15.2	29,400	19.5	46,500	25.8	77,700	33.3	119,000
8	18.6	42,600	16.4	33,800	15.2	29,400	19.8	47,800	26.2	79,700	33.1	118,000
10	18.5	42,200	16.2	33,100	15.1	29,100	20.1	49,200	27.0	84,000	32.9	117,000
N	18.4	41,800	16.1	32,700	15.1	29,100	20.2	49,600	27.9	88,900	32.6	115,000
2	18.2	40,900	16.0	32,300	15.2	29,400	20.2	49,600	29.2	95,900	32.4	114,000
4	18.1	40,500	15.8	31,600	15.3	29,800	20.2	49,600	30.5	103,000	32.2	113,000
6	17.9	39,700	15.7	31,200	15.5	30,500	20.6	51,500	31.6	109,000	32.0	112,000
8	17.7	38,900	15.6	30,900	16.0	32,300	21.2	54,300	32.3	113,000	31.9	111,000
10	17.5	38,100	15.5	30,500	16.7	35,000	22.1	58,600	32.7	116,000	31.8	110,000
M	17.3	37,300	15.4	30,100	17.5	38,100	23.0	63,100	33.0	117,000	31.7	110,000

Hour	March 20 Feet	March 20 Sec.ft.	March 21 Feet	March 21 Sec.ft.	March 22 Feet	March 22 Sec.ft.	March 23 Feet	March 23 Sec.ft.	March 24 Feet	March 24 Sec.ft.	March 25 Feet	March 25 Sec.ft.
2	31.6	109,000	29.6	98,200	29.2	95,900	26.0	78,700	22.7	61,600	20.5	51,000
4	31.6	109,000	29.4	97,000	28.8	93,700	25.7	77,100	22.5	60,600	20.4	50,500
6	31.5	109,000	29.1	95,400	28.4	91,600	25.4	75,600	22.3	59,600	20.4	50,500
8	31.2	107,000	28.8	93,700	28.2	90,500	25.1	74,000	22.0	58,100	20.3	50,100
10	31.2	107,000	28.5	92,100	27.8	88,300	24.8	72,500	21.8	57,100	20.2	49,600
N	31.0	106,000	28.4	91,600	27.5	86,700	24.5	70,900	21.6	56,200	20.1	49,200
2	30.8	105,000	28.2	90,500	27.2	85,100	24.3	69,900	21.4	55,200	20.0	48,700
4	30.6	104,000	28.5	92,100	27.0	84,000	24.0	68,300	21.2	54,300	19.9	48,300
6	30.5	103,000	29.0	94,800	26.8	82,900	23.7	66,700	21.0	53,300	19.7	47,400
8	30.2	102,000	29.4	97,000	26.6	81,800	23.5	65,700	20.8	52,400	19.6	46,900
10	30.1	101,000	29.6	98,200	26.4	80,800	23.2	64,100	20.7	51,900	19.4	46,100
M	29.9	99,800	29.5	97,600	26.2	79,700	23.0	63,100	20.6	51,500	19.2	45,200

Supplemental records.- Mar. 12, 1 p.m., 19.8 ft. Mar. 19, 3 to 4 a.m., 33.4 ft., 120,000 sec.-ft.

*Mean for the day.

†Mean for 6-hour period.

Connecticut River at Vernon, Vt.

Location.- Lat. 42°46'10", long. 72°30'50", just below dam at Vernon, Windham County, and 2 miles above mouth of Ashuelot River.

Drainage area.- 6,240 square miles.

Gage-height record.- Water-stage recorder graph except for period 6 a.m. Mar. 18 to 4 a.m. Mar. 19, when it was based on shape of graphs at nearby stations, and for period subsequent to 4 a.m. Mar. 19, when it was constructed from hourly gage readings.

Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 10. Defined by current-meter measurements below 68,900 second-feet; extended to peak stage by study of flow characteristics at control section; verified by comparison of peak discharge and total run-off of flood with records for other gaging stations on Connecticut River.

Maxima.- 1936: Discharge, 176,000 second-feet 8 a.m. Mar. 19 to 2 a.m. Mar. 20 (gage height, 128.8 feet).

Previously known maximum: Discharge, 155,000 second-feet Nov. 5, 1927 (gage height, 124.9 feet).

Remarks.- Flood run-off affected by a total storage capacity of 8,620,000,000 cubic feet. Records computed from data furnished by Connecticut River Power Co.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	4,510	2,200	38,600	11	4,290	7,160	36,800	21	4,220	141,000	20,300
2	3,320	3,940	35,600	12	3,970	41,400	35,100	22	3,340	132,000	20,200
3	4,270	4,100	35,100	13	3,300	86,800	34,000	23	2,560	112,000	17,900
4	5,180	3,730	35,800	14	3,530	74,400	29,800	24	3,900	86,800	19,000
5	4,600	5,050	32,000	15	3,100	63,200	26,100	25	4,680	73,800	17,400
6	4,500	4,000	34,200	16	2,160	53,400	24,600	26	4,320	66,500	16,000
7	4,360	4,080	52,200	17	3,400	58,700	24,500	27	4,200	55,400	14,400
8	3,490	3,160	46,900	18	3,940	123,000	23,600	28	3,870	59,200	13,600
9	2,380	4,510	43,100	19	4,130	175,000	23,000	29	2,950	49,300	13,400
10	4,420	5,800	40,400	20	4,510	165,000	20,200	30		42,400	15,000
								31		39,400	
Mean monthly discharge, in second-feet									3,841	56,340	27,960
Run-off, in inches									0.66	10.41	5.00

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	88.1	-	87.0	-	85.7	-	86.2	1,210	90.1	8,810	110.8	86,200
4	86.4	-	85.7	-	85.1	-	85.5	630	91.7	13,400	110.8	86,200
6	87.4	-	85.4	-	86.7	-	85.4	560	93.0	17,500	110.7	85,800
8	88.2	-	88.8	-	89.2	-	88.7	5,330	93.3	18,600	111.8	90,200
10	87.2	-	90.1	-	90.0	-	90.0	8,550	94.6	23,100	111.8	90,200
N	86.5	*3,160	90.2	*4,510	91.0	*5,800	91.0	11,300	97.6	33,600	116.0	109,000
2	87.0	-	90.2	-	90.2	-	90.0	8,550	100.2	43,800	109.6	81,400
4	85.5	-	90.3	-	90.3	-	90.2	9,080	103.6	57,400	109.7	81,800
6	89.2	-	90.3	-	90.0	-	90.2	9,080	105.0	63,000	110.8	86,200
8	91.8	-	91.1	-	92.0	-	91.0	11,300	106.2	67,800	110.2	83,800
10	90.0	-	90.2	-	91.8	-	91.0	11,300	107.4	72,600	109.6	81,400
M	88.3	-	86.7	-	87.8	-	90.2	9,080	108.6	77,400	109.2	79,800
	March 14		March 15		March 16		March 17		March 18		March 19	
2	108.8	78,200	106.6	69,400	103.6	57,400	101.7	49,800	109.9	82,600	127.5	168,000
4	108.6	77,400	106.3	68,200	103.4	56,600	101.7	49,800	109.6	81,400	128.0	171,000
6	108.5	77,000	106.0	67,000	103.2	55,800	101.9	50,600	111.1	87,400	128.6	175,000
8	108.2	75,800	105.7	65,800	103.0	55,000	102.8	54,200	114.0	99,000	128.8	176,000
10	108.3	76,200	105.4	64,600	103.1	55,400	102.8	54,200	116.0	109,000	128.8	176,000
N	108.0	75,000	105.2	63,800	102.7	53,800	102.8	54,200	118.0	119,000	128.8	176,000
2	107.6	73,400	104.8	62,200	102.5	53,000	103.3	56,200	120.0	129,000	128.8	176,000
4	107.6	73,400	104.6	61,400	102.2	51,800	103.7	57,800	123.0	144,000	128.8	176,000
6	107.6	73,400	104.2	59,800	102.0	51,000	104.4	60,600	124.0	149,000	128.8	176,000
8	107.2	71,800	104.2	59,800	102.0	51,000	105.8	66,200	125.0	154,000	128.8	176,000
10	107.0	71,000	103.8	58,200	101.7	49,800	106.8	70,200	126.0	159,000	128.8	176,000
M	106.8	70,200	103.7	57,800	101.7	49,800	109.4	80,600	127.0	165,000	128.8	176,000
	March 20		March 21		March 22		March 23		March 24		March 25	
2	128.8	176,000	124.9	154,000	121.0	134,000	118.9	124,000	113.5	97,000	108.4	76,600
4	128.4	173,000	124.1	150,000	120.8	133,000	118.5	122,000	112.9	94,600	108.2	75,800
6	128.2	172,000	123.9	148,000	120.8	133,000	118.1	120,000	112.5	93,000	107.9	74,600
8	128.2	172,000	122.9	144,000	120.8	133,000	117.6	117,000	112.0	91,000	107.8	74,200
10	127.7	169,000	122.4	141,000	120.8	133,000	117.2	115,000	111.6	89,400	107.7	73,800
N	127.2	166,000	122.2	140,000	120.8	133,000	116.9	114,000	111.2	87,800	107.6	73,400
2	126.6	163,000	121.9	138,000	120.7	132,000	116.5	112,000	110.8	86,200	107.6	73,400
4	126.5	162,000	121.8	138,000	120.7	132,000	116.0	109,000	110.3	84,200	107.6	73,400
6	125.6	157,000	121.1	134,000	120.5	132,000	115.5	106,000	109.7	81,800	107.5	73,000
8	125.6	157,000	121.0	134,000	120.5	132,000	115.0	104,000	109.4	80,600	107.4	72,600
10	125.2	155,000	121.0	134,000	120.2	130,000	114.5	102,000	109.0	79,000	107.4	72,600
M	125.1	154,000	121.0	134,000	119.2	125,000	114.0	99,000	108.6	77,400	107.3	72,200

*Mean for the day.

Connecticut River at Turners Falls, Mass.

Location.- Lat. 42°36'40", long. 72°33'20", at dam of Turners Falls Power & Electric Co., Turners Falls, Franklin County, just above mouth of Falls River.

Drainage area.- 7,138 square miles.

Gage-height record.- Graph constructed from several gage readings daily. Gage heights given to tenths. Affected by flashboards prior to 10 p.m. Mar. 13 and subsequent to noon Apr. 14. Crest of dam is 3.00 feet above gage datum.

Stage-discharge relation.- Discharge determined from flow over dam, through canal and flood gates.

Maxima.- 1936: Discharge, 210,000 second-feet 8 p.m. Mar. 19 to 6 a.m. Mar. 20 (gage height, 16.7 feet).

1915-35: Discharge, 160,000 second-feet (revised) 10 a.m. to 2 p.m. Nov. 5, 1927 (gage height, 13.7 feet).

Remarks.- Flood run-off affected by a total storage capacity of 8,620,000,000 cubic feet. Records computed from data furnished by Turners Falls Power & Electric Co.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	5,330	1,980	43,800	11	5,090	8,690	42,900	21	5,170	172,000	23,100
2	2,500	4,920	41,300	12	4,990	38,800	40,400	22	3,680	155,000	23,500
3	5,480	4,980	39,300	13	3,760	88,000	38,700	23	2,350	134,000	20,500
4	5,470	5,680	38,800	14	4,200	82,900	33,300	24	4,420	103,000	20,900
5	4,820	5,350	37,300	15	3,690	74,400	28,300	25	4,340	81,900	18,800
6	5,210	5,080	42,300	16	1,650	62,900	28,100	26	4,970	72,600	17,300
7	5,190	3,990	61,800	17	4,060	68,100	28,500	27	4,970	60,500	15,700
8	2,330	3,460	53,600	18	4,310	128,000	27,000	28	4,890	62,500	14,400
9	2,110	5,490	47,800	19	4,600	206,000	25,500	29	3,670	56,600	13,700
10	4,850	6,070	42,800	20	4,850	204,000	22,700	30		48,400	16,100
								31		41,100	
Mean monthly discharge, in second-feet									4,240	64,400	31,600
Run-off, in inches									0.64	10.40	4.94

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	-	-	-	-	10.5	76,400
4	-	-	-	-	-	-	-	-	-	-	10.5	76,400
6	10.1	-	10.0	-	9.5	-	10.1	-	7.2	†15,000	10.9	81,400
8	-	-	-	-	-	-	-	-	-	-	10.3	82,400
10	-	-	-	-	-	-	-	-	-	-	10.7	87,400
N	9.9	*3,460	7.9	*5,490	6.6	*6,070	7.6	*8,690	6.9	†30,000	10.8	89,400
2	-	-	-	-	-	-	-	-	-	-	10.4	89,400
4	-	-	-	-	-	-	-	-	-	-	10.4	91,400
6	9.7	-	6.9	-	6.4	-	6.8	-	8.2	†45,000	10.0	92,400
8	-	-	-	-	-	-	-	-	-	-	10.0	95,400
10	-	-	-	-	-	-	-	-	-	-	10.0	99,400
M	8.7	-	8.0	-	7.8	-	7.3	-	10.2	†65,000	9.5	94,400
	March 14		March 15		March 16		March 17		March 18		March 19	
2	9.5	85,500	9.7	81,000	8.8	65,200	8.7	67,000	9.8	89,900	16.2	200,000
4	9.3	82,900	9.8	82,400	8.8	65,200	8.8	68,100	9.7	88,500	16.4	204,000
6	9.3	82,900	9.7	81,000	8.8	65,200	8.8	68,100	9.6	87,200	16.5	206,000
8	9.2	81,500	9.6	79,700	8.4	60,600	8.6	65,800	9.7	88,500	16.5	206,000
10	8.8	76,600	9.3	75,800	8.4	60,600	8.5	64,600	10.5	99,900	16.5	206,000
N	8.6	74,300	9.1	73,100	8.5	61,700	8.5	64,600	11.9	122,000	16.5	206,000
2	9.0	78,900	9.1	73,100	8.6	62,900	8.6	65,800	12.8	138,000	16.6	208,000
4	9.7	88,100	9.2	74,400	8.7	64,100	8.8	68,100	13.5	152,000	16.6	208,000
6	9.8	89,500	9.0	71,800	8.6	62,900	8.9	69,200	14.2	165,000	16.6	208,000
8	9.5	85,500	8.6	67,200	8.5	61,700	9.2	73,000	14.9	179,000	16.7	210,000
10	9.5	85,500	8.6	67,200	8.5	61,700	9.3	74,400	15.3	187,000	16.7	210,000
M	9.5	85,500	8.7	68,400	8.6	62,900	9.4	75,700	15.8	197,000	16.7	210,000
	March 20		March 21		March 22		March 23		March 24		March 25	
2	16.7	210,000	15.6	188,000	14.2	161,000	13.3	145,000	11.6	114,000	9.7	85,800
4	16.7	210,000	15.3	182,000	14.2	161,000	13.2	143,000	11.5	112,000	9.6	84,500
6	16.7	210,000	15.2	180,000	14.1	159,000	13.1	141,000	11.3	109,000	9.6	84,500
8	16.6	209,000	15.0	176,000	14.0	157,000	13.0	139,000	11.2	108,000	9.5	83,200
10	16.6	209,000	14.8	172,000	14.0	157,000	12.9	137,000	11.0	104,000	9.4	81,900
N	16.5	208,000	14.6	168,000	13.9	155,000	12.8	135,000	10.9	103,000	9.4	81,900
2	16.3	206,000	14.4	164,000	13.9	155,000	12.6	132,000	10.8	101,000	9.3	80,600
4	16.1	200,000	14.3	162,000	13.8	153,000	12.5	130,000	10.5	96,700	9.3	80,600
6	16.0	197,000	14.3	162,000	13.7	151,000	12.3	126,000	10.3	93,800	9.2	79,200
8	15.8	193,000	14.3	162,000	13.6	149,000	12.1	123,000	10.2	92,300	9.2	79,200
10	15.7	191,000	14.3	162,000	13.5	148,000	11.9	119,000	9.9	88,000	9.2	79,200
M	15.7	191,000	14.2	160,000	13.5	148,000	11.8	118,000	9.8	86,700	9.2	79,200

*Mean for the day.
†Mean for 6-hour period.

A. VERNON DAM ON CONNECTICUT RIVER IN HINSDALE, N. H.
Note high degree of submergence. Courtesy of Boston Globe.

B. OVERFLOW OF CONNECTICUT RIVER AT NORTHFIELD, MASS.
Over 300 head of cattle drowned. Courtesy of Boston Globe

A. FLOODED AREAS ON RIGHT BANK OF CONNECTICUT RIVER AT SPRINGFIELD, MASS., SHOWING WEST SPRINGFIELD RAILROAD YARDS AND FAIRGROUNDS.

B. STONINGTON STREET, HARTFORD, CONN., ON CONNECTICUT RIVER, LOOKING NORTHWEST.

Note wreckage in foreground. Courtesy of International News Photo, Inc.

Connecticut River at Montague City, Mass.

Location.- Lat. 42°34'45", long. 72°34'20", in Montague City, Franklin County, 600 feet below mouth of Deerfield River. Zero of gage is 99.87 feet above mean sea level.
Drainage area.- 7,840 square miles.
Gage-height record.- Water-stage recorder graph except for periods 5 p.m. Mar. 18 to 3:30 a.m. Mar. 21, when it was based on flood marks and shape of stage graphs at nearby stations, and Mar. 26 to Apr. 13, when there was no record. Gage heights given to tenths.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 13. Defined by current-meter measurements below 124,000 second-feet; extended to peak stage by study of flow characteristics at high-water control section; verified by comparison of instantaneous discharge and total run-off of flood with records for other gaging stations on Connecticut River.
Maxima.- 1936: Discharge, 236,000 second-feet 10 a.m. to 8 p.m. Mar. 19 (gage height, 49.2 feet).
1904-35: Discharge, 179,000 second-feet (revised) Nov. 5, 1927 (gage height, 42.70 feet).
Remarks.- Total storage capacity above station, 16,400,000,000 cubic feet.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	6,500	2,900	45,000	11	6,000	11,000	45,500	21	5,900	187,000	22,700
2	3,400	5,400	44,000	12	6,000	45,000	43,500	22	4,900	169,000	25,800
3	5,700	6,200	43,000	13	4,900	90,000	45,000	23	3,100	144,000	22,000
4	6,600	6,700	42,500	14	5,000	103,000	38,600	24	4,100	112,000	22,400
5	6,100	6,400	40,500	15	4,600	85,200	30,500	25	5,400	88,700	22,000
6	6,000	5,700	40,500	16	2,700	70,200	33,500	26	5,900	76,000	19,700
7	6,200	4,500	55,000	17	4,600	68,500	32,400	27	5,900	71,000	18,800
8	3,900	4,000	63,000	18	5,000	158,000	30,500	28	5,700	70,000	16,300
9	3,000	6,000	60,000	19	5,400	233,000	27,300	29	5,400	68,000	15,100
10	5,600	7,200	51,000	20	5,600	216,000	25,100	30		58,900	16,300
								31		50,000	
Mean monthly discharge, in second-feet									5,141	71,920	34,580
Run-off, in inches									0.71	10.57	4.92

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	8.9	-	8.6	-	8.9	-	9.9	-	13.4	-	29.9	-
4	8.2	-	8.3	-	8.1	-	8.9	-	13.8	†20,000	31.0	†75,000
6	8.1	-	7.8	-	7.7	-	8.3	-	16.5	-	31.2	-
8	8.0	-	8.5	-	9.8	-	9.7	-	19.8	-	31.6	-
10	8.9	-	10.8	-	12.4	-	12.1	-	21.0	†40,000	31.3	†85,000
N	9.2	*4,000	11.8	*6,000	12.7	*7,200	13.2	*11,000	24.8	-	31.3	-
2	8.9	-	11.5	-	12.4	-	12.9	-	26.0	-	32.0	-
4	8.0	-	12.0	-	12.8	-	13.4	-	28.6	†55,000	32.5	†95,000
6	8.3	-	12.3	-	12.3	-	13.6	-	30.4	-	32.6	-
8	10.7	-	12.4	-	12.4	-	14.1	-	28.9	-	33.0	-
10	11.1	-	12.0	-	12.0	-	13.6	-	30.6	†65,000	34.0	†105,000
M	10.7	-	10.7	-	11.2	-	13.0	-	30.2	-	34.2	-
	March 14		March 15		March 16		March 17		March 18		March 19	
2	33.8	112,000	30.7	92,200	27.6	75,000	25.4	64,600	30.4	90,400	48.00	224,000
4	33.4	109,000	30.5	91,000	27.4	74,000	25.3	64,200	31.6	97,600	48.3	227,000
6	33.1	107,000	30.2	89,200	27.2	73,000	25.4	64,600	32.6	104,000	48.6	230,000
8	32.9	106,000	29.9	87,400	27.1	72,500	25.5	65,000	34.2	114,000	49.0	234,000
10	32.7	105,000	29.7	86,400	26.7	70,600	25.5	65,000	36.5	130,000	49.2	236,000
N	32.5	103,000	29.4	84,700	26.5	69,600	25.7	66,000	39.6	154,000	49.2	236,000
2	32.3	102,000	29.1	83,000	26.2	68,200	25.9	66,800	42.2	175,000	49.2	236,000
4	32.0	100,000	28.9	82,000	26.1	67,800	26.3	68,700	44.2	191,000	49.2	236,000
6	31.9	99,400	28.8	81,400	25.9	66,800	26.8	71,100	45.4	201,000	49.2	236,000
8	31.8	98,800	28.6	80,300	25.7	66,000	27.4	74,000	46.2	208,000	49.2	236,000
10	31.5	97,000	28.3	78,600	25.6	65,500	28.2	78,100	46.9	214,000	49.0	234,000
M	31.1	94,600	27.9	76,500	25.5	65,000	29.0	82,500	47.5	220,000	48.7	231,000
	March 20		March 21		March 22		March 23		March 24		March 25	
2	48.6	230,000	44.8	195,000	42.5	177,000	40.2	159,000	36.0	127,000	31.1	94,600
4	48.5	229,000	44.6	194,000	42.3	175,000	39.9	156,000	35.5	124,000	30.8	92,800
6	48.4	228,000	44.4	192,000	42.2	175,000	39.5	153,000	35.1	121,000	30.6	91,600
8	48.2	226,000	44.2	191,000	42.0	173,000	39.2	151,000	34.7	118,000	30.4	90,400
10	48.0	224,000	43.9	188,000	41.8	171,000	38.9	148,000	34.3	115,000	30.2	89,200
N	47.6	220,000	43.7	187,000	41.6	170,000	38.6	146,000	33.8	112,000	30.0	88,000
2	47.1	216,000	43.6	186,000	41.4	168,000	38.2	143,000	33.4	109,000	29.8	86,900
4	46.5	210,000	43.5	185,000	41.3	167,000	37.9	140,000	33.0	106,000	29.7	86,400
6	46.0	206,000	43.3	183,000	41.0	165,000	37.5	138,000	32.5	103,000	29.6	85,800
8	45.6	202,000	43.0	181,000	40.8	163,000	37.1	135,000	32.1	101,000	29.5	85,200
10	45.4	201,000	42.8	179,000	40.6	162,000	36.8	133,000	31.7	98,200	29.4	84,700
M	45.1	198,000	42.6	178,000	40.4	160,000	36.4	130,000	31.4	96,400	29.4	84,700

Supplemental records.- Mar. 12, 8:30 p.m., 28.4 ft.; 11 p.m., 31.2 ft. Mar. 13, 11 p.m., 34.3 ft. Mar. 16, 7 a.m., 27.3 ft.
*Mean for 24-hour period.
**Mean for 6-hour period.

Connecticut River at Holyoke, Mass.

Location.- Lat. 42°12'50", long. 72°36'10", at dam of Holyoke Water Power Co. in Holyoke, Hampden County.

Drainage area.- 8,284 square miles.

Gage-height record.- Water-stage recorder graph. Gage heights given to half tenths.

Maxima.- 1936: Discharge, 244,000 second-feet 8 p.m. Mar. 19 to 8 a.m. Mar. 20 (gage height, 16.8 feet).

1860-1935: Discharge, 183,000 second-feet (revised) Nov. 5, 1927 (gage height, 14.8 feet).

Remarks.- Daily and monthly discharge determined by adding flow over dam to flow through canals of Holyoke Power Co. Bihourly discharges give flow over dam only. Gage heights refer to pond above dam. Flood run-off affected by a total storage capacity of 16,800,000,000 cubic feet. Flashboards on dam prior to midnight Mar. 9. Records computed from data furnished by Holyoke Water Power Co.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	-	1,744	47,930	11	-	19,660	47,820	21	-	213,300	26,190
2	-	5,510	45,900	12	-	36,970	43,670	22	-	185,000	25,980
3	-	4,941	43,760	13	-	77,340	46,090	23	-	159,100	24,430
4	-	6,092	42,760	14	-	102,300	43,840	24	-	129,100	23,960
5	-	7,125	41,910	15	-	99,170	38,170	25	-	102,000	22,480
6	-	6,669	41,610	16	-	90,040	33,640	26	-	87,440	20,810
7	-	4,921	54,070	17	-	76,220	34,140	27	-	76,640	22,020
8	-	2,585	65,550	18	-	120,500	32,210	28	-	70,880	18,090
9	-	6,579	61,650	19	-	226,100	28,810	29	-	70,820	15,600
10	-	11,130	53,700	20	-	240,100	28,370	30	-	63,400	16,060
								31		52,450	
Mean monthly discharge, in second-feet										75,990	36,370
Run-off, in inches										10.57	4.90

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	-	-	3.0	18,000	5.85	46,800
4	-	-	-	-	-	-	-	-	3.45	21,600	6.2	51,400
6	2.4	-	3.0	-	1.4	6,000	2.6	14,800	3.85	25,200	6.55	56,200
8	-	-	-	-	-	-	-	-	4.1	28,100	6.85	58,600
10	-	-	-	-	-	-	-	-	4.1	28,100	6.9	59,800
N	3.0	*2,585	2.4	*6,579	1.6	7,200	2.5	14,000	3.85	25,200	7.35	65,800
2	-	-	-	-	-	-	-	-	3.85	25,200	8.1	74,300
4	-	-	-	-	-	-	-	-	4.05	27,000	8.55	80,800
6	3.1	-	1.3	-	0.8	3,200	2.0	10,000	4.45	31,400	8.9	84,700
8	-	-	-	-	-	-	-	-	4.8	35,800	9.15	88,600
10	-	-	-	-	-	-	-	-	5.15	40,200	9.3	89,900
M	3.0	-	0.4	-	1.3	5,500	2.5	14,000	5.5	43,500	9.45	91,200
	March 14		March 15		March 16		March 17		March 18		March 19	
2	9.6	93,800	10.1	100,000	9.65	93,800	7.9	71,800	7.8	70,600	15.35	192,000
4	9.75	96,400	10.05	99,000	9.6	93,800	7.85	70,600	8.1	74,300	15.75	201,000
6	9.8	96,400	10.0	99,000	9.45	91,200	7.75	70,600	8.55	80,800	16.0	209,000
8	9.8	96,400	9.9	97,700	9.25	88,600	7.7	69,400	9.1	87,300	16.2	216,000
10	9.8	96,400	9.85	96,400	9.05	86,000	7.6	68,200	9.75	96,400	16.35	223,000
N	9.8	96,400	9.75	96,400	8.8	83,400	7.6	68,200	10.4	105,000	16.45	227,000
2	9.85	96,400	9.7	95,100	8.6	80,800	7.55	68,200	11.1	114,000	16.55	232,000
4	9.85	96,400	9.6	93,800	8.45	78,200	7.5	67,000	11.75	125,000	16.6	234,000
6	10.0	99,000	9.55	93,800	8.35	78,200	7.5	67,000	12.5	136,000	16.65	236,000
8	10.1	100,000	9.55	93,800	8.2	75,600	7.5	67,000	13.2	149,000	16.8	243,000
10	10.1	100,000	9.65	93,800	8.1	74,300	7.5	67,000	13.9	162,000	16.8	243,000
M	10.1	100,000	9.65	93,800	8.0	73,000	7.6	68,200	14.7	178,000	16.8	243,000
	March 20		March 21		March 22		March 23		March 24		March 25	
2	16.8	243,000	16.1	227,000	14.6	194,000	13.4	170,000	11.9	142,000	9.8	109,000
4	16.8	243,000	16.0	225,000	14.55	192,000	13.3	168,000	11.75	138,000	9.65	107,000
6	16.8	243,000	15.85	223,000	14.45	192,000	13.2	166,000	11.6	136,000	9.45	105,000
8	16.8	243,000	15.75	218,000	14.35	188,000	13.1	164,000	11.4	133,000	9.3	102,000
10	16.75	241,000	15.6	216,000	14.25	188,000	13.0	162,000	11.25	131,000	9.1	99,000
N	16.7	241,000	15.45	214,000	14.15	186,000	12.85	160,000	11.1	128,000	9.0	97,700
2	16.65	241,000	15.35	209,000	14.0	182,000	12.75	156,000	10.9	125,000	8.8	95,100
4	16.6	238,000	15.2	207,000	13.9	180,000	12.6	154,000	10.75	122,000	8.7	93,800
6	16.5	236,000	15.05	205,000	13.8	178,000	12.5	153,000	10.55	119,000	8.55	91,200
8	16.35	232,000	14.9	201,000	13.7	176,000	12.35	149,000	10.35	116,000	8.4	89,900
10	16.3	232,000	14.8	199,000	13.6	174,000	12.2	147,000	10.15	113,000	8.35	88,600
M	16.2	229,000	14.7	197,000	13.5	172,000	12.05	145,000	10.0	112,000	8.2	87,300

*Mean for the day.

Connecticut River at Springfield, Mass.

Location.- Lat. 42°6'0", long. 72°35'50", at Memorial Bridge in Springfield, Hampden County, 1 1/4 miles above mouth of Westfield River. Zero of gage is 37.80 feet above mean sea level.

Drainage area.- 9,587 square miles including Westfield River Basin.

Gage-height record.- Water-stage recorder graph except for period noon Mar. 7 to 1 p.m. Mar. 12, when it was based on two gage readings daily. Gage heights given to half tenths.

Stage-discharge relation.- Affected by ice Mar. 1 to 12. Developed from rating curve at Thompsonville, Conn.; corrected for discharge from intervening drainage area.

Maxima.- 1936: Discharge, 281,000 second-feet midnight Mar. 19 to 8 a.m. Mar. 20 (gage height, 28.60 feet).

1927 flood: Discharge, 188,000 second-feet Nov. 6, 1927 (gage height, 22.4 feet).

1801-1935: Maximum known discharge, that of Nov. 6, 1927.

Remarks.- Flood run-off affected by 19,500,000,000 cubic feet of storage above station. Records computed from basic date furnished by U. S. Weather Bureau.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1		6,100	56,400	11		11,800	58,800	21		251,000	30,600
2		6,800	54,800	12		56,200	57,200	22		220,000	30,600
3		7,300	54,800	13		94,400	54,800	23		189,000	30,600
4		7,700	54,800	14		116,000	53,200	24		152,000	29,000
5		9,100	51,600	15		109,000	44,300	25		117,000	28,300
6		9,300	52,400	16		98,000	45,100	26		102,000	24,800
7		7,800	70,300	17		87,000	44,300	27		91,000	22,700
8		5,800	77,700	18		138,000	41,100	28		86,000	20,600
9		7,700	67,900	19		256,000	37,700	29		85,000	18,500
10		8,900	62,100	20		276,000	34,600	30		73,400	17,100
								31		62,200	
Mean monthly discharge, in second-feet.......................										88,630	44,220
Run-off, in inches..										10.65	5.14

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	3.35	-	3.2	-	3.6	-	4.15	-	6.8	-	13.3	79,700
4	3.3	-	3.2	-	3.7	-	4.2	-	7.4	†30,000	13.45	80,600
6	3.25	-	3.25	-	3.75	-	4.25	-	7.9	-	13.6	82,400
8	3.2	-	3.3	-	3.8	-	4.3	-	8.4	-	14.1	86,900
10	3.2	-	3.3	-	3.8	-	4.4	-	9.2	†50,000	14.0	86,000
N	3.15	*5,800	3.35	*7,700	3.85	*8,900	4.55	*11,800	10.6	-	14.3	88,700
2	3.15	-	3.4	-	3.9	-	4.7	-	12.3	-	15.2	96,800
4	3.15	-	3.4	-	3.95	-	4.9	-	12.25	†65,000	15.7	101,000
6	3.2	-	3.45	-	4.0	-	5.2	-	12.2	-	16.0	104,000
8	3.2	-	3.5	-	4.0	-	5.5	-	12.5	-	16.3	107,000
10	3.2	-	3.55	-	4.05	-	5.8	-	12.8	†80,000	16.6	109,000
M	3.2	-	3.6	-	4.1	-	6.2	-	13.05	-	16.8	111,000
	March 14		March 15		March 16		March 17		March 18		March 19	
2	17.0	113,000	17.45	117,000	16.3	107,000	14.15	89,400	14.25	89,400	24.1	214,000
4	17.2	115,000	17.3	116,000	16.2	106,000	14.0	88,000	14.5	91,500	24.9	226,000
6	17.4	117,000	17.1	114,000	16.0	104,000	13.9	87,300	14.9	94,300	25.5	234,000
8	17.4	117,000	16.9	112,000	15.8	102,000	13.8	86,600	15.3	97,700	26.1	244,000
10	17.4	117,000	16.7	110,000	15.6	100,000	13.8	86,600	16.3	107,000	26.5	250,000
N	17.2	115,000	16.5	108,000	15.4	98,600	13.75	86,600	17.5	118,000	26.9	256,000
2	17.2	115,000	16.35	108,000	15.2	96,800	13.75	86,600	19.2	140,000	27.5	264,000
4	17.2	115,000	16.2	106,000	15.0	95,000	13.7	85,900	20.3	156,000	27.8	269,000
6	17.3	116,000	16.1	105,000	14.8	93,600	13.7	85,900	21.3	172,000	28.1	274,000
8	17.5	118,000	16.0	104,000	14.6	92,200	13.7	85,900	22.8	194,000	28.4	278,000
10	17.5	118,000	16.2	106,000	14.45	90,800	13.8	86,600	22.7	192,000	28.5	280,000
M	17.5	118,000	16.3	107,000	14.3	90,100	14.0	88,000	23.6	206,000	28.55	281,000
	March 20		March 21		March 22		March 23		March 24		March 25	
2	28.6	281,000	27.5	264,000	25.6	236,000	23.4	203,000	21.3	172,000	18.5	130,000
4	28.6	281,000	27.4	263,000	25.3	232,000	23.25	200,000	21.1	168,000	18.3	128,000
6	28.6	281,000	27.2	260,000	25.2	230,000	23.1	198,000	20.85	164,000	18.0	124,000
8	28.55	281,000	26.9	256,000	24.9	226,000	22.9	196,000	20.6	161,000	17.8	122,000
10	28.5	280,000	26.7	252,000	24.7	222,000	22.75	194,000	20.4	158,000	17.6	120,000
N	28.4	278,000	26.5	250,000	24.55	221,000	22.6	191,000	20.2	155,000	17.4	117,000
2	28.3	276,000	26.4	248,000	24.35	218,000	22.4	188,000	19.9	150,000	17.2	115,000
4	28.2	275,000	26.3	246,000	24.2	215,000	22.25	185,000	19.7	148,000	17.05	113,000
6	28.1	274,000	26.2	245,000	24.0	212,000	22.1	184,000	19.45	143,000	16.85	111,000
8	27.9	270,000	26.1	244,000	23.9	210,000	21.9	180,000	19.2	140,000	16.7	110,000
10	27.8	269,000	26.0	242,000	23.7	208,000	21.7	178,000	19.0	137,000	16.5	108,000
M	27.7	268,000	25.8	239,000	23.5	204,000	21.5	174,000	18.75	134,000	16.4	108,000

*Mean for 24-hour period.
†Mean for 6-hour period.

Connecticut River at Thompsonville, Conn.

Location.- Lat. 41°59'20", long. 72°36'15", in pool above Enfield Dam, 1 mile below Thompsonville, Hartford County. Zero of gage is 38.48 feet above mean sea level.

Drainage area.- 9,637 square miles.

Gage-height record.- Water-stage recorder graph except for period 12 p.m. Mar. 18 to 7 a.m. Mar. 23, when it was based on flood marks and shape of stage graphs at nearby stations. Gage heights given to half tenths between 2.10 and 4.20 feet; hundredths below and tenths above these limits.

Stage-discharge relation.- Defined by current-meter measurements below 277,000 second-feet; verified by drainage-area comparison of instantaneous and total yield of flood at other gaging stations on Connecticut River.

Maxima.- 1936: Discharge, 282,000 second-feet 2 to 10 a.m. Mar. 20 (gage height, 16.6 feet).

1928-35: Discharge, 153,000 second-feet Apr. 20, 1933 (gage height, 10.47 feet).

Maximum discharge previously known, 190,000 second-feet (revised) Nov. 6, 1927 (gage height, 12.1 feet).

Remarks.- Flood run-off affected by 19,500,000,000 cubic feet of storage capacity above station. Tables of daily and monthly discharge include water diverted by canal of Northern Connecticut Power Company. Bihourly stages and discharges as shown in table are for Enfield Dam only.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	7,350	6,200	57,200	11	6,220	11,900	59,000	21	7,580	249,000	31,000
2	6,120	6,900	55,400	12	6,600	57,400	57,200	22	6,340	220,000	31,900
3	7,240	7,420	55,400	13	7,200	98,600	55,400	23	5,550	189,000	31,000
4	7,790	7,800	55,400	14	6,810	120,000	53,600	24	6,350	154,000	29,200
5	7,800	9,260	51,800	15	5,770	114,000	44,500	25	6,590	118,000	28,300
6	7,730	9,420	53,600	16	4,180	101,000	45,400	26	7,350	101,000	24,700
7	7,560	7,880	71,900	17	5,290	86,800	44,500	27	7,870	87,700	23,000
8	7,300	5,830	79,300	18	6,230	135,000	41,800	28	7,950	87,400	20,500
9	4,440	7,780	68,300	19	6,600	256,000	38,000	29	7,550	86,800	18,300
10	5,160	8,970	62,700	20	7,200	278,000	34,600	30		73,800	17,600
								31		62,800	
Mean monthly discharge, in second-feet									6,680	89,200	44,680
Run-off, in inches									0.75	10.68	5.18

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	1.33	5,420	1.28	5,060	1.58	7,340	1.69	8,260	2.6	17,600	6.4	85,000
4	1.31	5,280	1.28	5,060	1.55	7,100	1.68	8,180	2.95	23,000	6.4	85,000
6	1.30	5,200	1.26	4,920	1.51	6,780	1.68	8,180	3.4	31,000	6.5	86,800
8	1.30	5,200	1.30	5,200	1.50	6,700	1.75	8,780	3.7	36,400	6.6	88,600
10	1.27	4,990	1.40	5,950	1.55	7,100	1.84	9,560	4.0	41,800	6.7	90,400
N	1.27	4,990	1.48	6,550	1.62	7,670	1.97	10,700	4.3	47,200	6.8	92,200
2	1.27	4,990	1.55	7,100	1.66	8,010	2.03	11,300	6.0	77,800	6.9	94,400
4	1.28	5,060	1.61	7,580	1.69	8,260	2.07	11,700	5.9	76,000	7.2	99,400
6	1.28	5,060	1.67	8,100	1.72	8,520	2.1	12,000	6.0	77,800	7.6	107,000
8	1.29	5,130	1.68	8,180	1.72	8,520	2.15	12,500	6.2	81,400	7.9	112,000
10	1.29	5,130	1.66	8,010	1.72	8,520	2.25	13,500	6.2	81,400	8.0	114,000
M	1.29	5,130	1.62	7,670	1.70	8,350	2.3	14,000	6.3	83,200	8.0	114,000
	March 14		March 15		March 16		March 17		March 18		March 19	
2	8.1	116,000	8.4	121,000	7.8	110,000	6.6	88,600	6.6	88,600	13.1	210,000
4	8.2	118,000	8.3	119,000	7.7	108,000	6.5	86,800	6.7	90,400	13.7	222,000
6	8.3	119,000	8.2	118,000	7.6	107,000	6.5	86,800	6.8	92,200	14.3	234,000
8	8.3	119,000	8.1	116,000	7.5	105,000	6.4	85,000	7.1	97,600	14.8	245,000
10	8.3	119,000	8.0	114,000	7.4	103,000	6.4	85,000	7.5	105,000	15.2	253,000
N	8.2	118,000	7.9	112,000	7.3	101,000	6.4	85,000	8.2	118,000	15.6	261,000
2	8.2	118,000	7.8	110,000	7.2	99,400	6.4	85,000	9.1	134,000	15.9	268,000
4	8.2	118,000	7.7	108,000	7.0	95,800	6.4	85,000	10.0	151,000	16.1	272,000
6	8.4	121,000	7.7	108,000	6.9	94,400	6.4	85,000	11.0	169,000	16.2	274,000
8	8.4	121,000	7.6	107,000	6.8	92,200	6.4	85,000	11.7	183,000	16.4	278,000
10	8.5	123,000	7.8	110,000	6.8	92,200	6.5	86,800	12.1	190,000	16.5	280,000
M	8.5	123,000	7.8	110,000	6.7	90,400	6.5	86,800	12.5	198,000	16.5	280,000
	March 20		March 21		March 22		March 23		March 24		March 25	
2	16.6	282,000	15.8	266,000	14.3	234,000	12.8	204,000	11.1	171,000	9.0	132,000
4	16.6	282,000	15.7	264,000	14.2	232,000	12.6	200,000	10.9	167,000	8.9	130,000
6	16.6	282,000	15.5	259,000	14.1	230,000	12.5	198,000	10.8	166,000	8.7	127,000
8	16.6	282,000	15.3	255,000	13.9	226,000	12.3	194,000	10.6	162,000	8.5	123,000
10	16.6	282,000	15.2	253,000	13.8	224,000	12.2	192,000	10.4	158,000	8.4	121,000
N	16.5	280,000	15.0	249,000	13.7	222,000	12.1	190,000	10.3	156,000	8.3	119,000
2	16.4	278,000	14.8	245,000	13.5	218,000	12.0	188,000	10.1	153,000	8.2	118,000
4	16.4	278,000	14.7	242,000	13.4	216,000	11.8	184,000	9.9	149,000	8.0	114,000
6	16.3	276,000	14.7	242,000	13.3	214,000	11.7	183,000	9.7	145,000	7.9	112,000
8	16.2	274,000	14.6	240,000	13.2	212,000	11.6	181,000	9.5	142,000	7.8	110,000
10	16.0	270,000	14.5	238,000	13.0	208,000	11.4	177,000	9.4	140,000	7.7	108,000
M	15.9	268,000	14.4	236,000	12.9	206,000	11.2	173,000	9.2	136,000	7.6	107,000

Connecticut River at Hartford, Conn.

Location.- Lat. 41°46'10", long. 72°40'0", at Memorial Bridge in Hartford, Hartford County, three-quarters of a mile above Park River and 1½ miles above mouth of Hockanum River. Zero of gage is 0.55 foot below mean sea level.
Drainage area.- 10,480 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights given to tenths.
Stage-discharge relation.- Determined from continuous records of discharge from 98.4 percent of the drainage area as measured at gaging stations located on Connecticut River at Thompsonville, Farmington River at Tariffville, and Scantic River at Broad Brook plus computed flow from ungaged area and adjusted for gain or loss in valley storage between these points and Hartford gage.
Maxima.- 1936: Discharge, 313,000 second-feet 3 a.m. Mar. 20 (augmented by breaching of Hartford Dikes); maximum gage height, 37.6 feet 8 to 9 a.m. Mar. 21.
1896-1935: Gage height, 29.0 feet Nov. 6, 1927 (discharge not determined).
1639-1935: Maximum known stage, 29.8 feet May 1, 1854 (discharge not determined).
Remarks.- Flood run-off affected by 20,500,000,000 cubic feet of artificial storage capacity above station. Gage-height record furnished by U. S. Weather Bureau.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1		7,200	61,600	11		15,400	63,100	21		266,000	32,900
2		7,880	58,000	12		58,500	61,300	22		244,000	33,800
3		8,440	58,600	13		102,000	59,400	23		211,000	32,900
4		8,830	58,600	14		128,000	56,900	24		175,000	31,100
5		10,600	54,400	15		123,000	47,700	25		136,000	29,800
6		10,900	57,700	16		110,000	48,600	26		112,000	26,000
7		9,110	75,400	17		94,700	47,400	27		96,000	24,500
8		6,890	84,400	18		125,000	44,300	28		93,800	22,000
9		8,720	74,400	19		243,000	40,000	29		93,600	19,800
10		10,300	67,700	20		286,000	36,500	30		80,800	19,100
								31		68,500	
Mean monthly discharge, in second-feet										95,200	47,600
Run-off, in inches										10.47	5.06

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
1			3.4		4.0		4.9		7.5	20,200	15.9	88,400
3			3.6		4.3		5.0		8.1	24,800	16.5	91,300
5			3.7		4.4		5.2		8.8	31,100	17.3	92,200
7			3.6		4.4		5.3		9.5	40,100	17.9	94,600
9			3.5		4.3		5.3		10.3	46,400	18.5	96,800
11		*6,890	3.4	*8,720	4.2	*10,300	5.2	*15,400	11.3	52,700	18.9	98,700
1			3.4		4.1		5.3		12.1	58,900	19.4	100,000
3			3.5		4.2		5.5		12.8	83,100	19.8	102,000
5			3.7		4.4		5.9		14.0	83,600	20.8	106,000
7			3.8		4.6		6.2		14.7	85,800	22.2	114,000
9			3.8		4.7		6.6		15.2	87,100	22.3	117,000
11	3.3		4.0		4.8		7.0		15.6	88,100	22.4	120,000
	March 14		March 15		March 16		March 17		March 18		March 19	
1	22.5	123,000	23.8	128,000	23.5	120,000	22.0	99,800	20.5	93,600	26.0	192,000
3	22.7	128,000	23.9	127,000	23.4	119,000	21.9	98,000	20.5	95,000	26.8	205,000
5	22.8	129,000	23.9	127,000	23.4	117,000	21.7	97,200	20.5	95,000	27.7	218,000
7	23.0	129,000	23.9	127,000	23.3	116,000	21.5	96,200	20.6	97,500	28.5	228,000
9	23.1	130,000	24.0	125,000	23.2	114,000	21.4	94,400	20.7	101,000	29.4	235,000
11	23.2	129,000	23.9	123,000	23.1	112,000	21.2	93,400	21.0	110,000	30.3	242,000
1	23.3	128,000	23.9	122,000	23.0	110,000	21.1	93,400	21.3	120,000	31.1	248,000
3	23.4	128,000	23.8	120,000	22.9	108,000	21.0	92,900	21.9	130,000	31.9	257,000
5	23.5	128,000	23.8	119,000	22.7	104,000	20.8	92,900	22.6	146,000	32.6	265,000
7	23.5	128,000	23.7	118,000	22.6	103,000	20.7	92,700	23.4	160,000	33.4	272,000
9	23.6	128,000	23.6	117,000	22.4	101,000	20.6	91,800	24.2	173,000	34.0	275,000
11	23.7	128,000	23.6	120,000	22.2	101,000	20.6	93,700	25.1	179,000	34.6	277,000
	March 20		March 21		March 22		March 23		March 24		March 25	
1	35.0	283,000	37.4	276,000	37.0	256,000	35.0	227,000	32.5	192,000	29.5	152,000
3	34.4	313,000	37.5	275,000	36.9	254,000	34.8	222,000	32.3	189,000	29.2	148,000
5	35.1	295,000	37.5	274,000	36.7	250,000	34.6	221,000	32.1	185,000	28.9	147,000
7	35.6	284,000	37.5	272,000	36.6	250,000	34.4	219,000	31.8	184,000	28.6	143,000
9	36.0	270,000	37.6	267,000	36.4	249,000	34.2	214,000	31.6	180,000	28.3	139,000
11	36.3	278,000	37.5	265,000	36.2	245,000	34.0	211,000	31.3	175,000	28.0	137,000
1	36.6	284,000	37.5	264,000	36.0	244,000	33.8	210,000	31.1	173,000	27.7	135,000
3	36.8	289,000	37.4	260,000	35.9	241,000	33.6	208,000	30.8	170,000	27.4	133,000
5	37.0	288,000	37.4	259,000	35.7	237,000	33.4	203,000	30.6	168,000	27.1	129,000
7	37.1	286,000	37.3	259,000	35.5	236,000	33.2	201,000	30.3	164,000	26.8	127,000
9	37.3	283,000	37.2	259,000	35.3	231,000	33.0	200,000	30.0	160,000	26.6	125,000
11	37.4	278,000	37.1	256,000	35.2	229,000	32.8	197,000	29.7	157,000	26.3	123,000

*Mean for the day.

Connecticut River at Middletown, Conn.

Location.- Lat. 41°34'0", long. 72°39'5", at Middletown-Portland Highway Bridge in Middletown, Middlesex County, 0.4 mile below mouth of Mattabesset River.
Drainage area.- 10,850 square miles.
Gage-height record.- Gage heights shown are observed readings except for period 1:30 to 9:30 a.m. Mar. 22, when record was based on shape of stage graph at Hartford. Gage heights reduced to mean sea level.
Remarks.- Gage-height record furnished by Hartford office of U. S. Weather Bureau.

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
1:30											9.02	
3:30											9.35	
5:30											9.52	
7:30											9.52	
9:30											9.69	
11:30											10.19	
1:30											10.52	
3:30									7.77		10.86	
5:30									8.19		11.36	
7:30									8.69		11.86	
9:30									8.69		12.69	
11:30									8.86		13.36	
	March 14		March 15		March 16		March 17		March 18		March 19	
1:30	13.69		16.77		17.02		15.86		14.27		17.11	
3:30	14.02		16.86		17.02		15.89		14.27		17.86	
5:30	14.69		16.94		16.94		15.44		14.19		18.52	
7:30	15.19		17.02		16.77		15.36		14.02		19.52	
9:30	15.44		17.11		16.69		15.36		14.02		20.19	
11:30	15.69		17.19		16.69		15.02		14.11		21.02	
1:30	15.86		17.19		16.61		14.94		14.19		21.86	
3:30	16.02		17.19		16.44		14.77		14.44		22.69	
5:30	16.36		17.19		16.44		14.61		14.77		23.52	
7:30	16.44		17.19		16.27		14.52		15.02		24.36	
9:30	16.52		17.11		16.11		14.36		15.61		24.94	
11:30	16.69		17.02		16.02		14.27		16.36		25.52	
	March 20		March 21		March 22		March 23		March 24		March 25	
1:30	26.27		30.19		30.10		28.44		25.69		23.19	
3:30	26.52		30.19		30.00		28.27		25.52		23.02	
5:30	26.86		30.19		29.90		28.11		25.36		22.86	
7:30	27.44		30.36		29.80		27.94		25.11		22.44	
9:30	27.44		30.52		29.70		27.61		24.86		22.11	
11:30	28.19		30.61		29.61		27.44		24.61		21.94	
1:30	28.44		30.61		29.44		27.27		24.44		21.61	
3:30	28.77		30.52		29.36		26.77		24.19		21.36	
5:30	29.27		30.48		29.19		26.36		24.02		21.11	
7:30	29.52		30.44		28.94		26.19		23.86		20.86	
9:30	29.77		30.36		28.77		26.02		23.61		20.60	
11:30	30.02		30.23		28.61		25.86		23.44		20.36	

Passumpsic River at Passumpsic, Vt.

Location.- Lat. 44°21', long. 72°1', 1 mile below dam at Passumpsic, Caledonia County.
Drainage area.- 423 square miles.
Gage-height record.- Water-stage recorder graph except for periods Feb. 16 to Mar. 9, when there was no record, and Mar. 10 to 3 p.m. Mar. 21, when graph was based on twice-daily gage readings, flood marks, and shape of stage graphs at nearby stations. Gage heights given to half tenths between 3.5 and 4.8 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 12. Defined by current-meter measurements below 9,180 second-feet; extended to peak stage by determination of flood flow over dam (head, 7.06 feet; C, 3.5); verified by comparison of peak discharge and total run-off of flood with records for nearby streams.
Maxima.- 1936: Discharge, 16,000 second-feet noon to 4 p.m. Mar. 18 (gage height, 21.23 feet).
1928-35: Discharge, 9,660 second-feet (revised) Apr. 19, 1933 (gage height, 14.36 feet).
Remarks.- Flood run-off slightly affected by storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	215	155	3,090	11	190	450	2,360	21	155	6,070	1,630
2	205	160	2,380	12	185	4,040	2,280	22	155	7,040	1,620
3	220	165	2,530	13	175	10,500	1,930	23	145	4,510	1,350
4	215	160	1,920	14	170	7,760	1,620	24	155	3,180	1,240
5	210	155	1,600	15	160	5,940	1,540	25	160	3,400	1,150
6	205	155	2,870	16	145	6,320	1,820	26	165	3,120	1,090
7	200	150	4,530	17	150	10,500	2,020	27	168	3,140	1,130
8	200	140	3,190	18	155	15,400	1,860	28	170	3,360	1,100
9	180	220	2,350	19	160	11,700	1,840	29	165	2,880	1,350
10	190	280	2,300	20	160	7,410	1,640	30		2,670	2,920
								31		3,280	
Mean monthly discharge, in second-feet									177	4,013	2,008
Run-off, in inches									0.45	10.94	5.30

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	-	-	3.12	-	15.1	10,300
4	-	-	-	-	-	-	-	-	3.20	†550	15.6	10,700
6	-	-	-	-	-	-	-	-	3.28	-	15.9	11,000
8	-	-	-	-	3.20	-	3.50	-	3.40	-	16.0	11,100
10	-	-	-	-	-	-	-	-	4.6	†1,350	16.0	11,100
N	-	*140	-	*220	-	*280	-	*450	6.0	-	15.8	10,900
2	-	-	-	-	-	-	-	-	7.2	-	15.6	10,700
4	-	-	-	-	3.40	-	3.00	-	10.8	†5,570	15.3	10,500
6	-	-	-	-	-	-	-	-	11.9	-	15.1	10,300
8	-	-	-	-	-	-	-	-	12.7	-	14.8	10,000
10	-	-	-	-	-	-	-	-	13.6	†8,700	14.6	9,840
M	-	-	-	-	-	-	-	-	14.4	-	14.3	9,570
	March 14		March 15		March 16		March 17		March 18		March 19	
2	13.9	9,210	10.8	6,420	9.9	5,650	12.8	8,220	19.0	13,900	19.4	14,300
4	13.6	8,940	10.6	6,240	9.8	5,570	13.2	8,580	19.8	14,700	18.8	13,700
6	13.3	8,670	10.5	6,150	9.8	5,570	13.6	8,940	20.5	15,300	18.2	13,100
8	13.0	8,400	10.4	6,060	9.8	5,570	14.0	9,300	20.9	15,700	17.7	12,700
10	12.7	8,130	10.4	6,060	9.9	5,650	14.4	9,660	21.1	15,900	17.2	12,200
N	12.4	7,860	10.2	5,890	10.2	5,890	14.8	10,000	21.2	16,000	16.8	11,800
2	12.1	7,590	10.2	5,890	10.5	6,150	15.4	10,600	21.2	16,000	16.3	11,400
4	11.7	7,230	10.1	5,810	10.9	6,510	15.9	11,000	21.2	16,000	15.8	10,900
6	11.5	7,050	10.0	5,730	11.2	6,780	16.4	11,500	21.1	15,900	15.4	10,600
8	11.3	6,870	10.0	5,730	11.6	7,140	17.0	12,000	20.8	15,600	14.9	10,100
10	11.1	6,690	9.9	5,650	12.0	7,500	17.6	12,600	20.3	15,100	14.5	9,750
M	10.9	6,510	9.9	5,650	12.4	7,860	18.2	13,100	19.9	14,800	14.1	9,390
	March 20		March 21		March 22		March 23		March 24		March 25	
2	13.6	8,940	10.3	5,970	11.8	7,320	9.8	5,570	7.4	3,650	6.7	3,090
4	13.4	8,760	10.2	5,890	12.1	7,590	9.5	5,330	7.2	3,490	6.8	3,170
6	13.0	8,400	10.0	5,730	12.2	7,680	9.2	5,090	7.1	3,410	7.1	3,410
8	12.6	8,040	10.0	5,730	12.2	7,680	9.0	4,930	7.0	3,330	7.3	3,570
10	12.3	7,770	9.8	5,570	12.1	7,590	8.6	4,610	6.6	3,020	7.3	3,570
N	12.0	7,500	9.8	5,570	11.9	7,410	8.4	4,450	6.6	3,020	7.2	3,490
2	11.6	7,140	9.9	5,650	11.7	7,230	8.2	4,290	6.7	3,090	7.2	3,490
4	11.4	6,960	10.0	5,730	11.4	6,960	8.0	4,130	6.6	3,020	7.1	3,410
6	11.1	6,690	10.7	6,330	11.1	6,690	7.9	4,050	6.6	3,020	7.1	3,410
8	10.8	6,420	11.1	6,690	10.8	6,420	7.8	3,970	6.6	3,020	7.1	3,410
10	10.6	6,240	11.3	6,870	10.5	6,150	7.7	3,890	6.6	3,020	7.1	3,410
M	10.4	6,060	11.6	7,140	10.1	5,810	7.6	3,810	6.6	3,020	7.0	3,330

*Mean for the day.
†Mean for 6-hour period.

Moose River at St. Johnsbury, Vt.

Location.- Lat. 44°25'20", long. 71°59'55", in St. Johnsbury, Caledonia County, half a mile above mouth of river.

Drainage area.- 126 square miles (revised).

Gage-height record.- Water-stage recorder graph. Gage heights given to half tenths between 4.70 and 5.00 feet; hundredths below and tenths above these limits.

Stage-discharge relation.- Affected by ice Mar. 12. Defined by current-meter measurements below 2,430 second-feet; extended to peak stage by determination of flood flow over dam (head, 4.12 feet; C,3.7); verified by drainage-area comparison of instantaneous and total yield of flood with records for nearby streams.

Maxima.- 1936: Discharge, 4,780 second-feet noon Mar. 19 (gage height, 5.71 feet).
1928-35: Discharge observed, 5,220 second-feet Apr. 30, 1929 (gage height, 8.09 feet, former site and datum).

Remarks.- Flood run-off affected by some artificial and natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	70	49	1,200	11	55	72	676	21	51	1,910	436
2	68	49	868	12	55	2,130	687	22	51	2,270	467
3	67	48	764	13	55	3,170	570	23	51	1,960	390
4	65	48	579	14	51	3,410	452	24	51	1,150	348
5	65	51	429	15	47	2,630	429	25	52	1,030	303
6	64	51	737	16	45	2,640	498	26	53	906	299
7	62	51	1,360	17	44	2,360	525	27	57	963	294
8	59	50	1,170	18	47	2,400	498	28	51	1,120	307
9	57	49	775	19	52	4,160	507	29	50	1,140	383
10	57	51	665	20	51	2,930	475	30		925	772
								31		1,040	
Mean monthly discharge, in second-feet									55.3	1,308	595
Run-off, in inches									0.47	11.99	5.27

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	-	-	2.85	136	4.85	3,640
4	2.16	50	2.15	49	2.15	49	2.30	62	3.00	169	4.95	3,810
6	-	-	-	-	-	-	-	-	3.70	250	4.75	3,450
8	-	-	-	-	-	-	-	-	4.20	400	4.65	3,220
10	-	-	-	-	-	-	-	-	5.0	600	4.65	3,220
N	2.16	50	2.15	49	2.15	49	2.36	68	5.4	1,200	4.7	3,350
2	-	-	-	-	-	-	-	-	4.75	3,450	4.42	2,440
4	-	-	-	-	-	-	-	-	4.9	3,730	4.45	2,580
6	-	-	-	-	-	-	-	-	5.1	4,040	4.53	2,890
8	2.16	50	2.15	49	2.24	57	2.53	87	5.1	4,040	4.60	3,100
10	-	-	-	-	-	-	-	-	5.0	3,890	4.65	3,220
M	-	-	-	-	-	-	-	-	4.95	3,810	4.62	3,150
	March 14		March 15		March 16		March 17		March 18		March 19	
2	4.60	3,100	4.50	2,800	4.42	2,440	4.43	2,480	4.45	2,580	5.1	4,040
4	4.62	3,150	4.49	2,760	4.40	2,350	4.50	2,800	4.39	2,280	5.3	4,310
6	4.60	3,100	4.48	2,710	4.38	2,220	4.48	2,710	4.25	1,480	5.5	4,560
8	4.65	3,220	4.45	2,580	4.37	2,160	4.47	2,660	3.90	698	5.5	4,560
10	4.62	3,150	4.45	2,580	4.40	2,350	4.46	2,620	3.98	804	5.4	4,440
N	4.61	3,120	4.46	2,620	4.46	2,620	4.50	2,800	3.65	460	5.7	4,780
2	4.67	3,280	4.46	2,620	4.50	2,800	4.52	2,860	3.40	307	5.6	4,670
4	4.61	3,120	4.47	2,660	4.61	3,120	4.48	2,710	5.3	4,310	4.8	3,550
6	4.65	3,220	4.47	2,660	4.65	3,220	4.46	2,620	5.1	4,040	4.7	3,350
8	4.64	3,200	4.45	2,580	4.55	2,950	4.30	1,700	5.4	4,440	4.8	3,550
10	4.61	3,120	4.44	2,530	4.55	2,950	4.20	1,270	4.95	3,810	5.0	3,890
M	4.55	2,950	4.43	2,480	4.43	2,480	4.15	1,140	4.85	3,640	5.2	4,180
	March 20		March 21		March 22		March 23		March 24		March 25	
2	5.1	4,040	4.40	2,350	4.33	1,900	4.36	2,090	4.20	1,270	4.11	1,040
4	4.9	3,730	4.36	2,090	4.36	2,090	4.35	2,020	4.21	1,310	4.13	1,100
6	4.8	3,550	4.34	1,960	4.38	2,220	4.36	2,090	4.21	1,310	4.13	1,100
8	4.75	3,450	4.33	1,900	4.39	2,280	4.37	2,160	4.20	1,270	4.13	1,100
10	4.68	3,300	4.31	1,760	4.41	2,400	4.36	2,090	4.17	1,200	4.12	1,070
N	4.44	2,530	4.32	1,830	4.41	2,400	4.35	2,020	4.14	1,120	4.11	1,040
2	4.46	2,620	4.29	1,660	4.40	2,350	4.35	2,020	4.11	1,040	4.10	1,020
4	4.46	2,620	4.31	1,760	4.40	2,350	4.35	2,020	4.12	1,070	4.09	1,000
6	4.44	2,530	4.31	1,760	4.41	2,400	4.34	1,960	4.13	1,100	4.08	982
8	4.38	2,220	4.33	1,900	4.41	2,400	4.33	1,900	4.12	1,070	4.08	982
10	4.39	2,280	4.34	1,960	4.39	2,280	4.29	1,660	4.11	1,040	4.07	963
M	4.39	2,280	4.35	2,020	4.37	2,160	4.25	1,480	4.10	1,020	4.07	963

Ammonoosuc River near Bath, N. H.

Location.- Lat. 44°09'15", long. 71°59'10", 0.4 mile below mouth of Wild Ammonoosuc River and 1½ miles below Bath, Grafton County.
Drainage area.- 393 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights given to half tenths between 3.80 and 6.00 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 12. Defined by current-meter measurements below 12,800 second-feet; extended to peak stage by velocity-area study at measuring section; verified by drainage-area comparison of instantaneous and total yield of flood with records for nearby stations.
Maxima.- 1936: Discharge, 27,900 second-feet 5 and 10 p.m. Mar. 18 (gage height, 15.40 feet).
Remarks.- Flood run-off not materially affected by artificial or natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	180	190	1,900	11	130	700	1,760	21	200	5,950	970
2	185	180	1,440	12	140	10,000	1,660	22	220	8,520	1,200
3	170	170	1,660	13	150	13,900	1,440	23	210	3,980	935
4	180	175	1,400	14	160	4,300	1,280	24	200	2,790	816
5	190	185	1,120	15	160	2,550	1,120	25	200	3,050	697
6	200	200	3,440	16	150	3,800	1,200	26	200	2,700	678
7	170	190	4,180	17	150	12,600	1,240	27	205	2,250	690
8	160	180	2,300	18	160	20,500	1,040	28	210	2,690	672
9	150	200	1,760	19	175	17,000	970	29	205	2,050	950
10	140	380	1,800	20	190	7,620	910	30		1,710	2,590
								31		2,050	
Mean monthly discharge, in second-feet									177	4,283	1,461
Run-off, in inches									0.49	12.57	4.15

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	2.86	-	2.98	-	3.11	-	4.1	-	4.7	-	12.7	19,000
4	2.83	-	2.98	-	3.10	-	4.1	-	7.3	-	12.3	17,700
6	2.60	-	3.07	-	2.80	-	4.2	-	8.7	-	12.2	17,400
8	2.62	-	3.09	-	3.10	-	4.2	-	7.2	-	12.0	16,800
10	2.93	-	3.00	-	2.93	-	4.1	-	8.5	**7,220	11.7	15,900
N	3.01	*180	2.54	*200	3.11	*380	3.85	*700	9.7	-	11.1	14,100
2	2.88	-	2.88	-	3.38	-	4.25	-	11.3	-	10.7	12,900
4	3.09	-	2.98	-	3.64	-	4.25	-	13.9	-	10.2	11,400
6	2.99	-	3.00	-	3.9	-	4.3	-	13.3	-	9.8	10,300
8	2.95	-	2.91	-	3.8	-	4.4	-	13.8	-	9.4	9,320
10	2.93	-	3.10	-	3.85	-	4.5	-	13.7	22,200	8.9	8,140
M	3.07	-	3.11	-	4.0	-	4.6	-	13.2	20,600	8.4	7,040
	March 14		March 15		March 16		March 17		March 18		March 19	
2	8.0	6,200	5.9	2,900	5.75	2,720	9.7	10,100	11.0	13,800	14.4	24,500
4	7.7	5,600	5.8	2,780	5.7	2,660	10.1	11,100	10.9	13,500	13.6	21,900
6	7.4	5,060	5.65	2,600	5.7	2,660	10.4	12,000	10.9	13,500	13.2	20,600
8	7.2	4,720	5.5	2,420	5.7	2,660	10.3	11,700	11.2	14,400	12.7	19,000
10	7.0	4,400	5.45	2,360	5.75	2,720	10.2	11,400	12.0	16,800	12.3	17,700
N	6.8	4,080	5.4	2,300	5.9	2,900	10.2	11,400	13.0	20,000	11.9	16,500
2	6.6	3,800	5.4	2,300	6.3	3,380	10.5	12,300	14.1	23,500	11.4	15,000
4	6.5	3,660	5.5	2,420	6.8	4,080	11.0	13,800	15.0	26,600	11.0	13,800
6	6.4	3,520	5.6	2,540	7.3	4,880	11.5	15,300	15.0	26,600	10.7	12,900
8	6.3	3,380	5.7	2,660	7.7	5,600	11.5	15,300	15.2	27,200	10.4	12,000
10	6.2	3,260	5.8	2,780	8.1	6,400	11.4	15,000	15.4	27,900	10.2	11,400
M	6.0	3,020	5.75	2,720	8.9	8,140	11.2	14,400	14.9	26,200	10.1	11,100
	March 20		March 21		March 22		March 23		March 24		March 25	
2	10.1	11,100	7.2	4,720	10.2	11,400	7.4	5,060	6.2	3,260	5.65	2,600
4	10.0	10,900	7.1	4,560	9.8	10,300	7.2	4,720	6.1	3,140	5.8	2,780
6	9.5	9,560	6.9	4,240	9.5	9,560	7.1	4,560	6.0	3,020	5.95	2,960
8	9.0	8,360	6.8	4,080	9.5	9,560	6.9	4,240	5.9	2,900	6.1	3,140
10	8.7	7,700	6.8	4,080	9.5	9,560	6.8	4,080	5.85	2,840	6.2	3,260
N	8.4	7,040	6.8	4,080	9.2	8,840	6.6	3,800	5.8	2,780	6.2	3,260
2	8.1	6,400	7.0	4,400	8.9	8,140	6.5	3,660	5.75	2,720	6.3	3,380
4	7.9	6,000	8.0	6,200	8.6	7,480	6.4	3,520	5.7	2,660	6.3	3,380
6	7.8	5,800	8.4	7,040	8.4	7,040	6.4	3,520	5.7	2,660	6.3	3,380
8	7.6	5,420	9.2	8,840	8.1	6,400	6.4	3,520	5.7	2,660	6.2	3,260
10	7.5	5,240	9.9	10,600	7.9	6,000	6.3	3,380	5.65	2,600	6.2	3,260
M	7.3	4,880	10.4	12,000	7.6	5,420	6.3	3,380	5.65	2,600	6.1	3,140

Supplemental records.- Mar. 12, 7 p.m., 14.4 ft. Mar. 18, 5 p.m., 15.40 ft., 27,900 sec.-ft.
*Mean for the day.
**Mean for 20-hour period.

146875—37——15

White River near Bethel, Vt.

Location.- Lat. 43°48'45", long. 72°39'25", a third of a mile above mouth of Locust Creek and 1 3/4 miles southwest of Bethel, Windsor County.
Drainage area.- 241 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights given to half tenths between 3.00 and 6.10 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 12. Defined by current-meter measurements below 5,090 second-feet; extended to peak stage by study of flow characteristics at control section; verified by comparison of peak discharge and total run-off of flood with determinations for nearby stations.
Maxima.- 1936: Discharge, 16,100 second-feet 4 to 6 p.m. and 9 to 11 p.m. Mar. 18 (gage height, 6.72 feet).
1931-35: Discharge, 12,200 second-feet (revised) Apr. 18, 1933 (gage height, 5.93 feet); maximum gage height, 8.32 feet Mar. 27, 1934 (affected by ice).
Remarks.- Flood run-off not materially affected by artificial or natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	180	160	2,030	11	130	900	1,470	21	170	4,460	1,020
2	170	150	1,470	12	130	4,800	1,420	22	200	3,980	1,070
3	160	160	1,460	13	120	5,300	1,220	23	170	2,360	845
4	170	170	1,100	14	120	2,520	1,090	24	160	1,880	747
5	170	180	970	15	120	1,520	1,000	25	170	2,630	659
6	180	190	3,820	16	120	2,190	1,020	26	170	2,360	627
7	160	180	3,100	17	130	6,390	992	27	200	2,420	595
8	140	170	2,030	18	140	12,200	876	28	190	2,540	588
9	130	220	1,550	19	150	10,400	845	29	180	1,960	835
10	130	500	1,400	20	160	5,060	775	30		1,960	1,650
								31		2,780	
Mean monthly discharge, in second-feet									156	2,667	1,267
Run-off, in inches									0.70	12.80	5.90

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	1.85	-	1.87	-	2.03	-	2.69	-	3.10	-	4.7	6,570
4	1.85	-	1.92	-	2.10	-	2.69	-	3.45	**2,000	4.7	6,570
6	1.9	-	1.98	-	2.23	-	2.68	-	3.75	-	4.65	6,390
8	1.9	-	2.01	-	2.32	-	2.70	-	3.95	-	4.6	6,210
10	1.9	-	2.03	-	2.39	-	2.70	-	4.61	**3,500	4.5	5,880
N	1.87	*170	2.01	*220	2.45	*500	2.71	*900	4.25	-	4.35	5,420
2	1.83	-	1.99	-	2.49	-	2.72	-	5.25	6,000	4.2	5,010
4	1.80	-	1.97	-	2.55	-	2.73	-	4.85	7,140	4.05	4,620
6	1.84	-	1.95	-	2.59	-	2.75	-	4.85	7,140	3.95	4,380
8	1.92	-	1.95	-	2.62	-	2.78	-	4.85	7,140	3.8	4,040
10	1.94	-	1.96	-	2.64	-	2.84	-	4.8	6,950	3.65	3,720
M	1.88	-	1.99	-	2.68	-	2.94	-	4.75	6,760	3.55	3,500
	March 14		March 15		March 16		March 17		March 18		March 19	
2	3.45	3,300	2.66	1,820	2.48	1,530	4.35	5,420	4.95	7,540	6.5	15,000
4	3.35	3,100	2.60	1,720	2.48	1,530	4.6	6,210	5.05	7,960	6.5	15,000
6	3.25	2,900	2.56	1,660	2.48	1,530	4.75	6,760	5.2	8,600	6.2	13,500
8	3.2	2,800	2.52	1,590	2.48	1,530	4.8	6,950	5.4	9,500	5.9	12,000
10	3.1	2,610	2.50	1,560	2.48	1,530	4.75	6,760	5.7	11,000	5.7	11,000
N	3.00	2,420	2.48	1,530	2.51	1,580	4.65	6,390	6.2	13,500	5.45	9,740
2	2.97	2,370	2.45	1,480	2.63	1,770	4.6	6,210	6.6	15,500	5.3	9,040
4	2.91	2,260	2.43	1,460	2.89	2,220	4.65	6,390	6.7	16,100	5.15	8,380
6	2.86	2,170	2.43	1,460	3.25	2,900	4.7	6,570	6.7	16,100	5.05	7,960
8	2.80	2,060	2.47	1,520	3.55	3,500	4.75	6,760	6.6	15,500	4.85	7,160
10	2.75	1,980	2.50	1,560	3.75	3,930	4.8	6,950	6.7	16,100	4.8	6,960
M	2.70	1,890	2.52	1,590	4.05	4,620	4.85	7,140	6.6	15,500	4.75	6,780
	March 20		March 21		March 22		March 23		March 24		March 25	
2	4.7	6,590	3.6	3,700	4.2	5,060	3.15	2,820	2.7	2,030	2.75	2,110
4	4.6	6,240	3.5	3,500	4.05	4,690	3.05	2,630	2.65	1,960	2.9	2,360
6	4.5	5,910	3.45	3,400	3.95	4,460	3.00	2,540	2.6	1,880	3.00	2,540
8	4.35	5,460	3.4	3,300	3.85	4,230	2.95	2,450	2.55	1,800	3.1	2,720
10	4.25	5,190	3.4	3,300	3.75	4,020	2.9	2,360	2.55	1,800	3.15	2,820
N	4.1	4,810	3.55	3,600	3.7	3,910	2.85	2,280	2.5	1,730	3.15	2,820
2	4.0	4,570	4.0	4,570	3.6	3,700	2.8	2,190	2.5	1,730	3.15	2,820
4	3.95	4,460	4.4	5,600	3.55	3,600	2.8	2,190	2.5	1,730	3.15	2,820
6	3.85	4,230	4.55	6,080	3.45	3,400	2.8	2,190	2.5	1,730	3.15	2,820
8	3.80	4,120	4.55	6,080	3.4	3,300	2.75	2,110	2.55	1,800	3.15	2,820
10	3.75	4,020	4.5	5,910	3.3	3,100	2.75	2,110	2.6	1,880	3.15	2,820
M	3.65	3,800	4.35	5,460	3.2	2,910	2.7	2,030	2.65	1,960	3.1	2,720

*Mean for the day.
**Mean for 6-hour period.

White River at West Hartford, Vt.

Location.- Lat. 43°42'45", long. 72°25'10", 500 feet above highway bridge at West Hartford, Windsor County and 7 miles above mouth of river. Zero of gage is 374.22 feet above mean sea level.

Drainage area.- 690 square miles.

Gage-height record.- Water-stage recorder graph. Gage heights given to half tenths between 4.70 and 7.20 feet; hundredths below and tenths above these limits.

Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 10. Defined by current-meter measurements below 12,800 second-feet; extended to peak stage of November 1927 by revised slope-area determination of flood flow (n,0.046); verified by drainage-area comparison of instantaneous and total yield of March 1936 flood with records for nearby streams.

Maxima.- 1936: Discharge, 45,400 second-feet 10 p.m. Mar. 18 (gage height, 18.89 feet).
1915-35: Discharge, 120,000 second-feet Nov. 4, 1927 (gage height, 29.3 feet).

Remarks.- Flood run-off not materially affected by artificial or natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	380	420	4,970	11	300	1,320	4,040	21	480	12,700	2,420
2	400	430	3,770	12	340	11,800	4,290	22	500	12,500	2,680
3	350	380	4,040	13	360	15,600	3,640	23	460	7,190	2,160
4	400	390	3,330	14	350	5,990	3,180	24	430	5,710	1,970
5	430	400	2,820	15	350	4,200	2,890	25	430	7,570	1,740
6	450	460	7,700	16	340	6,040	2,960	26	440	6,430	1,630
7	380	430	8,160	17	350	16,300	3,030	27	460	6,430	1,580
8	350	390	5,320	18	400	31,300	2,610	28	480	6,820	1,4[illegible]0
9	340	410	4,460	19	430	29,800	2,480	29	450	5,140	1,580
10	320	750	4,040	20	450	14,300	2,220	30		4,800	2,680
								31		5,860	
Mean monthly discharge, in second-feet									400	7,170	3,329
Run-off, in inches									0.63	11.99	5.38

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	4.08	-	4.16	-	4.30	-	4.75	1,040	5.8	2,090	14.1	22,600
4	4.08	-	4.16	-	4.30	-	4.8	1,080	6.55	3,100	14.0	22,200
6	4.11	-	4.17	-	4.34	-	4.95	1,200	7.1	3,960	13.8	21,500
8	4.15	-	4.19	-	4.38	-	5.0	1,250	8.0	5,500	13.4	20,000
10	4.19	-	4.21	-	4.39	-	5.0	1,250	9.1	7,640	12.9	18,300
N	4.20	*390	4.22	*410	4.41	*750	5.0	1,250	10.3	10,500	12.3	16,300
2	4.20	-	4.23	-	4.44	-	5.05	1,300	11.2	12,900	11.5	13,800
4	4.20	-	4.24	-	4.48	-	5.1	1,340	12.0	15,300	10.9	12,100
6	4.14	-	4.25	-	4.54	-	5.15	1,380	12.7	17,600	10.6	11,200
8	4.13	-	4.26	-	4.58	-	5.25	1,480	13.3	19,700	10.3	10,500
10	4.17	-	4.33	-	4.64	-	5.35	1,580	13.8	21,500	9.9	9,460
M	4.17	-	4.38	-	4.70	-	5.5	1,740	14.0	22,200	9.6	8,740
	March 14		March 15		March 16		March 17		March 18		March 19	
2	9.3	8,080	7.4	4,460	7.6	4,800	11.3	13,200	12.8	17,900	18.6	43,600
4	9.0	7,420	7.3	4,290	7.6	4,800	11.7	14,400	13.1	19,000	18.2	41,200
6	8.8	7,020	7.2	4,120	7.5	4,630	12.2	15,900	13.2	19,300	17.7	38,500
8	8.5	6,430	7.15	4,040	7.5	4,630	12.6	17,200	13.5	20,400	17.1	35,500
10	8.3	6,050	7.05	3,880	7.5	4,630	12.7	17,600	13.9	21,800	16.5	32,500
N	8.2	5,860	7.0	3,800	7.5	4,630	12.6	17,200	14.7	24,900	15.8	29,200
2	8.0	5,500	7.0	3,800	7.6	4,800	12.4	16,600	17.0	35,000	15.2	26,800
4	7.9	5,320	7.1	3,960	7.9	5,320	12.2	15,900	17.7	38,500	14.7	24,900
6	7.9	5,320	7.3	4,290	8.4	6,240	12.2	15,900	18.6	43,600	14.2	23,000
8	7.8	5,140	7.4	4,460	8.9	7,220	12.3	16,300	18.8	44,800	13.9	21,800
10	7.7	4,970	7.5	4,630	9.8	9,220	12.7	17,600	18.9	45,400	13.6	20,800
M	7.6	4,800	7.5	4,630	10.7	11,500	12.7	17,600	18.8	44,800	13.3	19,700
	March 20		March 21		March 22		March 23		March 24		March 25	
2	13.1	19,000	10.3	10,500	12.5	16,900	9.6	8,740	8.4	6,240	8.3	6,050
4	12.9	18,300	10.2	10,200	12.2	15,900	9.4	8,300	8.4	6,240	8.6	6,620
6	12.6	17,200	10.0	9,700	11.9	15,000	9.2	7,860	8.3	6,050	8.9	7,220
8	12.3	16,300	9.9	9,460	11.7	14,400	9.1	7,640	8.2	5,860	9.1	7,640
10	11.9	15,000	9.9	9,460	11.4	13,500	8.9	7,220	8.1	5,680	9.3	8,080
N	11.6	14,100	10.0	9,700	11.1	12,600	8.8	7,020	8.1	5,680	9.4	8,300
2	11.3	13,200	10.4	10,700	10.8	11,800	8.7	6,820	8.0	5,500	9.4	8,300
4	11.1	12,600	11.4	13,500	10.5	11,000	8.6	6,620	8.0	5,500	9.3	8,080
6	10.9	12,100	12.1	15,600	10.3	10,500	8.6	6,620	7.9	5,320	9.2	7,860
8	10.8	11,800	12.6	17,200	10.1	9,940	8.6	6,620	7.9	5,320	9.1	7,640
10	10.7	11,500	12.8	17,900	9.9	9,460	8.5	6,430	8.0	5,500	9.1	7,640
M	10.5	11,000	12.8	17,900	9.8	9,220	8.5	6,430	8.1	5,680	9.0	7,420

*Mean for the day.

Mascoma River at Mascoma, N. H.

Location.- Lat. 43°39'0", long. 72°11'5", in Mascoma, Grafton County, 250 feet below railroad bridge and 1,500 feet below outlet of Mascoma Lake.
Drainage area.- 153 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights given to half tenths between 4.00 and 6.30 feet; hundredths below and tenths above these limits.
Stage-discharge realation.- Defined by current-meter measurements below 2,450 second-feet; extended to peak stage using determination of flood flow over dam (head, 6.50 feet; C, 3.6); verified by comparison of instantaneous discharge and total run-off of flood with records for nearby stations.
Maxima.- 1936: Discharge, 5,840 second-feet 4 p.m. Mar. 19 (gage height, 7.50 feet).
1932-35: Discharge, 3,630 second-feet Apr. 19, 1933 (gage height, 6.67 feet).
The discharge, 3,700 second-feet, formerly published for Mar. 30, 1925 (gage-height, 6.25 feet) has been revised to 3,540 second-feet.
Remarks.- Flood run-off considerably affected by storage in Mascoma and Crystal Lakes and Goose and Grafton Ponds, total capacity, 1,250,000,000 cubic feet. Table of storage corrections computed from basic data furnished by Mascoma River Improvement Co.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	114	123	610	11	114	141	829	21	109	3,200	474
2	114	123	560	12	114	157	843	22	109	2,740	464
3	114	123	535	13	114	597	850	23	107	2,420	460
4	114	120	515	14	114	2,200	774	24	118	1,640	425
5	114	120	478	15	114	1,730	702	25	125	1,220	403
6	114	120	565	16	114	1,350	632	26	125	1,020	387
7	114	120	1,060	17	112	1,460	600	27	125	920	297
8	114	118	1,300	18	109	2,840	580	28	125	878	189
9	114	125	1,060	19	109	5,090	535	29	125	857	229
10	114	139	899	20	109	4,740	500	30		768	233
								31		678	
Mean monthly discharge, in second-feet									115	1,222	600
Run-off, in inches									0.81	9.21	4.37

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	-	-	2.40	151	2.46	167
4	-	-	-	-	-	-	-	-	2.41	154	2.47	169
6	2.26	118	2.26	118	2.35	139	2.35	139	2.41	154	2.48	172
8	-	-	-	-	-	-	-	-	2.42	156	2.49	174
10	-	-	-	-	-	-	-	-	2.43	159	2.56	194
N	2.26	118	2.26	118	2.35	139	2.35	139	2.42	156	2.96	327
2	-	-	-	-	-	-	-	-	2.42	156	3.18	415
4	-	-	2.26	118	-	-	-	-	2.43	159	3.68	660
6	2.26	118	2.35	139	2.35	139	2.36	141	2.43	159	4.00	835
8	-	-	-	-	-	-	-	-	2.43	159	4.4	1,080
10	-	-	-	-	-	-	2.37	144	2.44	161	4.7	1,300
M	-	-	-	-	-	-	-	-	2.45	164	4.1	1,670
	March 14		March 15		March 16		March 17		March 18		March 19	
2	5.2	1,920	5.25	2,080	4.7	1,480	4.5	1,300	5.05	1,860	6.6	4,120
4	5.3	2,080	5.2	2,020	4.65	1,440	4.55	1,340	5.15	1,960	6.7	4,300
6	5.35	2,160	5.1	1,910	4.6	1,390	4.55	1,340	5.25	2,080	6.8	4,480
8	5.35	2,160	5.05	1,860	4.6	1,390	4.55	1,340	5.35	2,200	6.8	4,480
10	5.35	2,160	5.0	1,800	4.55	1,340	4.6	1,390	5.5	2,400	7.1	5,040
N	5.4	2,250	4.9	1,690	4.55	1,340	4.6	1,390	5.7	2,680	7.2	5,240
2	5.5	2,400	4.85	1,640	4.55	1,340	4.65	1,440	5.9	2,980	7.3	5,440
4	5.45	2,340	4.85	1,640	4.5	1,330	4.7	1,480	6.05	3,220	7.5	5,840
6	5.45	2,340	4.8	1,580	4.5	1,300	4.75	1,530	6.15	3,380	7.3	5,440
8	5.4	2,270	4.8	1,580	4.5	1,300	4.8	1,580	6.25	3,540	7.4	5,640
10	5.35	2,200	4.75	1,530	4.5	1,300	4.85	1,640	6.4	3,780	7.4	5,640
M	5.3	2,140	4.7	1,480	4.5	1,300	4.9	1,690	6.5	3,940	7.3	5,440
	March 20		March 21		March 22		March 23		March 24		March 25	
2	7.3	5,440	6.4	3,780	5.7	2,680	5.7	2,680	5.2	2,020	4.55	1,340
4	7.2	5,240	6.3	3,620	5.7	2,680	5.7	2,680	5.15	1,960	4.5	1,300
6	7.2	5,240	6.25	3,540	5.7	2,680	5.65	2,610	5.05	1,860	4.5	1,300
8	7.1	5,040	6.2	3,460	5.75	2,760	5.65	2,610	5.0	1,800	4.45	1,260
10	7.1	5,040	6.1	3,300	5.75	2,760	5.6	2,540	4.9	1,690	4.45	1,260
N	7.0	4,840	6.05	3,220	5.75	2,760	5.55	2,470	4.85	1,640	4.4	1,220
2	7.0	4,840	6.0	3,140	5.75	2,760	5.5	2,400	4.8	1,580	4.4	1,220
4	6.8	4,480	5.95	3,060	5.75	2,760	5.45	2,340	4.75	1,530	4.35	1,180
6	6.7	4,300	5.9	2,980	5.75	2,760	5.4	2,270	4.7	1,480	4.35	1,180
8	6.7	4,300	5.8	2,830	5.75	2,760	5.35	2,200	4.65	1,440	4.3	1,140
10	6.6	4,120	5.75	2,760	5.75	2,760	5.3	2,140	4.6	1,390	4.3	1,140
M	6.5	3,940	5.7	2,680	5.75	2,760	5.25	2,080	4.55	1,340	4.25	1,100

Mascoma River at Mascoma, N. H.--Continued

Mean discharge (second-feet) and gain or loss in storage (millions of cubic feet), 19

Day	February			March			April		
	Observed discharge	Gain or loss in storage	Discharge corrected for storage	Observed discharge	Gain or loss in storage	Discharge corrected for storage	Observed discharge	Gain or loss in storage	Discharge corrected for storage
1	114	-4.8	58	123	-6.9	43	610	-0.9	600
2	114	-4.5	62	123	-6.5	48	560	+.9	570
3	114	-4.7	60	123	-6.8	44	535	-.8	526
4	114	-5.3	53	120	-4.0	77	515	+6.1	586
5	114	-5.2	54	120	-3.4	81	478	+6.7	556
6	114	-6.2	42	120	-3.4	81	565	+24.6	850
7	114	-5.0	56	120	-3.4	81	1,060	+36.1	1,480
8	114	-4.8	58	118	+.4	123	1,300	-2.5	1,270
9	114	-4.1	67	125	+2.8	157	1,060	-17.3	860
10	114	-4.5	62	139	+7.6	226	899	-1.8	878
11	114	-6.4	40	141	+34.3	538	829	+2.4	857
12	114	-7.2	31	157	+126.3	1,620	843	-2.9	809
13	114	-6.3	41	597	+199.5	2,910	850	-3.9	805
14	114	-6.6	38	2,200	+93.0	3,280	774	-11.0	647
15	114	-6.6	38	1,730	+1.6	1,750	702	-8.0	609
16	114	-6.0	45	1,350	+23.0	1,620	632	-7.8	542
17	112	-5.0	54	1,460	+84.9	2,440	600	-1.9	578
18	109	-3.5	68	2,840	+155.2	4,640	580	-4.8	524
19	109	-5.8	42	5,090	+180.8	7,180	535	-7.9	444
20	109	-5.7	43	4,740	-32.7	4,360	500	-5.3	439
21	109	-5.5	45	3,200	-26.7	2,890	474	-9.3	366
22	109	-5.5	45	2,740	-13.5	2,580	464	-3.3	426
23	107	-5.0	49	2,420	+.2	2,420	460	-9.3	352
24	118	-5.0	60	1,640	-52.2	1,040	425	-7.4	339
25	125	-5.2	65	1,220	-12.6	1,070	403	-11.0	276
26	125	-6.3	52	1,020	-4.6	967	387	-15.4	209
27	125	-6.0	56	920	-4.6	867	297	-3.3	259
28	125	-6.5	50	878	+5.0	936	189	+6.6	265
29	125	-6.5	50	857	+2.8	889	229	+1.9	251
30				768	-8.8	666	233	-4.0	187
31				678	-12.1	538			

	February	March	April
Mean monthly discharge, in second-feet (observed)............	115	1,222	600
Gain or loss in storage, in millions of cubic feet...........	-159.7	+725.1	-54.5
Mean monthly discharge, in second-feet (corrected for storage)	51.2	1,489	579
Run-off, in inches (corrected for storage)...................	0.36	11.22	4.22

Ottauquechee River at North Hartland, Vt.

Location.- Lat. 43°36'5", long. 72°21'20", at highway bridge in North Hartland, Windsor County, 1 mile above mouth.
Drainage area.- 221 square miles.
Gage-height record.- Water-stage recorder graph except for period 10 a.m. Mar. 11 to 8 a.m. Mar. 17, when a graph was drawn based on shape of stage graphs at nearby stations. Gage heights given to half tenths between 4.10 and 6.60 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 18. Defined by current-meter measurements below 5,380 second-feet; extended to flood peak of November 1927 by determination of flow of that flood over dam (head, 9.2 feet; C, 3.90), and determination of Mar. 18, 1936 flood flow over same dam (head, 6.8 feet; C, 3.80); verified by drainage-area comparison of instantaneous and total yield of March 1936 flood with records for nearby streams.
Maxima.- 1936: Discharge, 19,200 second-feet 4 p.m. Mar. 18 (gage height, 15.58 feet).
1930-35: Discharge, 12,700 second-feet Apr. 12, 1934 (gage height, 12.17 feet).
Maximum discharge previously known, 30,400 second-feet November 1927 (gage height, 21.5 feet, determined from flood marks).
Remarks.- Flood run-off not materially affected by artificial or natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	120	130	1,340	11	115	250	1,340	21	155	5,500	875
2	120	160	1,140	12	110	4,830	1,340	22	130	4,180	1,000
3	150	145	1,260	13	110	5,780	1,140	23	140	2,410	785
4	135	140	1,000	14	125	2,700	1,040	24	160	1,890	708
5	135	140	905	15	110	1,600	970	25	145	2,680	637
6	135	160	3,060	16	120	2,300	1,080	26	145	2,090	598
7	150	120	2,700	17	150	4,600	1,040	27	150	2,230	560
8	135	140	1,730	18	135	13,300	905	28	165	2,290	525
9	120	180	1,380	19	140	10,200	875	29	145	1,620	555
10	140	170	1,340	20	160	4,690	815	30		1,480	815
								31		1,570	
Mean monthly discharge, in second-feet									136	2,570	1,115
Run-off, in inches									0.66	13.37	5.63

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	2.65	-	2.72	-	2.77	-	2.88	-	3.80	-	11.1	-
4	2.66	-	2.76	-	2.75	-	2.77	-	4.2	**700	10.8	**8,200
6	2.68	-	2.75	-	2.44	-	2.58	-	4.7	-	10.2	-
8	2.68	-	2.61	-	2.32	-	2.81	-	5.6	-	9.6	-
10	2.66	-	2.88	-	2.71	-	2.94	-	6.8	**2,600	8.9	**6,400
N	2.65	*140	2.92	*180	2.88	*170	2.98	*250	8.0	-	8.3	-
2	2.66	-	2.91	-	2.88	-	3.02	-	9.4	-	8.0	-
4	2.66	-	2.88	-	2.88	-	3.12	-	10.8	**6,900	7.8	**4,600
6	2.66	-	2.88	-	2.88	-	3.20	-	11.9	-	7.6	-
8	2.66	-	2.81	-	2.87	-	3.32	-	12.2	-	7.3	-
10	2.66	-	2.80	-	2.87	-	3.46	-	12.1	**9,100	7.1	**3,900
M	2.69	-	2.76	-	2.87	-	3.60	-	11.7	-	6.9	-
	March 14		March 15		March 16		March 17		March 18		March 19	
2	6.8	-	5.65	-	5.5	-	8.4	-	9.5	-	14.2	16,500
4	6.6	**3,300	5.55	**1,900	5.5	**1,800	9.1	**4,800	9.5	**7,300	13.2	14,600
6	6.5	-	5.4	-	5.5	-	9.5	-	10.0	-	12.4	13,100
8	6.4	-	5.35	-	5.55	-	9.3	-	10.4	9,350	11.8	12,000
10	6.3	**2,800	5.3	**1,500	5.6	**1,900	8.8	**4,540	11.1	10,600	11.1	10,600
N	6.2	-	5.25	-	5.7	-	8.3	-	12.5	13,300	10.5	9,530
2	6.1	-	5.25	-	5.8	-	8.0	-	14.8	17,600	10.1	8,810
4	6.1	**2,500	5.25	**1,400	6.0	**2,200	8.0	**4,200	15.6	19,200	9.7	8,120
6	6.0	-	5.3	-	6.3	-	8.3	-	14.9	17,800	9.4	7,610
8	5.9	-	5.35	-	6.6	-	8.4	-	14.1	16,300	9.2	7,270
10	5.8	**2,200	5.45	**1,700	7.1	**3,100	8.8	**4,900	14.1	16,300	9.1	7,100
M	5.75	-	5.5	-	7.8	-	8.9	-	14.8	17,600	8.9	6,770
	March 20		March 21		March 22		March 23		March 24		March 25	
2	8.6	6,290	6.7	3,580	8.2	5,650	6.2	2,900	5.55	2,020	5.6	2,090
4	8.3	5,810	6.6	3,440	8.0	5,350	6.1	2,760	5.5	1,960	5.75	2,290
6	8.0	5,350	6.5	3,300	7.8	5,070	6.0	2,630	5.5	1,960	6.1	2,760
8	7.7	4,930	6.5	3,300	7.6	4,790	5.95	2,560	5.45	1,900	6.4	3,170
10	7.5	4,660	6.6	3,440	7.3	4,380	5.85	2,430	5.4	1,840	6.35	3,100
N	7.3	4,380	6.9	3,840	7.1	4,120	5.75	2,290	5.35	1,780	6.25	2,970
2	7.2	4,250	8.2	5,650	6.9	3,840	5.7	2,220	5.3	1,730	6.15	2,830
4	7.2	4,250	9.9	8,460	6.8	3,710	5.7	2,220	5.35	1,780	6.05	2,700
6	7.2	4,250	10.4	9,350	6.7	3,580	5.75	2,290	5.4	1,840	6.0	2,630
8	7.2	4,250	9.8	8,290	6.6	3,440	5.75	2,290	5.45	1,900	5.95	2,560
10	7.0	3,980	9.1	7,100	6.45	3,240	5.7	2,220	5.5	1,960	5.9	2,500
M	6.9	3,840	8.6	6,290	6.3	3,040	5.65	2,160	5.55	2,020	5.9	2,500

*Mean for the day.
**Mean for 6-hour period.

Sunapee Lake at Sunapee, N. H.

Location.- Lat. 43°23'10", long. 72°4'55", at outlet of Sunapee Lake, in Sunapee, Sullivan County.
Drainage area.- 45.5 square miles.
Gage-height record.- Weekly gage readings except during flood period, when daily readings were made.
Remarks.- Total storage capacity of Sunapee Lake is 862,000,000 cubic feet.

Gain or loss in storage, March 1936

Day	Millions of cubic feet	Equivalent mean second-feet	Day	Millions of cubic feet	Equivalent mean second-feet
1	-1.7	-20	17	+51.0	+590
2	-1.7	-20	18	+256.6	+2,970
3	-2.5	-30	19	+126.0	+1,460
4	-2.5	-30	20	+54.0	+625
5	-1.7	-20	21	+57.0	+660
6	-1.7	-20	22	+47.5	+550
7	-1.7	-20	23	-9.5	-110
8	-1.7	-20	24	-9.5	-110
9	-1.7	-20	25	-9.5	-110
10	-1.7	-20	26	-9.5	-110
11	+15.3	+177	27	-19.0	-220
12	+110.5	+1,280	28	-19.0	-220
13	+68.0	+787	29	-19.0	-220
14	+34.0	+394	30	-18.5	-214
15	+17.0	+197	31	-18.0	-208
16	+25.5	+295			

Sugar River at West Claremont, N. H.

Location.- Lat. 43°23'15", long. 72°21'45", below Redwater Brook at West Claremont, Sullivan County.

Drainage area.- 269 square miles.

Gage-height record.- Water-stage recorder graph. Gage heights given to half tenths between 3.0 and 5.4 feet; hundredths below and tenths above these limits.

Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 12. Defined by current-meter measurements below 3,940 second-feet; extended to peak stage by determination of flood flow over dam (head, 9.20 feet; C, 3.7); verified by comparison of peak discharge and total run-off of flood with records for nearby stations.

Maxima.- 1936: Discharge, 14,000 second-feet 4 to 6 a.m. Mar. 19 (gage height, 10.92 feet); maximum gage height, 11.80 feet 4 p.m. Mar. 12 (ice jam).
1928-35: Discharge, 10,500 second-feet Apr. 12, 1934 (gage height, 9.26 feet).

Remarks.- Flood run-off affected by storage in Sunapee Lake, total capacity 862,000,000 cubic feet. For daily changes in storage in Sunapee Lake see record for Sunapee Lake at Sunapee, N. H.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	155	160	1,450	11	140	400	1,600	21	150	4,780	700
2	150	155	1,350	12	135	3,500	1,800	22	150	5,170	725
3	150	160	1,500	13	135	5,090	1,450	23	145	3,220	690
4	155	165	1,450	14	130	2,990	1,300	24	145	2,380	630
5	155	170	1,260	15	130	2,210	1,110	25	150	2,600	580
6	150	165	2,390	16	125	2,360	1,250	26	160	2,250	530
7	145	160	2,920	17	140	3,710	1,300	27	170	2,130	480
8	135	170	2,190	18	150	7,730	1,010	28	165	2,730	450
9	135	185	1,860	19	155	11,200	900	29	165	2,080	410
10	140	200	1,500	20	160	5,570	750	30		1,800	550
								31		1,600	
Mean monthly discharge, in second-feet (observed).............									147	2,490	1,203
Mean monthly discharge, in second-feet (corrected for storage).									135	2,758	1,088
Run-off, in inches (corrected for storage).....................									0.54	11.87	4.51
Gain or loss in storage, in millions of cubic feet..............									-30.6	+712.2	-297.0

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	2.10	-	2.24	-	2.14	-	2.70	-	4.6	-	7.1	6,180
4	2.07	-	2.20	-	2.08	-	2.72	-	5.05	1,200	7.0	6,010
6	2.03	-	2.22	-	2.06	-	2.75	-	5.3	-	6.9	5,840
8	2.06	-	2.80	-	2.47	-	3.00	-	6.0	-	6.7	5,500
10	2.30	-	2.26	-	2.20	-	2.72	-	10.2	2,500	6.6	5,330
N	2.31	*170	2.29	*185	2.31	*200	2.80	*400	10.6	-	6.5	5,160
2	2.16	-	2.20	-	2.38	-	3.05	-	10.7	-	6.3	4,840
4	2.11	-	2.39	-	2.56	-	3.1	-	11.8	4,500	6.3	4,840
6	2.10	-	2.25	-	2.52	-	3.2	-	10.0	-	6.2	4,680
8	2.19	-	2.12	-	2.33	-	3.4	-	6.9	5,840	6.0	4,380
10	2.32	-	2.23	-	2.63	-	3.65	-	6.9	5,840	5.9	4,230
M	2.28	-	2.24	-	2.70	-	4.1	-	7.0	6,010	5.8	4,080
	March 14		March 15		March 16		March 17		March 18		March 19	
2	5.6	3,790	4.5	2,380	4.4	2,270	4.9	2,860	6.6	5,330	10.7	13,600
4	5.4	3,510	4.5	2,380	4.35	2,220	4.95	2,920	6.7	5,500	10.9	14,000
6	5.25	3,300	4.4	2,270	4.4	2,270	5.0	2,980	6.8	5,670	10.9	14,000
8	5.1	3,110	4.3	2,160	4.4	2,270	5.05	3,040	6.8	5,670	10.7	13,600
10	5.0	2,980	4.25	2,100	4.4	2,270	5.1	3,110	7.0	6,010	10.5	13,100
N	4.95	2,920	4.2	2,050	4.45	2,320	5.15	3,180	7.2	6,350	10.1	12,200
2	4.9	2,860	4.3	2,160	4.45	2,320	5.25	3,300	7.8	7,450	9.5	10,900
4	4.8	2,740	4.3	2,160	4.45	2,320	5.5	3,650	8.1	8,030	9.1	10,100
6	4.85	2,800	4.1	1,940	4.5	2,380	5.7	3,930	8.5	8,830	8.6	9,030
8	4.8	2,740	4.45	2,320	4.55	2,440	6.1	4,530	8.9	9,660	8.4	8,630
10	4.7	2,620	4.45	2,320	4.65	2,560	6.7	5,500	9.5	10,900	8.0	7,830
M	4.6	2,500	4.4	2,270	4.8	2,740	6.7	5,500	10.6	13,300	7.7	7,260
	March 20		March 21		March 22		March 23		March 24		March 25	
2	7.6	7,070	5.9	4,230	7.1	6,180	5.7	3,930	4.75	2,670	4.4	2,250
4	7.5	6,890	5.9	4,230	6.9	5,840	5.6	3,790	4.7	2,610	4.5	2,370
6	7.1	6,180	5.8	4,080	7.0	6,010	5.5	3,650	4.65	2,550	4.65	2,550
8	7.0	6,010	5.7	3,930	6.8	5,670	5.3	3,370	4.6	2,490	4.7	2,610
10	6.9	5,840	5.7	3,930	6.7	5,500	5.2	3,240	4.5	2,370	4.75	2,670
N	6.7	5,500	5.8	4,080	6.6	5,330	5.15	3,180	4.5	2,370	4.8	2,730
2	6.6	5,330	6.0	4,380	6.5	5,160	5.1	3,110	4.45	2,310	4.8	2,730
4	6.5	5,160	6.4	5,000	6.3	4,840	5.05	3,050	4.4	2,250	4.85	2,790
6	6.4	5,000	6.7	5,500	6.2	4,680	5.0	2,980	4.4	2,250	4.8	2,730
8	6.3	4,840	6.9	5,840	6.1	4,530	4.9	2,850	4.4	2,250	4.75	2,670
10	6.2	4,680	7.0	6,010	5.9	4,230	4.85	2,790	4.35	2,190	4.7	2,610
M	6.0	4,380	7.1	6,180	5.8	4,080	4.8	2,730	4.35	2,190	4.65	2,550

*Mean for the day.

Black River at North Springfield, Vt.

Location.- Lat. 43°20'0", long. 72°30'55", in North Springfield, Windsor County, 1,300 feet above Great Brook.
Drainage area.- 158 square miles.
Gage-height record.- Water-stage recorder graph, except for period 8 p.m. Mar. 17 to 7 a.m. Mar. 20, when it was based on flood marks and shape of stage graphs at nearby stations. Gage heights given to half tenths between 4.3 and 6.2 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 9. Defined by current-meter measurements below 4,600 second-feet; extended to peak stage by determination of flood flow over dam (head, 6.5 feet; C, 3.5); verified by comparison of peak discharge and total run-off of flood with records for nearby streams.
Maxima.- 1936: Discharge, 14,700 second-feet 2 p.m. Mar. 18 (gage height, 16.41 feet).
1929-35: Discharge, 10,000 second-feet (revised) July 22, 1931, Apr. 12, 1934; maximum gage height, 13.84 feet Apr. 12, 1934.
Remarks.- Flood run-off not materially affected by storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	84	84	890	11	79	233	1,000	21	90	3,400	562
2	82	80	808	12	76	3,780	1,030	22	86	2,700	680
3	80	85	1,000	13	74	4,250	835	23	84	1,550	558
4	81	84	730	14	73	2,080	730	24	82	1,230	486
5	82	90	600	15	72	1,400	576	25	85	1,810	417
6	80	86	2,760	16	71	1,430	808	26	87	1,450	385
7	78	84	2,040	17	70	2,580	755	27	95	1,790	353
8	75	80	1,360	18	77	10,100	625	28	92	1,850	329
9	77	89	1,030	19	81	6,690	595	29	88	1,240	325
10	80	149	1,000	20	86	3,130	530	30		1,090	562
								31		1,060	
Mean monthly discharge, in second-feet									80.9	1,799	812
Run-off, in inches									0.55	13.14	5.74

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	2.91	-	2.82	-	2.89	130	3.04	162	4.15	522	10.4	5,190
4	2.91	-	2.91	-	2.95	142	3.06	166	4.45	660	10.4	5,190
6	2.89	-	3.02	-	3.00	153	3.10	175	5.05	972	10.2	4,980
8	2.81	-	3.16	-	3.09	173	3.18	194	6.7	1,990	9.9	4,680
10	2.72	-	3.14	-	3.07	168	3.33	233	8.1	2,980	9.6	4,390
N	2.70	*80	2.85	*89	2.95	142	3.35	238	9.0	3,700	9.4	4,210
2	2.76	-	2.82	-	2.91	134	3.20	199	10.1	4,880	9.5	4,300
4	2.84	-	2.85	-	2.91	134	3.20	199	11.3	6,240	9.5	4,300
6	2.85	-	2.90	-	2.95	142	3.31	228	11.2	6,110	9.2	4,030
8	2.84	-	2.94	-	3.02	157	3.63	322	11.1	5,990	8.7	3,600
10	2.82	-	2.94	-	3.04	162	3.65	329	10.9	5,750	8.2	3,180
M	2.81	-	2.88	-	3.01	155	3.71	350	10.7	5,520	7.9	2,940
	March 14		March 15		March 16		March 17		March 18		March 19	
2	7.7	2,780	5.8	1,480	5.75	1,450	6.3	1,800	9.8	4,580	14.3	10,800
4	7.4	2,560	5.7	1,420	5.7	1,420	6.6	1,990	10.2	4,980	13.6	9,660
6	7.1	2,340	5.6	1,360	5.65	1,390	6.8	2,130	10.5	5,300	13.1	8,850
8	6.9	2,200	5.55	1,330	5.7	1,420	7.0	2,270	11.2	6,110	12.5	7,910
10	6.7	2,060	5.5	1,300	5.6	1,360	6.9	2,200	12.2	7,460	12.0	7,180
N	6.6	1,990	5.45	1,270	5.55	1,330	6.8	2,130	13.6	9,660	11.5	6,500
2	6.7	2,060	5.55	1,330	5.55	1,330	6.7	2,060	16.4	14,700	11.0	5,870
4	6.6	1,990	5.65	1,390	5.6	1,360	7.3	2,480	16.2	14,300	10.6	5,410
6	6.5	1,920	5.75	1,450	5.6	1,360	7.3	2,480	16.2	14,300	10.2	4,980
8	6.3	1,800	5.8	1,480	5.75	1,450	8.4	3,340	16.2	14,300	9.9	4,680
10	6.1	1,660	5.85	1,510	5.9	1,540	9.0	3,850	15.8	13,600	9.6	4,390
M	5.95	1,570	5.85	1,510	6.2	1,730	9.4	4,210	15.0	12,100	9.2	4,030
	March 20		March 21		March 22		March 23		March 24		March 25	
2	9.1	3,940	7.1	2,340	8.7	3,600	6.4	1,860	5.6	1,360	5.65	1,390
4	9.0	3,850	7.0	2,270	8.4	3,340	6.3	1,800	5.5	1,300	5.8	1,480
6	8.8	3,680	6.8	2,130	8.2	3,180	6.2	1,730	5.45	1,270	6.3	1,800
8	8.6	3,510	6.8	2,130	8.0	3,020	6.0	1,600	5.4	1,240	6.7	2,060
10	8.3	3,260	6.8	2,130	7.8	2,860	5.95	1,570	5.35	1,210	6.8	2,130
N	8.0	3,020	7.4	2,560	7.6	2,710	5.75	1,450	5.3	1,180	6.7	2,060
2	7.8	2,860	8.7	3,600	7.4	2,560	5.75	1,450	5.25	1,150	6.6	1,990
4	7.7	2,780	10.0	4,780	7.2	2,410	5.75	1,450	5.2	1,120	6.4	1,860
6	7.7	2,780	10.5	5,300	7.1	2,340	5.7	1,420	5.25	1,150	6.3	1,800
8	7.6	2,710	10.3	5,080	7.0	2,270	5.7	1,420	5.35	1,210	6.2	1,730
10	7.5	2,640	9.7	4,480	6.8	2,130	5.7	1,420	5.45	1,270	6.2	1,730
M	7.3	2,480	9.1	3,940	6.6	1,990	5.65	1,390	5.55	1,330	6.2	1,730

*Mean for the day.

West River at Newfane, Vt.

Location.- Lat. 42°59'45", long. 72°38'30", at highway bridge 1¼ miles northeast of Newfane, Windham County.
Drainage area.- 308 square miles.
Gage-height record.- Water-stage recorder graph except for period 6 p.m. Mar. 17 to 8 a.m. Mar. 27, when it was based on two gage readings daily and on flood marks. Gage heights given to half tenths between 6.00 and 8.30 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 12. Defined by current-meter measurements below 8,770 second-feet; extended to peak stage by contracted opening determination of flood discharge (surface drop, 1.9 feet); verified by comparison of peak discharge and total run-off of flood with determinations for nearby streams.
Maxima.- 1936: Discharge, 39,000 second-feet 4 p.m. Mar. 18 (gage height, 19.30 feet).
1919-35: 53,100 second-feet (revised) Nov. 3, 1927 (gage height, 23.0 feet).
Remarks.- Flood run-off not materially affected by artificial or natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	170	160	1,960	11	150	270	1,840	21	170	6,160	1,040
2	170	155	1,600	12	145	7,000	1,890	22	165	5,540	1,310
3	165	155	2,160	13	140	8,950	1,500	23	155	3,080	890
4	165	150	1,530	14	140	3,630	1,340	24	150	2,480	800
5	165	165	1,250	15	140	1,890	1,320	25	145	3,960	688
6	160	180	5,780	16	140	2,480	1,720	26	150	3,010	626
7	160	170	4,490	17	140	4,160	1,600	27	160	3,870	598
8	160	160	2,310	18	140	23,900	1,190	28	175	4,990	556
9	155	155	1,760	19	165	14,000	1,030	29	170	2,770	570
10	155	170	1,700	20	175	6,260	900	30		2,440	1,000
								31		2,600	
Mean monthly discharge, in second-feet									157	3,712	1,565
Run-off, in inches									0.55	13.95	5.67

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	5.69	-	5.69	-	5.75	-	5.98	-	7.1	-	11.3	12,200
4	5.69	-	5.70	-	5.76	-	6.00	-	7.75	**1,000	11.1	11,600
6	5.69	-	5.71	-	5.80	-	6.05	-	8.4	-	10.9	11,100
8	5.68	-	5.72	-	5.81	-	6.05	-	10.5	-	10.6	10,400
10	5.69	-	5.72	-	5.81	-	6.1	-	15.5	**5,000	10.4	9,860
N	5.69	*160	5.72	*155	5.81	*170	6.15	*270	13.0	-	10.1	9,130
2	5.71	-	5.72	-	5.82	-	6.2	-	12.6	-	9.8	8,410
4	5.72	-	5.73	-	5.84	-	6.3	-	12.4	**10,000	9.6	7,950
6	5.71	-	5.73	-	5.87	-	6.4	-	12.2	-	9.4	7,490
8	5.70	-	5.74	-	5.89	-	6.45	-	12.0	-	9.1	6,830
10	5.69	-	5.74	-	5.92	-	6.6	-	11.8	**12,000	8.9	6,400
M	5.68	-	5.75	-	5.95	-	6.9	-	11.5	-	8.7	5,980
	March 14		March 15		March 16		March 17		March 18		March 19	
2	8.5	5,560	6.5	2,080	6.75	2,440	7.3	3,320	8.9	6,400	15.0	23,400
4	8.15	4,860	6.4	1,940	6.8	2,520	7.4	3,490	9.4	7,490	14.2	20,700
6	7.95	4,480	6.35	1,880	6.8	2,520	7.45	3,580	10.2	9,370	13.3	17,900
8	7.8	4,200	6.25	1,750	6.75	2,440	7.5	3,660	11.5	12,700	12.5	15,400
10	7.65	3,930	6.2	1,680	6.7	2,370	7.6	3,840	14.5	21,700	11.9	13,700
N	7.45	3,580	6.2	1,680	6.7	2,370	7.65	3,930	17.0	30,400	11.5	12,600
2	7.35	3,400	6.2	1,680	6.65	2,300	7.7	4,020	18.4	35,600	11.2	11,800
4	7.2	3,150	6.25	1,750	6.65	2,300	7.75	4,110	19.3	39,000	11.0	11,300
6	7.05	2,910	6.3	1,810	6.65	2,300	7.85	4,300	18.6	36,400	10.8	10,800
8	6.9	2,670	6.4	1,940	6.75	2,440	8.05	4,680	17.5	32,300	10.7	10,500
10	6.8	2,520	6.55	2,150	6.9	2,670	8.3	5,160	16.7	29,400	10.5	9,970
M	6.65	2,300	6.65	2,300	7.15	3,070	8.6	5,770	15.9	26,500	10.3	9,460
	March 20		March 21		March 22		March 23		March 24		March 25	
2	10.1	8,960	8.3	4,740	8.9	6,080	7.9	3,910	7.2	2,670	7.5	3,170
4	9.9	8,460	8.25	4,640	8.8	5,850	7.65	3,440	7.15	2,600	7.65	3,440
6	9.8	8,210	8.2	4,530	8.8	5,850	7.5	3,170	7.0	2,370	7.85	3,820
8	9.4	7,250	8.2	4,530	8.8	5,850	7.4	3,000	6.9	2,230	8.1	4,320
10	9.0	6,310	8.35	4,850	8.8	5,850	7.4	3,000	6.9	2,230	8.1	4,320
N	8.7	5,620	8.9	6,080	8.8	5,850	7.4	3,000	6.9	2,230	8.1	4,320
2	8.6	5,400	9.6	7,730	8.8	5,850	7.4	3,000	6.9	2,230	8.1	4,320
4	8.5	5,180	10.0	8,710	8.75	5,740	7.4	3,000	6.95	2,300	8.1	4,320
6	8.5	5,180	9.7	7,970	8.6	5,400	7.4	3,000	7.05	2,440	7.95	4,010
8	8.4	4,960	9.4	7,250	8.45	5,070	7.35	2,920	7.15	2,600	7.9	3,910
10	8.35	4,850	9.1	6,540	8.3	4,740	7.3	2,830	7.3	2,830	7.85	3,820
M	8.3	4,740	9.0	6,310	8.1	4,320	7.25	2,750	7.4	3,000	7.8	3,720

*Mean for the day.
**Mean for 6-hour period.

Ashuelot River near Gilsum, N. H.

Location.- Lat. 43°2'20", long. 72°16'15", at stone-arch bridge on Keene-Newport road, 0.7 mile below Gilsum, Cheshire County.
Drainage area.- 71.1 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights given to half tenths between 3.00 and 6.10 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 4, Mar. 11, 12. Defined by current-meter measurements below 1,990 second-feet; extended to peak stage by averaging discharges obtained from slope-area (n, 0.05) and contracted-opening (surface drop, 2.9 feet) computations of flood flow; verified by comparison of peak flow and total run-off of flood with determinations for nearby stations.
Maxima.- 1936: Discharge, 4,400 second-feet, 10 p.m. Mar. 18 to 2 a.m. Mar. 19 (gage height, 12.80 feet).
1922-35: Discharge, 3,580 second-feet (revised) Apr. 12, 1934 (gage height, 11.27 feet).
Remarks.- Flood run-off affected by artificial and natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	54	45	342	11	42	120	374	21	65	1,590	198
2	50	43	312	12	43	750	440	22	60	1,930	186
3	47	43	292	13	44	1,060	374	23	55	1,120	168
4	45	45	255	14	43	1,480	322	24	58	758	152
5	47	52	228	15	40	993	283	25	46	679	135
6	49	54	574	16	37	792	283	26	35	603	123
7	47	52	947	17	40	1,070	312	27	44	552	111
8	43	44	618	18	50	2,980	283	28	45	729	103
9	41	44	464	19	60	3,750	246	29	46	588	81
10	40	60	373	20	70	2,020	212	30		452	91
								31		384	
Mean monthly discharge, in second-feet									47.8	803	296
Run-off, in inches									0.72	13.03	4.64

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	1.99	51	1.88	41	2.08	60	2.42	-	5.5	-	8.0	1,880
4	1.96	48	1.88	41	2.06	58	2.53	-	6.0	**200	8.1	1,930
6	1.93	46	1.88	41	2.01	53	2.57	-	6.3	-	8.1	1,930
8	1.91	44	1.94	47	2.12	64	2.61	-	7.1	-	8.2	1,970
10	1.90	43	1.88	41	1.98	50	2.77	-	7.5	**500	8.1	1,930
N	1.88	41	1.88	41	1.97	49	2.75	*120	7.6	-	8.1	1,930
2	1.88	41	1.88	41	1.99	51	2.78	-	7.2	-	8.4	2,070
4	1.90	43	1.88	41	2.04	56	2.90	-	6.5	**900	8.2	1,970
6	1.91	44	1.93	46	2.14	66	3.1	-	6.8	-	8.2	1,970
8	1.90	43	1.98	50	2.08	60	3.2	-	7.7	-	8.1	1,930
10	1.89	42	2.02	54	2.32	85	3.2	-	7.7	**1,400	8.0	1,880
M	1.88	41	2.06	58	2.38	92	3.8	-	7.9	-	7.9	1,840
	March 14		March 15		March 16		March 17		March 18		March 19	
2	7.7	1,750	6.5	1,240	5.55	863	5.35	787	7.4	1,620	12.8	4,400
4	7.6	1,700	6.1	1,080	5.5	844	5.4	806	7.7	1,750	12.7	4,340
6	7.4	1,620	5.95	1,020	5.4	806	5.45	825	7.9	1,840	12.6	4,290
8	7.3	1,570	5.9	1,000	5.35	787	5.45	825	8.1	1,930	12.4	4,180
10	7.2	1,530	5.75	940	5.3	768	5.55	863	8.5	2,120	12.2	4,070
N	7.0	1,440	5.8	960	5.3	768	5.7	920	9.6	2,650	12.0	3,960
2	7.0	1,440	5.85	980	5.3	768	5.95	1,020	10.7	3,240	11.7	3,800
4	7.2	1,530	5.85	980	5.3	768	6.3	1,160	11.3	3,580	11.3	3,580
6	6.8	1,360	5.8	960	5.3	768	6.6	1,280	12.1	4,020	11.0	3,410
8	6.6	1,280	5.75	940	5.35	787	6.8	1,360	12.5	4,240	10.7	3,240
10	6.6	1,280	5.7	920	5.35	787	7.0	1,440	12.8	4,400	10.2	2,970
M	6.6	1,280	5.65	901	5.35	787	7.2	1,530	12.8	4,400	9.9	2,800
	March 20		March 21		March 22		March 23		March 24		March 25	
2	9.6	2,650	6.9	1,400	8.3	2,020	7.0	1,440	5.45	834	5.05	696
4	9.4	2,550	6.8	1,360	8.4	2,070	6.9	1,400	5.4	816	5.0	680
6	9.2	2,450	6.7	1,320	8.5	2,120	6.7	1,320	5.35	798	5.0	680
8	8.8	2,260	6.7	1,320	8.4	2,070	6.5	1,240	5.3	780	4.95	664
10	8.5	2,120	6.8	1,360	8.4	2,070	6.4	1,200	5.25	763	5.0	680
N	8.3	2,020	6.9	1,400	8.3	2,020	6.2	1,120	5.25	763	5.0	680
2	8.1	1,930	7.3	1,570	8.2	1,970	6.0	1,040	5.2	746	5.0	680
4	7.9	1,840	7.6	1,700	8.2	1,970	5.9	1,000	5.2	746	5.0	680
6	7.7	1,750	7.8	1,790	7.9	1,840	5.85	966	5.15	729	5.0	680
8	7.5	1,660	8.0	1,880	7.7	1,750	5.75	947	5.1	712	5.0	680
10	7.3	1,570	8.2	1,970	7.5	1,660	5.65	909	5.1	712	5.0	680
M	7.1	1,480	8.2	1,970	7.3	1,570	5.55	871	5.05	696	4.95	664

*Mean for the day.
**Mean for 6-hour period.

Ashuelot River at Hinsdale, N. H.

Location.- Lat. 42°47'5", long. 72°29'10", just above highway bridge in Hinsdale, Cheshire County, a quarter of a mile below dam and 1¼ miles above mouth of river.
Drainage area.- 420 square miles.
Gage-height record.- Water-stage recorder graph except for period 11 a.m. Mar. 18 to 9 a.m. Mar. 30, when it was based on flood marks and two gage readings daily. Gage heights given to half tenths between 6.00 and 8.60 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 4, Mar. 11-13; by backwater from Connecticut River noon Mar. 18 to 10 p.m. Mar. 24. Defined by current-meter measurements below 7,610 second-feet; extended to peak stage by determination of flood flow over dam (head, 8.09 feet; C, 3.4 and 3.65); verified by comparison of peak discharge and total run-off of flood with determinations for nearby streams.
Maxima.- 1936: Discharge, 16,600 second-feet 4 a.m. to 6 p.m. Mar. 19 (gage height, 20.2 feet, affected by backwater).
1907-35: Discharge, 18,000 second-feet Mar. 29, 1920 (gage height, 9.98 feet, former site, same datum).
Remarks.- Flood run-off affected by artificial and natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	360	300	1,840	11	250	580	2,150	21	450	12,100	1,200
2	330	320	1,700	12	270	2,750	2,100	22	390	10,100	1,120
3	320	340	2,130	13	290	6,160	1,940	23	340	8,110	1,010
4	290	400	2,130	14	280	7,380	1,820	24	380	5,710	948
5	300	497	1,770	15	250	6,780	1,700	25	350	3,980	850
6	320	434	2,130	16	250	4,530	1,700	26	290	3,330	738
7	310	404	3,880	17	260	3,780	1,630	27	300	3,130	760
8	290	331	4,270	18	300	10,300	1,500	28	320	3,440	730
9	260	295	3,130	19	400	16,500	1,400	29	310	3,760	693
10	240	361	2,280	20	540	14,900	1,300	30		2,940	665
								31		2,200	
Mean monthly discharge, in second-feet									319	4,392	1,707
Run-off, in inches									0.82	12.11	4.53

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	4.46	382	4.20	261	4.48	393	4.60	-	5.70	-	7.95	-
4	4.50	404	4.19	257	4.46	382	4.52	-	5.89	**1,000	8.0	**5,500
6	4.50	404	4.18	254	4.40	350	4.63	-	6.1	-	7.9	-
8	4.39	345	4.30	303	4.38	341	4.65	-	6.2	-	8.2	-
10	4.37	336	4.20	261	4.37	336	4.70	-	6.55	**2,000	8.25	**6,000
N	4.36	331	4.12	231	4.35	326	4.70	*580	6.8	-	8.3	-
2	4.33	317	4.17	250	4.49	399	4.74	-	6.95	-	7.5	6,220
4	4.26	286	4.18	254	4.40	350	4.79	-	7.35	**3,000	7.6	6,570
6	4.27	290	4.51	410	4.33	317	5.07	-	7.6	-	7.6	6,570
8	4.20	261	4.25	282	4.48	393	5.25	-	7.55	-	7.7	6,920
10	4.27	290	4.61	471	4.50	404	5.41	-	7.75	**5,000	7.7	6,920
M	4.20	261	4.40	350	4.52	416	5.70	-	7.9	-	7.6	6,180
	March 14		March 15		March 16		March 17		March 18		March 19	
2	7.7	6,760	7.8	7,160	7.45	5,820	6.85	3,900	7.05	4,490	17.4	16,200
4	7.7	6,760	7.9	7,560	7.3	5,280	6.8	3,760	7.2	4,960	18.0	16,600
6	7.8	7,160	7.85	7,360	7.2	4,960	6.75	3,630	7.3	5,280	18.6	16,600
8	7.85	7,360	7.8	7,160	7.1	4,640	6.75	3,630	7.65	6,560	19.1	16,600
10	7.9	7,560	7.7	6,760	7.05	4,490	6.7	3,500	8.1	8,360	19.6	16,600
N	8.0	7,960	7.65	6,560	7.0	4,340	6.7	3,500	9.0	9,960	19.9	16,600
2	7.85	7,360	7.7	6,760	7.0	4,340	6.7	3,500	11.0	11,200	20.1	16,600
4	7.95	7,760	7.6	6,360	7.0	4,340	6.8	3,760	13.2	12,400	20.2	16,600
6	7.95	7,760	7.65	6,560	6.95	4,190	6.9	4,040	14.2	13,700	20.2	16,600
8	7.95	7,760	7.7	6,760	6.9	4,040	6.9	4,040	15.0	14,500	20.1	16,200
10	7.9	7,560	7.6	6,360	6.9	4,040	6.9	4,040	16.0	15,400	20.0	16,200
M	7.7	6,760	7.5	6,000	6.85	3,900	6.9	4,040	16.7	16,200	19.8	16,200
	March 20		March 21		March 22		March 23		March 24		March 25	
2	19.6	15,800	16.6	13,700	13.1	10,800	9.6	9,160	7.8	6,570	7.05	4,720
4	19.4	15,800	16.2	13,300	12.8	10,400	9.4	9,160	7.8	6,570	7.0	4,560
6	19.2	15,400	15.9	12,800	12.5	10,400	9.2	8,760	7.7	6,220	6.9	4,270
8	19.0	15,400	15.6	12,800	12.1	10,400	9.0	8,760	7.7	6,220	6.85	4,140
10	18.7	15,400	15.3	12,400	11.8	10,400	8.8	8,380	7.6	5,880	6.8	4,000
N	18.4	14,900	15.0	12,000	11.6	9,960	8.6	8,380	7.6	5,880	6.8	4,000
2	18.2	14,900	14.8	12,000	11.2	9,960	8.5	8,000	7.5	5,540	6.75	3,880
4	17.9	14,900	14.5	11,600	10.9	9,960	8.3	8,000	7.5	5,540	6.7	3,760
6	17.6	14,500	14.3	11,200	10.6	9,960	8.2	7,640	7.4	5,200	6.7	3,760
8	17.4	14,500	13.9	11,200	10.4	9,560	8.1	7,280	7.3	5,200	6.65	3,650
10	17.2	14,100	13.6	11,200	10.2	9,560	8.0	6,920	7.2	4,870	6.6	3,540
M	16.9	13,700	13.4	10,800	9.9	9,560	7.9	6,920	7.1	4,870	6.6	3,540

*Mean for the day.
**Mean for 6-hour period.

Otter Brook near Keene, N. H.

Location.- Lat. 42°57'55", long. 72°14', at bridge near State Highway 9 (revised) 3½ miles northeast of Keene, Cheshire County, and 3½ miles above confluence with Minewawa Brook.
Drainage area.- 41.8 square miles.
Gage-height record.- Water-stage recorder graph except for periods Feb. 1-25, Apr. 4, 5, 18-23, when there was no record. Gage heights given to hundredths below and half tenths above 5.3 feet.
Stage-discharge relation.- Affected by ice Feb. 1-25, Mar. 10-12. Defined by current-meter measurements below 730 second-feet; extended to peak stage by averaging discharges obtained from slope-area (n, 0.045) and contracted-opening (surface drop, 2.6 feet) determinations of flood flow; verified by comparison of peak discharge and total run-off of flood with records for nearby stations.
Maxima.- 1936: Discharge, 3,580 second-feet 9 p.m. Mar. 18 (gage height, 7.10 feet); maximum stage, 7.77 feet 5 p.m. Mar. 12 (ice jam).
1923-35: Discharge, 3,180 second-feet Nov. 4, 1927 (gage height, 6.87 feet).
Remarks.- Flood run-off not affected by artificial or natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	29	34	179	11	22	110	218	21	35	757	110
2	26	30	162	12	23	680	284	22	31	992	105
3	25	33	194	13	23	1,030	242	23	29	515	100
4	25	35	175	14	22	537	171	24	32	387	82
5	26	40	150	15	21	426	160	25	29	418	65
6	26	40	465	16	20	408	210	26	37	342	63
7	25	30	519	17	24	556	171	27	40	373	61
8	23	28	345	18	28	1,540	150	28	40	491	57
9	21	27	236	19	32	1,950	135	29	39	366	56
10	21	50	199	20	40	919	120	30		290	50
								31		220	
Mean monthly discharge, in second-feet									28.1	440	174
Run-off, in inches									0.72	12.11	4.64

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	2.36	24	2.42	29	2.40	27	3.36	-	5.6	-	5.4	1,250
4	2.36	24	2.40	27	2.41	28	3.51	-	5.8	**150	5.55	1,400
6	2.36	24	2.39	26	2.41	28	3.68	-	5.7	-	5.4	1,250
8	2.48	33	2.39	26	2.42	29	3.91	-	6.1	-	5.35	1,200
10	2.48	33	2.39	26	2.43	29	4.10	-	6.5	**400	5.23	1,100
N	2.44	30	2.39	26	2.46	32	4.30	*110	6.9	-	5.24	1,110
2	2.41	28	2.39	26	2.50	35	4.40	-	7.1	-	5.14	1,020
4	2.41	28	2.39	26	2.61	45	4.55	-	7.2	**900	5.05	955
6	2.41	28	2.39	26	2.78	65	4.65	-	7.4	-	4.93	871
8	2.42	29	2.39	26	2.98	75	4.70	-	5.4	1,250	4.78	778
10	2.43	29	2.39	26	3.13	90	4.90	-	5.4	1,250	4.65	702
M	2.43	29	2.39	26	3.27	100	5.20	-	5.5	1,350	4.60	675
	March 14		March 15		March 16		March 17		March 18		March 19	
2	4.52	635	4.12	467	4.02	429	3.96	408	5.10	990	6.55	2,720
4	4.45	602	4.10	459	4.01	426	3.97	412	5.05	955	6.7	2,950
6	4.40	580	4.07	448	4.00	422	4.00	422	5.05	955	6.65	2,880
8	4.35	560	4.04	437	3.98	415	4.03	433	5.10	990	6.5	2,650
10	4.30	539	4.00	422	3.96	408	4.05	440	5.20	1,070	6.2	2,220
N	4.28	531	3.96	408	3.91	390	4.08	452	5.35	1,200	6.0	1,940
2	4.26	523	3.94	401	3.91	390	4.13	471	5.6	1,450	5.65	1,500
4	4.22	507	3.92	394	3.90	387	4.28	531	5.55	1,400	5.5	1,350
6	4.22	507	3.93	398	3.92	394	4.45	602	5.85	1,740	5.5	1,350
8	4.19	495	4.00	422	3.94	401	4.70	730	6.05	2,010	5.4	1,250
10	4.18	491	4.00	422	3.96	408	4.90	850	6.7	2,950	5.45	1,300
M	4.14	475	4.02	429	3.97	412	5.00	920	6.55	2,720	5.45	1,300
	March 20		March 21		March 22		March 23		March 24		March 25	
2	5.4	1,250	4.56	655	5.45	1,300	4.47	612	4.03	433	3.89	384
4	5.30	1,160	4.52	635	5.5	1,350	4.40	580	4.00	422	3.96	408
6	5.20	1,070	4.50	625	5.45	1,300	4.33	551	3.97	412	4.00	422
8	5.15	1,030	4.49	620	5.40	1,250	4.28	531	3.94	401	4.01	426
10	5.05	955	4.49	620	5.29	1,150	4.24	515	3.91	390	4.02	429
N	4.95	885	4.49	620	5.14	1,020	4.21	503	3.90	387	4.02	429
2	4.90	850	4.50	625	5.00	920	4.19	495	3.88	380	4.00	422
4	4.85	820	4.59	670	4.88	838	4.16	483	3.86	373	4.02	429
6	4.80	790	4.80	790	4.74	754	4.13	471	3.84	366	4.02	429
8	4.75	760	5.00	920	4.67	714	4.10	459	3.81	356	4.00	422
10	4.70	730	5.17	1,050	4.60	675	4.09	455	3.81	356	3.99	418
M	4.70	730	5.4	1,250	4.52	635	4.06	444	3.82	359	3.95	404

*Mean for the day.
**Mean for 6-hour period.

South Branch of Ashuelot River at Webb, near Marlboro, N. H.

<u>Location.</u>- Lat. 42°52'20", long. 72°12'55", at bridge a quarter of a mile from Webb railroad station and about 2½ miles south of Marlboro, Cheshire County.
<u>Drainage area.</u>- 36.6 square miles.
<u>Gage-height record.</u>- Water-stage recorder graph except for period Feb. 1-5, 8, 9, 20-26, when there was no record, and for period 7 a.m. Mar. 12 to 10 a.m. Mar. 15, when it was based on flood marks and shape of stage graphs at nearby stations. Gage heights given to half tenths between 5.5 and 7.3 feet; hundredths below and tenths above these limits.
<u>Stage-discharge relation.</u>- Affected by ice Feb. 1 to Mar. 13. Defined by current-meter measurements below 537 second-feet; extended to peak stage by slope-area determination of flood flow (n, 0.06); verified by comparison of peak discharge and total run-off of flood with records for nearby stations.
<u>Maxima.</u>- 1936: Discharge, 3,880 second-feet 5 p.m. Mar. 18 (gage height, 7.55 feet); maximum gage height, 9.70 feet 7 a.m. Mar. 12 (ice jam).
1920-35: Discharge, 3,560 second-feet Nov. 4, 1927 (gage height, 7.15 feet).
<u>Remarks.</u>- Flood run-off affected by artificial and natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	25	26	96	11	25	230	178	21	34	547	84
2	18	35	126	12	21	1,210	219	22	32	653	82
3	23	27	216	13	23	740	172	23	23	334	62
4	25	31	173	14	22	444	142	24	30	229	60
5	21	35	132	15	13	376	133	25	26	280	50
6	26	33	424	16	13	357	160	26	20	236	56
7	20	30	394	17	15	663	148	27	32	202	64
8	22	22	244	18	25	2,220	116	28	25	281	46
9	14	25	173	19	40	1,170	101	29	25	158	52
10	20	45	156	20	37	514	85	30		113	46
								31		90	
Mean monthly discharge, in second-feet									24.0	366	140
Run-off, in inches									0.71	11.53	4.27

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	2.15	-	1.62	-	2.23	-	3.46	-	7.0	-	5.7	-
4	2.13	-	2.11	-	2.23	-	3.72	**80	7.35	**1,000	5.55	**900
6	2.13	-	2.13	-	2.23	-	4.00	-	8.55	-	5.40	-
8	2.13	-	2.14	-	2.68	-	4.20	-	8.95	-	5.27	-
10	2.13	-	2.70	-	2.68	-	4.45	**140	8.1	**1,550	5.15	**800
N	2.40	*22	1.82	*25	1.71	*45	4.95	-	7.6	-	5.05	-
2	2.60	-	2.75	-	2.72	-	5.20	-	7.0	-	4.93	-
4	1.70	-	3.00	-	2.08	-	5.40	**250	6.7	**1,250	4.83	**700
6	1.63	-	2.69	-	2.89	-	5.9	-	6.4	-	4.71	-
8	2.56	-	3.00	-	3.20	-	5.9	-	6.2	-	4.55	-
10	2.10	-	1.85	-	2.97	-	6.25	**450	6.0	**1,050	4.42	**570
M	1.65	-	1.70	-	3.27	-	6.55	-	5.9	-	4.32	-
	March 14		March 15		March 16		March 17		March 18		March 19	
2	4.26	484	4.00	396	3.87	358	4.00	396	5.13	974	6.25	2,240
4	4.21	466	3.94	378	3.84	349	4.08	422	5.15	990	5.8	1,750
6	4.18	455	3.91	369	3.82	344	4.15	445	5.25	1,080	5.45	1,420
8	4.16	448	3.89	363	3.80	338	4.24	476	5.45	1,270	5.20	1,210
10	4.16	448	3.85	352	3.84	349	4.39	533	5.75	1,580	5.08	1,120
N	4.16	448	3.88	360	3.82	344	4.47	567	6.25	2,150	5.00	1,060
2	4.15	445	3.92	372	3.80	338	4.55	604	6.9	2,950	4.90	990
4	4.14	442	4.00	396	3.92	372	4.92	814	7.15	3,280	4.80	920
6	4.13	438	4.00	396	3.90	366	4.96	842	7.4	3,600	4.75	890
8	4.10	428	3.95	381	3.90	366	5.08	934	7.2	3,340	4.69	854
10	4.06	415	3.95	381	3.94	378	5.08	934	6.8	2,820	4.60	800
M	4.04	409	3.90	366	3.97	387	5.15	990	6.6	2,570	4.50	740
	March 20		March 21		March 22		March 23		March 24		March 25	
2	4.40	690	3.64	387	4.51	746	3.86	461	3.14	250	3.03	226
4	4.33	655	3.61	378	4.57	782	3.78	433	3.12	245	3.13	248
6	4.23	605	3.60	375	4.57	782	3.70	405	3.11	242	3.24	275
8	4.17	578	3.59	372	4.51	746	3.66	393	3.10	240	3.30	290
10	4.09	546	3.65	390	4.46	720	3.59	372	3.10	240	3.36	305
N	3.97	500	3.90	475	4.38	680	3.45	330	3.06	232	3.35	302
2	3.94	489	4.17	578	4.30	640	3.33	298	3.02	224	3.38	310
4	3.86	461	4.40	690	4.23	605	3.26	280	3.02	224	3.36	305
6	3.76	426	4.48	730	4.16	574	3.21	268	2.99	218	3.21	268
8	3.74	419	4.49	735	4.10	550	3.18	260	2.94	208	3.27	282
10	3.72	412	4.48	730	4.02	518	3.17	258	2.96	212	3.25	278
M	3.66	393	4.47	725	3.95	492	3.15	252	2.97	214	3.22	270

Supplemental records.- Mar. 12, 7 a.m., 9.70 ft. (ice jam). Mar. 18, 5 p.m., 7.55 ft., 3,880 sec.-ft.
*Mean for the day.
**Mean for 6-hour period.

Millers River near Winchendon, Mass.

Location.- Lat. 42°41', long. 72°5'5", at Nolan Bridge, half a mile below mouth of Sip Pond Brook and 2 miles west of Winchendon, Worcester County. Zero of gage is 826.66 feet above mean sea level.

Drainage area.- 83.8 square miles.

Gage-height record.- Water-stage recorder graph except for periods 9 a.m. Mar. 12 to 11 p.m. Mar. 13 and 11 p.m. Mar. 17 to noon Mar. 29, when it was based on flood marks and shape of stage graphs at nearby stations. Gage heights given to half tenths between 5.10 and 7.60 feet; hundredths below and tenths above these limits.

Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 11. Defined by current-meter measurements below 1,160 second-feet; extended to peak stage by study of flow characteristics at control section; verified by comparison of peak discharge and total run-off of flood with determinations for nearby streams.

Maxima.- 1936: Discharge, 5,530 second-feet 4 a.m. Mar. 19 (gage height, 18.3 feet).
1916-35: Discharge, 1,610 second-feet Apr. 13, 1934 (gage height, 9.07 feet).

Remarks.- Flood run-off affected by artificial and natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	110	50	433	11	100	320	373	21	65	2,070	275
2	35	70	400	12	105	1,230	355	22	40	1,680	227
3	125	60	481	13	100	1,450	419	23	160	1,260	210
4	120	75	448	14	95	1,140	392	24	120	962	210
5	110	110	301	15	40	1,070	365	25	115	824	146
6	115	90	702	16	60	1,060	374	26	130	742	136
7	90	80	835	17	135	1,110	355	27	100	724	128
8	45	60	716	18	120	2,350	315	28	80	760	104
9	25	90	526	19	95	4,740	399	29	60	564	119
10	110	200	460	20	100	2,910	308	30		540	94
								31		485	
Mean monthly discharge, in second-feet									89.8	931	354
Run-off, in inches									1.15	12.80	4.71

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	4.19	-	4.13	-	4.58	-	4.80	-	6.15	514	8.8	1,490
4	4.13	-	4.10	-	4.44	-	4.51	-	5.7	421	8.7	1,450
6	4.10	-	4.08	-	4.33	-	4.44	-	6.3	551	8.7	1,450
8	4.08	-	4.06	-	4.28	-	4.65	-	7.35	911	8.8	1,490
10	4.07	-	5.05	-	5.5	-	5.85	-	8.1	1,210	9.0	1,570
N	4.12	*60	5.15	*90	5.3	*200	5.85	*320	8.8	1,490	9.0	1,570
2	4.47	-	4.95	-	5.05	-	6.1	-	9.1	1,610	9.0	1,570
4	5.10	-	5.85	-	5.85	-	6.25	-	9.2	1,650	8.9	1,530
6	5.3	-	5.25	-	5.25	-	5.8	-	9.2	1,650	8.8	1,490
8	4.62	-	6.0	-	6.15	-	6.2	-	9.1	1,610	8.5	1,370
10	4.28	-	5.4	-	5.55	-	6.5	-	9.0	1,570	8.2	1,250
M	4.19	-	4.76	-	5.5	-	6.2	-	8.9	1,530	8.0	1,170
	March 14		March 15		March 16		March 17		March 18		March 19	
2	7.9	1,130	7.8	1,090	7.6	1,010	7.7	1,050	8.1	1,210	18.2	5,490
4	7.9	1,130	7.8	1,090	7.6	1,010	7.8	1,090	8.3	1,290	18.3	5,530
6	8.0	1,170	7.7	1,050	7.6	1,010	7.7	1,050	8.4	1,330	18.2	5,490
8	8.0	1,170	7.7	1,050	7.7	1,050	7.7	1,050	8.7	1,450	17.7	5,270
10	8.0	1,170	7.8	1,090	7.7	1,050	7.7	1,050	8.9	1,530	17.3	5,090
N	8.1	1,210	7.8	1,090	7.8	1,090	7.9	1,130	9.2	1,650	16.8	4,870
2	8.1	1,210	7.8	1,090	7.9	1,130	7.9	1,130	9.6	1,820	16.3	4,650
4	7.8	1,090	7.8	1,090	7.9	1,130	7.8	1,090	10.3	2,100	15.9	4,480
6	7.8	1,090	7.7	1,050	7.8	1,090	7.9	1,130	11.5	2,600	15.4	4,260
8	7.8	1,090	7.7	1,050	7.8	1,090	7.9	1,130	14.0	3,660	15.0	4,090
10	7.9	1,130	7.7	1,050	7.7	1,050	8.0	1,170	16.0	4,520	14.6	3,920
M	7.8	1,090	7.7	1,050	7.7	1,050	8.1	1,210	17.3	5,090	14.2	3,750
	March 20		March 21		March 22		March 23		March 24		March 25	
2	13.8	3,570	10.8	2,310	9.7	1,860	8.7	1,450	7.7	1,050	7.2	854
4	13.4	3,400	10.7	2,270	9.6	1,820	8.6	1,410	7.6	1,010	7.2	854
6	13.2	3,320	10.6	2,230	9.5	1,780	8.5	1,370	7.6	1,010	7.2	854
8	12.9	3,190	10.4	2,140	9.5	1,780	8.4	1,330	7.55	988	7.2	854
10	12.5	3,020	10.3	2,100	9.4	1,730	8.4	1,330	7.55	988	7.25	873
N	12.3	2,930	10.2	2,060	9.3	1,690	8.3	1,290	7.5	969	7.3	892
2	12.0	2,810	10.1	2,020	9.2	1,650	8.2	1,250	7.5	969	7.3	892
4	11.8	2,720	10.0	1,980	9.1	1,610	8.1	1,210	7.45	950	7.25	873
6	11.5	2,600	10.0	1,980	9.1	1,610	8.0	1,170	7.4	930	7.15	835
8	11.3	2,510	9.9	1,940	9.0	1,570	7.9	1,130	7.4	930	7.0	779
10	11.2	2,470	9.8	1,900	8.9	1,530	7.8	1,090	7.3	892	6.75	688
M	11.0	2,390	9.8	1,900	8.8	1,490	7.8	1,090	7.2	854	6.6	638

*Mean for the day.

Millers River at Erving, Mass.

<u>Location.</u>- Lat. 42°35'55", long. 72°24'15", a quarter of a mile below dam at Erving, Franklin County, 8 miles above mouth, and below all important tributaries. Zero of gage is 438.26 feet above mean sea level.

<u>Drainage area.</u>- 370 square miles.

<u>Gage-height record.</u>- Water-stage recorder graph except for period 10 p.m. Mar. 18 to 1 p.m. Mar. 22, when it was based on flood marks and shape of graphs at nearby stations. Gage heights given to half tenths between 4.00 and 6.20 feet; hundredths below and tenths above these limits.

<u>Stage-discharge relation.</u>- Affected by ice Feb. 1 to Mar. 18. Defined by current-meter measurements below 7,960 second-feet; extended to peak stage using the average of flood discharges obtained from slope-area (n, 0.03, 0.04) and contracted-opening (surface drop, 5.60 feet) methods, and flow over dam (head, 7.30 feet; C, 3.8); verified by drainage-area comparison of instantaneous and total yield of flood with nearby streams.

<u>Maxima.</u>- 1936: Discharge, 19,700 second-feet, 1 to 5 p.m. Mar. 19 (gage height, 10.86 feet).

1914-35: Discharge, 6,000 second-feet Apr. 19, 1933 (gage height, 5.94 feet).

<u>Remarks.</u>- Flood run-off affected slightly by artificial and natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	380	240	1,780	11	250	1,030	2,200	21	320	10,500	1,100
2	330	320	1,630	12	280	3,200	2,200	22	280	8,210	1,100
3	290	280	2,130	13	280	5,000	2,060	23	270	6,650	980
4	270	240	2,130	14	300	5,200	1,840	24	270	5,090	874
5	340	460	1,840	15	320	4,300	1,710	25	350	3,960	853
6	320	360	2,360	16	270	3,900	1,780	26	430	3,180	559
7	280	380	3,610	17	320	4,200	1,710	27	370	2,790	745
8	250	280	3,500	18	360	8,000	1,520	28	410	3,280	557
9	220	400	2,880	19	430	18,800	1,300	29	300	2,880	719
10	230	600	2,360	20	370	15,600	1,240	30		2,360	578
								31		1,980	
Mean monthly discharge, in second-feet									313	3,989	1,662
Run-off, in inches									0.92	12.45	5.01

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	3.08	-	2.66	-	2.92	-	3.36	-	3.55	-	6.1	-
4	3.05	-	2.65	-	2.92	-	3.35	-	3.95	-	5.95	-
6	3.08	-	2.64	-	2.92	-	3.28	-	4.3	-	5.95	-
8	3.08	-	2.63	-	3.05	-	3.26	-	4.75	-	5.75	-
10	2.70	-	2.63	-	3.00	-	3.25	-	5.1	-	5.8	-
N	2.63	*280	3.01	*400	2.97	*600	3.50	*1,030	5.3	*3,200	6.1	*5,000
2	2.46	-	3.10	-	3.02	-	3.59	-	5.5	-	6.3	-
4	2.53	-	3.05	-	3.10	-	3.34	-	5.8	-	6.4	-
6	2.56	-	2.79	-	3.18	-	3.56	-	5.95	-	6.5	-
8	2.59	-	3.04	-	3.38	-	3.83	-	6.1	-	6.5	-
10	2.72	-	2.95	-	3.40	-	3.90	-	5.95	-	6.5	-
M	2.68	-	2.90	-	3.41	-	3.91	-	6.0	-	6.4	-
	March 14		March 15		March 16		March 17		March 18		March 19	
2	6.4	-	5.95	-	5.8	-	5.55	-	6.6	-	10.2	17,700
4	6.4	-	5.9	-	5.65	-	5.45	-	6.6	**6,000	10.4	18,200
6	6.3	-	5.75	-	5.65	-	5.5	-	6.6	-	10.5	18,500
8	6.3	-	5.75	-	5.55	-	5.6	-	6.8	-	10.7	19,100
10	6.2	-	5.75	-	5.55	-	5.65	-	7.4	**7,000	10.8	19,400
N	6.2	*5,200	5.7	*4,300	5.6	*3,900	5.75	*6,200	7.3	-	10.8	19,400
2	6.2	-	5.7	-	5.7	-	5.8	-	7.8	-	10.9	19,700
4	6.15	-	5.75	-	5.65	-	5.95	-	7.0	**8,000	10.9	19,700
6	6.15	-	5.95	-	5.55	-	6.1	-	7.3	-	10.8	19,400
8	6.1	-	5.75	-	5.65	-	6.1	-	8.8	** -	10.7	19,100
10	6.05	-	5.75	-	5.55	-	6.15	-	9.2	11,000	10.5	18,500
M	6.0	-	5.75	-	5.55	-	6.2	-	9.8	-	10.4	18,200
	March 20		March 21		March 22		March 23		March 24		March 25	
2	10.2	17,700	8.3	12,300	7.0	8,730	6.5	7,430	5.85	5,740	5.3	4,330
4	10.1	17,400	8.1	11,700	7.0	8,730	6.4	7,170	5.8	5,610	5.25	4,200
6	10.0	17,100	8.0	11,400	6.9	8,470	6.4	7,170	5.75	5,480	5.2	4,080
8	9.8	16,500	7.8	10,900	6.9	8,470	6.3	6,910	5.7	5,350	5.2	4,080
10	9.6	15,900	7.7	10,600	6.8	8,210	6.2	6,650	5.65	5,220	5.2	4,080
N	9.5	15,600	7.6	10,400	6.8	8,210	6.2	6,650	5.6	5,090	5.15	3,960
2	9.3	15,100	7.5	10,100	6.7	7,950	6.15	6,520	5.55	4,960	5.1	3,840
4	9.1	14,500	7.4	9,810	6.7	7,950	6.1	6,390	5.45	4,700	5.1	3,840
6	9.0	14,200	7.3	9,540	6.7	7,950	6.05	6,260	5.45	4,700	5.05	3,720
8	8.8	13,700	7.2	9,270	6.7	7,950	6.0	6,130	5.4	4,580	5.0	3,610
10	8.6	13,100	7.2	9,270	6.6	7,690	5.9	5,870	5.35	4,460	5.0	3,610
M	8.4	12,600	7.1	9,000	6.5	7,430	5.85	5,740	5.3	4,330	4.9	3,390

Supplemental records.- Mar. 19, 1 to 5 p.m., 10.86 ft., 19,700 sec.-ft.

* Mean for the day.

** Mean for 6-hour period.

Sip Pond Brook near Winchendon, Mass.

Location.- Lat. 42°42'45", long. 72°5'10", a quarter of a mile below Massachusetts - New Hampshire State line, 1½ miles below outlet of Sip Pond, and 3 miles northwest of Winchendon, Worcester County.

Drainage area.- 19.0 square miles.

Gage-height record.- Water-stage recorder graph except for period 4 p.m. Mar. 18 to 2 p.m. Mar. 19, when it was based on two gage readings, flood marks, and shape of stage graphs at nearby stations. Gage heights given to half tenths between 7.20 and 11.10 feet; hundredths below and tenths above these limits.

Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 5, Mar. 9. Defined by current-meter measurements below 1,170 second-feet; verified by drainage-area comparison of instantaneous and total yield of flood with records for nearby streams.

Maxima.- 1936: Discharge, 1,430 second-feet 11 p.m. Mar. 18 to 2 a.m. Mar. 19 (gage height, 12.40 feet).
1916-35: Discharge, 420 second-feet (revised) Nov. 4, 1927 (gage height, 9.62 feet).

Remarks.- Flood run-off affected by storage in Pearly and Sip Ponds.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	16	11	92	11	14	34	100	21	17	450	53
2	11	16	85	12	12	100	103	22	17	442	50
3	14	16	103	13	13	199	100	23	14	302	44
4	15	12	103	14	13	172	83	24	16	187	41
5	13	16	92	15	14	149	74	25	15	157	36
6	15	14	109	16	10	146	83	26	15	158	35
7	14	13	160	17	14	163	78	27	16	140	36
8	14	11	142	18	15	732	69	28	15	165	30
9	10	22	118	19	17	1,080	63	29	16	156	32
10	13	17	103	20	17	599	59	30		121	32
								31		103	
Mean monthly discharge, in second-feet									14.3	190	76.9
Run-off, in inches									0.81	11.53	4.52

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	5.50	10	5.49	-	5.68	15	5.75	17	6.21	34	8.35	190
4	5.53	11	5.49	-	5.65	14	5.76	17	6.33	40	8.4	196
6	5.55	12	5.50	-	5.63	14	5.78	18	6.46	47	8.4	196
8	5.57	12	5.50	-	5.68	15	5.85	20	6.70	59	8.45	202
10	5.55	12	6.18	-	5.97	25	6.47	48	7.04	79	8.5	208
N	5.69	16	6.46	*22	5.69	16	6.56	52	7.20	90	8.55	214
2	5.54	11	6.47	-	5.67	15	6.44	46	7.35	100	8.45	202
4	5.50	10	6.59	-	5.85	20	6.60	54	7.5	112	8.5	208
6	5.49	10	6.60	-	5.72	16	6.65	56	7.7	128	8.5	208
8	5.49	10	6.13	-	5.72	16	6.10	30	8.0	155	8.35	190
10	5.49	10	5.93	-	5.73	17	6.03	27	8.15	170	8.3	185
M	5.49	10	5.76	-	5.74	17	6.10	30	8.25	180	8.3	185
	March 14		March 15		March 16		March 17		March 18		March 19	
2	8.3	185	8.0	155	7.9	146	7.85	142	8.55	214	12.4	1,430
4	8.3	185	7.95	150	7.9	146	7.85	142	8.7	235	12.3	1,380
6	8.25	180	7.95	150	7.9	146	7.9	146	8.9	266	12.2	1,340
8	8.25	180	7.9	146	7.85	142	7.9	146	9.2	326	12.0	1,250
10	8.25	180	7.9	146	7.95	150	7.95	150	9.55	408	11.9	1,210
N	8.25	180	7.9	146	7.95	150	8.05	160	10.0	525	11.6	1,090
2	8.2	175	7.95	150	7.95	150	8.1	165	10.6	725	11.4	1,010
4	8.2	175	7.95	150	7.9	146	8.15	170	11.2	935	11.2	935
6	8.1	165	7.95	150	7.9	146	8.2	175	11.6	1,090	11.05	882
8	8.0	155	7.95	150	7.9	146	8.25	180	12.0	1,250	10.95	848
10	8.0	155	7.9	146	7.85	142	8.3	185	12.3	1,380	10.85	812
M	8.0	155	7.9	146	7.85	142	8.4	196	12.4	1,430	10.75	778
	March 20		March 21		March 22		March 23		March 24		March 25	
2	10.65	742	9.8	470	9.8	470	9.45	384	8.55	216	8.05	164
4	10.55	708	9.75	458	9.8	470	9.4	372	8.5	210	8.05	164
6	10.45	672	9.7	445	9.8	470	9.35	360	8.4	198	8.05	164
8	10.4	655	9.65	432	9.8	470	9.3	348	8.35	193	8.05	164
10	10.35	638	9.65	432	9.75	458	9.2	326	8.3	188	8.05	164
N	10.25	602	9.65	432	9.75	458	9.1	304	8.3	188	8.1	169
2	10.15	570	9.7	445	9.7	445	9.05	294	8.3	188	8.0	160
4	10.1	555	9.7	445	9.65	432	8.95	275	8.25	183	7.8	142
6	10.05	540	9.7	445	9.6	420	8.85	258	8.2	178	7.75	138
8	10.0	525	9.75	458	9.55	408	8.8	250	8.15	174	7.8	142
10	9.9	495	9.8	470	9.55	408	8.7	236	8.1	169	7.9	151
M	9.85	482	9.8	470	9.5	396	8.6	222	8.05	164	8.0	160

Supplemental records.- Mar. 18, 11 p.m., 12.40 ft., 1,430 sec.-ft.
*Mean for the day.

East Branch of Tully River near Athol, Mass.

Location.- Lat. 42°38'35", long. 72°13'20", at highway bridge half a mile below mouth of Lawrence Brook and 3½ miles north of Athol, Worcester County. Zero of gage is 628.11 feet above mean sea level.
Drainage area.- 49.9 square miles.
Gage-height record.- Graph constructed from two gage readings daily, flood marks, and shape of stage graphs for nearby streams. Gage heights given to half tenths between 1.70 and 4.20 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 9. Defined by current-meter measurements below 1,540 second-feet; extended to peak stage using the average of two contracted-opening determinations of flood flow (surface drop, 1.60 and 2.50 feet); verified by drainage-area comparison of instantaneous and total yield of flood with records for nearby streams.
Maxima.- 1936: Discharge, 3,700 second-feet 11 p.m. Mar. 18 to 4 a.m. Mar. 19 (gage height, 6.50 feet).
1916-35: Discharge, 1,970 second-feet (revised) Nov. 4, 1927 (gage height, 5.10 feet).
Remarks.- Flood run-off not materially affected by artificial or natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	48	43	204	11	38	89	278	21	52	858	128
2	46	42	204	12	37	346	263	22	52	854	128
3	42	40	226	13	37	1,090	278	23	49	563	120
4	42	42	250	14	38	943	214	24	46	449	114
5	43	45	226	15	40	667	226	25	43	386	101
6	43	49	263	16	38	554	226	26	42	328	95
7	42	48	450	17	41	597	214	27	44	310	95
8	41	47	386	18	44	2,160	183	28	46	366	79
9	39	46	310	19	48	3,030	173	29	44	328	80
10	38	60	293	20	51	1,420	136	30		278	89
								31		193	
Mean monthly discharge, in second-feet									43.2	525	201
Run-off, in inches									0.93	12.11	4.50

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	1.38	-	1.36	-	1.38	51	1.59	71	2.15	145	3.75	740
4	1.38	-	1.35	-	1.40	53	1.61	73	2.25	164	3.9	838
6	1.38	-	1.35	-	1.41	54	1.63	75	2.35	183	4.0	909
8	1.38	-	1.34	-	1.43	56	1.66	79	2.45	204	4.1	984
10	1.38	-	1.34	-	1.45	58	1.68	81	2.6	237	4.2	1,060
N	1.40	*47	1.33	*46	1.46	58	1.70	83	2.8	293	4.3	1,150
2	1.40	-	1.33	-	1.48	60	1.75	89	2.9	328	4.4	1,240
4	1.41	-	1.33	-	1.49	61	1.75	89	3.05	386	4.4	1,240
6	1.41	-	1.34	-	1.51	63	1.8	95	3.2	450	4.4	1,240
8	1.40	-	1.35	-	1.53	65	1.85	101	3.35	519	4.4	1,240
10	1.39	-	1.36	-	1.55	67	1.95	114	3.5	594	4.4	1,240
M	1.37	-	1.37	-	1.57	69	2.0	120	3.6	649	4.3	1,150
	March 14		March 15		March 16		March 17		March 18		March 19	
2	4.3	1,150	3.8	771	3.5	594	3.4	543	3.8	771	6.5	3,700
4	4.2	1,060	3.75	740	3.5	594	3.4	543	3.95	874	6.5	3,700
6	4.15	1,020	3.7	708	3.45	568	3.4	543	4.05	946	6.4	3,570
8	4.1	984	3.65	678	3.4	543	3.4	543	4.2	1,060	6.3	3,440
10	4.05	946	3.65	678	3.4	543	3.45	568	4.6	1,430	6.2	3,310
N	4.0	909	3.6	649	3.4	543	3.45	568	5.0	1,850	6.0	3,050
2	4.0	909	3.6	649	3.4	543	3.45	568	5.4	2,330	5.9	2,930
4	4.0	909	3.6	649	3.4	543	3.5	594	5.8	2,810	5.8	2,810
6	4.0	909	3.6	649	3.4	543	3.55	622	6.1	3,180	5.7	2,690
8	3.95	874	3.55	622	3.4	543	3.6	649	6.3	3,440	5.6	2,570
10	3.9	838	3.55	622	3.4	543	3.65	678	6.4	3,570	5.4	2,330
M	3.85	804	3.5	594	3.4	543	3.75	740	6.5	3,700	5.3	2,210
	March 20		March 21		March 22		March 23		March 24		March 25	
2	5.2	2,090	3.9	838	4.1	984	3.65	678	3.2	450	3.1	407
4	5.1	1,970	3.85	804	4.1	984	3.6	649	3.2	450	3.1	407
6	4.9	1,740	3.8	771	4.1	984	3.6	649	3.25	472	3.05	386
8	4.8	1,630	3.8	771	4.05	946	3.55	622	3.3	495	3.05	386
10	4.7	1,530	3.8	771	4.0	909	3.5	594	3.3	495	3.05	386
N	4.6	1,430	3.85	804	3.95	874	3.45	568	3.25	472	3.05	386
2	4.5	1,330	3.9	838	3.9	838	3.4	543	3.2	450	3.05	386
4	4.4	1,240	3.95	874	3.85	804	3.35	519	3.2	450	3.05	386
6	4.3	1,150	4.0	909	3.8	771	3.3	495	3.15	428	3.05	386
8	4.2	1,060	4.05	946	3.75	740	3.3	495	3.1	407	3.05	386
10	4.1	984	4.1	984	3.7	708	3.25	472	3.1	407	3.0	366
M	4.0	909	4.1	984	3.7	708	3.25	472	3.1	407	3.0	366

Supplemental records.- Mar. 18, 11 p.m., 6.50 ft., 3,700 sec.-ft.
*Mean for the day.

Moss Brook at Wendell Depot, Mass.

Location.- Lat. 42°36'5", long. 72°21'35", a quarter of a mile above confluence with Millers River and a quarter of a mile north of Wendell Depot, Franklin County. Zero of gage is 508.88 feet above mean sea level.
Drainage area.- 12.2 square miles.
Gage-height record.- Graph constructed from twice-daily gage readings, flood marks, and shape of stage graphs at nearby stations. Gage heights given to half tenths between 3.00 and 4.10 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 11. Defined by current-meter measurements below 98 second-feet; extended to peak stage using slope-area determination of flood flow (n, 0.045); verified by drainage-area comparison of instantaneous and total yield of flood with records for nearby streams.
Maxima.- 1936: Discharge, 1,300 second-feet 1 to 4 a.m. Mar. 19 (gage height, 6.30 feet).
1916-35: Discharge, 775 second-feet Nov. 4, 1927 (gage height, 5.2 feet).
Remarks.- Flood run-off not materially affected by artificial or natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	11	9	46	11	8	62	64	21	11	199	34
2	10	9	50	12	8	208	79	22	11	227	33
3	9	9	100	13	8	309	84	23	11	156	28
4	8	9	84	14	8	195	56	24	10	69	25
5	9	10	60	15	8	113	51	25	9	84	24
6	10	10	84	16	8	75	60	26	9	69	20
7	9	10	120	17	9	66	56	27	9	74	18
8	9	10	120	18	9	454	50	28	9	100	14
9	8	11	89	19	10	922	43	29	9	79	16
10	8	17	74	20	11	358	38	30		69	22
								31		56	
Mean monthly discharge, in second-feet									9.17	131	54.7
Run-off, in inches									0.81	12.34	5.00

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	1.72	-	1.65	-	1.73	-	2.23	-	3.1	145	3.75	292
4	1.72	-	1.64	-	1.75	-	2.29	**25	3.15	155	3.8	305
6	1.72	-	1.63	-	1.78	-	2.35	-	3.2	165	3.85	320
8	1.72	-	1.62	-	1.82	-	2.43	-	3.25	175	3.9	335
10	1.72	-	1.62	-	1.86	-	2.51	**50	3.3	185	3.9	335
N	1.71	*10	1.63	*11	1.90	*17	2.59	-	3.35	195	3.9	335
2	1.70	-	1.63	-	1.94	-	2.65	-	3.4	205	3.85	320
4	1.70	-	1.64	-	1.98	-	2.73	**75	3.5	230	3.85	320
6	1.69	-	1.65	-	2.03	-	2.80	-	3.55	242	3.8	305
8	1.68	-	1.67	-	2.07	-	2.88	-	3.60	255	3.75	292
10	1.67	-	1.69	-	2.12	-	2.95	**100	3.65	268	3.7	280
M	1.66	-	1.71	-	2.17	-	3.0	-	3.7	280	3.65	268
	March 14		March 15		March 16		March 17		March 18		March 19	
2	3.6	255	3.1	145	2.77	87	2.58	64	2.80	91	6.3	1,300
4	3.55	242	3.05	135	2.74	83	2.55	62	2.86	101	6.3	1,300
6	3.5	230	3.0	125	2.72	80	2.54	61	2.95	116	6.2	1,250
8	3.45	218	3.0	125	2.70	77	2.52	59	3.05	135	6.1	1,200
10	3.4	205	2.95	116	2.69	76	2.53	60	3.25	175	5.8	1,060
N	3.35	195	2.95	116	2.68	75	2.54	61	3.55	242	5.6	970
2	3.3	185	2.9	107	2.67	74	2.55	62	4.0	365	5.4	880
4	3.25	175	2.88	104	2.67	74	2.57	63	4.3	455	5.1	755
6	3.2	165	2.86	101	2.65	72	2.61	67	4.9	675	4.9	675
8	3.2	165	2.84	97	2.64	70	2.65	72	5.3	835	4.7	595
10	3.15	155	2.82	94	2.62	68	2.70	77	5.8	1,060	4.6	560
M	3.10	145	2.79	90	2.60	66	2.74	83	6.1	1,200	4.5	525
	March 20		March 21		March 22		March 23		March 24		March 25	
2	4.5	525	3.35	195	3.6	255	3.35	195	2.86	108	2.67	86
4	4.4	490	3.3	185	3.6	255	3.3	185	2.81	101	2.68	87
6	4.3	455	3.3	185	3.55	242	3.3	185	2.77	97	2.69	88
8	4.2	425	3.25	175	3.55	242	3.25	175	2.72	91	2.70	89
10	4.1	395	3.25	175	3.5	230	3.25	175	2.67	86	2.69	88
N	4.0	365	3.25	175	3.5	230	3.2	165	2.65	84	2.68	87
2	3.9	335	3.3	185	3.5	230	3.15	155	2.63	82	2.66	85
4	3.8	305	3.35	195	3.45	218	3.1	145	2.63	82	2.64	83
6	3.7	280	3.4	205	3.45	218	3.05	136	2.63	82	2.62	81
8	3.6	255	3.5	230	3.4	205	3.0	128	2.64	83	2.61	80
10	3.55	242	3.55	242	3.4	205	2.95	120	2.64	83	2.59	78
M	3.45	218	3.55	242	3.35	195	2.90	113	2.65	84	2.57	76

Supplemental records.- Mar. 19, 1 a.m. 6.30 ft., 1,300 sec.ft.
* Mean for the day.
** Mean for 6-hour period.

East Branch of Deerfield River at outlet of Somerset Reservoir, near Somerset, Vt.

Location.- Lat. 42°58'25", long. 72°57'0", 2½ miles northeast of Somerset, Windham County.

Drainage area.- 30.0 square miles.

Stage-discharge relation.- Discharge determined from flow through gate.

Maxima.- 1936: Discharge corrected for storage, about 5,200 second-feet 9 a.m. Mar. 18.

Remarks.- Flood run-off completely stored in Somerset Reservoir (capacity 2,700,000,000 cubic feet). Mean daily and monthly discharges corrected for gain or loss in storage. Basic data furnished by New England Power Co.

Mean discharge (second-feet) and gain or loss in storage (millions of cubic feet), 1936

Day	February			March		
	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge
1	0	+1.83	21	88	-4.56	35
2	17	+0.46	22	150	-9.47	40
3	171	-13.24	18	180	-11.88	42
4	150	-11.33	19	184	-12.19	43
5	150	-11.27	20	167	-8.48	69
6	149	-10.74	25	169	-8.03	76
7	112	-7.58	24	106	-3.61	64
8	0	+1.78	21	0	+4.01	46
9	17	+0.45	22	138	-6.41	64
10	171	-12.88	22	150	-0	150
11	150	-11.05	22	106	+12.03	245
12	149	-10.98	22	0	+61.49	712
13	149	-10.92	23	0	+50.84	588
14	118	-8.24	23	0	+30.36	351
15	0	+2.16	25	0	+26.45	306
16	17	+0.43	22	0	+17.81	206
17	169	-12.09	29	0	+31.58	366
18	120	-6.88	40	0	+176.66	2,040
19	150	-9.39	41	0	+129.52	1,500
20	135	-8.51	37	0	+54.13	627
21	71	-3.39	32	0	+49.83	577
22	0	+2.12	25	0	+33.78	391
23	125	-8.46	27	0	+17.06	197
24	150	-10.11	33	0	+22.94	266
25	150	-10.05	34	0	+34.82	403
26	133	-9.16	27	0	+35.31	409
27	100	-6.22	28	0	+41.71	483
28	27	+0.83	37	0	+54.31	629
29	0	+2.90	34	0	+36.57	423
30				0	+30.68	355
31				0	+24.71	286

	February	March
Mean monthly discharge, in second-feet (observed)...........	98.3	46.4
Gain or loss in storage, in millions of cubic feet..........	-179.53	+911.97
Mean monthly discharge, in second-feet (corrected)..........	26.7	387
Run-off, in inches (corrected)..............................	0.96	14.87

East Branch of Deerfield River at outlet of Somerset Reservoir, near Somerset, Vt.-Contd.

Mean discharge (second-feet) and gain or loss in storage (millions of cubic feet), 1936

Day	April			May		
	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge
1	0	+24.87	288	0	+17.71	205
2	0	+18.74	217	0	+13.68	158
3	0	+12.54	145	0	+10.28	119
4	0	+12.59	146	0	+8.93	103
5	0	+12.60	146	0	+6.88	80
6	0	+70.00	810	0	+11.71	136
7	0	+38.60	447	0	+10.34	120
8	0	+19.42	225	0	+5.53	64
9	0	+12.98	150	0	+4.15	48
10	0	+9.76	113	0	+3.90	45
11	0	+11.09	128	0	+3.70	43
12	0	+13.07	151	0	+3.60	42
13	0	+11.79	136	0	+3.55	41
14	0	+11.17	129	0	+3.45	40
15	0	+13.16	152	0	+3.40	39
16	0	+17.17	199	0	+3.40	39
17	0	+13.24	153	0	+3.45	40
18	0	+11.95	138	0	+3.55	41
19	0	+7.98	92	0	+6.80	79
20	0	+4.66	54	0	+7.50	87
21	0	+11.33	131	0	+3.70	43
22	0	+18.72	217	0	+3.30	38
23	0	+12.74	147	0	+2.90	34
24	0	+8.06	93	0	+2.10	24
25	0	+6.73	78	0	+2.10	24
26	0	+6.78	78	0	+1.80	21
27	0	+8.77	102	0	+1.80	21
28	0	+12.18	141	0	+1.80	21
29	0	+16.95	196	0	+1.65	19
30	0	+20.38	236	0	+1.65	19
31				0	+1.40	16

	April	May
Mean monthly discharge, in second-feet (observed)	0	0
Gain or loss in storage, in millions of cubic feet	+469.97	+159.71
Mean monthly discharge, in second-feet (corrected)	181	59.6
Run-off, in inches (corrected)	6.73	2.29

Deerfield River at outlet of Harriman Reservoir, at Davis Bridge, Vt.

Location.- Lat. 42°47'50", long. 72°54'30", at Davis Bridge, Windham County, 3½ miles above mouth of West Branch of Deerfield River. Zero of gage is at mean sea level.
Drainage area.- 184 square miles; net, exclusive of drainage area above Somerset Reservoir, 154 square miles.
Stage-discharge relation.- Discharge determined from flow through wheels.
Maxima.- 1936: Discharge corrected for storage, about 29,000 second-feet 10 a.m. Mar. 18.
1927: Discharge corrected for storage, about 30,800 second-feet 2 to 5 a.m. Nov. 4.
Remarks.- Flood run-off almost completely stored in Harriman and Somerset Reservoirs (total capacity 7,550,000,000 cubic feet). Mean daily discharges corrected for gain or loss in storage in Harriman Reservoir only. Basic data furnished by New England Power Co.

Mean discharge (second-feet) and gain or loss in storage (millions of cubic feet), 1936

Day	February			March		
	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge
1	216	-7.52	129	0	+6.44	75
2	0	+7.52	87	674	-35.43	264
3	646	-30.41	294	631	-34.69	229
4	702	-26.84	391	596	-22.90	331
5	706	-40.78	234	642	-25.76	344
6	602	-33.28	217	549	-22.90	284
7	546	-28.98	211	45	+5.72	111
8	64	+7.52	151	0	+5.73	66
9	0	+7.15	83	604	-22.90	339
10	545	-14.67	375	610	-20.04	378
11	558	-28.26	231	580	+8.59	679
12	464	-25.05	174	50	+560.28	6,540
13	474	-13.59	317	37	+441.48	5,150
14	672	-41.86	188	6	+156.35	1,820
15	0	+10.38	120	0	+95.17	1,100
16	0	+7.15	83	165	+108.40	1,420
17	444	-17.53	241	391	+223.61	2,980
18	573	-31.13	213	138	+1,337.72	15,600
19	206	0	206	58	+633.61	7,390
20	357	-3.22	320	336	+276.20	3,530
21	323	-6.44	248	856	+242.21	3,660
22	0	+9.66	112	1,701	+88.37	2,720
23	0	+6.44	75	1,498	0	1,500
24	579	-22.89	314	1,079	+26.84	1,390
25	569	-26.84	258	1,134	+116.63	2,480
26	612	-22.89	347	990	+63.33	1,720
27	608	-32.20	235	2,530	+45.79	3,060
28	646	-41.86	162	3,030	-100.17	1,870
29	114	0	114	1,230	-27.20	915
30				2,078	-35.77	1,660
31				1,962	+17.89	2,170

	February	March
Mean monthly discharge, in second-feet (observed)	387	781
Run-off, in inches (observed)	2.26	4.89
Gain or loss in storage in Harriman Reservoir, in millions of cubic feet	-440.42	+4,112.60
Mean monthly discharge, in second-feet (corrected for storage in Harriman Reservoir)	211	2,315
Run-off, in inches (corrected for storage in Harriman Reservoir)	1.24	14.53
Gain or loss in storage in Harriman and Somerset Reservoirs, in millions of cubic feet	-619.95	+5,024.57
Mean monthly discharge, in second-feet (corrected for storage in Harriman and Somerset Reservoirs)	140	2,656
Run-off, in inches (corrected for storage in Harriman and Somerset Reservoirs)	0.82	16.60

Deerfield River at outlet of Harriman Reservoir, at Davis Bridge, Vt.--Continued

Mean discharge (second-feet) and gain or loss in storage (millions of cubic feet), 1936

Day	April			May		
	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge
1	1,381	-8.95	1,280	411	+18.25	622
2	1,184	-26.83	873	38	+45.08	560
3	0	+35.78	414	95	+8.94	198
4	616	0	616	821	-27.19	506
5	410	+62.96	1,140	693	-17.89	486
6	1,365	+82.29	2,320	541	-18.25	330
7	4,876	-72.98	4,030	547	-26.83	236
8	2,414	-63.33	1,680	252	-4.47	200
9	1,464	-26.83	1,150	0	+13.42	155
10	1,126	-17.89	919	0	+8.94	103
11	830	+26.83	1,140	334	+4.47	386
12	563	+26.83	874	274	-4.47	222
13	1,872	-44.72	1,350	135	+18.25	346
14	661	+8.95	765	205	+26.83	516
15	1,405	-44.72	887	265	+18.25	476
16	1,551	0	1,550	0	+18.24	211
17	1,245	-17.89	1,040	0	+8.95	104
18	225	+26.83	536	401	0	401
19	0	+26.83	311	359	-8.95	255
20	59	+44.72	577	173	+8.95	277
21	1,144	-17.88	937	220	+8.94	323
22	892	-17.89	685	198	+2.79	230
23	710	0	710	58	+4.65	112
24	893	-35.78	479	135	-4.65	81
25	363	+8.94	466	181	-5.47	118
26	67	+8.95	171	323	-18.00	115
27	468	+8.94	571	488	-33.70	98
28	497	+8.95	601	453	-31.67	86
29	588	+8.94	691	224	-8.94	121
30	409	+17.89	616	0	+7.26	84
31				0	+4.66	54

	April	May
Mean monthly discharge, in second-feet (observed)	976	252
Run-off, in inches (observed)	5.91	1.58
Gain or loss in storage in Harriman Reservoir, in millions of cubic feet	+8.94	+16.39
Mean monthly discharge, in second-feet (corrected for storage in Harriman Reservoir)	979	258
Run-off, in inches (corrected for storage in Harriman Reservoir)	5.94	1.61
Gain or loss in storage in Harriman and Somerset Reservoirs, in millions of cubic feet	+478.91	+176.10
Mean monthly discharge, in second-feet (corrected for storage in Harriman and Somerset Reservoirs)	1,161	318
Run-off, in inches (corrected for storage in Harriman and Somerset Reservoirs)	7.04	1.99

Deerfield River at Charlemont, Mass.

Location.- Lat. 42°37'30", long. 72°51'20", 1 mile below Charlemont, Franklin County. Zero of gage is 517.36 feet above mean sea level.

Drainage area.- 362 square miles; net, exclusive of drainage area above Harriman Reservoir, 178 square miles.

Gage-height record.- Water-stage recorder graph except for periods 7 a.m. to noon Mar. 12 and 3 p.m. Mar. 23 to 4 p.m. Mar. 30, when it was based on flood marks and shape of stage graphs at nearby stations. Gage heights given to half tenths between 3.4 and 6.2 feet; hundredths below and tenths above these limits.

Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 12. Defined by current-meter measurements below 9,950 second-feet; extended to peak stage by averaging flood discharges obtained from slope-area (n, 0.04) and contracted-opening (surface drop, 0.7 foot) determinations of flood flow; verified by comparison of peak discharge and total run-off of flood with records for nearby stations.

Maxima.- 1936: Discharge, 32,200 second-feet 11 a.m. Mar. 18 (gage height, 14.20 feet); maximum gage height, 19.9 feet, from flood mark, Mar. 12 (ice jam).
1913-35: Discharge, 38,200 second feet July 8, 1915 (gage height, 15.7 feet).

Remarks.- Flood run-off affected by storage in Somerset and Harriman (formerly called Davis Bridge) Reservoirs (total capacity 7,550,000,000 cubic feet). For record of storage see East Branch of Deerfield River at outlet of Somerset Reservoir, near Somerset, Vt., and Deerfield River at outlet of Harriman Reservoir, at Davis Bridge, Vt.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	560	260	2,200	11	500	1,180	2,050	21	480	5,770	1,140
2	200	480	2,020	12	550	9,000	1,470	22	340	4,950	1,650
3	280	740	2,320	13	580	5,390	1,870	23	160	3,230	1,540
4	670	790	1,460	14	660	2,080	1,850	24	360	2,510	1,350
5	740	740	1,060	15	460	970	1,910	25	740	3,600	914
6	760	570	5,520	16	240	1,400	2,830	26	670	2,700	710
7	780	360	7,910	17	290	3,140	2,330	27	740	4,400	733
8	540	160	3,170	18	530	21,700	1,250	28	800	7,200	850
9	320	320	2,200	19	430	9,860	894	29	420	4,300	949
10	400	760	1,970	20	420	4,150	710	30		3,400	785
								31		3,050	

	Feb.	Mar.	Apr.
Mean monthly discharge, in second-feet (observed)	504	3,521	1,920
Run-off, in inches (observed)	1.50	11.22	5.91
Mean monthly discharge, in second-feet (corrected for storage)	257	5,397	2,105
Run-off, in inches (corrected for storage)	0.77	17.18	6.48

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	6.8	-	4.55	-	7.8	-	8.1	-	10.3	-	7.2	8,830
4	5.7	-	4.55	-	7.1	-	7.2	-	10.9	†6,000	6.8	7,790
6	5.0	-	4.55	-	6.5	-	6.7	-	12.0	-	6.6	7,270
8	4.45	-	4.5	-	5.95	-	6.2	-	19.0	-	6.3	6,520
10	3.95	-	4.4	-	5.45	-	6.1	-	19.9	†9,000	6.05	5,900
N	3.8	*160	4.35	*320	5.25	*760	7.6	*1,180	18.5	-	5.85	5,400
2	3.85	-	7.6	-	8.0	-	8.3	-	8.1	11,000	5.6	4,770
4	4.05	-	7.6	-	7.9	-	8.4	-	8.1	11,300	5.4	4,280
6	5.1	-	7.8	-	7.8	-	8.8	-	7.9	10,800	5.3	4,050
8	5.25	-	8.1	-	7.8	-	9.0	-	7.6	9,920	5.15	3,720
10	4.85	-	8.1	-	7.8	-	9.4	-	7.6	9,920	4.85	3,140
M	4.6	-	8.0	-	8.1	-	9.8	-	7.4	9,370	4.8	3,050
	March 14		March 15		March 16		March 17		March 18		March 19	
2	4.85	3,140	3.6	1,460	3.25	1,110	3.8	1,680	7.2	8,830	9.3	14,900
4	4.65	2,800	3.6	1,460	3.07	956	3.55	1,410	7.3	9,100	9.0	13,900
6	4.55	2,640	3.25	1,110	3.01	908	4.05	1,980	9.6	15,800	8.3	11,900
8	4.3	2,300	2.94	852	2.98	884	4.05	1,980	11.2	21,200	8.0	11,000
10	4.3	2,300	2.81	752	2.95	860	4.3	2,300	13.8	30,600	7.6	9,920
N	4.2	2,170	2.77	772	2.95	860	4.4	2,430	14.1	31,800	7.6	9,920
2	3.95	1,860	2.78	730	3.85	1,740	4.5	2,570	13.6	29,900	7.3	9,100
4	3.8	1,680	2.86	790	3.9	1,800	4.9	3,230	12.6	26,200	7.2	8,830
6	3.65	1,520	2.95	860	4.0	1,920	5.15	3,720	12.1	24,400	7.2	8,830
8	3.65	1,520	3.03	924	4.0	1,920	5.3	4,050	12.1	24,400	6.5	7,020
10	3.65	1,520	3.08	964	4.05	1,980	5.9	5,520	11.2	21,200	6.4	6,770
M	3.65	1,520	3.15	1,020	3.95	1,860	6.4	6,770	10.1	17,400	6.2	6,270
	March 20		March 21		March 22		March 23		March 24		March 25	
2	6.1	6,020	5.15	3,720	6.3	6,520	4.7	2,880	4.65	2,800	5.0	3,420
4	5.8	5,270	5.1	3,620	6.2	6,270	4.65	2,800	4.55	2,640	5.15	3,720
6	5.6	4,770	5.05	3,520	6.15	6,140	4.85	3,140	4.5	2,570	5.15	3,720
8	5.35	4,160	5.1	3,620	5.95	5,640	4.85	3,140	4.45	2,500	5.1	3,620
10	5.25	3,940	5.6	4,770	5.8	5,270	5.15	3,720	4.4	2,430	4.95	3,320
N	5.15	3,720	6.5	7,020	5.6	4,770	5.2	3,830	4.35	2,360	4.85	3,140
2	5.05	3,520	6.9	8,050	5.4	4,280	5.05	3,520	4.35	2,360	4.9	3,230
4	5.1	3,620	6.9	8,050	5.05	3,520	4.95	3,320	4.35	2,360	5.1	3,620
6	5.15	3,720	6.4	6,770	5.25	3,940	4.9	3,230	4.35	2,360	5.2	3,830
8	5.2	3,830	6.4	6,770	5.2	3,830	4.85	3,140	4.4	2,430	5.25	3,940
10	5.1	3,620	6.4	6,770	5.65	4,900	4.80	3,050	4.45	2,500	5.25	3,940
M	5.1	3,620	6.3	6,520	5.4	4,280	4.75	2,960	4.65	2,800	5.15	3,720

*Mean for the day.
†Mean for 12-hour period.

Deerfield River near Shelburne Falls, Mass.

Location.- Lat. 42°34'15", long. 72°42'35", at plant No. 2 of New England Power Company, 3.1 miles below Shelburne Falls, Franklin County.
Drainage area.- 500 square miles; net, exclusive of drainage area above Harriman Reservoir, 316 square miles.
Stage-discharge relation.- Discharge determined by adding flow over dam to flow through wheels.
Maxima.- 1936: Discharge, 52,500 second-feet 1 p.m. Mar. 18.
Remarks.- Records furnished by New England Power Company. Flood run-off affected by storage in Somerset and Harriman (formerly called Davis Bridge) Reservoirs (capacity, 7,550,000,000 cubic feet). Monthly discharge table corrected for effect of storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	566	167	2,260	11	462	1,530	2,020	21	480	9,530	850
2	260	454	2,040	12	599	12,800	1,900	22	372	7,920	1,760
3	355	692	2,650	13	616	9,100	1,680	23	165	5,060	1,620
4	610	815	1,810	14	668	3,480	1,850	24	307	3,110	1,440
5	802	852	1,380	15	425	1,850	2,110	25	722	4,150	1,090
6	777	664	5,800	16	236	1,800	2,540	26	721	3,590	760
7	743	494	8,150	17	270	4,590	2,750	27	788	4,950	780
8	642	218	3,550	18	542	32,400	1,810	28	744	8,200	980
9	324	288	2,450	19	540	16,400	950	29	532	5,000	870
10	312	880	2,020	20	493	7,940	800	30		3,740	1,110
								31		3,380	
Mean monthly discharge, in second-feet (observed)									520	5,033	2,509
Mean monthly discharge, in second-feet (corrected)									272	6,910	2,244
Run-off, in inches (corrected)									0.59	15.91	5.01

Ware River at Cold Brook, Mass.

Location.- Lat. 42°23'30", long. 72°3'40", just above dam at Ware River intake works, 0.8 mile west of Cold Brook, Worcester County. Zero of gage is 651.35 feet above mean sea level and 657.0 feet above Boston City datum.

Drainage area.- 96.8 square miles (revised).

Gage-height record.- Water-stage recorder graph. Gage heights are given to hundredths. Add 600 to published figures to convert to Boston City datum.

Stage-discharge relation.- Affected by ice Mar. 13-18. Discharge determined from flow over dam, through Venturi meters and sluices. No flow over dam below a gage height of 57.00 feet.

Maxima.- 1936: Discharge, 5,990 second-feet 11 a.m. Mar. 19 (gage height, 61.35 feet).
1928-35: Maximum stage occurred Apr. 1 or 2, 1932 (stage and discharge not determined).

Remarks.- Flood run-off not materially affected by storage. Mean daily diversions for Boston water supply (included in discharge records): Mar. 11, 94 second-feet; Mar. 12, 987 second-feet; Mar. 13, 1,572 second-feet; Mar. 14, 556 second-feet; Mar. 18, 8 second-feet. Records computed from basic data furnished by Metropolitan District Water Supply Commission.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	98	106	456	11	78	230	504	21	124	2,110	274
2	91	103	415	12	78	1,130	536	22	121	1,650	272
3	86	100	518	13	77	2,130	518	23	114	1,300	254
4	86	101	548	14	76	1,910	459	24	109	991	228
5	89	116	495	15	76	1,500	412	25	105	816	208
6	89	121	560	16	75	1,180	425	26	103	699	190
7	88	118	800	17	87	1,170	419	27	106	642	192
8	84	114	754	18	106	2,610	376	28	110	804	181
9	79	109	609	19	115	5,600	331	29	108	775	173
10	78	129	528	20	122	3,510	299	30		636	167
								31		540	
Mean monthly discharge, in second-feet									95.1	1,066	403
Run-off, in inches									1.06	12.68	4.64

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	55.69	114	55.65	110	55.70	120	56.65	139	56.05	445	56.63	2,120
4	55.68	113	55.65	109	55.72	121	56.80	141	56.06	563	56.55	2,090
6	55.68	112	55.64	108	55.73	122	56.99	142	56.06	680	57.05	2,110
8	55.67	111	55.64	108	55.74	124	57.12	512	56.07	835	57.07	2,120
10	55.65	110	55.63	108	55.75	125	56.12	259	56.20	982	57.08	2,120
N	55.65	111	55.63	108	55.78	128	55.94	210	56.12	1,190	57.12	2,000
2	55.65	112	55.63	108	55.80	131	56.03	217	56.75	1,280	58.48	2,070
4	55.65	112	55.63	109	55.94	133	56.03	236	56.35	1,470	58.47	2,250
6	55.65	112	55.64	111	56.05	135	56.03	259	56.26	1,920	58.49	2,280
8	55.65	112	55.66	114	56.19	136	56.03	270	56.48	1,340	58.51	2,240
10	55.65	112	55.68	115	56.33	137	56.04	301	56.75	1,980	58.51	2,190
M	55.65	111	55.69	118	56.50	138	56.04	367	56.55	1,890	58.52	2,160
	March 14		March 15		March 16		March 17		March 18		March 19	
2	58.53	2,100	58.81	1,730	58.57	1,270	58.40	1,130	58.58	1,320	61.18	5,600
4	58.40	2,080	58.76	1,640	58.54	1,230	58.39	1,130	58.60	1,360	61.27	5,810
6	58.27	2,010	58.72	1,600	58.52	1,200	58.39	1,130	58.64	1,410	61.28	5,840
8	58.05	1,900	58.68	1,520	58.49	1,180	58.39	1,130	58.71	1,510	61.30	5,890
10	58.06	1,900	58.65	1,450	58.47	1,160	58.39	1,130	58.74	1,540	61.34	5,980
N	58.85	1,040	58.62	1,410	58.46	1,160	58.39	1,130	59.08	2,000	61.31	5,930
2	59.07	1,950	58.61	1,410	58.45	1,160	58.40	1,160	59.42	2,520	61.26	5,770
4	59.06	1,990	58.61	1,400	58.43	1,160	58.43	1,180	59.76	3,020	61.22	5,730
6	58.96	2,050	58.61	1,410	58.43	1,160	58.45	1,200	60.18	3,760	61.17	5,590
8	58.93	1,980	58.59	1,400	58.42	1,150	58.49	1,230	60.47	4,260	60.95	5,190
10	58.89	1,910	58.62	1,360	58.41	1,150	58.52	1,260	60.83	4,960	60.86	5,010
M	58.86	1,830	58.60	1,310	58.40	1,140	58.56	1,290	61.05	5,400	60.72	4,720
	March 20		March 21		March 22		March 23		March 24		March 25	
2	60.59	4,480	59.40	2,440	58.96	1,800	58.67	1,450	58.40	1,100	58.19	867
4	60.46	4,230	59.33	2,340	58.93	1,780	58.65	1,420	58.38	1,080	58.18	857
6	60.33	4,000	59.26	2,240	58.91	1,750	58.63	1,390	58.36	1,050	58.17	846
8	60.23	3,840	59.20	2,140	58.88	1,730	58.60	1,350	58.34	1,030	58.16	836
10	60.14	3,660	59.15	2,070	58.86	1,690	58.58	1,320	58.32	1,010	58.15	825
N	60.01	3,430	59.12	2,040	58.83	1,660	58.55	1,280	58.30	986	58.15	825
2	59.91	3,270	59.10	2,020	58.81	1,640	58.53	1,260	58.28	965	58.13	803
4	59.80	3,070	59.07	1,960	58.79	1,600	58.51	1,230	58.26	943	58.12	793
6	59.72	2,940	59.05	1,940	58.77	1,570	58.49	1,210	58.24	921	58.12	793
8	59.63	2,800	59.03	1,910	58.74	1,550	58.46	1,170	58.23	911	58.11	782
10	59.55	2,660	59.01	1,890	58.72	1,530	58.44	1,150	58.21	889	58.10	771
M	59.47	2,540	58.98	1,860	58.70	1,490	58.42	1,120	58.20	879	58.09	761

Ware River at Ware, Mass.

Location.- Lat. 42°15'30", long. 72°14'13", at dam of Gilbert Company, in Ware, Hampshire County, 0.6 mile above mouth of Muddy Brook.
Drainage area.- 169 square miles.
Gage-height record.- Water-stage recorder graph except for periods noon Mar. 12 to 6 p.m. Mar. 14, 4 p.m. Mar. 17 to 6 p.m. Mar. 18, and 4 a.m. to noon Mar. 22, when it was based on shape of stage graphs at nearby stations, and for period 6 p.m. Mar. 18 to 11 a.m. Mar. 21, when it was based on hourly gage readings. Gage heights given to half tenths between 6.5 and 8.0 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Defined by current-meter measurements below 3,450 second-feet; extended to peak stage by study of flow characteristics at control section; verified by comparison of peak discharge and total run-off of flood with records at nearby stations.
Maxima.- 1936: Discharge, 9,520 second-feet 3 a.m. Mar. 19 (gage height, 13.10 feet).
Remarks.- Flood run-off affected by diversions and by natural storage. Discharge computed from data furnished by Metropolitan District Water Supply Commission.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	200	141	714	11	134	696	802	21	212	3,530	471
2	182	246	653	12	145	3,080	909	22	268	2,640	474
3	245	151	870	13	120	2,540	822	23	282	1,980	437
4	210	159	865	14	124	1,610	727	24	279	1,530	386
5	168	242	750	15	98	2,020	671	25	218	1,300	315
6	121	217	908	16	63	1,800	728	26	167	1,140	268
7	137	186	1,380	17	189	1,700	687	27	162	1,060	362
8	105	144	1,210	18	184	4,370	596	28	197	1,430	348
9	90	236	1,010	19	184	8,660	541	29	159	1,220	319
10	188	301	853	20	204	5,970	513	30		1,020	290
								31		842	
Mean monthly discharge, in second-feet									174	1,683	663
Run-off, in inches									1.11	11.48	4.37

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	4.88	126	4.99	168	4.66	56	5.46	412	6.65	1,350	8.7	3,840
4	4.88	126	5.00	173	4.85	116	5.49	431	6.75	1,450	8.4	3,500
6	4.92	140	5.02	182	4.98	164	5.52	451	6.9	1,600	8.3	3,380
8	5.02	182	5.36	353	5.38	364	5.77	621	7.3	2,020	7.95	2,980
10	4.93	143	5.27	303	5.30	320	5.68	558	7.9	2,720	7.65	2,620
N	4.88	126	5.24	287	5.34	342	5.67	551	8.4	3,280	7.5	2,440
2	4.89	129	5.25	292	5.37	358	5.72	586	8.8	3,750	7.4	2,320
4	4.91	136	5.25	292	5.41	382	6.04	818	9.0	4,000	7.25	2,140
6	4.92	140	5.04	191	5.37	358	6.02	802	9.25	4,300	7.1	1,960
8	4.95	151	5.21	272	5.43	394	6.11	874	9.3	4,350	7.0	1,840
10	4.97	159	5.25	292	5.45	406	6.20	951	9.2	4,220	6.95	1,780
M	4.98	164	4.55	30	5.36	353	6.6	1,300	8.9	3,880	6.9	1,720
	March 14		March 15		March 16		March 17		March 18		March 19	
2	6.9	1,720	6.9	1,720	7.1	1,960	6.8	1,610	6.95	1,780	13.0	9,390
4	6.85	1,660	7.05	1,900	7.1	1,960	6.85	1,660	6.95	1,780	13.0	9,390
6	6.85	1,660	7.1	1,960	7.15	2,020	6.85	1,660	7.05	1,900	13.0	9,390
8	6.8	1,610	7.15	2,020	7.1	1,960	6.85	1,660	7.2	2,080	13.0	9,390
10	6.8	1,610	7.15	2,020	6.85	1,660	6.85	1,660	7.45	2,380	12.8	9,120
N	6.8	1,610	7.2	2,080	6.95	1,780	6.9	1,720	7.9	2,920	12.6	8,850
2	6.75	1,560	7.3	2,200	6.95	1,780	6.9	1,720	8.7	3,840	12.5	8,720
4	6.75	1,560	7.3	2,200	6.95	1,780	6.9	1,720	9.6	4,940	12.3	8,440
6	6.75	1,560	7.25	2,140	6.9	1,720	6.9	1,720	10.4	5,960	12.1	8,180
8	6.75	1,560	7.25	2,140	6.85	1,660	6.9	1,720	11.5	7,390	11.9	7,910
10	6.75	1,560	7.1	1,960	6.85	1,660	6.95	1,780	12.3	8,440	11.8	7,780
M	6.85	1,660	7.1	1,960	6.85	1,660	6.95	1,780	12.7	8,980	11.5	7,390
	March 20		March 21		March 22		March 23		March 24		March 25	
2	11.4	7,260	9.1	4,320	7.95	2,980	7.35	2,260	6.85	1,660	6.6	1,390
4	11.3	7,130	8.9	4,080	7.9	2,920	7.3	2,200	6.85	1,660	6.55	1,340
6	11.1	6,870	8.8	3,960	7.85	2,860	7.25	2,140	6.85	1,660	6.6	1,390
8	11.0	6,740	8.7	3,840	7.8	2,800	7.3	2,200	6.9	1,720	6.6	1,390
10	10.8	6,480	8.6	3,730	7.75	2,740	7.2	2,080	6.8	1,610	6.55	1,340
N	10.6	6,220	8.3	3,380	7.7	2,680	7.15	2,020	6.75	1,560	6.50	1,290
2	10.3	5,830	8.2	3,270	7.65	2,620	7.1	1,960	6.7	1,500	6.50	1,290
4	10.1	5,570	8.2	3,270	7.6	2,560	7.05	1,900	6.65	1,440	6.50	1,290
6	9.9	5,320	8.2	3,270	7.55	2,500	7.0	1,840	6.55	1,340	6.47	1,260
8	9.7	5,060	8.1	3,160	7.45	2,380	7.0	1,840	6.65	1,440	6.49	1,280
10	9.4	4,690	8.0	3,040	7.4	2,320	6.85	1,660	6.6	1,390	6.41	1,200
M	9.2	4,440	8.0	3,040	7.4	2,320	6.85	1,660	6.55	1,340	6.38	1,170

Supplemental records.- Mar. 19, 3 a.m., 13.10 ft., 9,520 sec.-ft.

Ware River at Gibbs Crossing, Mass.

Location.- Lat. 42°14'5", long. 72°16'45", half a mile above Gibbs Crossing, Hampshire County, 1 1/4 miles above mouth of Beaver Brook, and 2 1/2 miles southwest of Ware. Zero of gage is 379.79 feet above mean sea level.
Drainage area.- 199 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights given to half tenths between 3.6 and 4.5 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 8. Defined by current-meter measurements below 9,220 second-feet; verified by comparison of peak discharge and total run-off of flood with records for nearby stations.
Maxima.- 1936: Discharge, 11,200 second-feet 6 a.m. Mar. 19 (gage height, 12.04 feet).
1912-35: Discharge, 2,960 second-feet Sept. 17, 1933 (gage height, 6.48 feet).
Remarks.- Flood run-off affected by diversions and natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	220	165	843	11	150	849	983	21	230	3,380	592
2	205	265	772	12	160	3,340	1,150	22	285	2,760	604
3	260	170	1,070	13	135	2,830	1,060	23	295	2,140	563
4	225	175	1,100	14	140	1,800	902	24	295	1,680	511
5	190	260	918	15	115	1,980	826	25	240	1,490	414
6	140	240	1,140	16	85	1,960	925	26	180	1,380	358
7	150	210	1,660	17	205	1,830	879	27	180	1,270	469
8	125	175	1,480	18	200	4,240	738	28	215	1,750	451
9	110	293	1,230	19	200	9,890	675	29	175	1,660	419
10	205	400	1,050	20	220	5,940	641	30		1,360	377
								31		1,090	
Mean monthly discharge, in second-feet									191	1,838	827
Run-off, in inches									1.04	10.65	4.64

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	2.33	-	2.48	212	2.34	158	2.95	520	4.6	1,820	7.8	3,870
4	2.36	-	2.48	212	2.30	145	2.95	520	4.9	2,000	7.5	3,600
6	2.47	-	2.48	212	2.44	195	3.04	592	5.7	2,480	7.3	3,460
8	2.61	-	2.79	398	2.90	480	3.29	806	6.4	2,900	7.0	3,260
10	2.66	-	2.78	392	2.84	435	3.21	734	6.9	3,200	6.7	3,080
N	2.47	*175	2.72	353	2.86	450	3.22	743	7.3	3,460	6.4	2,900
2	2.47	-	2.65	308	2.81	412	3.25	770	7.6	3,680	6.1	2,720
4	2.47	-	2.68	327	2.96	528	3.55	1,060	7.9	3,980	5.8	2,540
6	2.47	-	2.58	264	2.95	520	3.56	1,060	8.1	4,220	5.5	2,360
8	2.47	-	2.63	294	2.96	528	3.65	1,140	8.1	4,220	5.2	2,180
10	2.47	-	2.67	320	2.96	528	3.75	1,230	8.0	4,100	5.0	2,060
M	2.47	-	2.48	212	2.88	465	4.2	1,550	7.9	3,980	4.8	1,940
	March 14		March 15		March 16		March 17		March 18		March 19	
2	4.6	1,820	4.6	1,820	5.0	2,060	4.6	1,820	4.8	1,940	11.6	10,400
4	4.6	1,820	4.7	1,880	5.0	2,060	4.6	1,820	4.8	1,940	11.8	10,800
6	4.6	1,820	4.9	2,000	5.0	2,060	4.6	1,820	4.9	2,000	12.0	11,200
8	4.6	1,820	5.0	2,060	5.0	2,060	4.6	1,820	5.1	2,120	11.9	11,000
10	4.6	1,820	5.0	2,060	5.0	2,060	4.6	1,820	5.4	2,300	11.8	10,800
N	4.6	1,820	5.0	2,060	4.8	1,940	4.6	1,820	5.9	2,600	11.6	10,400
2	4.6	1,820	4.9	2,000	4.8	1,940	4.6	1,820	7.3	3,460	11.4	9,950
4	4.6	1,820	4.8	1,940	4.8	1,940	4.6	1,820	8.1	4,220	11.2	9,550
6	4.6	1,820	4.7	1,880	4.7	1,880	4.6	1,820	9.0	5,500	11.0	9,150
8	4.5	1,760	4.8	1,940	4.7	1,880	4.6	1,820	9.8	6,850	10.8	8,750
10	4.5	1,760	5.0	2,060	4.6	1,820	4.7	1,880	10.6	8,360	10.7	8,550
M	4.5	1,760	5.0	2,060	4.6	1,820	4.7	1,880	11.2	9,550	10.5	8,170
	March 20		March 21		March 22		March 23		March 24		March 25	
2	10.3	7,790	7.8	3,870	6.7	3,080	5.6	2,420	4.6	1,820	4.15	1,520
4	10.1	7,410	7.6	3,680	6.6	3,020	5.5	2,360	4.6	1,820	4.15	1,520
6	9.9	7,030	7.4	3,530	6.5	2,960	5.4	2,300	4.6	1,820	4.15	1,520
8	9.8	6,850	7.3	3,460	6.4	2,900	5.4	2,300	4.6	1,820	4.2	1,550
10	9.6	6,490	7.2	3,390	6.3	2,840	5.3	2,240	4.6	1,820	4.2	1,550
N	9.4	6,150	7.1	3,320	6.2	2,780	5.2	2,180	4.5	1,760	4.15	1,520
2	9.2	5,820	7.1	3,320	6.1	2,720	5.1	2,120	4.4	1,690	4.1	1,480
4	9.0	5,500	7.0	3,260	6.0	2,660	5.0	2,060	4.2	1,550	4.1	1,480
6	8.7	5,050	6.9	3,200	6.0	2,660	4.9	2,000	4.15	1,520	4.05	1,440
8	8.5	4,760	6.9	3,200	5.8	2,540	4.8	1,940	4.15	1,520	4.05	1,440
10	8.2	4,350	6.8	3,140	5.7	2,480	4.8	1,940	4.2	1,550	4.05	1,440
M	8.0	4,100	6.8	3,140	5.6	2,420	4.6	1,820	4.15	1,520	4.0	1,410

*Mean for the day.

Chicopee River at Biroham Bend, Mass.

Location.- Lat. 42°9'30", long. 72°32'30", at dam at Bircham Bend, Hampden County, three-quarters of a mile below Higher Brook, and 5½ miles above mouth.
Drainage area.- 703 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights given to half tenths between 4.3 and 6.4 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Discharge computed from flow over dam and through wheels. No flow over dam when gage height is less than 2.15 feet.
Maxima.- 1936: Discharge, 20,400 second-feet 8 p.m. to midnight Mar. 19 (gage height, 9.87 feet).
1928-35: Discharge, 6,790 second-feet Apr. 20, 1933 (gage height, 5.59 feet).
Remarks.- Flood run-off affected by diversions and natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	505	708	3,300	11	692	2,280	3,460	21	753	13,800	2,240
2	436	1,020	3,010	12	591	9,540	3,800	22	749	11,300	2,060
3	768	864	3,520	13	577	12,400	3,670	23	654	9,350	1,930
4	684	763	3,490	14	561	8,920	3,200	24	934	7,210	1,800
5	574	1,050	3,190	15	363	7,860	3,000	25	800	5,850	1,370
6	588	1,020	3,830	16	368	7,260	3,070	26	690	5,200	1,440
7	576	784	4,980	17	793	6,390	2,890	27	792	4,600	1,680
8	420	764	4,740	18	708	8,190	2,580	28	866	5,490	1,400
9	382	1,100	4,140	19	757	18,200	2,420	29	742	5,200	1,390
10	728	1,120	3,580	20	781	19,200	2,280	30		4,480	1,220
								31		3,860	
Mean monthly discharge, in second-feet									649	5,993	2,823
Run-off, in inches									1.00	9.82	4.48

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	1.95	491	2.63	901	1.85	491	2.88	1,360	4.3	3,930	7.4	13,500
4	2.18	973	2.64	909	2.18	973	3.22	1,790	4.5	4,390	7.3	13,100
6	2.14	973	2.66	925	1.88	491	3.24	1,820	5.0	5,600	7.2	12,700
8	2.18	822	2.53	1,060	2.20	982	3.38	2,040	5.5	6,920	7.2	12,800
10	2.13	884	2.85	1,320	2.20	982	3.59	2,380	5.9	8,110	7.1	12,400
N	1.80	726	2.89	1,370	2.70	1,180	3.69	2,550	6.3	9,480	7.1	12,400
2	1.81	726	2.90	1,380	3.05	1,550	3.70	2,570	6.6	10,500	7.1	12,400
4	1.83	726	2.91	1,390	3.03	1,530	3.72	2,600	7.6	14,200	7.0	12,000
6	1.88	726	2.48	1,040	2.63	1,130	3.60	2,400	7.6	14,200	6.9	11,600
8	2.03	726	2.30	990	2.96	1,450	3.73	2,620	7.5	13,900	6.8	11,300
10	2.48	785	2.30	990	3.01	1,500	3.86	2,850	7.6	14,200	6.7	10,900
M	2.63	871	2.28	987	2.60	1,100	4.07	3,230	7.5	13,900	6.6	10,600
	March 14		March 15		March 16		March 17		March 18		March 19	
2	6.5	10,200	5.9	8,160	5.7	7,560	5.2	6,110	5.15	5,980	8.4	14,500
4	6.3	9,510	5.85	8,010	5.7	7,560	5.2	6,110	5.2	6,110	8.7	15,600
6	6.25	9,340	5.8	7,860	5.6	7,260	5.25	6,250	5.4	6,260	9.0	16,800
8	6.25	9,340	5.8	7,860	5.65	7,410	5.35	6,540	5.5	6,870	9.2	17,600
10	6.2	9,160	5.75	7,710	5.8	7,860	5.45	6,820	5.6	7,250	9.3	18,000
N	6.15	8,980	5.75	7,710	5.7	7,560	5.4	6,680	5.7	7,550	9.5	18,800
2	6.05	8,640	5.75	7,710	5.6	7,260	5.35	6,540	5.85	8,000	9.7	19,600
4	5.9	8,160	5.75	7,710	5.55	7,120	5.3	6,390	6.15	8,970	9.8	20,000
6	5.9	8,160	5.7	7,560	5.4	6,680	5.25	6,250	6.5	10,200	9.8	20,000
8	5.9	8,160	5.7	7,560	5.45	6,820	5.25	6,250	7.0	11,900	9.9	20,400
10	5.9	8,160	5.75	7,710	5.4	6,680	5.25	6,250	7.5	11,200	9.9	20,400
M	5.9	8,160	5.7	7,560	5.35	6,540	5.2	6,110	7.9	12,600	9.9	20,400
	March 20		March 21		March 22		March 23		March 24		March 25	
2	9.8	20,000	8.8	16,000	7.5	11,200	6.6	10,600	5.7	7,580	5.05	5,710
4	9.8	20,000	8.7	15,600	7.4	10,900	6.4	9,880	5.7	7,580	5.05	5,710
6	9.8	20,000	8.6	15,200	7.3	10,600	6.4	9,880	5.7	7,580	5.1	5,840
8	9.7	19,600	8.4	14,500	7.2	10,200	6.4	9,880	5.75	7,730	5.15	5,980
10	9.6	19,200	8.3	14,100	7.2	12,800	6.4	9,880	5.7	7,580	5.25	6,250
N	9.6	19,200	8.1	13,300	7.1	12,400	6.35	9,700	5.65	7,430	5.2	6,110
2	9.5	18,800	8.0	13,000	7.0	12,000	6.25	9,360	5.55	7,140	5.1	5,840
4	9.5	18,800	7.9	12,600	6.9	11,600	6.15	9,000	5.5	6,990	5.05	5,710
6	9.4	18,400	7.8	12,300	6.8	11,300	6.0	8,480	5.4	6,700	5.0	5,580
8	9.3	18,000	7.8	12,300	6.8	11,300	6.0	8,480	5.4	6,700	5.05	5,710
10	9.2	17,600	7.6	11,600	6.7	10,900	5.95	8,330	5.25	6,270	5.0	5,580
M	9.0	16,800	7.6	11,600	6.6	10,600	5.9	8,180	5.2	6,130	4.95	5,460

Swift River at West Ware, Mass.

Location.- Lat. 42°16'0", long. 72°20'5", 1,000 feet below dam at West Ware, Hampshire County, and 3 miles below mouth of Swift River, West Branch. Zero of gage is 365.18 feet above mean sea level.
Drainage area.- 186 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights given to half tenths between 3.50 and 5.00 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1-14, 18-21, 23, 24, 29, Mar. 2, 7, 8. Defined by current-meter measurements below 6,600 second-feet; verified by drainage-area comparison of instantaneous and total yield of flood with records for nearby streams.
Maxima.- 1936: Discharge, 7,590 second-feet 6 p.m. Mar. 19 (gage height, 15.00 feet).
1910-35: Discharge, 2,390 second-feet Apr. 7, 1923 (gage height, 9.08 feet).
Remarks.- Flood run-off affected by some artificial and natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	205	196	902	11	150	404	1,040	21	195	4,020	618
2	195	190	800	12	150	1,140	1,080	22	196	2,810	586
3	185	188	902	13	150	2,680	1,080	23	190	2,320	552
4	180	188	972	14	147	3,000	972	24	180	1,820	520
5	185	213	937	15	147	2,420	902	25	176	1,470	486
6	180	213	1,040	16	147	1,860	902	26	176	1,260	454
7	170	210	1,370	17	153	1,700	868	27	183	1,150	438
8	160	208	1,520	18	165	2,850	784	28	196	1,330	422
9	155	210	1,330	19	175	6,850	734	29	198	1,370	406
10	155	269	1,150	20	190	6,480	668	30		1,220	397
								31		1,040	
Mean monthly discharge, in second-feet									174	1,654	828
Run-off, in inches									1.01	10.25	4.96

Gage-height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	3.02	-	2.89	206	2.98	228	3.36	324	4.65	685	7.5	1,720
4	3.01	-	2.89	206	2.99	230	3.39	331	4.9	760	8.1	1,980
6	3.11	-	2.89	206	3.00	233	3.41	334	5.6	970	9.2	2,540
8	3.08	-	2.89	206	3.01	236	3.45	347	5.7	1,000	9.2	2,540
10	2.78	-	2.89	206	3.04	243	3.45	347	6.0	1,090	9.3	2,600
N	2.78	*208	2.89	206	3.08	253	3.50	360	6.2	1,150	9.7	2,840
2	2.96	-	2.89	206	3.14	268	3.6	386	6.4	1,220	9.8	2,900
4	2.91	-	2.90	208	3.21	286	3.7	412	6.5	1,260	9.8	2,900
6	2.91	-	2.91	210	3.27	300	3.8	440	6.6	1,290	9.9	2,960
8	2.90	-	2.93	216	3.31	311	3.9	468	6.7	1,320	10.0	3,020
10	2.90	-	2.95	220	3.34	318	4.05	510	7.1	1,460	10.1	3,080
M	2.89	-	2.97	226	3.35	321	4.35	595	7.0	1,430	10.1	3,080
	March 14		March 15		March 16		March 17		March 18		March 19	
2	10.1	3,080	9.6	2,780	8.3	2,080	7.4	1,680	7.8	1,840	12.6	5,110
4	10.1	3,080	9.5	2,720	8.2	2,030	7.4	1,680	7.9	1,880	13.2	5,700
6	10.1	3,080	9.3	2,600	8.1	1,980	7.4	1,680	8.0	1,930	13.7	6,200
8	10.0	3,020	9.2	2,540	8.0	1,930	7.3	1,640	8.2	2,030	14.0	6,500
10	10.0	3,020	9.1	2,480	7.9	1,880	7.3	1,640	8.5	2,180	14.3	6,820
N	10.0	3,020	9.0	2,430	7.8	1,840	7.3	1,640	8.9	2,380	14.5	7,040
2	10.0	3,020	8.9	2,380	7.7	1,800	7.4	1,680	9.5	2,720	14.8	7,370
4	10.0	3,020	8.8	2,330	7.6	1,760	7.4	1,680	10.1	3,080	14.9	7,480
6	10.0	3,020	8.7	2,280	7.6	1,760	7.5	1,720	10.6	3,430	15.0	7,590
8	9.9	2,960	8.6	2,230	7.6	1,760	7.6	1,760	11.0	3,720	14.9	7,480
10	9.8	2,900	8.5	2,180	7.5	1,720	7.6	1,760	11.6	4,210	14.9	7,480
M	9.7	2,840	8.4	2,130	7.5	1,720	7.7	1,800	12.2	4,750	14.9	7,480
	March 20		March 21		March 22		March 23		March 24		March 25	
2	14.9	7,480	12.6	5,110	10.1	3,080	9.2	2,540	8.2	2,030	7.1	1,560
4	14.8	7,370	12.3	4,840	10.0	3,020	9.1	2,480	8.1	1,980	7.1	1,560
6	14.7	7,260	12.1	4,660	9.9	2,960	9.0	2,430	8.1	1,980	7.0	1,520
8	14.5	7,040	11.8	4,390	9.8	2,900	9.0	2,430	8.0	1,930	7.0	1,520
10	14.3	6,820	11.6	4,210	9.8	2,900	8.9	2,380	7.8	1,840	6.9	1,480
N	14.1	6,600	11.4	4,040	9.7	2,840	8.8	2,330	7.8	1,840	6.8	1,440
2	13.9	6,400	11.2	3,880	9.6	2,780	8.8	2,330	7.7	1,800	6.8	1,440
4	13.7	6,200	11.0	3,720	9.6	2,780	8.7	2,280	7.6	1,760	6.8	1,440
6	13.5	6,000	10.8	3,570	9.5	2,720	8.6	2,230	7.5	1,720	6.7	1,410
8	13.3	5,800	10.6	3,430	9.4	2,660	8.5	2,180	7.4	1,680	6.6	1,370
10	13.0	5,500	10.4	3,290	9.3	2,600	8.4	2,130	7.3	1,640	6.6	1,370
M	12.8	5,300	10.2	3,150	9.2	2,540	8.3	2,080	7.2	1,600	6.5	1,330

*Mean for the day.

Quaboag River at West Brimfield, Mass.

Location.- Lat. 42°10'30", long. 72°15'50", at highway bridge at West Brimfield, Hampden County, a third of a mile above mouth of Blodgett Mill Brook. Zero of gage is 377.36 feet above mean sea level.
Drainage area.- 151 square miles.
Gage-height record.- Water-stage recorder graph except for period Feb. 1 to 16, when there was no record. Gage heights given to half tenths between 3.9 and 5.7 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to noon Mar. 12. Defined by current-meter measurements below 1,840 second-feet; extended to peak stage by slope-area determination of flood flow (n, 0.06); verified by comparison of peak discharge and total run-off of flood with records for nearby streams.
Maxima.- 1936: Discharge, 3,620 second-feet 6:30 p.m. Mar. 18 (gage height, 8.62 feet). Maximum gage height, 8.75 feet 4:30 a.m. Mar. 12 (ice jam).
1909-35: Discharge, 1,980 second-feet Mar. 17, 1920 (gage height, 5.30 feet).

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	140	155	925	11	127	500	775	21	160	3,140	504
2	135	150	875	12	124	2,100	800	22	165	2,690	474
3	140	145	900	13	123	2,310	750	23	160	2,310	454
4	135	150	825	14	122	2,220	705	24	150	1,990	422
5	137	170	800	15	120	2,050	705	25	143	1,750	398
6	130	165	875	16	110	1,860	660	26	140	1,500	379
7	132	160	850	17	120	1,670	615	27	150	1,380	368
8	132	160	800	18	130	2,580	592	28	160	1,360	342
9	127	175	775	19	145	3,510	561	29	155	1,240	324
10	129	240	775	20	155	3,410	530	30		1,130	306
								31		1,020	
Mean monthly discharge, in second-feet									138	1,399	635
Run-off, in inches									0.99	10.68	4.70

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	3.76	-	3.86	-	3.81	-	4.5	-	6.6	1,780	6.8	2,370
4	3.86	-	3.85	-	3.90	-	4.45	-	7.1	1,920	6.8	2,370
6	3.84	-	3.84	-	4.0	-	4.45	-	6.8	1,980	6.7	2,300
8	3.84	-	3.84	-	3.95	-	4.45	-	7.0	2,040	6.7	2,300
10	3.85	-	4.1	-	4.15	-	4.55	-	6.8	2,110	6.7	2,300
N	3.95	*160	3.59	*175	3.75	*240	4.75	*500	6.6	2,180	6.7	2,300
2	4.2	-	3.72	-	4.05	-	4.7	-	6.5	2,180	6.7	2,300
4	4.1	-	4.0	-	4.3	-	5.05	-	6.6	2,240	6.7	2,300
6	3.95	-	3.73	-	4.4	-	5.2	-	6.6	2,240	6.7	2,300
8	3.90	-	4.05	-	4.65	-	5.05	-	6.6	2,240	6.7	2,300
10	3.89	-	4.0	-	4.55	-	5.3	-	6.6	2,240	6.7	2,300
M	3.87	-	3.95	-	4.55	-	6.3	-	6.8	2,370	6.7	2,300
	March 14		March 15		March 16		March 17		March 18		March 19	
2	6.7	2,300	6.5	2,180	6.2	1,980	5.8	1,720	5.65	1,620	8.2	3,330
4	6.6	2,240	6.4	2,110	6.1	1,920	5.8	1,720	5.7	1,660	8.3	3,400
6	6.6	2,240	6.4	2,110	6.1	1,920	5.8	1,720	5.8	1,720	8.4	3,480
8	6.6	2,240	6.4	2,110	6.1	1,920	5.8	1,720	6.0	1,850	8.6	3,550
10	6.6	2,240	6.3	2,040	6.0	1,850	5.7	1,660	6.7	2,300	8.5	3,550
N	6.6	2,240	6.3	2,040	6.0	1,850	5.7	1,660	7.6	2,910	8.5	3,550
2	6.6	2,240	6.3	2,040	6.0	1,850	5.7	1,660	7.9	3,120	8.6	3,550
4	6.6	2,240	6.3	2,040	6.0	1,850	5.7	1,660	8.0	3,190	8.5	3,550
6	6.5	2,180	6.3	2,040	5.9	1,780	5.7	1,660	8.5	3,550	8.5	3,550
8	6.5	2,180	6.2	1,980	5.9	1,780	5.7	1,660	8.2	3,330	8.5	3,560
10	6.5	2,180	6.2	1,980	5.9	1,780	5.65	1,620	8.2	3,330	8.5	3,550
M	6.5	2,180	6.2	1,980	5.9	1,780	5.65	1,620	8.2	3,330	8.5	3,550
	March 20		March 21		March 22		March 23		March 24		March 25	
2	8.5	3,650	8.0	3,190	7.7	2,980	6.9	2,440	6.4	2,110	6.0	1,860
4	8.5	3,550	8.0	3,190	7.6	2,910	6.9	2,440	6.4	2,110	6.0	1,860
6	8.4	3,480	8.0	3,190	7.5	2,840	6.8	2,370	6.4	2,110	5.9	1,800
8	8.4	3,480	8.0	3,190	7.5	2,840	6.8	2,370	6.3	2,040	5.9	1,800
10	8.4	3,480	8.0	3,190	7.4	2,770	6.8	2,370	6.3	2,040	5.9	1,800
N	8.3	3,400	8.0	3,190	7.3	2,700	6.7	2,300	6.2	1,980	5.8	1,740
2	8.3	3,400	8.0	3,190	7.2	2,630	6.7	2,300	6.2	1,980	5.8	1,740
4	8.3	3,400	8.0	3,190	7.1	2,560	6.7	2,300	6.1	1,920	5.8	1,740
6	8.2	3,330	7.9	3,120	7.0	2,500	6.6	2,240	6.1	1,920	5.7	1,680
8	8.2	3,330	7.8	3,050	7.0	2,500	6.6	2,240	6.1	1,920	5.7	1,680
10	8.1	3,260	7.8	3,050	7.0	2,500	6.5	2,180	6.0	1,860	5.7	1,680
M	8.1	3,260	7.7	2,980	7.0	2,500	6.5	2,180	6.0	1,860	5.6	1,620

*Mean for the day.

Westfield River at Knightville, Mass.

Location.- Lat. 42°17'25", long. 72°51'45", at Knightville, Hampshire County, three-quarters of a mile above mouth of Pond Brook and 2 2/3 miles above mouth of Middle Branch of Westfield River. Prior to Jan. 11, 1935, chain gage at a different datum on Pitcher Bridge a third of a mile upstream. Zero of gage is 471.82 feet above mean sea level.

Drainage area.- 162 square miles.

Gage-height record.- Water-stage recorder graph except for period 10 a.m. Mar. 18 to 3:30 p.m. Apr. 6, when a graph was drawn based on flood marks and shape of stage graphs at nearby stations. Gage heights given to half tenths between 4.70 and 6.30 feet; hundredths below and tenths above these limits.

Stage-discharge relation.- Affected by ice Feb. 1-17, 28, Mar. 12, 13. Defined by current-meter measurements below 3,640 second-feet; extended to peak stage by slope-area determination of flood flow (n,0.035); verified by drainage-area comparison of instantaneous and total yield of flood with records for nearby streams.

Maxima.- 1936: Discharge, 25,700 second-feet noon Mar. 18 (gage height, 24.07 feet).
1909-35: Discharge, about 16,000 second-feet Nov. 3, 1927 (gage height, 15.2 feet, former site and datum).

Remarks.- Flood run-off not materially affected by artificial or natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	135	150	520	11	115	750	920	21	139	4,630	425
2	130	144	600	12	115	6,800	970	22	134	2,310	465
3	130	144	950	13	115	3,900	761	23	139	1,480	374
4	125	146	650	14	110	1,710	627	24	132	1,020	340
5	125	214	500	15	110	1,270	787	25	127	1,490	305
6	120	196	2,200	16	110	1,470	935	26	134	1,100	309
7	120	169	1,600	17	115	2,310	794	27	174	1,700	301
8	115	152	1,000	18	132	13,400	604	28	190	2,500	261
9	115	162	768	19	182	7,590	515	29	169	1,600	261
10	125	277	794	20	165	3,020	460	30		1,000	264
								31		750	
Mean monthly discharge, in second-feet									133	2,050	675
Run-off, in inches									0.89	14.64	4.65

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	2.71	157	2.70	155	2.80	179	4.25	-	5.4	1,650	9.0	6,000
4	2.71	157	2.71	157	2.81	182	4.44	*640	8.0	4,200	8.7	5,640
6	2.70	155	2.76	169	2.88	199	4.52	-	9.3	6,360	8.2	5,040
8	2.70	155	2.74	165	2.92	209	4.59	-	10.5	7,800	7.8	4,560
10	2.68	150	2.73	162	2.94	214	4.65	*700	11.4	8,880	7.3	3,960
N	2.68	150	2.70	155	2.99	227	4.70	-	11.0	8,400	7.1	3,720
2	2.62	137	2.71	157	3.10	257	4.70	-	10.8	8,160	6.9	3,480
4	2.66	146	2.70	155	3.28	309	5.3	*780	10.7	8,040	6.8	3,360
6	2.67	148	2.72	160	3.47	378	5.4	-	10.5	7,800	6.6	3,130
8	2.69	153	2.74	165	3.60	430	4.5	-	10.2	7,440	6.4	2,910
10	2.70	155	2.74	165	3.73	495	4.75	*900	9.7	6,840	6.1	2,580
M	2.70	155	2.79	177	3.85	555	4.95	-	9.3	6,360	5.95	2,420
	March 14		March 15		March 16		March 17		March 18		March 19	
2	5.8	2,250	4.85	1,300	5.15	1,600	5.2	1,650	7.5	4,200	11.1	8,520
4	5.65	2,100	4.8	1,260	5.05	1,500	5.2	1,650	8.5	5,400	10.7	8,040
6	5.5	1,950	4.7	1,170	5.0	1,450	5.2	1,650	11.0	8,400	10.6	7,920
8	5.4	1,850	4.65	1,120	4.9	1,350	5.3	1,750	15.1	13,600	10.8	8,160
10	5.3	1,750	4.60	1,080	4.85	1,300	5.35	1,800	20.0	20,000	11.2	8,640
N	5.2	1,650	4.59	1,070	4.8	1,260	5.45	1,900	24.1	25,700	11.4	8,880
2	5.15	1,600	4.59	1,070	4.8	1,260	5.55	2,000	21.6	22,200	11.0	8,400
4	5.1	1,550	4.70	1,170	4.9	1,350	5.85	2,300	16.9	16,000	10.6	7,920
6	5.1	1,550	4.85	1,300	5.05	1,500	6.2	2,690	14.0	12,200	10.1	7,320
8	5.05	1,500	5.05	1,500	5.2	1,650	6.6	3,130	14.4	12,700	9.4	6,480
10	5.0	1,450	5.15	1,600	5.25	1,700	6.9	3,480	12.8	10,600	8.8	5,760
M	4.9	1,350	5.2	1,650	5.25	1,700	7.1	3,720	11.7	9,240	8.2	5,040
	March 20		March 21		March 22		March 23		March 24		March 25	
2	7.8	4,560	5.9	2,360	6.8	3,360	5.3	1,750	4.70	1,170	4.70	1,170
4	7.4	4,080	5.9	2,360	6.6	3,130	5.2	1,650	4.70	1,170	5.1	1,550
6	7.1	3,720	6.1	2,580	6.3	2,800	5.2	1,650	4.65	1,120	5.3	1,750
8	6.8	3,360	6.6	3,130	6.0	2,470	5.1	1,550	4.60	1,080	5.4	1,850
10	6.5	3,020	7.8	4,560	5.9	2,360	5.1	1,550	4.55	1,040	5.3	1,750
N	6.2	2,690	9.9	7,080	5.7	2,150	5.1	1,550	4.50	1,000	5.2	1,650
2	6.05	2,520	10.3	7,560	5.6	2,050	5.0	1,450	4.50	1,000	5.1	1,550
4	5.95	2,420	9.5	6,600	5.5	1,950	4.9	1,350	4.45	960	5.1	1,550
6	5.95	2,420	8.8	5,760	5.5	1,950	4.9	1,350	4.40	920	5.0	1,450
8	6.0	2,470	8.3	5,160	5.4	1,850	4.9	1,350	4.40	920	4.9	1,350
10	6.0	2,470	7.8	4,560	5.4	1,850	4.8	1,260	4.35	880	4.8	1,260
M	6.0	2,470	7.3	3,960	5.3	1,750	4.8	1,260	4.45	960	4.70	1,170

*Mean for 3-hour period.

Westfield River near Westfield, Mass.

Location.- Lat. 42°6'25", long. 72°42'5", 1 mile below mouth of Great Brook and 3 miles east of Westfield, Hampden County. Zero of gage is 98.25 feet above mean sea level.
Drainage area.- 497 square miles.
Gage-height record.- Water-stage recorder graph except for period 4 p.m. Mar. 11 to 8 a.m. Mar. 13, when it was based on flood marks and shape of stage graphs at nearby stations. Gage heights given to half tenths between 3.70 and 7.00 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to 18. Defined by current-meter measurements below 17,600 second-feet; extended to peak stage using determination of flood flow over dam (head, 9.00 feet; C, 3.60); verified by drainage-area comparison of instantaneous and total yield of flood with records for nearby streams.
Maxima.- 1936: Discharge, 48,200 second-feet 6 p.m. Mar. 18 (gage height, 27.20 feet).
1914-35: Discharge, 42,500 second-feet Nov. 4, 1927 (gage height, 25.41 feet).
Remarks.- Flood run-off affected by some artificial and natural storage; slightly affected by diversions.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	400	460	1,890	11	360	1,830	2,460	21	453	8,810	1,410
2	380	529	1,820	12	350	18,100	2,890	22	421	5,990	1,440
3	415	483	2,730	13	350	10,100	2,390	23	366	3,610	1,300
4	400	531	2,200	14	360	4,810	2,210	24	437	2,960	1,240
5	390	596	1,710	15	370	3,530	2,370	25	375	3,560	1,140
6	360	602	4,810	16	320	3,880	2,800	26	378	3,090	1,100
7	370	543	4,610	17	390	5,200	2,500	27	475	3,130	1,170
8	350	469	3,000	18	380	31,500	1,880	28	536	5,290	1,140
9	330	550	2,270	19	466	20,600	1,640	29	529	3,060	1,170
10	380	644	2,190	20	488	7,730	1,520	30		2,520	1,100
								31		2,270	
Mean monthly discharge, in second-feet									399	5,064	2,070
Run-off, in inches									0.87	11.76	4.64

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	4.10	420	4.33	538	4.28	510	4.9	880	11.6	8,720	15.0	14,900
4	4.12	430	4.28	510	4.30	520	5.0	940	13.8	12,500	14.5	13,900
6	4.27	505	4.26	500	4.32	532	5.05	972	15.0	14,900	14.0	12,900
8	4.31	526	4.25	495	4.30	520	5.2	1,070	16.3	17,600	13.4	11,800
10	4.23	485	4.24	490	4.30	520	5.4	1,200	17.8	21,100	12.7	10,600
N	4.07	405	4.35	550	4.35	550	5.6	1,340	18.6	23,600	12.3	9,910
2	4.00	370	4.47	622	4.47	622	5.85	1,520	18.7	23,400	11.8	9,060
4	4.18	460	4.52	652	4.60	700	6.0	1,640	18.4	22,600	11.5	8,550
6	4.26	500	4.49	634	4.70	760	6.5	2,050	17.5	20,400	11.2	8,070
8	4.32	532	4.37	562	4.70	760	7.0	2,530	16.6	18,300	11.0	7,750
10	4.23	485	4.32	532	4.8	820	7.6	3,270	16.3	17,600	10.7	7,270
M	4.28	510	4.29	515	4.95	910	8.8	4,570	15.6	16,200	10.4	6,800
	March 14		March 15		March 16		March 17		March 18		March 19	
2	10.0	6,200	8.2	3,840	8.5	4,200	8.6	4,320	11.3	8,230	23.0	35,100
4	9.8	5,920	8.1	3,720	8.4	4,080	8.6	4,320	11.9	9,230	21.3	30,200
6	9.5	5,500	8.0	3,600	8.4	4,080	8.6	4,320	13.4	11,800	19.4	25,100
8	9.3	5,220	7.9	3,490	8.2	3,840	8.6	4,320	16.2	17,400	17.7	20,900
10	9.1	4,960	7.8	3,380	8.2	3,840	8.6	4,320	19.5	25,400	17.0	19,200
N	8.9	4,700	7.7	3,270	8.0	3,600	8.8	4,570	23.8	37,500	17.1	19,400
2	8.7	4,440	7.6	3,160	8.0	3,600	8.9	4,700	26.0	44,400	17.2	19,700
4	8.6	4,320	7.6	3,160	7.9	3,490	9.2	5,090	27.1	47,900	16.8	18,700
6	8.5	4,200	7.8	3,380	8.0	3,600	9.5	5,500	27.2	48,200	16.2	17,400
8	8.5	4,200	7.9	3,490	8.2	3,840	10.0	6,200	26.4	45,700	15.4	15,700
10	8.4	4,080	8.2	3,840	8.4	4,080	10.6	7,110	25.5	42,800	14.5	13,900
M	8.3	3,960	8.4	4,080	8.6	4,320	10.9	7,590	24.6	40,000	13.8	12,500
	March 20		March 21		March 22		March 23		March 24		March 25	
2	13.0	11,100	10.0	6,200	11.6	8,720	8.6	4,320	7.6	3,160	7.6	3,160
4	12.4	10,100	9.8	5,920	11.1	7,910	8.4	4,080	7.5	3,050	7.5	3,050
6	11.9	9,230	9.8	5,920	10.6	7,110	8.3	3,960	7.5	3,050	7.5	3,050
8	11.5	8,550	9.8	5,920	10.3	6,650	8.2	3,840	7.4	2,940	7.6	3,160
10	11.1	7,910	10.1	6,350	10.0	6,200	8.1	3,720	7.4	2,940	7.9	3,490
N	10.8	7,430	10.9	7,590	9.8	5,920	8.0	3,600	7.4	2,940	8.2	3,840
2	10.5	6,950	12.6	10,400	9.5	5,500	7.9	3,490	7.4	2,940	8.4	4,080
4	10.2	6,500	13.8	12,500	9.3	5,220	7.8	3,380	7.3	2,830	8.4	4,080
6	10.1	6,350	14.0	12,900	9.1	4,960	7.8	3,380	7.3	2,830	8.3	3,960
8	10.0	6,200	13.4	11,800	8.9	4,700	7.7	3,270	7.3	2,830	8.1	3,720
10	10.0	6,200	12.7	10,600	8.8	4,570	7.6	3,160	7.3	2,830	8.0	3,600
M	10.0	6,200	12.1	9,570	8.7	4,440	7.6	3,160	7.6	3,160	7.9	3,490

Middle Branch of Westfield River at Goss Heights, Mass.

Location.- Lat. 42°15'30", long. 72°52'25", at highway bridge in Goss Heights, Hampshire County, half a mile above mouth. Zero of gage is 400.30 feet above mean sea level.
Drainage area.- 52.6 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights given to half tenths between 4.10 and 7.20 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 13. Defined by current-meter measurements below 2,110 second-feet; extended to peak stage by study of flow of characteristics at control section; verified by drainage-area comparison of instantaneous and total yield of flood with records for nearby stations.
Maxima.- 1936: Discharge, 8,400 second-feet 9:30 a.m. Mar. 18 (gage height, 9.80 feet); maximum gage height, 13.87 feet 4 a.m. Mar. 12 (ice jam).
1910-35: Discharge, 8,020 second-feet (revised) Sept. 17, 1933 (gage height, 9.6 feet); maximum gage height, 9.67 feet Jan. 9, 1935 (ice jam).
Remarks.- Flood run-off not materially affected by artificial or natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	37	55	158	11	33	300	324	21	40	1,140	117
2	35	53	194	12	32	2,700	315	22	40	620	135
3	35	50	355	13	31	1,500	242	23	40	375	98
4	37	60	226	14	31	667	201	24	38	311	86
5	34	75	178	15	30	412	291	25	37	486	74
6	33	65	875	16	30	549	324	26	40	346	77
7	32	60	539	17	34	971	246	27	55	489	70
8	32	55	337	18	60	4,550	182	28	65	640	62
9	32	65	234	19	50	1,940	148	29	60	332	61
10	35	100	255	20	45	820	123	30		250	62
								31		201	
Mean monthly discharge, in second-feet									39.1	653	220
Run-off, in inches									0.80	14.30	4.66

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	3.10	-	3.17	-	3.43	-	3.93	-	12.0	-	7.15	-
4	3.04	-	3.16	-	3.46	-	4.2	-	13.9	‡1,800	7.0	‡1,800
6	2.91	-	3.16	-	3.50	-	4.2	-	8.7	-	6.75	-
8	2.76	-	3.15	-	3.52	-	4.25	-	8.8	-	6.55	-
10	2.95	-	3.15	-	3.54	-	4.25	†150	8.7	‡4,000	6.35	‡1,600
N	2.96	*55	3.26	*65	3.61	*100	4.35	-	8.3	-	6.25	-
2	3.01	-	3.18	-	3.58	-	4.45	-	8.0	-	6.0	-
4	2.95	-	3.15	-	3.60	-	4.65	-	7.9	‡3,000	5.8	‡1,400
6	3.35	-	3.27	-	3.70	-	4.95	-	7.7	-	5.55	-
8	3.49	-	3.25	-	3.74	-	5.15	-	7.6	-	5.3	-
10	3.47	-	3.34	-	3.76	-	5.6	‡750	7.4	‡2,000	5.05	‡1,200
M	3.20	-	3.38	-	3.85	-	10.0	-	7.2	-	4.85	-
	March 14		March 15		March 16		March 17		March 18		March 19	
2	4.65	1,140	3.31	378	3.64	541	3.85	652	5.85	2,120	6.0	2,270
4	4.4	980	3.28	364	3.59	515	3.84	647	6.95	3,460	5.75	2,020
6	4.25	890	3.26	355	3.54	489	3.86	658	8.4	5,770	5.75	2,020
8	4.04	764	3.23	342	3.49	464	3.96	716	9.2	7,260	6.1	2,370
10	3.89	674	3.20	328	3.44	440	4.06	776	9.5	7,830	6.4	2,720
N	3.71	577	3.18	319	3.42	430	4.15	830	8.5	5,950	6.15	2,420
2	3.57	505	3.20	328	3.46	449	4.3	920	7.9	4,920	5.8	2,070
4	3.48	459	3.32	382	3.63	536	4.55	1,080	7.4	4,130	5.55	1,840
6	3.44	440	3.47	454	3.84	647	4.85	1,280	7.2	3,830	5.3	1,630
8	3.43	435	3.65	546	3.94	704	5.0	1,390	7.4	4,130	5.1	1,470
10	3.39	415	3.72	583	3.93	698	5.1	1,470	6.8	3,250	4.9	1,320
M	3.35	396	3.69	567	3.89	674	5.45	1,760	6.35	2,660	4.7	1,180
	March 20		March 21		March 22		March 23		March 24		March 25	
2	4.55	1,080	3.90	680	4.2	860	3.45	444	3.22	337	3.28	364
4	4.4	980	3.92	692	4.10	800	3.40	420	3.20	328	3.43	435
6	4.3	920	3.95	710	4.00	740	3.37	406	3.18	319	3.63	536
8	4.2	860	4.15	830	3.90	680	3.33	387	3.16	310	3.75	598
10	4.10	800	4.85	1,280	3.83	642	3.30	373	3.15	306	3.71	577
N	4.03	758	5.55	1,840	3.76	604	3.28	364	3.13	297	3.64	541
2	3.98	728	5.45	1,760	3.71	577	3.27	360	3.12	293	3.59	515
4	3.99	734	5.15	1,510	3.66	551	3.26	355	3.12	293	3.54	489
6	4.03	758	4.9	1,320	3.62	530	3.25	350	3.12	293	3.49	464
8	4.05	770	4.65	1,140	3.57	505	3.25	350	3.15	306	3.46	449
10	4.01	746	4.5	1,040	3.53	484	3.24	346	3.18	319	3.44	440
M	3.94	704	4.3	920	3.49	464	3.23	342	3.20	328	3.40	420

*Mean for the day.
†Mean for 18-hour period.
‡Mean for 6-hour period.

West Branch of Westfield River at Huntington, Mass.

Location.- Lat. 42°14'20", long. 72°53'40", in Huntington, Hamsphire County, 0.4 mile below Roaring Brook and 1½ miles above confluence with Westfield River
Drainage area.- 93.7 square miles.
Gage-height record.- Water-stage recorder graph except for period 3 p.m. Mar. 14 to 1 p.m. Mar. 16, when a graph was developed based on shape of stage graphs at nearby stations. Gage heights given to half tenths between 3.20 and 5.80 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 11. Defined by current-meter measurements below 1,930 second-feet; extended to peak stage by determination of flood flow over dam (head, 7.66 feet; C, 3.34); verified by drainage-area comparison of instantaneous and total yield of flood with records for nearby streams.
Maxima.- 1936: Discharge, 14,400 second-feet 10 a.m. Mar. 18 (gage height, 12.95 feet).
Remarks.- Flood run-off affected by some artificial and natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	74	99	312	11	69	860	545	21	85	2,040	230
2	73	98	345	12	68	4,050	530	22	78	1,200	250
3	72	97	585	13	67	1,920	400	23	78	673	200
4	70	105	435	14	65	929	350	24	77	548	170
5	70	130	340	15	65	750	470	25	75	796	150
6	68	120	1,300	16	65	942	530	26	85	569	155
7	67	105	1,000	17	70	1,580	420	27	106	844	150
8	67	99	640	18	77	7,640	350	28	118	1,130	140
9	67	106	415	19	105	3,470	290	29	102	561	140
10	72	183	451	20	93	1,580	250	30		435	140
								31		376	
Mean monthly discharge, in second-feet									77.6	1,098	389
Run-off, in inches									0.89	13.49	4.63

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	1.49	91	1.59	105	1.78	135	2.65	356	7.3	3,830	6.4	2,830
4	1.45	86	1.59	105	1.80	138	2.70	373	7.9	4,610	6.1	2,540
6	1.40	79	1.58	103	1.82	142	2.75	392	8.5	5,480	5.8	2,270
8	1.37	75	1.57	102	1.84	146	2.78	403	8.5	5,480	5.55	2,040
10	1.44	84	1.56	100	1.86	149	2.85	429	8.2	5,030	5.35	1,880
N	1.57	102	1.56	100	1.87	151	3.05	510	7.6	4,210	5.2	1,760
2	1.67	116	1.56	100	1.92	161	3.25	550	7.4	3,950	5.1	1,680
4	1.63	110	1.56	100	2.07	192	3.7	640	7.2	3,710	5.0	1,610
6	1.65	114	1.60	106	2.18	217	3.75	790	6.9	3,360	4.9	1,540
8	1.66	115	1.62	109	2.30	248	4.4	1,160	6.7	3,140	4.75	1,440
10	1.63	110	1.67	116	2.41	279	6.0	1,840	6.5	2,930	4.6	1,340
M	1.60	106	1.72	124	2.59	336	6.5	2,930	6.5	2,930	4.5	1,280
	March 14		March 15		March 16		March 17		March 18		March 19	
2	4.35	1,190	3.5	715	3.85	892	4.25	1,130	6.3	3,150	7.1	4,110
4	4.25	1,130	3.45	691	3.75	838	4.3	1,160	7.1	4,110	6.9	3,860
6	4.1	1,040	3.35	644	3.65	788	4.4	1,220	8.6	6,280	6.8	3,740
8	4.0	980	3.3	620	3.6	763	4.6	1,340	11.1	10,600	6.9	3,860
10	3.95	950	3.25	598	3.55	739	4.75	1,440	13.0	14,500	6.8	3,740
N	3.9	920	3.25	598	3.6	763	4.85	1,500	11.6	11,600	6.9	3,860
2	3.85	892	3.3	620	3.75	838	5.0	1,610	10.2	9,000	6.7	3,620
4	3.8	864	3.5	715	4.05	1,010	5.15	1,720	9.2	7,260	6.5	3,380
6	3.75	838	3.8	864	4.25	1,130	5.4	1,920	9.2	7,260	6.3	3,150
8	3.7	812	3.95	950	4.35	1,190	5.6	2,090	9.2	7,260	6.0	2,840
10	3.65	788	4.05	1,010	4.35	1,190	5.7	2,180	8.6	6,280	5.7	2,540
M	3.55	739	4.0	980	4.3	1,160	5.9	2,360	7.9	5,210	5.4	2,260
	March 20		March 21		March 22		March 23		March 24		March 25	
2	5.2	2,080	4.1	1,290	4.6	1,630	3.3	811	2.84	587	2.91	618
4	5.0	1,920	4.1	1,290	4.45	1,520	3.25	785	2.82	578	3.25	785
6	4.85	1,800	4.2	1,360	4.3	1,420	3.17	743	2.79	565	3.5	920
8	4.65	1,660	4.55	1,600	4.15	1,320	3.12	717	2.77	556	3.55	948
10	4.5	1,560	5.40	2,260	4.05	1,260	3.01	663	2.75	548	3.5	920
N	4.4	1,490	6.2	3,040	3.9	1,160	2.95	636	2.74	543	3.45	892
2	4.35	1,460	6.2	3,040	3.8	1,100	2.92	622	2.71	530	3.35	838
4	4.3	1,420	5.9	2,740	3.7	1,040	2.92	622	2.71	530	3.25	785
6	4.3	1,420	5.65	2,490	3.6	976	2.91	618	2.71	530	3.17	743
8	4.3	1,420	5.3	2,170	3.55	948	2.89	609	2.71	530	3.13	723
10	4.25	1,390	5.0	1,920	3.45	892	2.88	604	2.72	535	3.09	702
M	4.15	1,320	4.8	1,770	3.35	838	2.86	595	2.74	543	3.05	682

Westfield Little River at outlet of Cobble Mountain Reservoir, near Westfield, Mass.

Location.- Lat. 42°7'25", long. 72°53'5", at Cobble Mountain Dam, $1\frac{1}{4}$ miles below confluence of Pebble and Borden Brooks and $6\frac{1}{2}$ miles west of Westfield, Hampden County.
Drainage area.- 45.8 square miles.
Stage-discharge relation.- Discharge computed from flow through power plant.
Maxima.- 1936: Mean daily discharge corrected for storage, 4,070 second-feet Mar. 18.
1905-35: Discharge, 6,100 second-feet Nov. 3, 1927 at site $1\frac{3}{4}$ miles downstream.
Remarks.- Flood run-off completely stored in Borden and Cobble Mountain Reservoirs (total capacity 3,380,000,000 cubic feet). Daily and monthly discharges corrected for storage in both reservoirs. Basic data furnished by Board of Water Commissioners, Springfield, Mass.

Mean discharge (second-feet) and gain or loss in storage (millions of cubic feet), 1936

Day	February			March			April		
	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge
1	15	+0.80	24	0	+2.27	26	151	-3.61	109
2	0	+1.60	19	26	0	26	200	-1.87	178
3	30	+3.21	67	64	0	64	89	+7.49	176
4	18	+2.41	46	15	+3.88	60	0	+12.03	139
5	21	+1.47	38	21	+3.07	57	0	+31.28	362
6	19	+.94	30	15	0	15	21	+67.50	802
7	18	+1.60	37	15	0	15	26	+25.26	318
8	19	+.80	28	0	+3.21	37	0	+14.44	167
9	0	+3.21	37	25	+3.07	61	18	+19.25	241
10	29	-.67	21	18	+13.37	173	6.8	+15.10	182
11	28	-2.01	5	12	+140.76	1,640	0	+34.09	395
12	23	-1.20	9	0	+153.86	1,780	3.8	+14.70	174
13	30	0	30	0	+62.29	721	133	+4.81	189
14	25	0	25	0	+34.62	401	239	-.27	236
15	20	0	20	0	+33.69	390	266	0	266
16	0	+3.21	37	0	+38.10	441	285	-7.08	203
17	37	0	37	22	+234.46	2,740	242	-7.62	154
18	23	0	23	170	+336.72	4,070	58	+4.41	109
19	21	0	21	25	+98.92	1,170	5.4	+7.22	89
20	22	0	22	104	+54.40	734	15	+7.08	97
21	20	0	20	173	+54.81	807	31	+4.81	87
22	11	+1.47	28	137	+14.70	307	13	+4.81	69
23	0	+1.60	19	191	+6.82	270	16	+4.95	73
24	38	+1.47	55	261	+5.35	323	17	+4.81	73
25	26	+.94	37	223	+4.68	277	18	+5.48	81
26	23	+.67	31	262	-4.68	208	0	+4.01	46
27	18	+1.60	37	395	+19.38	619	73	-4.95	16
28	15	+1.60	34	159	+15.37	337	131	-5.21	71
29	15	+1.47	32	113	+10.03	229	143	-8.82	41
30				336	-12.16	195	160	-10.96	33
31				360	-20.59	122			

	February	March	April
Mean monthly discharge, in second-feet (observed)...........	19.4	101	78.7
Gain or loss in storage, in millions of cubic feet..........	26.19	+1,310.40	+243.14
Mean monthly discharge, in second-feet (corrected)..........	30.0	591	173
Run-off, in inches (corrected).............................	0.71	14.87	4.22

Scantic River at Broad Brook, Conn.

Location.- Lat. 41°54'45", long. 72°34'5", 300 feet above highway bridge, 1 mile southwest of Broad Brook, Hartford County, half a mile below confluence with Broad Brook, and 5½ miles above mouth.
Drainage area.- 98.4 square miles.
Gage-height record.- Water-stage recorder graph except for periods Feb. 1-15, Mar. 31 to Apr. 30.
Stage-discharge relation.- Affected by backwater from Connecticut River 4 p.m. Mar. 19 to 2 p.m. Mar. 25. Affected by ice Feb. 18-21. Defined by current-meter measurements below 546 second-feet; extended logarithmically to peak stage; verified by run-off comparisons with records for nearby streams.
Maxima.- 1936: Discharge, 1,620 second-feet 1 a.m. Mar. 13 (gage height, 10.17 feet); gage height, 12.31 feet 3 to 4 p.m. Mar. 21 (backwater from Connecticut River).
1928-35: Discharge, about 1,550 second-feet Mar. 6, 1934 (gage height, about 9.8 feet).
Remarks.- Discharge during period of missing gage-height record determined on basis of comparison with records of Hockanum River near East Hartford.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	80	146	330	11	90	732	350	21	130	1,030	190
2	46	158	300	12	95	1,540	360	22	103	1,150	210
3	75	141	410	13	80	1,450	380	23	116	971	230
4	90	149	350	14	90	951	360	24	109	746	260
5	95	230	250	15	80	618	380	25	98	557	140
6	80	231	450	16	48	462	360	26	91	430	130
7	90	189	600	17	100	392	340	27	116	400	220
8	75	158	520	18	110	666	300	28	145	531	180
9	40	163	470	19	150	1,490	190	29	145	603	170
10	60	257	430	20	140	1,140	180	30		451	160
								31		360	
Mean monthly discharge, in second-feet									95.4	597	307
Run-off, in inches									1.05	7.00	3.48

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	1.50	144	1.51	145	4.60	563	8.90	1,370	10.16	1,620
4	-	-	1.49	143	1.38	127	4.64	569	9.37	1,460	10.09	1,610
6	-	-	1.49	143	1.36	124	4.63	568	9.62	1,510	9.95	1,580
8	-	-	1.48	141	1.60	156	4.59	561	9.78	1,550	9.80	1,550
10	-	-	1.66	163	1.80	178	4.59	561	9.90	1,570	9.61	1,510
N	*1.62	*158	1.66	163	1.98	196	4.66	573	9.97	1,580	9.38	1,470
2	-	-	1.70	167	2.26	227	4.98	627	9.99	1,590	9.19	1,430
4	-	-	1.84	182	2.75	286	5.72	755	10.03	1,600	8.99	1,390
6	-	-	1.96	194	3.37	372	6.52	899	10.07	1,600	8.74	1,340
8	-	-	1.82	180	3.82	439	7.24	1,040	10.10	1,610	8.48	1,290
10	-	-	1.72	169	4.16	493	7.85	1,160	10.14	1,620	8.27	1,240
M	1.51	145	1.65	162	4.42	534	8.38	1,270	10.16	1,620	8.02	1,190
	March 14		March 15		March 16		March 17		March 18		March 19	
2	-	-	-	-	-	-	-	-	3.19	347	8.35	1,260
4	7.58	1,110	5.34	688	4.21	501	3.52	394	3.20	348	9.16	1,420
6	-	-	-	-	-	-	-	-	3.29	361	9.54	1,500
8	7.19	1,030	5.08	644	4.14	489	3.61	408	3.74	427	9.75	1,540
10	-	-	-	-	-	-	-	-	4.32	518	9.83	1,560
N	6.77	946	4.87	608	4.00	467	3.46	385	4.91	615	9.88	1,570
2	-	-	-	-	-	-	3.45	384	5.39	696	9.89	1,570
4	6.34	866	4.70	579	3.89	450	3.48	388	5.88	783	9.88	1,570
6	-	-	-	-	-	-	3.52	394	6.78	948	9.97	1,550
8	5.88	783	4.54	553	3.63	410	3.54	397	7.53	1,100	10.15	1,530
10	-	-	-	-	-	-	3.52	394	7.60	1,110	10.41	1,490
M	5.61	735	4.37	526	3.57	402	3.24	354	7.75	1,140	10.71	1,450
	March 20		March 21		March 22		March 23		March 24		March 25	
2	10.96	-	-	-	-	-	-	-	-	-	-	-
4	10.94	1,330	12.31	914	11.54	1,170	9.53	1,050	7.35	814	5.20	613
6	10.95	-	-	-	-	-	-	-	-	-	-	-
8	11.25	1,210	12.29	952	11.25	1,170	9.17	1,010	6.96	778	4.90	579
10	-	-	-	-	-	-	-	-	-	-	-	-
N	11.67	1,090	12.26	1,030	10.95	1,150	8.82	971	6.57	751	4.61	555
2	-	-	-	-	-	-	-	-	-	-	-	-
4	12.01	1,010	12.15	1,090	10.59	1,130	8.47	933	6.20	706	4.36	525
6	-	-	-	-	-	-	-	-	-	-	-	-
8	12.19	952	11.98	1,130	10.21	1,110	8.10	895	5.88	672	4.26	509
10	-	-	-	-	-	-	-	-	-	-	-	-
M	12.27	914	11.78	1,160	9.87	1,080	7.72	859	5.48	647	4.02	470

Supplemental records.- Mar. 10, 7 a.m., 1.37 ft., 125 sec.-ft. Mar. 13, 1 a.m., 10.17 ft., 1,620 sec.-ft. Mar. 18, 7 p.m., 7.31 ft., 1,050 sec.-ft. Mar. 20, 3 a.m., 10.99 ft.; 5 a.m., 10.89 ft.

*Mean for the day.

Farmington River near New Boston, Mass.

Location.- Lat. 42°4'40", long. 73°4'25", at highway bridge a quarter of a mile below Clam River and 1 mile south of New Boston, Berkshire County.
Drainage area.- 92.0 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights given to half tenths between 5.90 and 8.30 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to 2 a.m. Mar. 12. Defined by current-meter measurements below 890 second-feet; extended to peak stage by a contracted-opening determination of flood flow (surface drop 1.43 feet); verified by drainage-area comparison of instantaneous and total yield of flood with records for nearby streams.
Maxima.- 1936: Discharge, 9,080 second-feet 9:30 a.m. Mar. 18 (gage height, 10.65 feet); maximum gage height, 11.20 feet 1 a.m. Mar. 12 (ice jam).
1913-35: Discharge, 6,610 second-feet (revised) Nov. 3, 1927 (gage height, 9.42 feet).
Remarks.- Flood run-off materially affected by artificial storage. For daily changes in storage see record for Otis Reservoir at Cold Spring, Mass.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	85	100	274	11	80	400	384	21	85	1,520	205
2	75	100	283	12	70	3,800	400	22	80	976	227
3	85	100	397	13	70	2,000	345	23	70	568	191
4	80	115	321	14	80	1,000	306	24	75	453	171
5	75	110	271	15	80	740	386	25	85	552	152
6	71	105	948	16	70	768	366	26	105	450	158
7	67	100	636	17	85	1,390	303	27	120	490	148
8	65	90	468	18	90	5,900	271	28	115	690	134
9	65	105	360	19	95	3,700	235	29	110	468	132
10	80	160	348	20	90	1,710	207	30		372	130
								31		318	
Mean monthly discharge, in second-feet (observed)............									82.9	947	305
Run-off, in inches (observed)............................									0.97	11.87	3.70

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	3.65	-	3.65	-	3.91	-	5.06	-	7.0	2,490	7.2	2,770
4	3.57	-	3.63	-	3.99	-	5.13	-	7.95	3,920	7.0	2,490
6	3.52	-	3.61	-	4.04	-	5.22	-	8.5	4,890	6.8	2,230
8	3.57	-	3.59	-	4.08	-	5.26	-	8.5	4,890	6.65	2,040
10	4.07	-	3.58	-	4.10	-	5.33	-	8.3	4,530	6.55	1,920
N	4.65	*90	3.57	*105	4.15	*160	5.40	*400	8.1	4,180	6.5	1,860
2	3.88	-	3.58	-	4.50	-	5.61	-	7.95	3,920	6.5	1,860
4	3.82	-	3.58	-	4.65	-	5.82	-	7.90	3,840	6.5	1,860
6	3.74	-	3.60	-	4.75	-	6.1	-	7.75	3,600	6.4	1,740
8	3.71	-	3.65	-	4.83	-	7.1	-	7.60	3,360	6.25	1,580
10	3.69	-	3.74	-	4.90	-	8.4	-	7.55	3,280	6.1	1,410
M	3.67	-	3.84	-	4.99	-	10.5	-	7.45	3,140	6.0	1,310
	March 14		March 15		March 16		March 17		March 18		March 19	
2	5.90	1,210	5.35	725	5.44	792	5.59	921	7.05	2,560	8.4	4,710
4	5.82	1,130	5.30	690	5.39	753	5.67	993	7.65	3,440	8.2	4,350
6	5.75	1,060	5.27	672	5.34	718	5.76	1,070	8.5	4,890	8.05	4,100
8	5.70	1,020	5.24	654	5.30	690	5.83	1,140	9.2	6,220	8.0	4,010
10	5.66	984	5.22	642	5.28	678	5.89	1,200	10.4	8,660	7.95	3,920
N	5.66	984	5.24	654	5.30	690	6.0	1,310	9.9	7,610	7.85	3,760
2	5.65	975	5.36	732	5.39	753	6.1	1,410	9.8	7,410	7.75	3,600
4	5.65	975	5.48	824	5.49	832	6.3	1,630	9.6	7,010	7.6	3,360
6	5.62	948	5.54	876	5.53	867	6.45	1,800	9.4	6,610	7.45	3,140
8	5.54	876	5.54	876	5.55	885	6.5	1,860	9.2	6,220	7.3	2,910
10	5.49	832	5.51	849	5.54	876	6.65	2,040	8.9	5,650	7.15	2,700
M	5.42	776	5.48	824	5.55	885	6.8	2,230	8.7	5,270	7.05	2,560
	March 20		March 21		March 22		March 23		March 24		March 25	
2	6.95	2,420	5.79	1,100	6.0	1,310	5.25	660	4.87	488	4.87	488
4	6.8	2,230	5.76	1,070	5.90	1,210	5.21	636	4.84	476	5.07	568
6	6.65	2,040	5.77	1,080	5.82	1,130	5.17	615	4.82	468	5.14	600
8	6.5	1,860	5.95	1,260	5.75	1,060	5.12	590	4.80	460	5.12	590
10	6.4	1,740	6.4	1,740	5.68	1,000	5.07	568	4.78	453	5.10	580
N	6.25	1,580	6.6	1,980	5.61	939	5.05	560	4.76	446	5.07	568
2	6.2	1,520	6.55	1,920	5.55	885	5.03	552	4.75	442	5.05	560
4	6.15	1,460	6.5	1,860	5.60	840	5.00	540	4.74	439	5.03	552
6	6.05	1,360	6.4	1,740	5.46	808	4.98	532	4.72	432	5.00	540
8	6.0	1,310	6.3	1,630	5.40	760	4.95	520	4.71	428	4.97	528
10	5.90	1,210	6.2	1,520	5.35	725	4.93	512	4.71	428	4.95	520
M	5.84	1,150	6.1	1,410	5.29	684	4.89	496	4.74	439	4.93	512

Supplemental records.- Mar. 12, 1 a.m., 11.20 ft. (ice jam). Mar. 18, 9:30 a.m., 10.65 ft., 9,080 sec.-ft.
*Mean for the day.

Farmington River at Riverton, Conn.

Location.- Lat. 41°57'15", long. 73°0'45", a quarter of a mile below mouth of Still River, 1 mile below Riverton, Litchfield County, and 4 miles northeast of Winsted.
Drainage area.- 216 square miles.
Gage-height record.- Water-stage recorder graph except for period Feb. 1-5.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 12. Defined by current-meter measurements below 3,460 second-feet; extended to peak stage on basis of velocity-area study; verified by comparison of run-off with other records on Farmington River.
Maxima.- 1936: Discharge, 19,900 second-feet 10:30 a.m. Mar. 18 (gage height, 13.42 feet).
1929-35: Discharge, 9,720 second-feet Nov. 19, 1932 (gage height, 9.2 feet).
Remarks.- Flood run-off affected by artificial storage. For daily changes in storage see record for Otis Reservoir at Cold Spring, Mass.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	140	200	647	11	140	650	1,040	21	160	3,120	453
2	130	200	662	12	130	7,780	1,160	22	150	2,280	490
3	160	200	994	13	130	4,470	917	23	120	1,480	416
4	140	200	780	14	150	2,190	795	24	140	1,110	374
5	130	240	612	15	150	1,700	869	25	150	1,340	322
6	130	220	2,450	16	110	1,790	880	26	200	1,080	313
7	120	200	1,840	17	150	2,680	702	27	240	1,160	326
8	110	180	1,240	18	170	12,800	588	28	260	1,730	284
9	100	200	901	19	190	7,070	520	29	220	1,200	289
10	140	240	844	20	170	3,300	477	30		926	278
								31		762	
Mean monthly discharge, in second-feet (observed).............									153	2,023	749
Run-off, in inches (observed).............................									0.76	10.80	3.87

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	2.76	-	2.75	-	2.80	-	3.57	303	6.23	3,690	7.56	6,350
4	2.73	-	2.72	-	2.80	-	3.65	322	7.57	6,370	7.26	5,830
6	3.06	-	3.08	-	3.10	-	3.70	342	8.86	8,810	6.91	5,250
8	2.68	-	2.72	-	2.90	-	3.80	384	10.83	13,400	6.60	4,750
10	3.00	-	3.12	-	3.22	-	3.90	407	9.50	10,200	6.38	4,410
N	3.05	*180	3.20	*200	3.33	*240	4.05	480	9.27	9,670	6.27	4,240
2	3.00	-	2.87	-	3.02	-	4.15	555	8.91	8,910	6.16	4,080
4	2.70	-	3.09	-	3.40	-	4.30	662	8.62	8,330	6.09	3,980
6	3.00	-	3.16	-	3.66	-	4.57	775	8.34	7,790	5.[illegible]7	3,800
8	3.08	-	3.09	-	3.64	-	4.95	1,000	8.06	7,250	5.73	3,450
10	3.10	-	3.06	-	3.70	-	5.48	1,470	7.80	6,780	5.53	3,170
M	2.91	-	3.06	-	3.59	303	5.88	2,270	7.69	6,580	5.36	2,950
	March 14		March 15		March 16		March 17		March 18		March 19	
2	5.19	2,730	-	-	-	-	-	-	6.42	4,470	9.13	9,370
4	5.03	2,540	4.22	1,670	4.35	1,800	4.62	2,070	7.43	6,120	8.72	8,530
6	4.90	2,380	-	-	-	-	-	-	10.00	11,300	8.37	7,840
8	4.80	2,270	4.09	1,550	4.22	1,670	4.83	2,300	12.01	16,200	8.20	7,520
10	4.72	2,180	-	-	-	-	-	-	13.36	19,800	8.11	7,350
N	4.70	2,160	4.00	1,470	4.20	1,650	5.02	2,520	12.88	18,500	7.97	7,090
2	4.69	2,150	-	-	-	-	5.12	2,640	11.96	16,100	-	-
4	4.60	2,050	4.24	1,690	4.37	1,820	5.33	2,910	11.43	14,800	7.59	6,400
6	4.61	2,060	-	-	-	-	5.62	3,380	11.05	13,800	-	-
8	4.56	2,010	4.54	1,990	4.54	1,990	5.78	3,520	10.71	13,000	7.06	5,490
10	4.46	1,910	-	-	-	-	5.86	3,630	10.19	11,700	-	-
M	4.37	1,820	4.48	1,930	4.52	1,970	6.11	4,000	9.64	10,500	6.61	4,770
	March 20		March 21		March 22		March 23		March 24		March 25	
2	-	-	4.92	2,400	-	-	-	-	-	-	3.61	1,150
4	6.23	4,180	4.87	2,350	-	-	-	-	3.70	1,220	3.82	1,320
6	-	-	4.88	2,360	5.09	2,610	4.11	1,570	-	-	3.97	1,440
8	5.85	3,620	5.03	2,540	-	-	-	-	3.64	1,170	4.02	1,490
10	-	-	5.53	3,170	-	-	-	-	-	-	4.00	1,470
N	5.55	3,200	6.03	3,880	4.80	2,270	4.00	1,470	3.56	1,110	3.95	1,420
2	-	-	6.13	4,040	-	-	-	-	-	-	-	-
4	5.32	2,900	6.03	3,880	-	-	-	-	3.42	1,010	3.89	1,370
6	-	-	5.89	3,680	4.52	1,970	3.87	1,360	-	-	-	-
8	5.14	2,670	5.75	3,480	-	-	-	-	3.47	1,050	3.81	1,310
10	-	-	5.61	3,280	-	-	-	-	-	-	-	-
M	4.99	2,490	5.46	3,080	4.32	1,770	3.88	1,360	3.50	1,070	3.74	1,250

Supplemental records.- Mar. 8, 5 a.m., 3.05 ft.; 9 a.m., 2.65 ft.; 5 p.m., 2.68 ft.; 11 p.m., 3.10 ft. Mar. 9, 1 a.m., 2.79 ft.; 5 a.m., 3.07 ft.; 1 p.m., 3.20 ft.; 3 p.m., 2.73 ft. Mar. 10, 5 a.m., 3.10 ft.; 7 a.m., 3.10 ft.; 1 p.m., 3.35 ft.; 3 p.m., 3.02 ft. Mar. 11, 11 p.m., 6.00 ft.; 11:40 p.m., 8.05 ft. Mar. 12, 1:30 a.m., 7.12 ft.; 3 a.m., 6.84 ft.; 3:20 a.m., 9.78 ft.; 4:30 a.m., 7.90 ft.; 4:50 a.m., 9.42 ft.; 7:40 a.m., 9.60 ft.; 8:50 a.m., 9.77 ft. Mar. 18, 10:30 a.m., 13.42 ft., 19,900 sec.-ft. Mar. 21, 1 p.m., 6.15 ft., 4,060 sec.-ft.

*Mean for the day.

Farmington River at Tariffville, Conn.

Location.- Lat. 41°54'35", long. 72°45'40", at Tariffville, Hartford County, half a mile above Hartford Electric Light Co. plant and 12 miles above mouth.
Drainage area.- 578 square miles.
Gage-height record.- Water-stage recorder graph except for period Jan. 25 to Feb. 5.
Stage-discharge relation.- Affected by ice Jan. 18 to Mar. 2, Mar. 11-13, and by intermittent backwater from Hartford Electric Light Co. dam. Defined by current-meter measurements below 3,820 second-feet; extended to peak stage using determination of flood flow over spillway of dam half a mile below (C, 3.64 and 2.63).
Maxima.- 1936: Discharge, 22,200 second-feet 3 p.m. Mar. 19 (gage height, 13.40 feet).
1928-35: Discharge, 7,610 second-feet Nov. 21, 1932 (gage height, 7.8 feet, affected by backwater).
Remarks.- Discharge during periods of ice effect or backwater from dam determined from operation records of Hartford Electric Light Co. plant half a mile below. Flood run-off affected by breaking of Greenwood Dam 30 miles upstream (capacity, 400,000 cubic feet) and storage in reservoirs on main and tributary streams. For daily changes in storage see records for Otis Reservoir at Cold Spring, Mass.; Barkhamsted Reservoir near Barkhamsted, Conn.; East Branch Reservoir at New Hartford, Conn.; and Nepaug Reservoir near Collinsville, Conn.

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	2.18	666	2.89	1,050	5.84	3,630	11.24	13,100
4	2.30	720	1.63	478	2.30	720	3.03	1,150	6.27	4,520	11.50	13,900
6	-	-	-	-	2.27	706	3.15	1,240	6.98	5,340	11.64	14,500
8	2.41	776	1.93	566	2.20	675	3.23	1,290	7.58	6,230	11.56	14,900
10	-	-	-	-	2.12	639	3.24	1,300	8.09	6,990	11.50	14,900
N	2.21	680	1.87	544	2.02	598	3.24	1,300	8.41	7,790	10.73	14,700
2	-	-	-	-	1.96	576	3.27	1,320	8.48	8,100	10.51	14,100
4	1.93	566	1.57	467	1.95	572	3.40	1,410	8.59	8,320	10.42	13,900
6	-	-	-	-	1.97	580	3.60	1,560	8.89	8,850	10.22	13,400
8	1.58	470	1.50	435	2.12	639	3.92	1,840	9.34	9,740	10.10	13,100
10	-	-	-	-	2.37	755	4.41	2,300	9.94	10,900	9.89	12,600
M	1.49	430	1.73	499	2.65	910	5.12	2,900	10.47	12,100	9.65	12,000
	March 14		March 15		March 16		March 17		March 18		March 19	
2	9.40	11,100	-	-	-	-	-	-	6.31	5,020	11.51	16,800
4	9.20	10,700	7.65	7,490	-	-	-	-	6.42	5,200	12.06	18,300
6	8.88	9,970	-	-	6.21	4,860	5.92	4,390	6.56	5,440	12.32	19,000
8	8.66	9,400	7.25	6,700	-	-	-	-	6.76	5,800	12.95	20,800
10	8.54	9,180	-	-	-	-	-	-	7.11	6,440	13.23	21,700
N	8.48	9,070	6.97	6,180	6.08	4,650	5.93	4,410	7.73	7,490	13.34	22,000
2	8.34	8,740	-	-	-	-	-	-	8.28	8,520	13.38	22,100
4	8.13	8,480	6.73	5,740	-	-	5.98	4,490	8.66	9,400	13.32	21,900
6	8.03	8,270	-	-	6.00	4,520	-	-	8.98	9,970	13.21	21,600
8	7.95	8,100	6.56	5,440	-	-	6.08	4,650	9.41	11,100	13.04	21,100
10	7.92	8,040	-	-	-	-	-	-	10.10	12,700	12.89	20,700
M	7.92	8,040	6.41	5,190	5.93	4,410	6.22	4,870	10.84	15,000	12.67	20,000
	March 20		March 21		March 22		March 23		March 24		March 25	
2	12.44	19,400	-	-	-	-	-	-	-	-	-	-
4	12.20	18,700	9.00	10,400	-	-	7.38	6,950	6.10	4,680	5.01	3,100
6	11.95	18,000	-	-	7.97	8,150	-	-	-	-	-	-
8	11.68	17,300	8.69	9,720	-	-	7.19	6,590	5.93	4,410	4.98	3,060
10	11.27	16,200	-	-	-	-	-	-	-	-	-	-
N	11.00	15,400	8.50	9,290	7.82	7,830	7.01	6,250	5.80	4,210	5.02	3,120
2	10.70	14,600	-	-	-	-	-	-	-	-	-	-
4	10.41	13,900	8.46	9,200	-	-	6.82	5,910	5.65	3,980	5.13	3,260
6	10.14	13,200	-	-	7.73	7,650	-	-	-	-	-	-
8	9.88	12,600	8.33	8,920	-	-	6.49	5,320	5.37	3,590	5.15	3,280
10	9.63	11,900	-	-	-	-	-	-	-	-	-	-
M	9.40	11,400	8.17	8,570	7.56	7,310	6.29	4,980	5.13	3,260	5.18	3,320

Supplemental records.- Mar. 13, 11 a.m., 11.41 ft. Mar. 19, 7:40 a.m., 12.5 ft., 19,600 sec.-ft.; 8:30 a.m., 13.23 ft., 21,700 sec.-ft.; 9 a.m., 13.16 ft., 21,400 sec.-ft.; 3 p.m. 13.40 ft., 22,200 sec.-ft.
*Mean for the day.

Farmington River at Tariffville, Conn.--Continued

Mean discharge, in second-feet, October 1935 to April 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
1	182	205	910	189	400	600	1,920
2	222	247	635	195	340	550	1,820
3	244	212	454	595	280	630	2,080
4	244	208	454	1,410	380	618	2,240
5	382	259	279	1,130	360	737	1,870
6	215	267	255	770	340	837	2,830
7	202	255	244	652	320	709	5,340
8	198	247	251	517	340	624	4,840
9	222	219	215	479	280	496	3,160
10	215	212	364	583	240	642	2,410
11	219	189	419	652	300	1,470	2,350
12	226	229	467	610	340	7,370	3,160
13	202	263	414	452	340	13,700	2,960
14	192	279	313	675	340	9,250	2,350
15	205	267	477	644	380	6,340	2,130
16	222	275	309	1,970	300	4,680	2,240
17	219	283	480	1,740	320	4,520	2,020
18	226	222	475	950	480	8,220	1,680
19	240	313	359	700	400	20,300	1,480
20	198	300	335	550	420	15,600	1,410
21	189	331	271	650	420	9,510	1,340
22	192	340	348	700	420	7,790	1,380
23	229	340	202	700	380	6,230	1,300
24	222	354	222	600	340	4,210	1,200
25	215	247	240	550	380	3,160	1,130
26	263	300	189	550	420	3,160	940
27	195	326	185	550	480	2,770	940
28	179	443	240	550	600	3,910	1,060
29	189	733	192	500	800	4,060	1,030
30	215	1,300	185	550		3,090	1,030
31	202		185	480		2,590	

Month	Mean	Run-off in inches
1935		
October	218	0.43
November	322	.62
December	341	.68
1936		
January	705	1.41
February	384	.72
March	4,786	9.55
April	2,055	3.97

Otis Reservoir at Cold Spring, Mass.

Location.- Lat. 42°9'35", long. 73°3'33", on unnamed stream three-quarters of a mile above confluence with Farmington River and 1 mile northeast of Cold Spring, Hampden County.

Drainage area.- 17.2 square miles.

Gage-height record.- One gage reading daily usually at 7 a.m. Gage height at midnight determined for period Mar. 10-25 from graph constructed from gage readings; determined for other periods by interpolation between gage readings.

Remarks.- No water released from reservoir during period Feb. 1 to Apr. 30. Gain in storage represents run-off from area above reservoir outlet. No corrections for evaporation from reservoir surface. Records based on data furnished by the Collins Co., Collinsville, Conn.

Gain in storage, in equivalent mean second-feet, 1936

Day	February	March	April	Day	February	March	April	Day	February	March	April
1	19	13	31	11	16	116	85	21	13	376	43
2	28	18	36	12	16	217	122	22	4	238	48
3	19	18	229	13	18	291	101	23	13	204	11
4	16	20	120	14	16	214	90	24	7	184	32
5	16	18	73	15	16	213	85	25	13	155	11
6	16	19	148	16	18	288	90	26	18	145	32
7	18	7	117	17	17	274	59	27	4	152	16
8	16	0	85	18	18	915	43	28	13	173	32
9	16	14	90	19	20	805	48	29	7	107	11
10	18	12	90	20	4	485	43	30		46	32
								31		31	
Monthly gain in storage, in equivalent mean second-feet........									14.9	186	68.4
Run-off, in inches..									0.93	12.45	4.44

Barkhamsted Reservoir near Barkhamsted, Conn.

Location.- Lat. 41°54'55", long. 72°57'5", on East Branch of Farmington River 1¼ miles south of Barkhamsted, Litchfield County, and 3½ miles above confluence with Farmington River.

Remarks.- Elevations of reservoir surface are for 8 a.m. Gain or loss in storage is for 24-hour period prior to 8 a.m. Data furnished by Water Bureau of the Metropolitan District Commission, Hartford, Conn.

Elevation, in feet, and gain or loss in storage, in millions of gallons, 1936

Day	February		March		April	
	Feet	Millions of gallons	Feet	Millions of gallons	Feet	Millions of gallons
1	422.05	-1.5	422.44	-2.0	423.40	-7.0
2	422.04	-.5	422.42	-1.0	423.26	-3.5
3	422.03	-.5	422.40	-1.0	423.94	+17.0
4	422.03	0	422.37	-1.5	424.02	+1.8
5	422.06	+1.5	422.54	+8.5	424.02	0
6	422.06	0	422.48	-3.0	424.01	0
7	422.03	-1.5	422.37	-5.5	427.17	+37.3
8	422.02	-.5	422.39	+1.0	424.78	-25.8
9	422.01	-.5	422.40	+.5	423.93	-13.4
10	422.00	-.5	422.45	+2.5	423.83	-2.5
11	421.98	-.5	423.20	+32.5	423.82	-.2
12	422.00	+.5	432.65	+267.5	424.03	+5.0
13	422.03	+1.5	430.83	-91.0	424.24	+3.2
14	422.04	+.5	426.55	-136.0	423.89	-6.4
15	422.10	+3.0	425.80	-7.5	423.60	-7.2
16	422.10	0	425.67	-1.3	424.13	+12.0
17	422.10	0	425.55	-1.2	423.65	-10.7
18	422.25	+7.5	425.43	-1.2	423.36	-7.2
19	422.32	+3.1	425.30	-1.3	423.21	-3.8
20	422.30	-.6	425.18	-1.2	423.06	-3.8
21	422.26	-2.0	425.06	-1.2	422.98	-2.5
22	422.24	-1.0	424.94	-1.5	422.94	-2.0
23	422.21	-1.5	424.82	-1.8	422.83	-5.5
24	422.18	-1.5	424.69	-2.0	422.74	-4.5
25	422.17	-.5	424.57	-1.8	422.65	-4.5
26	422.26	+4.5	424.45	-1.8	422.67	+1.0
27	422.38	+6.0	424.32	-2.0	422.70	+1.5
28	422.50	+6.0	424.19	-2.0	422.60	-5.0
29	422.48	-1.0	424.06	-2.0	422.56	-2.0
30			423.94	-2.4	422.56	0
31			423.68	-6.5		

	February	March	April
Gain or loss in storage, in millions of gallons..........	+20.0	+32.8	-38.7

East Branch Reservoir at New Hartford, Conn.

Location.- Lat. 41°52'55", long. 72°57'25", on East Branch of Farmington River 1 mile east of New Hartford, Hartford County, and 1¼ miles above confluence with Farmington River.

Remarks.- Elevations of reservoir surface are for 8 a.m. Elevation of crest of spillway, 422.5 feet. Gain or loss in storage is for 24-hour period previous to 8 a.m. Data furnished by Water Bureau of the Metropolitan District Commission, Hartford, Conn.

Elevation, in feet, and gain or loss in storage, in millions of gallons, 1936

Day	February		March		April	
	Feet	Millions of gallons	Feet	Millions of gallons	Feet	Millions of gallons
1	388.00	-42.5	388.70	+78.0	421.30	+18
2	388.25	+10.0	389.20	+17.0	421.20	-18
3	388.30	+2.0	389.20	0	422.00	+116
4	388.50	+8.0	388.80	-13.0	422.90	+132
5	388.20	-12.0	388.90	+4.0	422.95	+7
6	387.90	-11.5	389.05	+5.2	423.10	+22
7	387.60	-10.5	388.90	-5.2	423.35	+36
8	386.50	-33.5	389.75	+22.8	423.25	-14
9	388.75	+77.5	389.90	+3.8	422.60	-93
10	388.60	-6.0	390.30	+16.0	422.90	+43
11	387.80	-31.0	391.80	+55.5	422.90	0
12	387.15	-22.8	401.80	+518.0	423.15	+36
13	386.40	-20.2	423.10	+2,139	423.10	-7
14	385.40	-25.0	423.50	+58	423.00	-14
15	385.65	+6.2	423.35	-22	422.95	-7
16	386.95	+32.5	423.30	-7	423.05	+14
17	386.80	-3.8	423.00	-43	422.95	-14
18	386.15	-14.8	423.85	+124	422.90	-7
19	386.10	-2.8	424.75	+133	422.90	0
20	385.40	-17.5	423.50	-184	422.85	-7
21	385.00	-10.0	422.60	-130	422.70	-21
22	385.30	+7.5	422.60	0	422.35	-48.8
23	386.95	+41.5	422.30	-42.5	422.00	-48.8
24	386.80	-3.8	422.30	0	421.55	-63.0
25	386.00	-20.0	422.65	+52.5	421.10	-63.0
26	385.40	-15.0	422.65	0	421.85	+105.0
27	385.10	-7.5	422.55	-14	421.90	+7.0
28	385.30	+5.0	422.90	+50	421.40	-70.0
29	386.40	+27.5	422.75	-21	420.70	-96.5
30			422.55	-28	420.20	-67.5
31			421.20	-194		

	February	March	April
Gain or loss in storage, in millions of gallons..........	-92.5	+2,573.1	-123.6

Nepaug Reservoir near Collinsville, Conn.

Location.- Lat. 41°49'40", long. 72°56'5", on Nepaug River a quarter of a mile above confluence with Farmington River and 1½ miles northwest of Collinsville, Hartford County.

Remarks.- Elevations of reservoir surface are for 8 a.m. Elevation of crest of spillway, 485.0 feet. Gain or loss in storage is for 24-hour period prior to 8 a.m. Diversions for Hartford water supply are for calendar day. Data furnished by Water Bureau of the Metropolitan District Commission, Hartford, Conn.

Elevation, in feet, gain or loss in storage, in millions of gallons, and diversion, in millions of gallons, 1936

Day	February			March			April		
	Elevation	Gain or loss in storage	Diversion	Elevation	Gain or loss in storage	Diversion	Elevation	Gain or loss in storage	Diversion
1	476.84	-10.0	21.5	476.30	+4.9	21.8	485.16	-16.6	28.0
2	476.82	-5.4	22.0	476.31	+2.5	21.8	485.13	-8.3	28.0
3	476.79	-7.1	22.0	476.34	+7.4	21.8	485.20	+19.4	28.0
4	476.78	-2.5	22.0	476.34	0	22.5	485.23	+8.3	28.0
5	476.76	-5.0	22.0	476.36	+4.9	24.9	485.16	-19.4	28.0
6	476.74	-5.0	22.0	476.41	+12.4	25.5	485.20	+11.1	28.0
7	476.70	-10.0	22.0	476.43	+5.0	25.5	485.62	+117	28.0
8	476.68	-5.0	21.7	476.42	-2.5	25.5	485.48	-38.9	28.0
9	476.66	-5.1	21.5	476.41	-2.5	25.5	485.30	-49.9	28.0
10	476.66	0	21.5	476.40	-2.5	24.2	485.21	-25.0	28.0
11	476.62	-9.8	21.5	476.53	+32.2	14.1	485.23	+5.5	28.0
12	476.57	-12.4	21.5	479.23	+683.4	5.9	485.34	+30.5	28.0
13	476.58	+2.5	22.5	482.71	+919.3	5.2	485.31	-8.3	28.0
14	476.55	-7.4	25.5	483.61	+243.8	5.2	485.26	-13.9	28.0
15	476.55	0	25.5	484.20	+161.1	5.2	485.20	-16.6	28.0
16	476.50	-12.4	25.5	484.69	+134.6	5.2	485.20	0	28.0
17	476.48	-5.0	22.6	485.20	+141	5.2	485.18	-5.5	28.0
18	476.49	+2.5	19.0	485.63	+119	5.2	485.13	-13.8	28.0
19	476.50	+2.5	21.3	486.49	+235	5.2	485.11	-5.5	28.0
20	476.49	-2.5	25.5	485.78	-199	5.2	485.09	-5.5	28.0
21	476.45	-9.9	25.5	485.51	-75.2	12.2	485.06	-8.3	28.0
22	476.41	-9.9	25.5	485.60	+25.0	26.9	485.08	+5.5	28.0
23	476.38	-7.4	25.5	485.32	-77.6	27.7	485.06	-5.5	28.0
24	476.33	-12.4	25.5	485.14	-49.7	28.0	485.05	-2.8	18.4
25	476.28	-12.4	25.5	485.19	+13.8	28.0	485.03	-5.5	16.1
26	476.24	-9.9	23.2	485.23	+11.1	28.0	485.03	0	25.7
27	476.23	-2.5	22.0	485.20	-8.3	28.0	485.03	0	28.5
28	476.26	+7.4	22.0	485.43	+63.8	28.0	485.00	-8.3	28.5
29	476.28	+4.9	22.0	485.39	-11.1	28.0	484.95	-13.9	28.5
30				485.28	-30.5	28.0	484.95	0	28.5
31				485.22	-16.6	28.0			

	February	March	April
Gain or loss in storage, in millions of gallons............	-149.2	+2,344.7	-74.2
Diversion, in millions of gallons.........................	665.3	591.4	818.2

Burlington Brook near Burlington, Conn.

Location.- Lat. 41°47'10", long. 72°57'55", at artificial control, 1¼ miles north of Burlington, Hartford County, 2½ miles above mouth, and 3 miles southwest of Collinsville.
Drainage area.- 4.1 square miles.
Gage-height record.- Water-stage recorder graph except for period Feb. 19-26.
Stage-discharge relation.- Affected by ice Feb. 1, 8-14, 17, 18, Mar. 1, 2, 7, 8. Artificial control consists of a square orifice and rectangular weir; rating curve developed from formulae and checked by current-meter measurements below 49 second-feet. Weir wall overflowed at stages above 6.0 feet.
Maxima.- 1936: Discharge, 503 second-feet 4:10 a.m. Mar. 12 (gage height, 6.58 feet).
1931-35: Discharge, 403 second-feet Sept. 9, 1934 (gage height, 5.93 feet).
Remarks.- Discharge for periods of ice effect or missing record determined from study of gage-height graph and weather records, and comparison with records of adjacent stations.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	3.0	3.4	11.0	11	2.2	65	21.8	21	2.7	43.3	9.93
2	2.46	3.9	13.3	12	2.2	254	22.4	22	2.6	31.6	8.63
3	2.29	4.65	21.6	13	2.2	57	16.4	23	2.6	22.1	8.63
4	2.76	4.03	13.9	14	2.33	26.9	13.9	24	2.6	17.6	8.00
5	2.93	8.68	11.4	15	2.37	26.2	15.6	25	3.0	17.6	8.63
6	2.80	4.92	57	16	2.33	30.6	14.7	26	4.6	14.3	6.85
7	2.71	3.2	31.0	17	4.7	36.5	11.0	27	6.85	20.8	8.63
8	2.58	3.3	18.9	18	4.5	152	10.6	28	7.71	42.3	7.71
9	2.33	4.55	13.6	19	2.9	71	10.3	29	6.30	18.9	7.41
10	2.2	12.5	16.8	20	2.8	31.4	10.3	30	-	14.7	6.03
								31	-	13.9	-
Mean monthly discharge, in second-feet									3.23	34.2	14.5
Run-off, in inches									0.85	9.62	3.95

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	-	-	6.17	434	2.66	88
4	-	-	-	-	-	-	1.61	23.0	6.57	501	2.51	77
6	-	-	-	-	-	-	-	-	6.18	435	2.37	68
8	-	-	-	-	-	-	1.63	24.0	5.33	337	2.39	69
10	-	-	-	-	-	-	-	-	4.57	258	2.23	58
N	*1.03	*3.3	*1.10	*4.55	*1.36	*12.5	1.71	27.9	4.05	207	2.14	53
2	-	-	-	-	-	-	1.77	31.1	3.62	167	-	-
4	-	-	-	-	-	-	1.84	34.8	3.28	137	2.01	44.6
6	-	-	-	-	-	-	1.95	41.0	3.07	121	-	-
8	-	-	-	-	-	-	2.23	58	2.92	108	1.92	39.3
10	-	-	-	-	-	-	4.50	251	2.79	98	-	-
M	-	-	-	-	1.60	22.5	5.88	398	2.73	94	1.83	34.3
	March 14		March 15		March 16		March 17		March 18		March 19	
2	-	-	-	-	-	-	-	-	1.93	39.9	2.89	106
4	1.77	31.1	1.64	24.5	1.83	34.3	1.83	34.3	1.93	39.9	2.69	91
6	-	-	-	-	-	-	-	-	1.99	43.4	2.54	80
8	1.69	26.9	1.59	22.1	1.74	29.5	1.88	37.0	3.29	138	2.44	72
10	-	-	-	-	-	-	-	-	5.20	323	2.40	70
N	1.64	24.5	1.56	20.7	1.67	26.0	1.87	36.5	4.60	261	2.41	70
2	-	-	1.56	20.7	-	-	-	-	4.07	209	-	-
4	1.62	23.5	1.64	24.5	1.71	27.9	1.86	35.9	3.78	182	2.26	60
6	-	-	1.72	28.5	-	-	-	-	3.64	169	-	-
8	1.67	26.0	1.80	32.6	1.77	31.1	1.94	40.5	3.73	177	2.13	52
10	-	-	1.88	37.0	-	-	-	-	3.55	161	-	-
M	1.68	26.4	1.90	38.1	1.79	32.1	1.95	41.0	3.19	130	1.98	42.8
	March 20		March 21		March 22		March 23		March 24		March 25	
2	-	-	1.63	24.0	-	-	-	-	-	-	-	-
4	1.90	38.1	1.65	25.0	-	-	-	-	-	-	-	-
6	-	-	1.70	27.4	1.85	35.4	-	-	-	-	-	-
8	1.82	33.7	1.78	31.6	-	-	-	-	-	-	-	-
10	-	-	1.89	37.6	-	-	-	-	-	-	-	-
N	1.76	30.6	2.11	51	1.76	30.6	1.59	22.1	1.48	17.2	*1.49	*17.6
2	-	-	2.35	66	-	-	-	-	-	-	-	-
4	1.70	27.4	2.33	65	-	-	-	-	-	-	-	-
6	-	-	2.24	59	1.70	27.4	-	-	-	-	-	-
8	1.68	26.4	2.15	53	-	-	-	-	-	-	-	-
10	-	-	2.07	48.2	-	-	-	-	-	-	-	-
M	1.63	24.0	2.00	44.0	1.65	25.0	1.53	19.4	1.45	16.0	-	-

Supplemental records.- Mar. 11, 9 p.m., 3.15 ft., 127 sec.-ft.; 11 p.m., 5.65 ft., 372 sec.-ft. Mar. 12, 1 a.m., 5.87 ft., 397 sec.-ft.; 4:10 a.m., 6.58 ft., 503 sec.-ft. Mar. 13, 7 a.m., 2.32 ft., 64 sec.-ft. Mar. 18, 7 a.m., 2.17 ft., 54 sec.-ft.; 9 a.m., 4.42 ft., 243 sec.-ft.; 11 a.m., 4.97 ft., 299 sec.-ft.

*Mean for the day.

Hockanum River at outlet of Shenipsit Lake, at Rockville, Conn.

Location.- Lat. 41°52'6", long. 72°25'56", three-quarters of a mile east of Rockville, Tolland County.
Drainage area.- 16.5 square miles.
Gage-height record.- One reservoir gage reading daily at 8 a.m. except Sundays. Gage height at midnight determined from graph constructed from gage-height readings.
Stage-discharge relation.- Observed discharge computed from flow over spillway and through pumps, venturi meter, wheel, and gate.
Remarks.- Mean daily and monthly discharges corrected for gain or loss in storage in Shenipsit Lake. No corrections for evaporation from lake surface. Basic data furnished by Rockville Water & Aqueduct Co.

Mean discharge, in second-feet, and gain or loss in storage, in equivalent mean second-feet, 1936

Day	February			March			April		
	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge
1	0	+9	9	0	+28	28	72	-28	44
2	0	+12	12	25	+5	30	65	-2	63
3	24	-14	10	27	+2	29	67	+9	76
4	26	-16	10	27	+28	55	17	+6	23
5	25	-12	13	27	+25	52	13	+22	35
6	25	-9	16	27	+2	29	77	+69	146
7	25	-7	18	0	+14	14	108	-9	99
8	3	+7	10	0	+14	14	96	-38	58
9	3	+9	12	25	+34	59	68	-28	40
10	24	-14	10	27	+73	100	34	+13	47
11	26	-16	10	28	+260	288	46	+41	87
12	26	-14	12	29	+733	762	45	+28	73
13	25	-9	16	30	+213	243	92	-31	61
14	24	-2	22	10	+124	134	84	-44	40
15	2	+14	16	0	+88	88	75	-25	50
16	3	+23	26	29	+54	83	66	-31	35
17	23	+5	28	31	+80	111	60	-16	44
18	25	-5	20	82	+470	552	9	+16	25
19	26	-12	14	245	+185	430	4	+19	23
20	25	-7	18	254	-67	187	50	-31	19
21	24	-2	22	210	-37	173	62	-28	34
22	1	+16	17	208	-36	172	61	-31	30
23	0	+23	23	142	-41	101	61	-41	20
24	23	+2	25	83	-25	58	60	-25	35
25	25	0	25	75	-19	56	1	+13	14
26	25	+2	27	71	0	71	0	+13	13
27	25	+9	34	73	+19	92	31	-22	9
28	24	+7	31	38	+62	100	34	-22	12
29	1	+25	26	53	+20	73	33	0	33
30				93	-38	55	33	0	33
31				86	-51	35			

	February	March	April
Mean monthly discharge, in second-feet (observed)	17.5	66.3	50.8
Run-off, in inches (observed)	1.14	4.64	3.44
Mean monthly discharge, in second-feet (corrected)	18.3	138	44.0
Run-off, in inches (corrected)	1.20	9.64	2.98

Hockanum River near East Hartford, Conn.

Location.- Lat. 41°46'57", long. 72°35'20", at Case & Marshall paper mill, 1⅛ miles below confluence with South Branch of Hockanum River and 2¾ miles east of East Hartford, Hartford County.

Drainage area.- 74.5 square miles.

Gage-height record.- Water-stage recorder graph.

Stage-discharge relation.- Defined by current-meter measurements below 425 second-feet; extended logarithmically to peak stage; verified by comparison of run-off with records for nearby streams.

Maxima.- 1936: Discharge, 1,530 second-feet 11 a.m. Mar. 12 (gage height, 8.06 feet).
1919-21, 1928-35: Discharge, 1,640 second-feet Mar. 5, 1934 (gage height, 8.3 feet).

Remarks.- Run-off affected by storage and diversions (see record for Shenipsit Lake at Rockville, Conn.).

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	36	64	261	11	93	577	258	21	95	620	152
2	19	139	258	12	82	1,290	260	22	34	586	173
3	82	132	277	13	81	658	266	23	31	455	187
4	88	131	256	14	80	336	260	24	96	375	217
5	81	229	168	15	32	264	262	25	103	315	83
6	87	241	321	16	6.9	303	257	26	130	299	76
7	82	101	396	17	147	250	237	27	121	291	192
8	25	49	342	18	157	424	216	28	158	382	144
9	15	167	292	19	116	784	153	29	91	290	137
10	82	251	279	20	113	582	148	30		314	134
								31		271	
Mean monthly discharge, in second-feet									81.5	360	222
Run-off, in inches									1.18	5.57	3.32

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2					2.09	131	3.87	429	6.62	1,100	5.73	868
4			1.77	90	2.01	120	3.88	431	7.14	1,250	5.49	808
6					1.95	112	3.98	451	7.64	1,400	5.30	760
8			2.26	153	1.90	106	4.07	469	7.89	1,480	5.14	720
10					2.34	165	4.27	509	8.04	1,520	5.11	712
N	*1.38	*49	2.48	185	2.80	235	4.44	545	8.02	1,520	4.95	672
2			2.55	196	3.07	280	4.53	568	7.83	1,460	4.74	620
4			2.79	233	3.37	334	4.72	615	7.53	1,370	4.54	570
6			2.97	263	3.62	381	4.93	668	7.15	1,260	4.34	523
8			2.78	232	3.84	423	5.16	725	6.77	1,140	4.15	485
10			2.45	180	3.93	441	5.64	820	6.43	1,040	4.04	463
M	1.58	69	2.24	151	3.94	443	6.08	955	6.10	960	3.94	443
	March 14		March 15		March 16		March 17		March 18		March 19	
2	3.68	392	-	-	-	-	-	-	2.38	170	5.90	910
4	3.52	362	-	-	2.81	237	3.02	271	2.28	156	5.80	885
6	3.53	364	3.03	273	-	-	-	-	2.22	148	5.72	865
8	3.40	339	-	-	3.09	283	2.59	202	2.29	158	5.59	832
10	3.42	343	-	-	-	-	-	-	2.62	206	5.58	830
N	3.31	323	2.95	260	3.36	332	2.77	230	3.27	316	5.50	810
2	-	-	-	-	-	-	2.95	260	3.82	419	-	-
4	3.27	316	-	-	3.44	347	3.03	273	4.30	515	5.19	732
6	-	-	2.89	249	-	-	3.06	278	4.97	678	-	-
8	3.20	303	-	-	3.40	339	2.88	248	5.53	818	4.94	670
10	-	-	-	-	-	-	2.67	214	5.84	895	-	-
M	3.13	290	2.83	240	3.40	339	2.50	188	5.96	925	4.83	642
	March 20		March 21		March 22		March 23		March 24		March 25	
2	-	-	-	-	-	-	4.17	489	-	-	-	-
4	4.60	585	4.37	529	4.87	652	4.09	473	3.74	404	3.08	282
6	-	-	-	-	-	-	4.04	463	-	-	-	-
8	4.68	605	4.44	545	4.69	608	3.99	453	3.62	381	2.88	248
10	-	-	-	-	-	-	4.28	511	-	-	-	-
N	4.71	612	4.76	625	4.58	580	4.24	503	3.67	390	3.33	326
2	-	-	-	-	-	-	4.14	483	-	-	-	-
4	4.55	572	4.96	675	4.45	548	4.02	459	3.60	377	3.49	356
6	-	-	-	-	-	-	3.93	441	3.56	369	-	-
8	4.39	533	5.14	720	4.32	519	3.71	398	3.38	335	3.40	339
10	-	-	-	-	-	-	3.64	385	3.34	328	-	-
M	4.34	523	5.08	705	4.23	501	3.65	386	3.34	328	3.41	341

Supplemental records.- Mar. 9, 7 a.m., 1.82 ft., 96 sec.-ft. Mar. 12, 11 a.m., 8.06 ft., 1,530 sec.-ft. Mar. 17, 1 a.m., 3.39 ft., 337 sec.-ft.; 9 a.m., 2.53 ft., 192 sec.-ft. Mar. 23, 9 a.m., 3.99 ft., 453 sec.-ft.

*Mean for the day.

Salmon River near East Hampton, Conn.

Location.- Lat. 41°33'14", long. 72°27', at Comstock Bridge, on Hartford-Middlesex County line, 3 1/2 miles southeast of East Hampton, Middlesex County.
Drainage area.- 105 square miles.
Gage-height record.- Water-stage recorder graph.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 12. Defined by current-meter measurements below 2,040 second-feet; extended logarithmically to peak stage; verified by comparisons of run-off with records on adjacent streams.
Maxima.- 1936: Discharge, 6,250 second-feet 10 a.m. Mar. 12 (gage height, 6.98 feet, ice jam).
1905-6, 1928-35: Discharge, 3,700 second-feet Mar. 5, 1929 (gage height, 4.4 feet); gage height, 5.4 feet (ice) Mar. 5, 1934 and Jan. 10, 1935.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	60	220	336	11	48	1,310	556	21	100	1,220	236
2	50	190	363	12	46	4,570	506	22	80	936	229
3	55	180	528	13	44	1,570	435	23	75	591	212
4	50	180	430	14	42	779	381	24	75	485	195
5	60	460	349	15	40	586	372	25	130	475	183
6	65	440	1,390	16	40	502	372	26	320	440	186
7	55	340	1,100	17	160	455	328	27	340	481	189
8	50	280	665	18	220	1,940	278	28	280	821	173
9	50	260	500	19	170	2,030	266	29	260	556	164
10	50	650	578	20	120	932	248	30		445	158
								31		386	
Mean monthly discharge, in second-feet									108	797	397
Run-off, in inches									1.11	8.75	4.22

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	2.90	1,100	5.42	3,630	4.19	2,310
4	-	-	-	-	-	-	2.88	1,090	5.90	4,540	3.99	2,070
6	-	-	-	-	-	-	2.84	1,060	6.19	5,440	3.87	1,940
8	-	-	-	-	-	-	2.79	1,020	6.78	6,050	3.67	1,720
10	-	-	-	-	-	-	2.81	1,040	6.98	6,250	3.53	1,580
N	*2.11	*280	*1.65	*260	*2.43	*650	2.95	1,140	6.48	6,010	3.40	1,450
2	-	-	-	-	-	-	3.05	1,200	6.32	5,360	3.26	1,320
4	-	-	-	-	-	-	3.22	1,320	5.84	4,630	3.16	1,230
6	-	-	-	-	-	-	3.44	1,450	5.32	3,900	3.05	1,140
8	-	-	-	-	-	-	3.63	1,610	4.97	3,360	2.97	1,080
10	-	-	-	-	-	-	4.17	1,910	4.77	3,070	2.91	1,030
M	-	-	-	-	3.00	1,060	4.96	2,390	4.54	2,750	2.84	975
	March 14		March 15		March 16		March 17		March 18		March 19	
2	-	-	-	-	-	-	-	-	1.98	435	4.71	2,980
4	2.73	892	2.34	629	2.16	528	2.05	470	2.02	455	4.50	2,700
6	-	-	-	-	-	-	-	-	2.07	480	4.24	2,370
8	2.62	814	2.29	600	2.13	512	2.02	455	2.27	588	4.10	2,200
10	-	-	-	-	-	-	-	-	3.02	1,120	3.98	2,060
N	2.54	758	2.25	578	2.11	500	2.04	465	3.90	1,970	3.90	1,970
2	-	-	-	-	-	-	-	-	4.37	2,530	3.80	1,860
4	2.47	710	2.22	561	2.09	490	2.03	460	4.75	3,040	3.63	1,680
6	-	-	-	-	-	-	-	-	5.09	3,540	3.50	1,550
8	2.43	684	2.20	550	2.07	480	2.00	445	5.20	3,710	3.38	1,430
10	-	-	-	-	-	-	-	-	5.11	3,570	3.26	1,320
M	2.38	653	2.17	534	2.06	475	1.99	440	4.85	3,180	3.16	1,230
	March 20		March 21		March 22		March 23		March 24		March 25	
2	-	-	2.56	772	-	-	-	-	-	-	-	-
4	3.00	1,100	2.60	800	3.04	1,130	-	-	-	-	-	-
6	-	-	2.63	821	-	-	-	-	-	-	2.08	485
8	2.85	982	2.81	952	2.88	1,100	-	-	-	-	-	-
10	-	-	3.18	1,250	-	-	-	-	-	-	-	-
N	2.75	908	3.42	1,470	2.74	900	2.26	583	2.09	490	2.07	480
2	-	-	3.50	1,550	-	-	-	-	-	-	-	-
4	2.66	842	3.52	1,570	2.62	814	-	-	-	-		
6	-	-	3.49	1,540	-	-	-	-	-	-	2.07	480
8	2.57	779	3.42	1,470	2.50	730	-	-	-	-	-	-
10	-	-	3.33	1,390	-	-	-	-	-	-	-	-
M	2.51	737	3.24	1,310	2.42	678	2.15	522	2.03	460	2.04	465

*Mean for the day.

146875—37——18

Quinnipiac River at Wallingford, Conn.

Location.- Lat. 41°26'58", long. 72°50'29", 0.4 mile below Quinnipiac Street Bridge, in Wallingford, New Haven County, 2 miles above Worton Brook.
Drainage area.- 109 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights used to hundredths.
Stage-discharge relation.- Defined by current-meter measurements below 320 second-feet; extended on basis of form of previous rating curves and study of control section.
Maxima.- 1936: Discharge, 1,750 second-feet at 11 p.m. Mar. 12 (gage height, 8.20 feet).
1930-35: Discharge, 1,320 second-feet Mar. 5, 1934 (gage height, 6.9 feet).

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	102	216	358	11	105	707	500	21	146	803	312
2	106	209	358	12	98	1,620	528	22	137	745	296
3	108	220	380	13	96	1,520	498	23	127	562	281
4	106	239	396	14	90	1,010	432	24	126	462	261
5	105	308	356	15	81	711	392	25	122	426	247
6	104	307	723	16	98	574	397	26	130	407	242
7	101	290	979	17	122	515	385	27	166	414	238
8	76	268	711	18	158	747	351	28	222	609	231
9	103	249	525	19	182	1,190	341	29	223	575	222
10	118	349	473	20	169	979	328	30		440	215
								31		383	
Mean monthly discharge, in second-feet									125	582	399
Run-off, in inches									1.24	6.16	4.08

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	2.03	275	2.82	434	6.98	1,410	8.13	1,730
4	-	-	1.89	-	2.07	284	2.76	422	7.25	1,480	8.03	1,700
6	-	-	-	-	2.07	284	2.71	412	7.51	1,550	7.91	1,660
8	-	-	1.87	-	2.07	284	2.78	426	7.69	1,600	7.83	1,640
10	-	-	2.28	-	2.53	376	3.51	574	7.83	1,640	7.70	1,600
N	*1.99	*268	2.13	*249	2.37	344	3.82	639	7.89	1,660	7.49	1,550
2	-	-	1.95	-	2.18	306	4.16	714	7.97	1,680	7.28	1,490
4	-	-	2.10	-	2.65	400	4.71	836	8.03	1,700	7.14	1,450
6	-	-	1.80	-	2.59	388	5.05	915	8.06	1,710	6.83	1,370
8	-	-	1.56	-	2.80	430	5.58	1,040	8.12	1,720	6.71	1,330
10	-	-	1.81	-	2.96	462	6.10	1,170	8.19	1,740	6.57	1,300
M	1.92	-	1.97	263	2.91	452	6.61	1,310	8.19	1,740	6.40	1,250
	March 14		March 15		March 16		March 17		March 18		March 19	
2	-	-	-	-	-	-	-	-	3.05	480	5.85	1,110
4	6.04	1,160	-	-	-	-	-	-	3.10	490	5.96	1,140
6	-	-	4.37	760	-	-	-	-	3.15	500	6.08	1,170
8	5.71	1,080	-	-	-	-	-	-	3.38	547	6.18	1,190
10	-	-	-	-	-	-	-	-	4.07	694	6.38	1,250
N	5.43	1,010	4.09	699	*3.51	*574	*3.22	*515	4.37	760	6.37	1,240
2	-	-	-	-	-	-	-	-	4.51	791	6.37	1,240
4	5.10	927	-	-	-	-	-	-	5.10	927	6.36	1,240
6	-	-	3.90	657	-	-	-	-	5.25	963	6.20	1,200
8	4.89	878	-	-	-	-	-	-	5.35	987	6.13	1,180
10	-	-	-	-	-	-	-	-	5.60	1,050	6.10	1,170
M	4.67	827	3.72	618	-	-	3.01	472	5.74	1,080	6.02	1,150
	March 20		March 21		March 22		March 23		March 24		March 25	
2	5.92	1,130	4.62	816	4.42	771	3.82	639	-	-	2.80	-
4	5.81	1,100	4.53	796	4.42	771	3.73	620	3.03	-	2.80	-
6	5.70	1,070	4.50	789	4.41	769	3.65	604	-	-	2.80	-
8	5.59	1,050	4.52	793	4.40	767	3.59	591	2.96	-	2.90	-
10	5.62	1,050	4.65	822	4.52	793	3.92	661	3.35	-	3.20	-
N	5.41	1,000	4.60	811	4.47	782	3.71	614	3.18	*462	3.02	*426
2	5.25	963	4.60	811	4.40	767	3.35	540	2.90	-	2.80	-
4	5.20	951	4.62	816	4.35	756	3.50	572	3.10	-	3.00	-
6	4.85	868	4.50	789	4.05	690	3.15	500	2.80	-	2.68	-
8	4.72	839	4.43	774	4.00	679	2.91	452	2.53	-	2.45	-
10	4.73	841	4.44	776	3.95	668	3.06	482	2.68	-	2.61	-
M	4.69	832	4.43	774	3.88	653	3.07	484	2.74	-	2.70	-

Supplemental records.- Mar. 9, 1 p.m., 1.59 ft.; 7 p.m., 1.47 ft. Mar. 10, 1 p.m., 1.85 ft., 237 sec.-ft.; 5 p.m., 2.81 ft., 432 sec.-ft. Mar. 11, 1 p.m., 3.68 ft., 610 sec.-ft. Mar. 12, 1 p.m., 7.83 ft., 1,640 sec.-ft.; 11 p.m., 8.20 ft., 1,750 sec.-ft. Mar. 19, 1 p.m., 6.20 ft., 1,200 sec.-ft. Mar. 20, 1 p.m., 5.10 ft., 927 sec.-ft. Mar. 21, 1 p.m., 4.48 ft., 785 sec.-ft. Mar. 22, 9 a.m., 4.53 ft., 796 sec.-ft.; 1 p.m., 4.28 ft., 741 sec.-ft. Mar. 23, 1 p.m., 3.21 ft., 512 sec.-ft.; 3 p.m., 3.51 ft., 574 sec.-ft.; 5 p.m., 3.44 ft., 559 sec.-ft.; 7 p.m., 2.90 ft., 450 sec.-ft. Mar. 24, 1 p.m., 2.69 ft. Mar. 25, 1 p.m., 2.55 ft.

*Mean for the day.

Housatonic River at Coltsville, Mass.

Location.- Lat. 42°28'10", long. 73°11'50", in Coltsville, Berkshire County, 1 mile above mouth of Unkamet Brook and 2 miles northeast of Pittsfield.
Drainage area.- 57.1 square miles.
Gage-height record.- Water-stage recorder. Gage heights given to half tenths between 4.5 and 9.3 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Defined by current-meter measurements below 2,070 second-feet; extended to peak stage by determination of flood flow over dam (head, 5.87 feet; C, 3.4); verified by comparison of peak discharge and total run-off of flood with records for nearby streams.
Maxima.- 1936: Discharge, 6,670 second-feet 3 to 4 p.m. Mar. 18 (gage height, 10.14 feet).
Remarks.- Flood run-off not materially affected by artificial or natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	-	-	159	11	-	393	279	21	-	889	140
2	-	-	172	12	-	2,170	267	22	-	708	151
3	-	-	307	13	-	1,160	238	23	-	449	127
4	-	-	232	14	-	546	196	24	-	351	104
5	-	-	194	15	-	448	243	25	-	425	93
6	-	-	654	16	-	522	331	26	-	349	89
7	-	-	583	17	-	921	284	27	-	353	124
8	-	44	362	18	-	4,460	201	28	-	580	78
9	-	72	270	19	-	2,820	161	29	-	331	99
10	-	102	256	20	-	947	161	30	-	256	96
								31		210	
Mean monthly discharge, in second-feet									-	*813	222
Run-off, in inches										*12.67	4.48

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	2.60	45	2.75	58	2.82	65	3.46	157	6.35	1,260	7.15	1,880
4	2.52	39	2.87	71	2.82	65	3.52	169	6.8	1,570	6.85	1,610
6	2.51	39	2.89	73	2.82	65	3.52	169	7.25	1,970	6.5	1,360
8	2.51	39	3.20	110	2.83	66	3.65	198	7.6	2,340	6.25	1,200
10	2.44	34	2.95	80	2.92	76	3.76	224	7.7	2,460	6.1	1,100
N	2.43	34	3.03	89	2.95	80	3.82	238	7.75	2,520	6.0	1,050
2	2.44	34	2.65	49	3.15	104	4.10	316	7.75	2,520	6.2	1,160
4	2.46	36	2.85	68	3.30	127	4.40	410	7.75	2,520	6.1	1,100
6	2.73	56	2.84	67	3.35	136	4.7	515	7.65	2,400	5.95	1,020
8	2.75	58	2.82	65	3.40	145	5.0	627	7.55	2,280	5.75	928
10	2.75	58	2.82	65	3.39	143	5.35	762	7.45	2,180	5.5	820
M	2.75	58	2.82	65	3.42	149	5.75	928	7.3	2,020	5.3	742
	March 14		March 15		March 16		March 17		March 18		March 19	
2	5.1	665	4.50	444	4.7	515	5.0	627	6.5	1,360	8.85	4,200
4	4.95	608	4.47	434	4.6	479	5.0	627	6.75	1,530	8.6	3,760
6	4.85	570	4.43	420	4.47	434	5.1	665	7.3	2,020	8.35	3,360
8	4.75	533	4.17	337	4.75	533	5.3	742	8.15	3,060	8.2	3,130
10	4.7	515	4.28	371	4.6	479	5.45	800	9.1	4,670	8.15	3,060
N	4.65	491	4.31	380	4.6	479	5.55	840	9.8	6,050	8.1	2,990
2	4.65	491	4.43	420	4.7	515	5.75	928	10.0	6,460	8.0	2,850
4	4.75	533	4.65	491	4.85	570	5.9	1,000	10.1	6,670	7.8	2,580
6	4.8	551	4.75	533	4.85	570	6.1	1,100	9.8	6,050	7.6	2,340
8	4.85	570	4.6	479	4.8	551	6.25	1,200	9.6	5,650	7.35	2,070
10	4.8	551	4.7	515	4.85	570	6.3	1,220	9.4	5,250	7.1	1,830
M	4.6	479	4.8	551	4.85	570	6.4	1,290	9.15	4,760	6.9	1,650
	March 20		March 21		March 22		March 23		March 24		March 25	
2	6.6	1,420	5.2	703	5.8	950	4.7	515	4.35	394	4.15	331
4	6.4	1,290	5.15	684	5.7	905	4.65	491	4.33	387	4.29	374
6	6.2	1,160	5.15	684	5.55	840	4.6	479	4.32	384	4.42	417
8	6.15	1,040	5.2	703	5.35	762	4.85	570	4.30	377	4.49	441
10	5.7	905	5.35	762	5.35	762	4.55	462	4.28	371	4.5	444
N	5.7	905	5.65	882	5.2	703	4.29	374	4.29	374	4.55	462
2	5.6	860	5.9	1,000	5.15	684	4.48	437	4.19	343	4.5	444
4	5.5	820	5.95	1,020	5.0	627	4.44	424	4.16	334	4.5	444
6	5.4	781	6.1	1,100	4.95	608	4.43	420	4.12	322	4.47	434
8	5.35	762	6.1	1,100	4.85	570	4.41	413	4.12	322	4.49	441
10	5.25	722	6.0	1,050	4.8	551	4.39	407	4.04	299	4.5	444
M	5.2	703	5.85	975	4.75	533	4.37	400	4.06	304	4.43	420

*For period Mar. 8-31.

Housatonic River near Great Barrington, Mass.

Location.- Lat. 42°13'45", long. 73°21'35", at highway bridge at Van Deusenville, just above mouth of Williams River and 2 miles north of Great Barrington, Berkshire County.

Drainage area.- 280 square miles.

Gage-height record.- Water-stage recorder graph. Gage heights given to half tenths between 3.10 and 5.30 feet; hundredths below and tenths above these limits.

Stage-discharge relation.- Affected by ice Feb. 1, 4-8, 18-22. Defined by current-meter measurements below 6,120 second-feet; extended to peak stage by study of flow characteristics at control section; verified by drainage-area comparison of instantaneous and total yield of flood at other gaging stations on Housatonic River.

Maxima.- 1936: Discharge, 8,990 second-feet 4 p.m. to midnight Mar. 19 (gage height, 10.60 feet).

1913-35: Discharge, 7,910 second-feet (revised) Nov. 5, 1927 (gage height, about 10 feet, present datum at site just below highway bridge.

Remarks.- Flood run-off affected by some artificial and natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	300	313	1,210	11	238	1,020	1,380	21	240	5,690	895
2	195	284	1,130	12	245	3,330	1,340	22	250	4,130	895
3	245	348	1,280	13	222	6,160	1,310	23	208	3,290	835
4	280	362	1,340	14	199	5,370	1,240	24	208	2,410	835
5	240	412	1,180	15	223	3,250	1,210	25	298	2,060	781
6	290	404	1,540	16	182	2,590	1,280	26	325	1,850	549
7	210	386	2,400	17	187	2,560	1,300	27	324	1,700	490
8	220	276	2,460	18	320	5,200	1,210	28	345	2,110	634
9	182	396	1,940	19	300	8,740	988	29	338	2,110	620
10	270	425	1,560	20	270	8,010	981	30		1,770	565
								31		1,420	
Mean monthly discharge, in second-feet									254	2,528	1,179
Run-off, in inches									0.98	10.41	4.70

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	2.19	340	1.97	247	2.14	318	2.90	730	4.4	1,640	8.6	5,540
4	2.17	331	1.77	176	2.05	280	3.10	855	4.7	1,800	8.7	5,700
6	2.18	335	1.81	188	2.15	322	3.2	920	5.3	2,140	8.8	5,870
8	1.75	170	2.50	495	2.33	406	3.25	952	5.7	2,370	8.9	6,040
10	1.84	199	2.90	730	2.51	500	3.55	1,160	6.4	2,830	8.9	6,040
N	1.89	216	2.76	646	2.53	512	3.35	1,020	6.7	3,060	9.0	6,210
2	1.99	255	2.60	550	2.50	495	3.2	920	7.3	3,630	8.8	5,870
4	2.13	313	2.33	406	2.45	468	3.4	1,050	7.6	4,000	9.0	6,210
6	2.06	284	2.27	377	2.44	463	3.45	1,080	7.7	4,140	9.1	6,380
8	2.09	296	2.25	368	2.40	442	3.7	1,250	7.9	4,430	9.2	6,550
10	2.17	331	2.24	363	2.50	495	3.8	1,310	8.1	4,740	9.4	6,890
M	2.01	263	2.19	340	2.60	550	4.0	1,420	8.4	5,220	9.3	6,720
	March 14		March 15		March 16		March 17		March 18		March 19	
2	9.2	6,550	7.6	4,000	6.3	2,760	5.8	2,430	6.5	2,900	10.1	8,090
4	9.1	6,380	7.4	3,750	6.3	2,760	5.8	2,430	6.6	2,980	10.2	8,270
6	8.9	6,040	7.3	3,630	6.2	2,690	5.8	2,430	6.8	3,140	10.3	8,450
8	8.8	5,870	7.1	3,420	6.2	2,690	5.8	2,430	7.1	3,420	10.4	8,630
10	8.7	5,700	6.9	3,230	6.1	2,620	5.9	2,490	7.4	3,750	10.5	8,810
N	8.6	5,540	6.8	3,140	6.0	2,550	5.9	2,490	8.0	4,580	10.5	8,810
2	8.4	5,220	6.7	3,060	6.2	2,690	5.9	2,490	8.7	5,700	10.5	8,810
4	8.3	5,060	6.7	3,060	6.0	2,550	6.1	2,620	9.1	6,380	10.6	8,990
6	8.2	4,900	6.6	2,980	5.8	2,430	6.1	2,620	9.4	6,890	10.6	8,990
8	8.0	4,580	6.6	2,980	5.8	2,430	6.2	2,690	9.6	7,230	10.6	8,990
10	7.9	4,430	6.5	2,900	5.8	2,430	6.3	2,760	9.8	7,570	10.6	8,990
M	7.7	4,140	6.4	2,830	5.8	2,430	6.4	2,830	10.0	7,910	10.6	8,990
	March 20		March 21		March 22		March 23		March 24		March 25	
2	10.5	8,810	9.3	6,720	8.1	4,740	7.3	3,650	6.4	2,760	5.6	2,110
4	10.5	8,810	9.2	6,550	8.0	4,580	7.3	3,630	6.4	2,760	5.6	2,110
6	10.4	8,630	9.1	6,380	7.9	4,430	7.2	3,520	6.3	2,670	5.6	2,110
8	10.3	8,460	9.0	6,210	7.8	4,280	7.3	3,630	6.2	2,580	5.6	2,110
10	10.2	8,270	8.8	5,870	7.8	4,280	7.1	3,420	5.9	2,340	5.6	2,110
N	10.2	8,270	8.7	5,700	7.7	4,140	7.0	3,320	6.0	2,420	5.6	2,110
2	10.1	8,090	8.6	5,540	7.6	4,000	6.9	3,220	5.9	2,340	5.5	2,040
4	9.9	7,740	8.5	5,380	7.5	3,870	6.8	3,120	5.9	2,340	5.5	2,040
6	9.8	7,570	8.4	5,220	7.5	3,870	6.8	3,120	5.8	2,260	5.5	2,040
8	9.7	7,400	8.3	5,060	7.5	3,870	6.7	3,020	5.7	2,180	5.4	1,960
10	9.6	7,230	8.2	4,900	7.4	3,750	6.6	2,940	5.6	2,110	5.4	1,960
M	9.4	6,890	8.1	4,740	7.4	3,750	6.6	2,940	5.6	2,110	5.4	1,960

Housatonic River at Falls Village, Conn.

Location.- Lat. 41°57'15", long. 73°22'5", at Falls Village, Litchfield County, half a mile below plant of Connecticut Power Co.

Drainage area.- 632 square miles.

Gage-height record.- Water-stage recorder graph. No record for periods Oct. 29 to Nov. 11, Jan. 2-10, Apr. 27-30.

Stage-discharge relation.- Affected by aquatic growth Oct. 1-28, by ice Dec. 6, 7, Dec. 21 to Mar. 12. Defined by current-meter measurements below 14,100 second-feet; extended to peak stage; verified by determination of flood flow over spillway of dam half a mile upstream (C, 3.7 and 3.5).

Maxima.- 1936: Discharge, 14,500 second-feet 2 a.m. Mar. 20 (gage height, 17.41 feet).
1912-35: Discharge, about 11,700 second-feet Nov. 5, 1927 (gage height, 15.7 feet).

Remarks.- Discharge during periods of missing or ice-affected record determined from operation records of Connecticut Power Co. plant half a mile upstream. Flood run-off slightly affected by storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	550	800	2,880	11	420	1,900	3,370	21	480	12,800	1,900
2	550	700	2,470	12	420	9,040	3,160	22	480	10,100	1,930
3	500	650	2,600	13	420	11,400	3,020	23	480	7,020	1,930
4	380	750	2,880	14	400	11,600	2,810	24	380	5,400	1,750
5	460	900	2,740	15	420	9,620	2,670	25	360	4,620	1,540
6	550	950	3,010	16	400	6,750	2,670	26	600	4,000	1,480
7	500	850	4,240	17	420	5,740	2,600	27	800	3,580	1,300
8	460	800	4,400	18	460	9,070	2,470	28	800	3,930	1,100
9	440	750	4,320	19	500	13,800	2,350	29	800	4,160	1,200
10	400	900	3,860	20	500	14,200	2,110	30		3,860	1,200
								31		3,370	
Mean monthly discharge, in second-feet									494	5,291	2,535
Run-off, in inches									0.84	9.65	4.47

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	-	-	10.50	6,100	14.43	10,400
4	-	-	-	-	-	-	-	-	11.08	6,650	14.42	10,300
6	-	-	-	-	-	-	-	-	11.46	7,030	14.52	10,500
8	-	-	-	-	-	-	-	-	11.88	7,450	14.67	10,700
10	-	-	-	-	-	-	-	-	13.40	9,120	14.84	10,900
N	*3.93	*1,350	*3.86	1,310	*4.27	*1,550	*6.87	*3,210	14.30	10,200	15.17	11,300
2	-	-	-	-	-	-	6.96	3,270	14.58	10,600	15.81	12,200
4	-	-	-	-	-	-	7.50	3,650	14.76	10,800	16.05	12,500
6	-	-	-	-	-	-	8.05	4,040	14.79	10,800	16.00	12,400
8	-	-	-	-	-	-	8.56	4,450	15.60	10,900	15.88	12,300
10	-	-	-	-	-	-	9.20	4,960	14.77	10,800	15.78	12,100
M	-	-	-	-	-	-	10.00	5,650	14.52	10,500	15.70	12,000
	March 14		March 15		March 16		March 17		March 18		March 19	
2	15.63	11,900	14.81	10,900	12.30	7,900	10.24	5,870	10.23	5,860	16.37	13,000
4	15.56	11,800	14.65	10,600	11.95	7,520	10.19	5,820	10.50	6,100	16.46	13,100
6	15.55	11,800	14.46	10,400	11.75	7,320	10.15	5,780	10.83	6,400	16.56	13,200
8	15.52	11,800	14.29	10,200	11.49	7,060	10.12	5,760	11.43	7,000	16.70	13,400
10	15.48	11,700	14.09	9,950	11.27	6,840	10.09	5,730	11.72	7,290	16.84	13,600
N	15.44	11,700	13.86	9,670	11.07	6,640	9.83	5,500	12.90	8,560	16.96	13,800
2	15.39	11,600	13.63	9,400	10.90	6,470	9.99	5,640	13.95	9,780	17.07	14,000
4	15.31	11,500	13.41	9,130	10.72	6,300	9.97	5,620	14.85	10,900	17.18	14,100
6	15.24	11,400	13.18	8,870	10.57	6,160	9.96	5,610	15.65	12,000	17.27	14,300
8	15.17	11,300	12.93	8,590	10.46	6,060	9.97	5,620	16.00	12,400	17.35	14,400
10	15.05	11,200	12.69	8,330	10.36	5,970	10.03	5,680	16.20	12,700	17.37	14,400
M	14.94	11,000	12.45	8,060	10.29	5,910	10.10	5,740	16.30	12,900	17.39	14,400
	March 20		March 21		March 22		March 23		March 24		March 25	
2	17.41	14,500	16.76	13,500	-	-	-	-	-	-	-	-
4	17.38	14,400	16.65	13,400	15.09	11,200	12.15	7,740	10.17	5,800	-	-
6	17.37	14,400	16.58	13,300	-	-	-	-	-	-	8.92	4,740
8	17.36	14,400	16.52	13,200	14.69	10,700	11.80	7,370	9.90	5,560	-	-
10	17.33	14,400	16.38	13,000	-	-	-	-	-	-	-	-
N	17.28	14,300	16.21	12,700	14.21	10,100	11.35	6,920	9.7	5,380	8.76	4,610
2	17.22	14,200	16.07	12,500	-	-	-	-	-	-	-	-
4	17.18	14,100	15.96	12,400	13.63	9,400	10.95	6,520	9.5	5,200	-	-
6	17.12	14,000	15.82	12,200	-	-	-	-	-	-	8.63	4,500
8	17.02	13,900	15.69	12,000	13.25	8,940	10.66	6,240	9.35	5,080	-	-
10	16.93	13,800	15.54	11,800	-	-	-	-	-	-	-	-
M	16.85	13,600	15.40	11,600	12.75	8,400	10.40	6,010	9.14	4,910	8.43	4,340

Supplemental records.- Mar. 12, 7 p.m., 14.81 ft., 10,900 sec.-ft.; 9 p.m., 14.83 ft., 10,900 sec.-ft. Mar. 17, 11 a.m., 10.08 ft., 5,720 sec.-ft.; 1 p.m., 10.01 ft., 5,660 sec.-ft. Mar. 18, 9 a.m., 11.70 ft., 7,270 sec.-ft.

*Mean for the day.

Housatonic River at Stevenson, Conn.

Location.- Lat. 41°23'5", long. 73°9'55", in New Haven County, a quarter of a mile below dam of Connecticut Light & Power Co. at Stevenson, Fairfield County.

Drainage area.- 1,545 square miles.

Gage-height record.- Water-stage recorder graph except for period 5:30 a.m. Mar. 12 to 4 p.m. Mar. 18, when graph was determined from a gage-height relation with that of tailrace gage at Stevenson Dam, a quarter of a mile upstream, forebay elevations at Derby Dam, 6 miles downstream, and high-water marks. Short breaks in record Mar. 20 and 23 were estimated. Gage heights used to hundredths.

Stage-discharge relation.- Defined by current-meter measurements below 33,400 second-feet; extended to peak stage on basis of flow determination at Stevenson Dam and power plant, spillway computation at Derby Dam (C, varying), and slope-area computation at gaging station (n, 0.040).

Maxima.- 1936: Discharge, 69,500 second-feet 9 a.m. Mar. 12 (gage height, 23.5 feet, from high-water marks). Breaking of large ice jams upstream probably caused unnaturally high peak flow.

Remarks.- Run-off affected by storage. For daily changes in storage see records for Rocky River at outlet of Candlewood Lake, near New Milford, Conn., and Shepaug River at outlet of Shepaug Reservoir, at Woodville, Conn.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	1,070	1,780	6,140	11	908	6,860	7,580	21	1,910	24,600	4,280
2	897	2,000	5,600	12	1,440	48,600	7,520	22	1,070	19,700	3,930
3	1,260	1,840	5,850	13	774	34,300	6,810	23	681	13,900	3,940
4	1,180	1,850	5,750	14	269	25,200	6,390	24	1,170	11,700	3,850
5	1,280	2,220	5,250	15	942	20,200	6,140	25	1,130	9,710	3,660
6	838	2,290	7,830	16	858	15,400	5,940	26	1,110	9,530	2,920
7	1,230	2,590	10,300	17	1,850	13,700	5,430	27	1,390	7,680	2,780
8	824	1,910	9,180	18	1,220	26,200	5,080	28	1,800	9,440	2,970
9	1,030	2,220	8,180	19	756	33,300	4,730	29	2,140	8,640	2,360
10	1,120	2,190	7,890	20	1,040	27,400	4,520	30		7,730	2,650
								31		7,030	
Mean monthly discharge, in second-feet									1,144	12,960	5,515
Run-off, in inches									0.80	9.67	3.98

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	4.51	-	2.50	-	1.72	-	6.66	4,260	15.28	29,100	18.0	42,000
4	1.15	-	.76	-	.71	-	6.67	4,280	16.62	35,100	17.65	40,200
6	.77	-	.62	-	.60	-	6.26	3,690	19.45	49,200	17.4	39,000
8	4.24	-	6.00	-	6.00	-	6.68	4,290	19.80	51,000	17.0	37,000
10	5.21	-	6.15	-	6.19	-	6.70	4,320	21.70	60,500	16.6	35,000
N	5.21	*1,910	6.13	*2,220	6.20	*2,190	6.73	4,360	20.65	55,200	16.2	33,200
2	3.91	-	5.40	-	5.45	-	6.80	4,470	20.35	53,800	15.9	31,800
4	3.91	-	5.41	-	4.30	-	7.02	4,810	20.0	52,000	15.6	30,500
6	6.08	-	6.20	-	5.00	-	8.25	6,940	19.5	49,500	15.4	29,600
8	6.11	-	6.15	-	6.29	-	9.84	10,300	19.1	47,500	15.25	28,900
10	6.10	-	6.14	-	6.63	-	12.00	15,800	18.8	46,000	15.15	28,500
M	5.07	-	5.35	-	6.65	4,240	14.30	24,600	18.6	45,000	15.1	28,200
	March 14		March 15		March 16		March 17		March 18		March 19	
2	15.0	27,800	14.15	24,000	12.55	17,700	11.5	14,300	11.75	15,000	16.56	34,800
4	14.9	27,400	13.7	22,100	12.5	17,600	11.45	14,200	12.0	15,800	16.49	34,500
6	14.75	26,700	13.45	21,100	12.45	17,400	11.4	14,000	12.2	16,500	16.48	34,500
8	14.6	26,000	13.3	20,500	12.3	16,800	11.3	13,800	12.9	19,000	16.48	34,500
10	14.4	25,100	13.15	19,900	11.95	15,600	11.25	13,700	14.1	23,800	16.47	34,400
N	14.25	24,400	13.05	19,500	11.45	14,200	11.2	13,600	14.8	26,900	16.37	34,000
2	14.1	23,800	13.0	19,300	11.3	13,800	11.15	13,400	15.65	30,700	16.27	33,500
4	14.0	23,300	12.9	19,000	11.4	14,000	11.1	13,300	16.43	34,200	16.14	32,900
6	14.0	23,300	12.8	18,600	11.5	14,300	11.15	13,400	16.78	35,900	15.97	32,200
8	14.1	23,800	12.75	18,400	11.55	14,400	11.2	13,600	16.84	36,200	15.81	31,400
10	14.45	25,300	12.65	18,100	11.55	14,400	11.25	13,700	16.77	35,800	15.68	30,900
M	14.55	25,800	12.6	17,900	11.55	14,400	11.4	14,000	16.65	35,200	15.55	30,300
	March 20		March 21		March 22		March 23		March 24		March 25	
2	15.46	29,900	14.27	24,500	13.85	22,700	-	-	-	-	-	-
4	14.91	27,400	14.10	23,800	13.68	22,000	-	-	-	-	-	-
6	15.29	29,100	14.17	24,100	13.55	21,500	11.70	14,900	10.70	12,300	9.75	10,200
8	15.32	29,200	14.25	24,400	13.37	20,800	-	-	-	-	-	-
10	15.11	28,300	14.33	24,800	13.27	20,400	-	-	-	-	-	-
N	14.94	27,500	14.40	25,100	13.15	19,900	11.35	13,900	10.45	11,700	9.55	9,710
2	14.85	27,100	14.49	25,500	13.00	19,300	-	-	-	-	-	-
4	14.75	26,700	14.48	25,500	12.97	19,200	-	-	-	-	-	-
6	14.65	26,200	14.40	25,100	12.80	18,600	10.70	12,300	10.18	11,100	9.40	9,400
8	14.55	25,800	14.29	24,600	12.65	18,100	-	-	-	-	-	-
10	14.45	25,300	14.15	24,000	12.40	17,200	-	-	-	-	-	-
M	14.37	25,000	14.00	23,300	12.15	16,300	10.88	12,800	10.05	10,800	9.20	9,000

Supplemental records.-Mar. 8, 8:30 a.m., 5.24 ft.; 5 p.m., 3.91 ft.; 11 p.m., 5.22 ft. Mar. 9, 3 a.m., 1.00 ft.; 7 a.m., 0.60 ft.; 1 p.m., 2.03 ft.; 5 p.m., 5.24 ft.; 11 p.m., 6.13 ft. Mar. 10, 7 a.m., 0.59 ft.; 1 p.m., 2.08 ft.; 3 p.m., 5.51 ft.; 5:30 p.m., 1.75 ft.; 7 p.m., 6.30 ft.; 9 p.m., 6.63 ft. Mar. 11, 11 p.m., 14.50 ft., 25,600 sec.-ft. Mar. 12, 4:30 a.m., 20.12 ft., 52,600 sec.-ft.; 5 a.m., 19.90 ft., 51,500 sec.-ft.; 7 a.m. 19.45 ft., 49,200 sec.-ft.; 9 a.m., 23.50 ft., 69,500 sec.-ft. Mar. 18, 7 p.m., 16.86 ft., 36,300 sec.-ft. Mar. 20, 3:50 a.m., 15.40 ft., 29,600 sec.-ft.

*Mean for the day.

Tenmile River near Gaylordsville, Conn.

Location.- Lat. 41°39'35", long. 73°31'45", 1 mile above Connecticut-New York State line, 1½ miles above confluence with Housatonic River, and 2½ miles northwest of Gaylordsville, Litchfield County.
Drainage area.- 204 square miles.
Gage-height record.- Water-stage recorder graph. No record for periods Feb. 9-14, 20-24, Mar. 23 to Apr. 23.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 10. Defined by current-meter measurements below 9,650 second-feet; extended to peak stage.
Maxima.- 1936: Discharge, 10,200 second-feet 11 a.m. Mar. 12 (gage height, 11.61 feet).
1929-35: Mean daily discharge, 3,500 second-feet Mar. 5, 1934 (gage height, uncertain).
Remarks.- Gage heights Mar. 23, 24 and discharge for periods of missing record determined by comparison with records of other streams in Housatonic River Basin.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	75	220	600	11	60	1,980	1,100	21	110	2,360	420
2	70	190	600	12	60	8,640	900	22	95	2,060	440
3	65	180	800	13	55	5,490	750	23	90	1,310	404
4	65	190	600	14	55	3,030	750	24	85	990	367
5	70	300	500	15	60	2,040	700	25	90	960	334
6	65	280	1,500	16	60	1,740	650	26	120	850	316
7	65	260	1,200	17	70	1,660	550	27	160	900	297
8	65	240	1,000	18	140	3,580	500	28	240	1,400	277
9	65	260	800	19	160	4,680	480	29	240	950	271
10	60	440	700	20	130	2,950	460	30		800	265
								31		650	
Mean monthly discharge, in second-feet									94.7	1,664	618
Run-off, in inches									0.50	9.41	3.38

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	3.58	850	9.17	6,180	9.84	7,160
4	-	-	-	-	-	-	3.70	910	9.96	7,340	9.53	6,700
6	-	-	-	-	-	-	3.86	996	10.70	8,540	9.23	6,260
8	-	-	-	-	-	-	3.99	1,070	11.33	9,640	8.99	5,930
10	-	-	-	-	-	-	4.16	1,180	11.58	10,100	8.72	5,570
N	*2.88	*240	*2.90	*260	*3.17	*440	4.36	1,300	11.59	10,100	8.51	5,290
2	-	-	-	-	-	-	4.72	1,530	11.50	9,950	8.32	5,050
4	-	-	-	-	-	-	5.30	1,960	11.30	9,590	8.16	4,840
6	-	-	-	-	-	-	6.10	2,640	11.03	9,100	7.99	4,640
8	-	-	-	-	-	-	6.93	3,440	10.72	8,570	7.81	4,420
10	-	-	-	-	-	-	7.94	4,580	10.39	8,020	7.63	4,210
M	-	-	-	-	3.48	751	8.70	5,540	10.07	7,510	7.44	3,990
	March 14		March 15		March 16		March 17		March 18		March 19	
2	-	-	-	-	-	-	-	-	5.10	1,800	8.62	5,440
4	7.08	3,600	5.66	2,250	5.09	1,790	4.87	1,640	5.32	1,980	8.58	5,380
6	-	-	-	-	-	-	-	-	5.59	2,190	8.49	5,270
8	6.70	3,210	5.49	2,110	5.06	1,770	4.86	1,630	6.29	2,810	8.37	5,110
10	-	-	-	-	-	-	-	-	6.61	3,120	8.22	4,920
N	6.38	2,890	5.32	1,980	5.02	1,740	4.83	1,610	7.25	3,780	8.07	4,730
2	-	-	-	-	-	-	-	-	7.56	4,130	7.91	4,540
4	6.17	2,700	5.21	1,890	4.98	1,720	4.86	1,630	7.93	4,570	7.72	4,310
6	-	-	-	-	-	-	-	-	8.13	4,810	7.54	4,100
8	6.03	2,580	5.20	1,880	4.93	1,680	4.97	1,710	8.32	5,050	7.39	3,940
10	-	-	-	-	-	-	-	-	8.50	5,280	7.24	3,770
M	5.87	2,430	5.16	1,850	4.89	1,650	5.00	1,730	8.59	5,400	7.11	3,630
	March 20		March 21		March 22		March 23		March 24		March 25	
2	-	-	5.74	2,320	-	-	-	-	-	-	-	-
4	6.88	3,390	5.66	2,250	5.70	2,280	-	-	-	-	-	-
6	-	-	5.67	2,260	-	-	4.8	1,590	4.1	1,140	-	-
8	6.64	3,150	5.72	2,300	5.56	2,170	-	-	-	-	-	-
10	-	-	5.77	2,340	-	-	-	-	-	-	-	-
N	6.41	2,920	5.83	2,400	5.43	2,060	4.6	1,450	4.0	1,080	*3.8	*960
2	-	-	5.89	2,450	-	-	-	-	-	-	-	-
4	6.19	2,720	5.89	2,450	5.30	1,960	-	-	-	-	-	-
6	-	-	5.83	2,400	-	-	4.4	1,320	3.9	1,020	-	-
8	6.00	2,550	5.79	2,360	5.13	1,820	-	-	-	-	-	-
10	-	-	5.77	2,340	-	-	-	-	-	-	-	-
M	5.82	2,390	5.76	2,330	5.00	1,730	4.25	1,230	3.85	990	-	-

Supplemental records.- Mar. 12, 11 a.m., 11.61 ft., 10,200 sec.-ft. Mar. 18, 7:20 a.m., 5.76 ft., 2,110 sec.-ft.
*Mean for the day.

Rocky River at outlet of Candlewood Lake, near New Milford, Conn.

Location.- Lat. 41°35', long. 73°26', at Rocky River hydroelectric plant of Connecticut Light & Power Co., 1½ miles northwest of New Milford, Litchfield County.
Drainage area.- 40.4 square miles.
Gage-height record.- One lake-gage reading daily at about 8 a.m. Gage height at midnight determined from graph constructed from gage readings.
Stage-discharge relation.- Observed discharge computed from flow through venturi meters.
Remarks.- Power plant is of pumped-storage type. Candlewood Lake stores both normal run-off of Rocky River and water pumped from Housatonic River, into which tail race of plant discharges. Plus sign before observed discharge indicates water passed from lake through generators into Housatonic River; minus sign indicates water pumped from Housatonic River into lake. Daily and monthly discharges corrected for gain or loss in Candlewood Lake. No corrections for evaporation from reservoir surface, which is about 8 square miles. Record based on data furnished by Connecticut Light & Power Co.

Discharge, in second-feet, and gain or loss in storage, in equivalent mean second-feet, 1936

Day	February			March			April		
	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge
1	+16	0	16	+6	0	6	42	0	42
2	+16	0	16	+7	+81	88	+106	0	106
3	+25	0	25	0	+54	54	0	+83	83
4	+6	+81	87	0	+81	81	0	+196	196
5	+19	+53	72	0	+54	54	-95	+196	101
6	+16	0	16	+7	0	7	-65	+168	103
7	+49	0	49	+6	0	6	+110	+253	363
8	+14	0	14	+7	0	7	0	+281	281
9	+14	0	14	0	0	0	0	+281	281
10	+52	0	52	0	+54	54	0	+338	338
11	+15	0	15	0	+1,300	1,300	-54	+309	255
12	+14	0	14	-29	+2,350	2,321	-154	+197	43
13	+12	0	12	-13	+521	508	-15	+169	154
14	+15	+27	42	0	+274	274	0	+141	141
15	+6	+53	59	-113	+329	216	+93	+84	177
16	+7	+53	60	-49	+384	335	+3	+84	87
17	0	0	0	0	+692	692	-6	+112	106
18	+7	0	7	+86	+995	1,081	0	+112	112
19	+13	0	13	+74	+774	848	-106	+141	35
20	+15	0	15	+89	+639	728	-28	+57	29
21	+14	0	14	+8	+390	398	+119	+28	147
22	+14	+27	41	-38	+168	130	+12	0	12
23	+15	+27	42	+19	+139	158	+28	0	28
24	+7	+161	168	+37	+139	176	0	0	0
25	0	+53	53	+46	+139	185	+95	0	95
26	0	+81	81	+42	+139	181	0	0	0
27	0	+53	53	+57	+139	196	+62	0	62
28	+6	0	6	-7	+196	189	+101	-84	17
29	+8	0	8	-82	+196	114	+57	-57	0
30				-1	+139	138	0	0	0
31				+82	+83	165			

	February	March	April
Mean monthly discharge, in second-feet (observed)	13.6	7.77	10.2
Run-off, in inches (observed)	0.36	0.22	0.28
Mean monthly discharge, in second-feet (corrected)	36.7	345	113
Run-off, in inches (corrected)	0.98	9.85	3.12

Still River near Lanesville, Conn.

Location.- Lat. 41°31'14", long. 73°25'9", at highway bridge 1½ miles south of Lanesville, Litchfield County, 2 miles above mouth, and 4 miles south of New Milford.
Drainage area.- 68.5 square miles.
Gage-height record.- Water-stage recorder graph.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 9. Defined by current-meter measurements below 585 second-feet; extended to peak stage on basis of a study of over flow conditions and by run-off comparisons with adjacent streams.
Maxima.- 1936: Discharge, 2,080 second-feet 5 p.m. Mar. 12 (gage height, 10.58 feet).
1931-35: Discharge, 950 second-feet Nov. 20, 1932 (gage height, 7.75 feet); gage height, 9.4 feet Mar. 5, 1934 (ice jam).

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	42	100	166	11	42	444	320	21	55	602	147
2	40	110	163	12	42	1,710	374	22	50	568	149
3	42	110	205	13	40	1,210	321	23	50	454	139
4	44	130	198	14	42	778	277	24	50	323	128
5	46	190	159	15	44	638	259	25	55	269	118
6	44	170	268	16	44	526	256	26	60	240	111
7	42	160	543	17	46	438	214	27	70	222	113
8	40	150	440	18	60	555	179	28	95	312	107
9	38	150	298	19	60	940	163	29	90	320	102
10	40	176	267	20	60	710	153	30		222	98
								31		188	
Mean monthly discharge, in second-feet									50.8	423	214
Run-off, in inches									0.80	7.12	3.48

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	3.83	164	5.07	275	7.80	970	9.35	1,590
4	-	-	-	-	3.86	166	5.25	298	8.36	1,190	9.02	1,460
6	-	-	-	-	3.86	166	5.38	315	9.00	1,450	8.75	1,350
8	-	-	-	-	3.86	166	5.51	334	9.55	1,670	8.54	1,270
10	-	-	-	-	3.83	164	5.64	354	9.95	1,830	8.38	1,200
N	*4.07	*150	*3.97	*150	3.80	162	5.78	378	10.28	1,960	8.25	1,150
2	-	-	-	-	3.79	161	5.98	413	10.50	2,050	8.15	1,110
4	-	-	-	-	3.85	165	6.27	470	10.58	2,080	8.07	1,080
6	-	-	-	-	4.04	178	6.67	558	10.54	2,070	7.98	1,040
8	-	-	-	-	4.27	196	6.98	648	10.37	2,000	7.89	1,010
10	-	-	-	-	4.55	220	7.25	750	10.10	1,890	7.83	982
M	-	-	3.80	162	4.84	249	7.48	842	9.76	1,750	7.75	950
	March 14		March 15		March 16		March 17		March 18		March 19	
2	-	-	-	-	-	-	-	-	5.94	406	7.87	998
4	7.62	898	-	-	-	-	-	-	5.99	415	7.92	1,020
6	-	-	7.04	669	6.65	553	6.19	454	6.07	430	7.93	1,020
8	7.50	850	-	-	-	-	-	-	6.24	464	7.90	1,010
10	-	-	-	-	-	-	-	-	6.39	495	7.82	978
N	7.40	810	6.96	641	6.54	528	6.09	434	6.54	528	7.76	954
2	-	-	-	-	-	-	-	-	6.66	555	7.69	926
4	7.32	778	-	-	-	-	-	-	6.76	580	7.62	898
6	-	-	6.86	608	6.42	501	6.01	419	6.88	614	7.57	878
8	7.22	738	-	-	-	-	-	-	7.09	686	7.52	858
10	-	-	-	-	-	-	-	-	7.44	826	7.49	846
M	7.14	706	6.77	582	6.31	478	5.95	408	7.74	946	7.44	826
	March 20		March 21		March 22		March 23		March 24		March 25	
2	-	-	-	-	-	-	-	-	-	-	-	-
4	7.34	786	-	-	-	-	-	-	-	-	-	-
6	-	-	6.87	611	6.80	590	6.36	489	5.60	348	5.08	277
8	7.23	742	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-
N	7.14	706	6.84	602	6.74	575	6.20	456	5.40	318	5.02	269
2	-	-	-	-	-	-	-	-	-	-	-	-
4	7.05	672	-	-	-	-	-	-	-	-	-	-
6	-	-	6.78	585	6.66	555	6.02	421	5.24	296	4.95	262
8	6.96	641	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-
M	6.91	624	6.78	585	6.51	521	5.80	381	5.14	284	4.90	256

Supplemental records.- Mar. 12, 5 p.m., 10.58 ft., 2,080 sec.-ft.
*Mean for the day.

Shepaug River at outlet of Shepaug Reservoir, at Woodville, Conn.

Location.- Lat. 41°43'16", long. 73°17'40", 1 mile north of Woodville, Litchfield County, and 3 miles above confluence of Shepaug and Bantam Rivers.
Drainage area.- 38.0 square miles.
Gage-height record.- One reservoir gage reading daily at noon; additional readings during periods of rapid change in stage; gage height at midnight determined from graph constructed from gage-height readings.
Stage-discharge relation.- Observed discharges computed from flow through gates and over weir and spillway at times when reservoir gage was read. During period of rapid change in discharge, mean daily discharge computed from graph constructed from determinations of instantaneous discharges.
Maxima.- 1936: Discharge observed, 4,070 second-feet 10 to 11 a.m. Mar. 12.
Remarks.- Mean daily and monthly discharges corrected for gain or loss in storage in Shepaug Reservoir. No diversions from reservoir Feb. 1 to Apr. 30. No corrections for evaporation from reservoir surface. Minimum flow of 2.35 second-feet maintained at all times below reservoir. Basic data furnished by Bureau of Engineering, City of Waterbury.

Mean discharge, in second-feet, and gain or loss in storage, in equivalent mean second-feet, 1936

Day	February			March			April		
	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge
1	25	-4	21	38	0	38	141	-3	138
2	24	-4	20	40	0	40	128	+5	133
3	23	-1	22	37	0	37	218	+2	220
4	23	-1	22	40	+2	42	162	-6	156
5	23	-2	21	51	+1	52	122	-3	119
6	23	-1	22	49	-1	48	540	+40	580
7	22	0	22	44	-1	43	480	-10	470
8	22	0	22	42	0	42	308	-9	299
9	22	0	22	38	0	38	238	-5	233
10	22	-2	20	42	+2	44	213	-1	212
11	22	-2	20	200	+60	260	218	+1	219
12	22	0	22	2,710	+50	2,760	234	-1	233
13	20	0	20	1,430	-30	1,400	203	-3	200
14	20	+1	21	660	-20	640	179	-3	176
15	20	0	20	460	0	460	166	-2	164
16	20	0	20	480	0	480	151	-3	148
17	20	+3	23	800	+40	840	128	-3	125
18	25	+1	26	2,720	+20	2,740	113	-2	111
19	25	-1	24	1,350	-60	1,290	98	-2	96
20	24	+2	26	720	-30	690	92	-1	91
21	24	0	24	560	-10	550	84	0	84
22	24	-1	23	440	+40	480	90	0	90
23	24	-2	22	328	-12	316	76	-2	74
24	24	-1	23	251	-3	248	67	-2	65
25	23	+1	24	246	-3	243	57	-2	55
26	29	+1	30	198	-5	193	55	0	55
27	42	0	42	179	+13	192	55	0	55
28	44	0	44	520	+6	526	51	-1	50
29	42	0	42	278	-13	265	46	0	46
30				198	-7	191	46	0	46
31				166	-4	162			

	February	March	April
Mean monthly discharge, in second-feet (observed)..........	24.9	494	159
Run-off, in inches (observed)..............................	0.71	14.99	4.66
Mean monthly discharge, in second-feet (corrected).........	24.5	495	158
Run-off, in inches (corrected).............................	0.70	14.99	4.64

Shepaug River near Roxbury, Conn.

Location.- Lat. 41°32'53", long. 73°19'51", at highway bridge 0.7 mile below Roxbury station and 1 1/4 miles southwest of Roxbury, Litchfield County.
Drainage area.- 133 square miles.
Gage-height record.- Water-stage recorder graph except for period 10 a.m. to midnight April 6, when there was no record.
Stage-discharge relation.- Affected by ice Feb. 1 to 3 p.m. Mar. 11. Defined by current-meter measurements below 3,000 second-feet; extended logarithmically to peak discharge; verified by spillway determination at dam at Roxbury station (C, 3.58).
Maxima.- 1936: Discharge, 7,000 second-feet 5 a.m. Mar. 12 (gage height, 10.77 feet).
1930-35: Discharge, 4,150 second-feet (revised) Mar. 5, 1934 (gage height, about 8.3 feet).
Remarks.- Discharge for periods of ice effect based upon one discharge measurement, study of gage-height graph and weather records, and comparison with discharge records for nearby stations. Flood discharge not materially affected by storage. For daily changes in storage see record for Shepaug River at outlet of Shepaug Reservoir, at Woodville, Conn.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	75	130	548	11	70	1,300	810	21	90	2,270	363
2	80	120	548	12	70	5,400	825	22	85	1,850	355
3	75	130	646	13	70	3,180	720	23	80	1,360	316
4	75	150	548	14	70	2,140	656	24	85	1,150	283
5	75	200	471	15	75	1,750	628	25	90	1,020	262
6	70	190	1,430	16	70	1,680	579	26	100	850	254
7	65	170	1,170	17	75	1,840	502	27	130	890	244
8	70	170	895	18	90	4,420	458	28	150	1,340	228
9	75	180	750	19	110	3,570	429	29	130	940	211
10	70	380	735	20	85	2,550	395	30		765	199
								31		660	
Mean monthly discharge, in second-feet........................									84.7	1,379	549
Run-off, in inches...									0.69	11.96	4.61

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	4.95	850	9.45	5,400	8.11	3,960
4	-	-	-	-	3.61	-	5.00	850	10.10	6,170	7.90	3,750
6	-	-	-	-	-	-	5.02	900	10.50	6,650	7.66	3,510
8	-	-	-	-	3.65	-	5.10	900	10.30	6,410	7.45	3,300
10	-	-	-	-	-	-	5.20	900	10.25	6,350	7.30	3,170
N	*3.56	*170	*3.60	*180	3.74	*380	5.95	900	10.20	6,290	7.15	3,030
2	-	-	-	-	3.94	-	6.30	950	9.60	5,570	7.05	2,940
4	-	-	-	-	4.36	-	4.80	1,100	9.04	4,940	7.05	2,940
6	-	-	-	-	4.88	-	5.50	1,690	8.64	4,500	6.89	2,800
8	-	-	-	-	4.95	-	6.00	2,060	8.26	4,110	6.89	2,800
10	-	-	-	-	4.95	-	6.95	2,860	8.30	4,150	6.73	2,660
M	-	-	-	-	4.95	850	8.45	4,300	8.31	4,160	6.62	2,560
	March 14		March 15		March 16		March 17		March 18		March 19	
2	-	-	-	-	-	-	-	-	6.31	2,310	8.32	4,170
4	6.37	2,360	5.68	1,820	5.62	1,770	5.52	1,700	6.61	2,550	8.09	3,940
6	-	-	-	-	-	-	-	-	7.50	3,350	7.93	3,780
8	6.13	2,160	5.53	1,710	5.50	1,690	5.57	1,740	8.27	4,120	7.89	3,740
10	-	-	-	-	-	-	-	-	9.10	5,010	7.85	3,700
N	5.98	2,040	5.42	1,630	5.40	1,620	5.60	1,760	9.46	5,410	7.74	3,590
2	-	-	5.39	1,610	-	-	-	-	9.75	5,750	-	-
4	5.97	2,040	5.47	1,670	5.37	1,600	5.74	1,860	9.71	5,700	7.47	3,320
6	-	-	-	-	-	-	-	-	9.53	5,490	-	-
8	5.95	2,020	5.65	1,800	5.43	1,640	6.02	2,080	9.27	5,200	7.27	3,140
10	-	-	-	-	-	-	-	-	8.92	4,810	-	-
M	5.81	1,910	5.71	1,840	5.45	1,660	6.24	2,250	8.56	4,420	7.08	2,970
	March 20		March 21		March 22		March 23		March 24		March 25	
2	-	-	6.05	2,100	-	-	5.09	1,400	-	-	-	-
4	6.91	2,820	6.01	2,070	6.05	2,100	5.16	1,450	-	-	-	-
6	-	-	6.00	2,060	-	-	5.18	1,470	4.76	1,190	4.58	1,080
8	6.75	2,680	6.26	2,270	5.89	1,970	5.13	1,430	-	-	-	-
10	-	-	6.47	2,440	-	-	-	-	-	-	-	-
N	6.60	2,540	6.45	2,420	5.77	1,880	5.06	1,380	4.68	1,140	4.50	1,030
2	-	-	-	-	-	-	-	-	-	-	-	-
4	6.47	2,440	6.37	2,360	5.61	1,770	4.98	1,330	-	-	-	-
6	-	-	-	-	-	-	-	-	4.62	1,100	4.40	970
8	6.28	2,280	6.32	2,320	5.50	1,690	4.90	1,270	-	-	-	-
10	-	-	-	-	5.04	1,370	-	-	-	-	-	-
M	6.12	2,160	6.21	2,230	4.92	1,280	4.84	1,230	4.58	1,080	4.33	928

Supplemental records.- Mar. 10, 5 p.m., 4.72 ft. Mar. 11, 11:30 a.m., 5.30 ft.; 3:30 p.m., 6.30 ft.; 3:45 p.m., 7.20 ft.; 9:30 p.m., 6.90 ft.; 9:45 p.m., 8.85 ft. Mar. 12, 3 a.m., 8.98 ft., 4,880 sec.-ft.; 5 a.m., 10.77 ft., 7,000 sec.-ft.; 8:30 a.m., 10.46 ft., 6,600 sec.-ft.; 11:15 a.m., 10.07 ft., 6,130 sec.-ft.; 9 p.m., 8.20 ft., 4,050 sec.-ft.; 11 p.m., 8.37 ft., 4,220 sec.-ft. Mar. 13, 7 p.m., 6.97 ft., 2,870 sec.-ft.
*Mean for the day.

Pomperaug River at Southbury, Conn.

Location.- Lat. 41°28'50", long. 73°13'30", 200 feet above highway bridge, three-quarters of a mile west of Southbury, New Haven County, and 5½ miles above mouth.

Drainage area.- 75.3 square miles.

Gage-height record.- Water-stage recorder graph except for period 7:40 to 10 a.m. Mar. 12, when it was determined on basis of high-water mark.

Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 2, Mar. 7-9. Defined by current-meter measurements below 1,170 second-feet; extended to peak stage by determination of flood flow over spillway of dam 2 miles downstream (C, 3.39).

Maxima.- 1936: Discharge, 6,600 second-feet 9 a.m. Mar. 12 (gage height, 14.13 feet, from flood marks).

1932-35: Discharge, 5,860 second-feet (revised) Sept. 17, 1934 (gage height, 13.2 feet, from flood marks).

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	30	95	195	11	26	1,230	426	21	55	690	152
2	30	90	203	12	26	4,030	414	22	50	499	158
3	28	96	288	13	24	1,270	314	23	50	350	134
4	28	144	209	14	28	604	269	24	46	306	123
5	30	260	179	15	30	470	271	25	44	298	112
6	26	169	643	16	26	420	255	26	55	260	114
7	24	120	501	17	22	403	207	27	90	286	109
8	22	110	349	18	34	1,480	185	28	150	540	99
9	24	100	267	19	80	1,190	178	29	120	309	100
10	26	333	303	20	70	632	160	30		253	99
								31		222	
Mean monthly discharge, in second-feet									44.6	557	234
Run-off, in inches									0.64	8.53	3.47

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	5.90	820	11.92	4,840	7.76	1,860
4	-	-	-	-	3.79	138	5.71	734	12.82	5,560	7.88	1,930
6	-	-	-	-	-	-	5.63	698	13.01	5,710	7.60	1,760
8	-	-	-	-	3.87	153	5.62	694	13.76	6,310	7.11	1,470
10	-	-	-	-	-	-	5.70	730	13.61	6,190	6.73	1,240
N	*3.64	*110	*3.63	*100	3.94	167	5.86	802	11.53	4,520	6.50	1,120
2	-	-	-	-	4.06	192	6.22	980	9.94	3,360	-	-
4	-	-	-	-	4.35	258	6.71	1,230	9.09	2,760	6.19	965
6	-	-	-	-	4.80	385	7.27	1,560	8.45	2,320	-	-
8	-	-	-	-	5.53	654	7.80	1,880	8.02	2,010	6.01	875
10	-	-	-	-	6.11	925	8.63	2,440	7.81	1,890	-	-
M	-	-	3.68	120	6.17	955	10.40	3,680	7.66	1,800	5.80	775
	March 14		March 15		March 16		March 17		March 18		March 19	
2	-	-	-	-	-	-	-	-	4.96	431	7.38	1,630
4	5.62	694	5.13	492	-	-	-	-	4.99	442	7.03	1,420
6	-	-	-	-	4.99	442	4.86	397	5.18	512	6.83	1,300
8	5.46	624	5.06	466	-	-	-	-	6.01	875	6.75	1,250
10	-	-	-	-	-	-	-	-	6.68	1,210	6.71	1,230
N	5.33	572	4.98	438	4.88	403	4.85	394	7.35	1,610	6.68	1,210
2	-	-	-	-	-	-	-	-	8.19	2,130	6.55	1,140
4	5.27	548	4.96	431	-	-	4.84	390	8.72	2,500	6.38	1,060
6	-	-	-	-	4.84	390	-	-	8.80	2,560	6.21	975
8	5.27	548	5.06	466	-	-	4.89	407	8.42	2,290	6.07	905
10	-	-	-	-	-	-	-	-	8.06	2,040	5.94	840
M	5.23	532	5.10	480	4.86	397	4.96	431	7.76	1,860	5.85	798
	March 20		March 21		March 22		March 23		March 24		March 25	
2	-	-	5.15	500	-	-	-	-	-	-	-	-
4	5.71	734	5.14	496	-	-	-	-	-	-	4.48	288
6	-	-	5.16	504	5.28	552	-	-	-	-	-	-
8	5.57	672	5.27	548	-	-	-	-	-	-	4.58	314
10	-	-	5.53	654	-	-	-	-	-	-	-	-
N	5.45	620	5.91	825	5.14	496	4.71	350	4.55	306	4.61	322
2	-	-	6.24	990	-	-	-	-	-	-	-	-
4	5.35	580	6.17	955	-	-	-	-	-	-	4.54	303
6	-	-	5.92	830	4.99	442	-	-	4.52	298	-	-
8	5.25	540	5.73	744	-	-	-	-	-	-	4.49	291
10	-	-	5.59	680	-	-	-	-	-	-	-	-
M	5.17	508	5.49	636	4.83	387	4.59	316	4.47	286	4.44	279

Supplemental records.- Mar. 10, 11 p.m., 6.20 ft., 970 sec.-ft. Mar. 12, 5 a.m., 13.00 ft., 5,700 sec.-ft.; 9 a.m., 14.13 ft., 6,600 sec.-ft. Mar. 18, 7 a.m., 5.35 ft., 580 sec.-ft.; 5:30 p.m., 8.83 ft., 2,580 sec.-ft. Mar. 21, 3 p.m., 6.27 ft., 1,000 sec.-ft.

*Mean for the day.

Naugatuck River near Thomaston, Conn.

Location.- Lat. 41°42'11", long. 73°3'56", at highway bridge half a mile above confluence with Leadmine Brook and 2 miles north of Thomaston, Litchfield County.
Drainage area.- 71.9 square miles.
Gage-height record.- Water-stage recorder graph.
Stage-discharge relation.- Affected by ice Feb. 1-29. Defined by current-meter measurements below 1,800 second-feet; extended logarithmically to 2,000 second-feet and as a straight line above 2,000 second-feet; verified by comparison of run-off with that for nearby stations.
Maxima.- 1936: Discharge, 5,950 second-feet 7 a.m. Mar. 12 (gage height, 9.37 feet).
1930-35: Discharge, 5,000 second-feet Sept. 17, 1934 (gage height, 8.0 feet).
Remarks.- Discharge for periods of ice effect based upon one discharge measurement, study of gage-height graph and weather records, and comparisons with other discharge records in the same drainage basin.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	65	153	214	11	55	971	547	21	75	1,010	170
2	65	129	231	12	55	4,300	506	22	70	686	176
3	60	99	364	13	55	1,580	364	23	65	435	150
4	65	103	277	14	55	716	311	24	60	385	136
5	65	150	208	15	55	662	311	25	75	475	116
6	65	104	1,260	16	65	734	288	26	110	381	122
7	60	86	714	17	90	1,090	234	27	160	464	116
8	60	80	445	18	120	3,750	205	28	220	728	104
9	55	80	322	19	130	1,790	195	29	170	385	104
10	55	200	330	20	95	860	173	30		296	104
								31		252	
Mean monthly discharge, in second-feet									82.6	746	293
Run-off, in inches									1.24	11.99	4.55

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	2.60	385	8.07	4,780	5.55	2,520
4	-	-	-	-	-	-	2.60	385	8.77	5,410	5.23	2,230
6	-	-	-	-	1.77	108	2.62	394	9.24	5,840	4.91	1,940
8	-	-	-	-	-	-	2.66	412	9.34	5,930	4.64	1,720
10	-	-	-	-	-	-	2.76	460	8.74	5,390	4.42	1,550
N	*1.63	*80	*1.63	*80	1.88	134	2.92	542	7.97	4,690	4.25	1,420
2	-	-	-	-	2.00	167	3.14	674	7.32	4,110	4.12	1,320
4	-	-	-	-	2.30	266	3.60	960	6.75	3,600	4.03	1,260
6	-	-	-	-	2.44	319	4.02	1,250	6.25	3,140	3.93	1,190
8	-	-	-	-	2.54	359	4.64	1,720	5.82	2,760	3.79	1,090
10	-	-	-	-	2.60	385	5.62	2,580	5.65	2,600	3.66	1,000
M	-	-	1.69	91	2.59	381	6.85	3,680	5.72	2,670	3.54	920
	March 14		March 15		March 16		March 17		March 18		March 19	
2	-	-	-	-	-	-	-	-	4.41	1,540	5.72	2,670
4	3.35	800	2.98	578	3.31	776	3.55	925	4.76	1,820	5.34	2,330
6	-	-	-	-	-	-	-	-	6.01	2,930	5.02	2,040
8	3.21	716	2.91	536	3.15	680	3.62	974	7.41	4,190	4.89	1,920
10	-	-	-	-	-	-	-	-	8.51	5,180	4.79	1,840
N	3.10	650	2.84	500	3.06	626	3.61	967	8.95	5,580	4.62	1,710
2	-	-	2.91	536	-	-	3.71	1,040	8.53	5,200	4.49	1,600
4	3.11	656	3.16	686	3.18	698	3.91	1,180	8.06	4,770	4.35	1,490
6	-	-	3.45	860	-	-	4.09	1,300	7.58	4,340	4.23	1,400
8	3.20	710	3.56	932	3.30	770	4.18	1,370	7.14	3,950	4.11	1,320
10	-	-	3.51	897	-	-	4.22	1,390	6.63	3,490	3.98	1,230
M	3.08	638	3.47	872	3.40	830	4.32	1,470	6.14	3,050	3.89	1,160
	March 20		March 21		March 22		March 23		March 24		March 25	
2	-	-	3.12	662	-	-	-	-	-	-	-	-
4	3.70	1,030	3.11	656	3.40	830	-	-	-	-	-	-
6	-	-	3.16	686	-	-	2.78	470	2.56	368	2.81	485
8	3.52	904	3.52	804	3.25	740	-	-	-	-	-	-
10	-	-	3.85	1,140	-	-	-	-	-	-	-	-
N	3.40	830	4.06	1,280	3.12	662	2.70	430	2.53	355	2.83	495
2	-	-	4.10	1,310	-	-	-	-	-	-	-	-
4	3.29	764	4.03	1,260	-	-	-	-	-	-	-	-
6	-	-	3.95	1,200	2.98	578	2.62	394	2.65	408	2.80	480
8	3.23	728	3.83	1,120	-	-	-	-	-	-	-	-
10	-	-	3.71	1,040	-	-	-	-	-	-	-	-
M	3.15	680	3.58	946	2.87	515	2.60	385	2.68	421	2.74	450

Supplemental records.- Mar. 12, 7 a.m., 9.37 ft., 5,950 sec.-ft. Mar. 24, 2 p.m., 2.52 ft., 351 sec.-ft.
*Mean for the day.

Naugatuck River near Naugatuck, Conn.

Location.- Lat. 41°28'15", long. 73°3'10", one-fifth of a mile above Beacon Hill Brook, 1.3 miles below Naugatuck, New Haven County, and 12 miles above mouth.

Drainage area.- 246 square miles.

Gage-height record.- Water-stage recorder graph. Broken record Feb. 25 to Mar. 4.

Stage-discharge relation.- Defined by current-meter measurements below 4,650 second-feet; extended logarithmically to 6,000 second-feet and as a straight line above 6,000 second-feet; verified by run-off comparisons with records for other stations in the same basin.

Maxima.- 1936: Discharge, 14,800 second-feet 9 a.m. Mar. 12 (gage height, 11.96 feet).

1918-24, 1928-35: Gage height, 12.08 feet Apr. 7, 1924 (discharge uncertain; previously published figure probably low).

Flood of November 1927 reached a stage of about 14 feet (discharge, about 18,300 second-feet).

Remarks.- Discharge for period Feb. 25 to Mar. 4 determined from partial gage-height graph and comparison with records of nearby streams.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	202	400	658	11	179	2,890	1,500	21	251	2,420	474
2	179	380	676	12	174	11,100	1,510	22	222	1,880	487
3	192	380	1,020	13	168	4,360	1,060	23	196	1,210	428
4	202	460	796	14	179	2,030	880	24	199	1,020	389
5	204	700	620	15	176	1,640	880	25	220	1,090	344
6	193	545	2,750	16	190	1,730	850	26	300	985	344
7	179	415	2,140	17	245	1,930	664	27	460	981	344
8	166	373	1,330	18	337	6,360	585	28	600	2,090	321
9	163	402	950	19	352	4,690	560	29	440	1,130	307
10	179	789	1,020	20	285	2,270	521	30		880	299
								31		754	
Mean monthly discharge, in second-feet......................									242	1,880	824
Run-off, in inches..									1.06	8.81	3.74

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	3.61	1,690	9.30	10,300	6.83	6,100
4	-	-	-	-	-	-	3.60	1,680	10.41	12,200	6.75	5,960
6	-	-	-	-	1.90	492	3.61	1,690	11.68	14,300	6.55	5,630
8	-	-	1.65	381	-	-	3.62	1,700	11.95	14,800	6.25	5,150
10	-	-	-	-	-	-	3.72	1,800	11.86	14,700	5.91	4,610
N	*1.63	*373	1.70	402	2.07	575	3.82	1,900	11.08	13,300	5.56	4,080
2	-	-	-	-	2.17	625	4.04	2,120	10.13	11,700	5.32	3,730
4	-	-	-	-	2.45	790	4.53	2,690	9.20	10,100	5.16	3,500
6	-	-	-	-	2.86	1,060	5.00	3,280	8.40	8,770	4.99	3,270
8	-	-	-	-	3.21	1,340	5.64	4,200	7.81	7,770	4.84	3,070
10	-	-	-	-	3.48	1,570	7.60	7,410	7.40	7,070	4.70	2,890
M	1.70	402	1.80	446	3.57	1,650	8.50	8,940	7.04	6,460	4.57	2,730
	March 14		March 15		March 16		March 17		March 18		March 19	
2	4.36	2,480	-	-	-	-	-	-	4.25	2,360	7.16	6,660
4	4.25	2,360	3.66	1,740	3.85	1,930	3.68	1,760	4.60	2,770	6.77	6,000
6	4.12	2,210	-	-	-	-	-	-	4.85	3,080	6.43	5,440
8	4.01	2,090	3.55	1,640	3.72	1,800	3.80	1,880	5.80	4,440	6.20	5,070
10	3.93	2,010	-	-	-	-	-	-	6.80	6,050	5.97	4,700
N	3.84	1,920	3.44	1,540	3.58	1,660	3.86	1,940	8.10	8,260	5.85	4,520
2	3.77	1,850	-	-	-	-	-	-	8.60	9,110	5.70	4,290
4	3.72	1,800	3.35	1,460	3.47	1,560	3.83	1,910	8.84	9,520	5.54	4,050
6	3.70	1,780	3.37	1,470	-	-	3.85	1,930	8.67	9,230	5.35	3,770
8	3.70	1,780	3.55	1,640	3.49	1,580	4.00	2,080	8.30	8,600	5.19	3,550
10	3.71	1,790	3.81	1,890	-	-	4.14	2,230	7.95	8,000	5.03	3,320
M	3.75	1,830	3.93	2,010	3.60	1,680	4.20	2,300	7.56	7,340	4.87	3,110
	March 20		March 21		March 22		March 23		March 24		March 25	
2	4.72	2,920	3.68	1,760	4.30	2,410	-	-	-	-	-	-
4	4.57	2,730	3.66	1,740	4.16	2,260	-	-	-	-	-	-
6	4.45	2,590	3.68	1,760	4.05	2,140	-	-	-	-	-	-
8	4.33	2,450	3.90	1,980	3.93	2,010	-	-	-	-	-	-
10	4.25	2,360	4.09	2,180	3.85	1,930	-	-	-	-	-	-
N	4.14	2,230	4.40	2,530	3.76	1,840	3.10	1,250	2.81	1,030	2.97	1,150
2	4.03	2,110	4.74	2,940	3.66	1,740	-	-	-	-	-	-
4	3.96	2,040	4.84	3,070	3.58	1,660	-	-	-	-	-	-
6	3.87	1,950	4.84	3,070	3.50	1,590	-	-	-	-	-	-
8	3.80	1,880	4.74	2,940	3.42	1,520	-	-	-	-	-	-
10	3.76	1,840	4.60	2,770	3.37	1,470	-	-	-	-	-	-
M	3.70	1,780	4.45	2,590	3.30	1,410	2.90	1,090	2.76	992	2.88	1,080

Supplemental records.- Mar. 12, 9 a.m., 11.96 ft., 14,800 sec.-ft.
*Mean for the day.

Leadmine Brook near Thomaston, Conn.

Location.- Lat. 41°42'10", long. 73°3'36", at highway bridge half a mile above mouth and 2 1/4 miles northeast of Thomaston, Litchfield County.
Drainage area.- 24.0 square miles.
Gage-height record.- Water-stage recorder graph except for period Feb. 10-17, when there was no record.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 4, 3 to 5 a.m. Mar. 11. Defined by current-meter measurements below 380 second-feet; extended logarithmically to 600 second-feet and as a straight line above 600 second-feet on basis of run-off comparisons with records for adjacent stations.
Maxima.- 1936: Discharge, 2,470 second-feet 5:30 a.m. Mar. 12 (gage height, 10.43 feet).
1930-35: Discharge, about 2,800 second-feet (revised) Sept. 17, 1934 (gage height, 11.2 feet, from flood marks).
Remarks.- Discharge for periods of ice effect based upon one discharge measurement, study of gage-height graph and weather records, and comparison with discharge records for other stations in the same basin.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	19	36	72	11	15	561	185	21	19	273	56
2	18	34	84	12	14	1,560	156	22	18	168	58
3	19	32	116	13	14	444	120	23	16	121	49
4	18	38	82	14	14	218	99	24	16	104	44
5	18	95	68	15	15	208	105	25	18	110	40
6	18	57	401	16	18	206	92	26	22	91	40
7	16	42	196	17	30	253	75	27	28	158	38
8	15	38	132	18	44	990	67	28	44	232	37
9	15	36	101	19	38	458	63	29	38	124	34
10	15	144	107	20	22	220	58	30		98	33
								31		84	
Mean monthly discharge, in second-feet									21.2	233	93.6
Run-off, in inches									0.95	11.20	4.35

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	4.50	249	9.52	2,110	6.07	728
4	-	-	-	-	3.02	47	4.72	243	9.97	2,290	5.80	620
6	-	-	-	-	-	-	4.41	231	10.37	2,450	5.56	531
8	-	-	-	-	3.08	51	4.44	237	9.82	2,230	5.32	456
10	-	-	-	-	3.12	55	4.60	270	8.89	1,860	5.18	412
N	*2.90	*38	*2.87	*36	3.26	68	4.80	315	7.93	1,470	5.07	382
2	-	-	-	-	3.65	111	5.00	365	7.34	1,240	4.97	358
4	-	-	-	-	4.00	159	5.30	450	6.92	1,070	4.92	345
6	-	-	-	-	4.20	192	5.80	620	6.61	944	4.85	328
8	-	-	-	-	4.43	235	6.80	1,020	6.33	832	4.77	308
10	-	-	-	-	4.50	249	8.20	1,580	6.18	772	4.67	285
M	-	-	2.93	40	4.53	255	9.00	1,900	6.29	816	4.58	266
	March 14		March 15		March 16		March 17		March 18		March 19	
2	4.50	249	4.24	199	-	-	-	-	4.60	270	5.80	620
4	4.42	233	4.19	190	4.32	214	4.47	243	5.15	405	5.60	545
6	4.35	220	4.13	180	-	-	-	-	6.31	824	5.50	510
8	4.29	208	4.10	175	4.19	190	4.47	243	7.90	1,460	5.50	510
10	4.25	201	4.08	172	-	-	-	-	8.37	1,650	5.43	489
N	4.22	196	4.06	169	4.11	177	4.40	229	7.89	1,460	5.39	477
2	4.22	196	4.06	169	-	-	-	-	7.30	1,220	-	-
4	4.26	203	4.15	184	4.25	201	4.55	260	7.04	1,120	5.10	390
6	4.34	218	4.59	268	-	-	-	-	6.98	1,090	-	-
8	4.39	227	4.67	285	4.34	218	4.62	274	6.80	1,020	4.87	332
10	4.38	225	4.61	272	-	-	-	-	6.47	888	-	-
M	4.31	212	4.52	253	4.40	229	4.60	270	6.10	740	4.69	290
	March 20		March 21		March 22		March 23		March 24		March 25	
2	-	-	4.09	173	-	-	-	-	-	-	-	-
4	-	-	4.10	175	-	-	-	-	-	-	3.66	112
6	4.50	249	4.30	210	4.17	187	3.77	126	3.61	106	-	-
8	-	-	4.70	292	-	-	-	-	-	-	3.70	117
10	-	-	5.01	368	-	-	-	-	-	-	-	-
N	4.33	216	5.07	382	4.03	164	3.71	118	3.59	104	3.70	117
2	-	-	5.01	368	-	-	-	-	-	-	-	-
4	-	-	4.84	325	-	-	-	-	-	-	3.62	107
6	4.18	189	4.67	285	3.90	144	3.68	115	3.56	100	-	-
8	-	-	4.55	260	-	-	-	-	-	-	3.60	105
10	-	-	4.45	239	-	-	-	-	-	-	-	-
M	4.08	172	4.37	223	3.83	134	3.65	111	3.55	99	3.56	100

Supplemental records.- Mar. 11, 3 a.m., 4.65 ft., 5 a.m., 4.70 ft. Mar. 12, 5:30 a.m., 10.43 ft., 2,470 sec.-ft.

*Mean for the day.

Branch of Naugatuck River at outlet of Wigwam Reservoir, near Thomaston, Conn.

Location.- Lat. 41°39'45", long. 73°7'35", 2½ miles west of Thomaston, Litchfield County, and 3 miles above confluence with Naugatuck River.
Drainage area.- 18.0 square miles.
Gage-height record.- Three reservoir gage readings daily; gage height at midnight determined from graph constructed from gage-height readings.
Stage-discharge relation.- Observed discharge computed from flow over spillways and through venturi meter.
Maxima.- 1936: Discharge observed, 2,700 second-feet 3 a.m. Mar. 12.
Remarks.- Mean daily and monthly discharges corrected for gain or loss in storage in Wigwam and Morris Reservoirs. No diversions from Shepaug River drainage area to Morris Reservoir Feb. 1 to Apr. 30. No corrections for evaporation from reservoir surfaces. Basic data furnished by Bureau of Engineering, City of Waterbury.

Mean discharge, in second-feet, and gain or loss in storage, in equivalent mean second-feet, 1936

Day	February			March			April		
	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge
1	21	-1	20	37	-5	32	38	-5	33
2	18	-1	17	28	-1	27	50	+34	84
3	16	-2	14	26	-1	25	83	-28	55
4	17	+2	19	31	+14	45	41	-4	37
5	17	+1	18	86	-1	85	45	+14	59
6	17	-2	15	39	-12	27	420	+37	457
7	15	-6	9	25	-4	21	140	-27	113
8	13	-2	11	23	0	23	86	-12	74
9	11	+3	14	23	+1	24	60	-2	58
10	12	-2	10	61	+47	108	77	0	77
11	12	-4	8	525	+201	726	196	+16	212
12	12	-5	7	1,332	-154	1,178	122	-8	114
13	12	-2	10	258	-67	191	85	-8	77
14	12	+6	18	101	-11	90	64	-2	62
15	12	+3	15	82	-1	81	68	-1	67
16	11	0	11	104	+6	110	56	-5	51
17	11	+1	12	161	+21	182	39	-3	36
18	13	+11	24	604	+26	630	36	-1	35
19	22	+6	28	294	-23	271	35	-2	33
20	32	0	32	130	-17	113	32	-2	30
21	29	-3	26	262	+8	270	31	+1	32
22	21	-3	18	123	-16	107	31	-1	30
23	13	-6	7	83	-9	74	24	-2	22
24	12	-3	9	60	-1	59	24	-2	22
25	12	+2	14	64	0	64	16	0	16
26	13	+7	20	57	-5	52	20	+2	22
27	16	+9	25	65	+14	79	18	0	18
28	47	+9	56	136	-4	132	18	-2	16
29	59	-5	54	64	-8	56	19	-1	18
30				57	-1	56	17	-1	16
31				54	-3	51			

	February	March	April
Mean monthly discharge, in second-feet (observed)	18.2	161	66.4
Run-off, in inches (observed)	1.09	10.31	4.12
Mean monthly discharge, in second-feet (corrected)	18.7	161	65.9
Run-off, in inches (corrected)	1.12	10.31	4.08

Saugatuck River near Westport, Conn.

Location.- Lat. 41°10'15", long. 73°22'0", on old Ford Road or Clinton Ave., 400 feet below confluence with West Branch of Saugatuck River, 600 feet below dam of Dorr Co., and 2 miles north of Westport, Fairfield County.
Drainage area.- 77.5 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights used to hundredths.
Stage-discharge relation.- Affected by ice Feb. 1-26, Mar. 1, 2, 6-8. Defined by current-meter measurements below 1,700 second-feet; extended logarithmically to 3,000 second-feet with a straight-line extension above 3,000 second-feet.
Maxima.- 1936: Discharge, 5,310 second-feet at 11:30 a.m. Mar. 12 (gage height, 11.30 feet).
1932-35: Discharge, about 3,100 second-feet Sept. 17, 1934 (gage height, 8.8 feet).
Remarks.- Discharge for periods of ice effect based upon one discharge measurement, study of gage-height graph and weather records, and comparison with records for nearby stations. Bridgeport Hydraulic Co. diverts the flow from 17 square miles of the Aspetuck River drainage area. Water for diversion is stored in Aspetuck Reservoir and diverted by canal into Hemlocks Reservoir (Mill River Basin) from which it is released for water supply. Daily and monthly discharges not corrected for diversions. Run-off computations are based on total drainage area above station.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	70	110	260	11	65	870	503	21	90	812	216
2	75	110	260	12	65	4,020	471	22	80	672	204
3	70	122	330	13	65	2,080	416	23	80	510	194
4	70	151	282	14	65	1,070	391	24	80	440	181
5	70	187	245	15	75	767	366	25	80	400	146
6	70	170	1,060	16	75	628	351	26	90	357	144
7	65	160	974	17	80	536	299	27	141	375	155
8	65	150	636	18	100	1,250	268	28	165	529	138
9	65	158	492	19	120	1,480	248	29	143	410	130
10	70	280	525	20	110	920	230	30		336	122
								31		296	
Mean monthly discharge, in second-feet									84.8	657	341
Run-off, in inches									1.18	9.78	4.91

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	4.64	514	8.50	2,900	8.40	2,820
4	-	-	-	-	3.51	193	4.67	524	9.26	3,530	8.21	2,670
6	-	-	-	-	-	-	4.69	532	9.97	4,160	8.00	2,500
8	-	-	-	-	3.54	200	4.72	542	10.58	4,690	7.75	2,320
10	-	-	-	-	-	-	4.80	570	11.08	5,120	7.54	2,170
N	*3.42	*150	*3.35	*158	3.63	220	4.95	625	11.26	5,280	7.33	2,020
2	-	-	-	-	3.77	253	5.18	717	10.77	4,850	7.13	1,880
4	-	-	-	-	3.98	307	5.52	864	10.16	4,320	6.98	1,780
6	-	-	-	-	4.18	364	6.01	1,100	9.66	3,880	6.79	1,650
8	-	-	-	-	4.39	427	6.55	1,380	9.19	3,470	6.63	1,560
10	-	-	-	-	4.51	468	7.14	1,730	8.86	3,190	6.47	1,460
M	-	-	3.44	178	4.63	510	7.85	2,220	8.64	3,010	6.35	1,390
	March 14		March 15		March 16		March 17		March 18		March 19	
2	-	-	-	-	-	-	-	-	4.52	510	7.01	1,800
4	6.11	1,250	-	-	-	-	-	-	4.63	552	6.90	1,720
6	-	-	-	-	-	-	-	-	4.80	620	6.78	1,650
8	5.92	1,130	-	-	-	-	-	-	5.21	790	6.71	1,610
10	-	-	-	-	-	-	-	-	5.71	1,020	6.63	1,560
N	5.76	1,050	5.15	762	4.81	624	4.58	533	6.16	1,280	6.53	1,500
2	-	-	-	-	-	-	-	-	6.61	1,550	-	-
4	5.60	970	-	-	-	-	-	-	7.01	1,800	6.32	1,370
6	-	-	-	-	-	-	-	-	7.20	1,930	-	-
8	5.47	906	-	-	-	-	-	-	7.22	1,940	6.11	1,250
10	-	-	-	-	-	-	-	-	7.17	1,910	-	-
M	5.39	870	4.97	688	4.69	576	4.51	507	7.11	1,870	5.92	1,130
	March 20		March 21		March 22		March 23		March 24		March 25	
2	-	-	-	-	-	-	-	-	-	-	-	-
4	5.75	1,040	5.11	744	5.11	744	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-
8	5.61	975	5.21	790	5.01	704	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-
N	5.49	916	5.30	830	4.92	668	*4.52	*510	*4.32	*440	*4.20	*400
2	-	-	-	-	-	-	-	-	-	-	-	-
4	5.37	862	5.36	857	4.82	628	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-
8	5.26	812	5.31	834	4.74	596	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-
M	5.17	772	5.21	790	4.67	568	-	-	-	-	-	-

Supplemental records.- Mar. 12, 11:30 a.m., 11.30 ft., 5,310 sec.-ft.
*Mean for the day.

146875—37——19

Poultney River below Fair Haven, Vt.

Location.- Lat. 43°37'40", long. 73°18'50", a third of a mile below Carver Falls, 1.9 miles above mouth of Hubbardton River, and $3\frac{1}{4}$ miles northwest of Fair Haven, Rutland County.
Drainage area.- 187 square miles.
Gage-height record.- Water-stage recorder graph except for period 8 a.m. Mar. 12 to 10 a.m. Mar. 18, when it was based on flood marks and shape of stage graphs at nearby stations. Gage heights given to tenths.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 12. Defined by current-meter measurements below 1,620 second-feet; extended to peak stage by determination of flood flow over dam (head, 6.32 feet; C, 3.50); verified by comparison of peak discharge and total run-off of flood with records for nearby streams.
Maxima.- 1936: Discharge, 6,190 second-feet 10 p.m. to midnight Mar. 18 (gage height, 16.50 feet); maximum gage height, 22.90 feet about 8 a.m. Mar. 12 (ice jam).
1928-35: Discharge, 6,030 second-feet (revised) Nov. 20, 1932 (gage height, 16.26 feet).
Remarks.- Flood run-off affected by storage in Lake Bomoseen.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	130	155	637	11	120	1,500	936	21	110	2,080	478
2	100	150	608	12	90	4,270	856	22	130	1,780	471
3	140	160	825	13	110	3,350	777	23	100	1,320	380
4	120	185	685	14	130	2,020	729	24	120	1,120	355
5	140	220	554	15	90	1,470	652	25	110	1,070	274
6	130	260	1,000	16	110	1,980	593	26	170	960	247
7	130	210	1,620	17	100	3,670	570	27	140	936	266
8	120	175	1,320	18	130	5,300	563	28	150	1,090	267
9	80	210	1,100	19	120	4,620	510	29	160	779	209
10	140	430	1,010	20	130	2,990	484	30		685	281
								31		685	
Mean monthly discharge, in second-feet									122	1,478	642
Run-off, in inches									0.70	9.11	3.83

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	6.6	-	6.6	-	6.8	-	7.7	-	15.6	-	14.2	4,400
4	6.6	-	6.6	-	6.8	-	7.8	†500	17.9	†3,500	13.8	4,110
6	6.7	-	6.6	-	6.9	-	8.0	-	18.3	-	13.6	3,970
8	6.6	-	6.6	-	7.0	-	8.2	-	22.9	-	13.2	3,690
10	6.6	-	6.6	-	7.1	-	8.3	†1,000	21.2	†4,000	13.0	3,560
N	6.5	*175	6.6	*210	7.2	*430	8.4	-	19.6	-	12.7	3,360
2	6.4	-	6.6	-	7.4	-	8.5	-	18.4	-	12.4	3,170
4	6.2	-	6.6	-	7.4	-	9.5	†2,000	17.4	†5,000	12.2	3,050
6	6.6	-	6.5	-	7.4	-	9.5	-	16.4	-	12.0	2,930
8	6.5	-	6.6	-	7.4	-	9.8	-	15.6	-	11.7	2,760
10	6.5	-	6.7	-	7.5	-	10.6	†2,500	15.0	†4,500	11.5	2,660
M	6.6	-	6.7	-	7.6	-	13.5	-	14.6	-	11.3	2,560
	March 14		March 15		March 16		March 17		March 18		March 19	
2	11.0	2,410	8.9	1,580	8.7	1,520	12.3	3,110	13.9	4,180	16.2	5,950
4	10.9	2,360	8.8	1,550	8.8	1,550	12.7	3,360	14.2	4,400	15.9	5,710
6	10.8	2,320	8.6	1,490	9.0	1,610	13.0	3,560	14.5	4,620	15.6	5,470
8	10.6	2,230	8.5	1,460	9.2	1,680	13.1	3,620	14.8	4,850	15.2	5,150
10	10.4	2,140	8.5	1,460	9.4	1,750	13.2	3,690	15.1	5,080	14.8	4,850
N	10.2	2,060	8.4	1,430	9.6	1,820	13.2	3,690	15.3	5,230	14.4	4,550
2	10.0	1,980	8.4	1,430	9.8	1,900	13.2	3,690	15.5	5,390	14.1	4,320
4	9.8	1,900	8.4	1,430	10.1	2,020	13.3	3,760	15.8	5,630	13.8	4,110
6	9.6	1,820	8.4	1,430	10.5	2,180	13.4	3,830	16.0	5,790	13.6	3,970
8	9.4	1,750	8.5	1,460	10.9	2,360	13.4	3,830	16.3	6,030	13.5	3,900
10	9.2	1,680	8.5	1,460	11.4	2,610	13.5	3,900	16.5	6,190	13.4	3,830
M	9.0	1,610	8.6	1,490	11.8	2,820	13.6	3,970	16.5	6,190	13.2	3,690
	March 20		March 21		March 22		March 23		March 24		March 25	
2	13.1	3,620	10.6	2,230	10.4	2,140	8.6	1,490	7.5	1,190	6.9	1,040
4	13.0	3,560	10.4	2,140	10.2	2,060	8.4	1,430	7.4	1,160	7.0	1,060
6	12.9	3,500	10.3	2,100	10.0	1,980	8.3	1,400	7.4	1,160	7.0	1,060
8	12.8	3,430	10.2	2,060	9.8	1,900	8.2	1,380	7.3	1,140	7.0	1,060
10	12.5	3,240	10.1	2,020	9.6	1,820	8.1	1,350	7.3	1,140	7.1	1,090
N	12.2	3,050	10.0	1,980	9.5	1,780	8.0	1,320	7.2	1,110	7.1	1,090
2	11.9	2,880	10.1	2,020	9.3	1,720	7.9	1,290	7.2	1,110	7.1	1,090
4	11.6	2,710	10.1	2,020	9.2	1,680	7.8	1,270	7.1	1,090	7.1	1,090
6	11.4	2,610	10.2	2,060	9.0	1,610	7.8	1,270	7.1	1,090	7.1	1,090
8	11.2	2,510	10.3	2,100	8.9	1,580	7.7	1,240	7.1	1,090	7.1	1,090
10	11.0	2,410	10.4	2,140	8.8	1,550	7.6	1,220	7.0	1,060	7.0	1,060
M	10.8	2,320	10.4	2,140	8.7	1,520	7.5	1,190	6.9	1,040	6.9	1,040

Supplemental records.- Mar. 18, 10 to 12 p.m., 16.50 ft., 6,190 sec.-ft.
*Mean for the day.
†Mean for 6-hour period.

Otter Creek at Center Rutland, Vt.

Location.- Lat. 43°36'15", long. 73°0'50", at highway bridge in Center Rutland, Rutland County, 100 feet below dam and 1 mile below mouth of East Creek.
Drainage area.- 307 square miles.
Gage-height record.- Water-stage recorder graph except Feb. 18 to 2 p.m. Mar. 8, when there was no record. Gage heights given to half tenths between 2.80 and 5.30 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Defined by current-meter measurements below 3,450 second-feet; extended to peak stage by determination of flood flow over dam (head, 4.40 and 5.70 feet; C, 2.8); verified by drainage-area comparison of instantaneous and total yield of flood with records for nearby streams.
Maxima.- 1936: Discharge, 8,580 second-feet midnight Mar. 18 to 4 a.m. Mar. 19 (gage height, 10.84 feet).
1928-35: Discharge, 6,470 second-feet Apr. 18, 1933 (gage height, 9.08 feet).
Remarks.- Flood run-off not materially affected by artificial or natural storage. Discharges Feb. 1-13, Feb. 18 to 2 p.m. Mar. 8 determined by hydrographic comparison.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	260	300	1,300	11	230	1,680	1,510	21	240	3,580	1,090
2	210	290	1,080	12	210	5,700	1,580	22	230	3,570	1,310
3	270	300	1,440	13	260	6,130	1,330	23	200	2,390	992
4	260	340	1,110	14	212	3,200	1,210	24	240	1,710	807
5	260	400	905	15	267	2,080	1,100	25	230	1,870	731
6	250	540	2,000	16	190	2,890	1,160	26	250	1,890	619
7	250	410	3,860	17	262	5,550	1,150	27	280	1,700	628
8	240	330	2,580	18	231	7,020	1,030	28	290	1,930	589
9	210	399	1,840	19	260	7,440	1,090	29	310	1,700	600
10	260	709	1,620	20	250	4,960	959	30		1,330	780
								31		1,330	
Mean monthly discharge, in second-feet									245	2,376	1,267
Run-off, in inches									0.86	8.92	4.61

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	1.87	294	2.45	460	3.6	1,030	6.0	2,980	9.6	7,070
4	-	-	1.86	291	2.48	469	3.65	1,060	6.4	3,380	9.5	6,950
6	-	-	1.86	291	2.53	486	3.75	1,130	6.8	3,810	9.4	6,830
8	-	-	1.98	322	2.63	522	3.8	1,160	7.3	4,360	9.2	6,590
10	-	-	2.32	421	2.79	590	3.9	1,220	8.1	5,270	9.0	6,350
N	-	-	2.37	436	2.9	640	4.1	1,360	8.9	6,230	8.9	6,230
2	1.74	262	2.37	436	3.1	740	4.35	1,550	9.2	6,590	8.8	6,110
4	1.76	266	2.35	430	3.2	790	4.65	1,770	9.6	7,070	8.7	5,990
6	1.76	266	2.46	463	3.3	845	5.1	2,140	9.7	7,190	8.5	5,750
8	1.74	262	2.53	486	3.45	935	5.4	2,410	9.7	7,190	8.3	5,510
10	1.84	286	2.45	460	3.55	998	5.5	2,500	9.7	7,190	8.1	5,270
M	1.88	296	2.43	454	3.6	1,030	5.8	2,780	9.7	7,190	7.8	4,910
	March 14		March 15		March 16		March 17		March 18		March 19	
2	7.5	4,580	5.3	2,320	5.05	2,100	7.5	4,580	8.7	5,990	10.8	8,580
4	7.2	4,250	5.25	2,280	5.15	2,190	8.1	5,270	8.7	5,990	10.8	8,580
6	6.8	3,810	5.15	2,190	5.25	2,280	8.3	5,510	3.7	5,990	10.6	8,320
8	6.5	3,480	5.05	2,100	5.4	2,410	8.3	5,510	8.8	6,110	10.5	8,190
10	6.3	3,280	5.0	2,060	5.5	2,500	8.3	5,510	8.9	6,230	10.2	7,800
N	6.1	3,080	4.9	1,980	5.7	2,690	8.3	5,510	9.2	6,590	10.0	7,550
2	5.9	2,880	4.85	1,930	5.9	2,880	8.4	5,630	9.7	7,190	9.8	7,310
4	5.8	2,780	4.9	1,980	6.0	2,980	8.5	5,750	10.0	7,550	9.6	7,070
6	5.7	2,690	4.9	1,980	6.3	3,280	8.5	5,750	10.2	7,800	9.4	6,830
8	5.6	2,600	4.95	2,020	6.5	3,480	8.6	5,870	10.4	8,060	9.2	6,590
10	5.5	2,500	4.95	2,020	6.7	3,700	8.6	5,870	10.5	8,190	9.0	6,350
M	5.4	2,410	5.0	2,060	7.1	4,140	8.6	5,870	10.8	8,580	8.8	6,110
	March 20		March 21		March 22		March 23		March 24		March 25	
2	8.7	5,990	6.9	3,920	7.0	4,030	5.8	2,780	4.9	1,980	4.4	1,580
4	8.5	5,750	6.7	3,700	7.0	4,030	5.7	2,690	4.8	1,890	4.4	1,580
6	8.3	5,510	6.5	3,480	6.9	3,920	5.6	2,600	4.75	1,850	4.4	1,660
8	8.2	5,390	6.4	3,380	6.8	3,810	5.5	2,500	4.7	1,810	4.65	1,770
10	8.0	5,150	6.3	3,280	6.8	3,810	5.5	2,500	4.65	1,770	4.8	1,890
N	7.9	5,030	6.2	3,180	6.7	3,700	5.4	2,410	4.5	1,660	4.9	1,980
2	7.7	4,800	6.2	3,180	6.6	3,590	5.4	2,410	4.45	1,620	4.85	1,930
4	7.6	4,690	6.4	3,380	6.4	3,380	5.2	2,230	4.4	1,580	4.9	1,980
6	7.5	4,580	6.7	3,700	6.3	3,280	5.2	2,230	4.4	1,580	4.9	1,980
8	7.3	4,360	6.8	3,810	6.2	3,180	5.1	2,140	4.4	1,580	4.95	2,020
10	7.2	4,250	6.9	3,920	6.1	3,080	5.05	2,100	4.4	1,580	4.95	2,020
M	7.0	4,030	7.0	4,030	6.0	2,980	5.0	2,060	4.4	1,580	4.95	2,020

Otter Creek at Middlebury, Vt.

Location.- Lat. 44°0'45", long. 73°10'5", 150 feet above highway bridge at Middlebury, Addison County, 3½ miles below Middlebury River.
Drainage area.- 628 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights given to half tenths between 2.50 and 4.20 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 4. Defined by current-meter measurements below 8,790 second-feet; extended to peak stage by study of flow characteristics at control section; verified by drainage-area comparison of instantaneous and total yield of flood with records for nearby streams.
Maxima.- 1936: Discharge, 11,000 second-feet 8 p.m. Mar. 20 to midnight Mar. 21 (gage height, 10.30 feet).
1903-07, 1910-20, 1928-35: Discharge, 10,100 second-feet Mar. 30, 1913 (gage height, 11.07 feet).
Maximum known discharge, 13,600 second-feet Nov. 4, 1927 (gage height, 13.3 feet, at site 1,800 feet upstream, present datum).
Remarks.- Flood run-off affected by some artificial and natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	510	580	3,440	11	460	1,750	2,980	21	460	11,000	1,920
2	500	550	3,220	12	440	2,950	2,850	22	450	10,300	2,000
3	490	570	3,080	13	440	3,040	2,700	23	430	9,250	2,200
4	480	590	2,900	14	440	3,280	2,490	24	410	8,280	1,980
5	500	734	2,800	15	450	5,190	2,350	25	420	7,360	1,800
6	490	882	2,900	16	450	6,880	2,200	26	450	6,480	1,450
7	480	1,060	2,900	17	440	7,550	2,100	27	500	5,640	1,280
8	470	844	2,900	18	450	8,000	2,020	28	530	4,850	1,180
9	470	720	2,900	19	460	9,010	1,950	29	580	4,240	1,140
10	460	1,060	3,010	20	470	10,600	1,900	30		3,890	1,390
								31		3,550	
Mean monthly discharge, in second-feet									468	4,538	2,331
Run-off, in inches									0.80	8.34	4.14

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	2.47	958	2.16	727	2.25	792	3.0	1,390	4.4	2,700	4.8	3,120
4	2.45	942	2.15	720	2.28	815	3.05	1,430	4.6	2,900	4.7	3,010
6	2.42	920	2.14	713	2.32	845	3.15	1,520	4.6	2,900	4.7	3,010
8	2.40	905	2.13	706	2.37	882	3.10	1,480	4.7	3,010	4.7	3,010
10	2.38	890	2.16	727	2.47	958	3.15	1,520	4.7	3,010	4.7	3,010
N	2.33	852	2.11	692	2.6	1,060	3.2	1,560	4.7	3,010	4.8	3,120
2	2.29	822	2.11	692	2.7	1,140	3.3	1,650	4.6	2,900	4.8	3,120
4	2.26	800	2.12	699	2.7	1,140	3.45	1,780	4.6	2,900	4.7	3,010
6	2.23	778	2.14	713	2.75	1,180	3.7	2,020	4.7	3,010	4.7	3,010
8	2.22	770	2.17	734	2.85	1,260	3.8	2,110	4.7	3,010	4.7	3,010
10	2.20	755	2.19	748	2.9	1,300	3.9	2,200	4.7	3,010	4.7	3,010
M	2.18	741	2.22	770	2.95	1,350	4.05	2,360	4.7	3,010	4.7	3,010
	March 14		March 15		March 16		March 17		March 18		March 19	
2	4.7	3,010	5.7	4,120	7.6	6,620	8.1	7,360	8.4	7,820	8.8	8,450
4	4.7	3,010	5.8	4,240	7.6	6,620	8.1	7,360	8.4	7,820	8.9	8,610
6	4.7	3,010	5.8	4,240	7.6	6,620	8.2	7,510	8.4	7,820	8.9	8,610
8	4.7	3,010	5.9	4,360	7.6	6,620	8.2	7,510	8.4	7,820	9.0	8,770
10	4.7	3,010	6.1	4,600	7.6	6,620	8.2	7,510	8.4	7,820	9.0	8,770
N	4.7	3,010	6.4	4,980	7.8	6,910	8.2	7,510	8.5	7,980	9.1	8,940
2	4.8	3,120	6.7	5,360	7.8	6,910	8.2	7,510	8.5	7,980	9.1	8,940
4	4.9	3,220	6.8	5,500	7.8	6,910	8.3	7,660	8.5	7,980	9.2	9,100
6	5.1	3,440	6.9	5,640	7.9	7,060	8.3	7,660	8.6	8,130	9.3	9,260
8	5.3	3,660	7.4	6,330	8.0	7,210	8.3	7,660	8.6	8,130	9.4	9,430
10	6.5	3,890	7.5	6,480	8.0	7,210	8.3	7,660	8.7	8,290	9.4	9,430
M	5.6	4,000	7.5	6,480	8.0	7,210	8.3	7,660	8.8	8,450	9.6	9,770
	March 20		March 21		March 22		March 23		March 24		March 25	
2	9.7	9,940	10.3	11,000	10.2	10,800	9.5	9,600	9.0	8,770	8.4	7,820
4	9.8	10,100	10.3	11,000	10.2	10,800	9.5	9,600	8.9	8,610	8.3	7,660
6	9.8	10,100	10.3	11,000	10.2	10,800	9.5	9,600	8.9	8,610	8.3	7,660
8	9.9	10,300	10.3	11,000	10.1	10,600	9.4	9,430	8.8	8,450	8.2	7,510
10	10.0	10,500	10.3	11,000	10.1	10,600	9.4	9,430	8.8	8,450	8.2	7,510
N	10.1	10,600	10.3	11,000	10.0	10,500	9.3	9,260	8.7	8,290	8.1	7,360
2	10.1	10,600	10.3	11,000	9.9	10,300	9.3	9,260	8.7	8,290	8.1	7,360
4	10.2	10,800	10.3	11,000	9.8	10,100	9.2	9,100	8.6	8,130	8.0	7,210
6	10.2	10,800	10.3	11,000	9.7	9,940	9.2	9,100	8.6	8,130	8.0	7,210
8	10.3	11,000	10.3	11,000	9.7	9,940	9.1	8,940	8.5	7,980	7.9	7,060
10	10.3	11,000	10.3	11,000	9.6	9,770	9.1	8,940	8.4	7,820	7.9	7,060
M	10.3	11,000	10.3	11,000	9.6	9,770	9.0	8,770	8.4	7,820	7.8	6,910

Winooski River at Montpelier, Vt.

Location.- Lat. 44°15'25", long. 72°35'35", three-eighths of a mile above mouth of Dog River and 1 mile downstream from depot in Montpelier, Washington County. Zero of gage is 499.97 feet above mean sea level.

Drainage area.- 433 square miles.

Gage-height record.- Water-stage recorder graph except for period 7 p.m. Mar. 12 to 9 a.m. Mar. 14, when it was based on shape of stage graphs at nearby stations. Gage heights given to half tenths between 5.60 and 6.80 feet; hundredths below and tenths above these limits.

Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 17. Defined by current-meter measurements below 6,880 second-feet; extended to peak stage of November 1927 by using slope-area determination of flood flow (n, 0.040), and by study of flow characteristics at control section; verified by drainage-area comparison of instantaneous and total yield of March 1936 flood with records for nearby stations.

Maxima.- 1936: Discharge, 20,000 second-feet 6 p.m. Mar. 18 (gage height, 16.57 feet).
1909-35: Discharge, 57,000 second-feet. Nov. 3, 1927 (gage height, 27.1 feet).

Remarks.- Flood run-off affected by storage on North Branch of Winooski River and Jail Branch.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	280	200	2,600	11	280	550	2,700	21	190	5,820	1,720
2	210	190	2,430	12	240	3,500	3,090	22	180	5,350	1,770
3	210	230	3,090	13	210	6,200	2,600	23	170	4,050	1,660
4	270	260	2,480	14	200	4,750	2,210	24	170	3,540	1,380
5	360	300	1,990	15	260	3,600	1,880	25	170	4,370	1,250
6	350	250	3,180	16	170	4,380	1,770	26	180	4,080	1,110
7	310	230	3,710	17	155	8,950	2,210	27	230	3,520	1,000
8	285	220	3,200	18	200	15,200	2,430	28	285	3,750	971
9	240	260	2,980	19	220	12,100	2,100	29	240	3,090	1,020
10	200	360	2,650	20	200	7,250	1,820	30		2,760	1,390
								31		2,700	
Mean monthly discharge, in second-feet									230	3,613	2,146
Run-off, in inches									0.57	9.62	5.53

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	4.92	-	4.87	-	4.84	-	5.30	-	5.95	-	13.5	-
4	4.81	-	4.95	-	4.95	-	5.32	-	6.25	**1,000	13.3	**6,500
6	4.71	-	4.99	-	5.03	-	5.38	-	6.75	-	13.3	-
8	4.72	-	5.08	-	5.11	-	5.49	-	7.5	-	13.4	-
10	4.76	-	5.15	-	5.25	-	5.58	-	8.2	**2,500	13.4	**6,500
N	4.80	*220	5.07	*260	5.30	*360	5.52	*550	8.9	-	13.4	-
2	4.84	-	4.90	-	5.21	-	5.42	-	9.6	-	13.3	-
4	4.88	-	4.96	-	5.24	-	5.60	-	10.8	**4,000	13.2	**6,000
6	4.90	-	4.71	-	5.14	-	5.58	-	11.7	-	13.1	-
8	4.90	-	4.52	-	5.11	-	5.53	-	12.8	-	12.8	-
10	4.89	-	4.68	-	5.21	-	5.60	-	13.5	**6,500	12.6	**5,800
M	4.88	-	4.71	-	5.26	-	5.75	-	13.7	-	12.5	-
	March 14		March 15		March 16		March 17		March 18		March 19	
2	12.5	-	11.1	-	10.7	-	11.8	-	12.3	10,200	15.0	16,100
4	12.4	**5,500	11.0	**3,750	10.7	**3,750	12.2	**8,000	12.6	10,800	14.6	15,200
6	12.2	-	10.8	-	10.6	-	12.3	-	13.0	11,600	14.2	14,300
8	12.0	-	10.6	-	10.5	-	12.3	-	13.3	12,200	13.8	13,300
10	11.9	**5,000	10.5	**3,500	10.5	**3,750	12.1	**9,000	13.7	13,100	13.4	12,400
N	11.8	-	10.6	-	10.6	-	11.8	-	14.3	14,500	13.2	12,000
2	11.6	-	10.6	-	10.9	-	11.7	9,170	15.2	16,600	12.9	11,400
4	11.6	**4,500	10.6	**3,500	11.3	**4,500	11.6	9,000	16.1	18,800	12.6	10,800
6	11.5	-	10.6	-	11.3	-	11.7	9,170	16.6	20,000	12.4	10,400
8	11.4	-	10.6	-	11.0	-	11.9	9,520	16.4	19,500	12.2	10,100
10	11.3	**4,000	10.7	**3,650	11.1	**5,500	12.0	9,700	15.8	18,000	12.1	9,880
M	11.2	-	10.7	-	11.4	-	12.1	9,880	15.4	17,100	12.0	9,700
	March 20		March 21		March 22		March 23		March 24		March 25	
2	11.9	9,340	10.3	5,730	10.8	6,330	9.2	4,530	8.4	3,750	8.3	3,640
4	11.8	9,000	10.1	5,490	10.6	6,090	9.1	4,410	8.4	3,750	8.5	3,860
6	11.6	8,490	9.9	5,250	10.4	5,850	9.0	4,300	8.3	3,640	8.7	4,080
8	11.5	8,150	9.8	5,130	10.3	5,730	8.8	4,080	8.2	3,530	8.9	4,300
10	11.3	7,640	9.7	5,010	10.2	5,610	8.7	3,970	8.2	3,530	9.0	4,410
N	11.1	7,150	9.7	5,010	10.0	5,370	8.7	3,970	8.2	3,530	9.1	4,530
2	10.9	6,700	9.8	5,130	9.9	5,250	8.8	4,080	8.2	3,530	9.2	4,650
4	10.8	6,450	10.4	5,850	9.8	5,130	8.7	3,970	8.1	3,420	9.2	4,650
6	10.7	6,210	11.0	6,570	9.6	4,890	8.7	3,970	8.1	3,420	9.2	4,650
8	10.6	6,090	11.3	6,990	9.5	4,770	8.6	3,860	8.1	3,420	9.2	4,650
10	10.5	5,970	11.3	6,990	9.4	4,650	8.5	3,750	8.1	3,420	9.1	4,530
M	10.4	5,850	11.1	6,700	9.3	4,530	8.5	3,750	8.2	3,530	9.1	4,530

*Mean for the day.
**Mean for 6-hour period.

Winooski River near Essex Junction, Vt.

Location.- Lat. 44°28'40", long. 73°8'20", half a mile below mouth of Muddy Brook and 2 miles southwest of Essex Junction, Chittenden County.

Drainage area.- 1,079 square miles.

Gage-height record.- Water-stage recorder graph. Gage heights given to half tenths between 2.80 and 4.40 feet; hundredths below and tenths above these limits.

Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 12. Defined by current-meter measurements below 21,800 second-feet; extended to flood peak of Nov. 4, 1927, by averaging discharges obtained from slope-area computation (n, 0.030) and a computation of flow over dam (head, 19.1 feet; C, 4.00), and by determination of flood flow of Mar. 19, 1936, over same dam (head, 10.0 feet; C, 3.9); verified by drainage-area comparison of instantaneous and total yield of March 1936 flood with records for near-by streams.

Maxima.- 1936: Discharge, 45,300 second-feet noon Mar. 19 (gage height, 23.54 feet).
1928-35: Discharge, 34,600 second-feet Apr. 19, 1933 (gage height, 18.60 feet).
Maximum discharge previously known, 113,000 second-feet (revised) Nov. 4, 1927 (gage height, 50.4 feet, from flood marks).

Remarks.- Flood run-off not materially affected by artificial or natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	560	560	5,800	11	600	1,100	5,060	21	530	13,100	4,190
2	450	580	4,630	12	620	12,000	6,000	22	270	17,900	4,600
3	570	650	5,670	13	650	27,600	4,980	23	320	9,010	3,670
4	640	610	4,870	14	550	18,900	4,350	24	570	6,830	3,250
5	550	610	4,160	15	400	10,500	3,910	25	550	9,510	2,850
6	720	770	6,170	16	270	9,670	4,130	26	520	9,080	2,630
7	500	600	10,900	17	650	19,700	4,550	27	630	6,830	2,440
8	350	700	6,410	18	500	28,600	4,930	28	700	7,040	2,330
9	500	820	5,400	19	550	41,600	4,700	29	600	5,800	3,360
10	550	800	5,010	20	500	25,300	4,220	30		5,600	6,950
								31		6,520	
Mean monthly discharge, in second-feet									530	9,642	4,737
Run-off, in inches									0.53	10.31	4.90

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	2.95	-	2.8	-	2.44	-	3.2	-	6.3	-	15.5	27,200
4	3.0	-	2.76	-	1.93	-	3.3	-	7.3	†2,000	15.9	28,100
6	3.2	-	3.0	-	3.1	-	4.2	-	8.1	-	16.0	28,300
8	3.85	-	4.05	-	4.05	-	4.4	-	9.2	-	15.9	28,100
10	2.95	-	4.05	-	4.1	-	4.4	-	11.0	†5,500	15.8	27,900
N	3.6	*700	4.2	*820	4.1	*800	4.4	*1,100	11.6	-	15.7	27,700
2	3.8	-	4.0	-	4.1	-	4.6	-	12.7	-	15.4	27,000
4	3.0	-	3.5	-	3.8	-	4.6	-	13.2	†15,000	15.2	26,600
6	3.3	-	3.95	-	3.7	-	4.7	-	13.7	-	15.6	27,500
8	3.9	-	3.95	-	4.05	-	4.7	-	14.2	24,500	15.9	28,100
10	2.15	-	2.95	-	3.75	-	4.8	-	14.8	25,800	15.6	27,500
M	3.35	-	2.95	-	3.25	-	5.6	-	15.3	26,800	15.3	26,800
	March 14		March 15		March 16		March 17		March 18		March 19	
2	14.7	25,600	8.3	12,700	6.5	9,180	9.0	14,000	13.9	23,900	20.8	38,900
4	14.1	24,300	7.9	11,900	6.5	9,180	9.6	15,200	14.0	24,100	21.6	40,800
6	13.4	22,800	7.6	11,400	6.4	8,970	10.4	16,800	14.2	24,500	22.4	42,700
8	12.7	21,400	7.3	10,800	6.5	9,180	10.9	17,800	14.6	25,400	23.0	44,100
10	12.2	20,400	7.2	10,600	6.4	8,970	11.4	18,800	14.9	26,000	23.4	45,100
N	11.7	19,400	7.0	10,200	6.5	9,180	11.8	19,600	15.4	27,000	23.5	45,300
2	11.0	18,000	6.8	9,800	7.0	10,200	12.1	20,200	15.9	28,100	23.1	44,300
4	10.5	17,000	6.6	9,390	6.3	8,750	12.6	21,200	16.5	29,400	22.6	43,100
6	9.9	15,800	6.6	9,390	6.6	9,390	13.2	22,400	17.1	30,700	21.9	41,500
8	9.5	15,000	6.8	9,800	6.6	9,390	13.6	23,300	18.0	32,700	21.2	39,900
10	9.1	14,200	6.9	10,000	7.3	10,800	13.8	23,700	18.9	34,700	20.4	38,000
M	8.7	13,400	6.7	9,600	8.4	12,900	13.9	23,900	20.0	37,100	19.4	35,800
	March 20		March 21		March 22		March 23		March 24		March 25	
2	18.5	33,800	9.7	15,400	11.3	18,600	7.8	11,700	5.8	7,670	5.2	6,410
4	17.7	32,000	9.2	14,400	12.0	20,000	7.5	11,200	5.7	7,460	5.3	6,620
6	17.0	30,500	8.8	13,600	12.4	20,800	7.1	10,400	5.6	7,250	5.4	6,830
8	16.3	29,000	8.4	12,900	12.6	21,200	6.9	10,000	5.7	7,460	5.8	7,670
10	15.7	27,700	8.0	12,100	12.4	20,800	6.6	9,390	5.5	7,040	6.1	8,310
N	15.0	26,200	7.7	11,600	12.0	20,000	6.3	8,750	5.3	6,620	6.6	9,390
2	14.4	24,900	7.4	11,000	11.4	18,800	6.2	8,530	5.3	6,620	7.3	10,800
4	13.6	23,300	7.4	11,000	10.7	17,400	5.9	7,880	5.2	6,410	7.6	11,400
6	12.8	21,600	7.6	11,400	10.0	16,000	5.7	7,460	5.1	6,200	7.8	11,700
8	11.9	19,800	8.3	12,700	9.4	14,800	5.7	7,460	5.2	6,410	7.9	11,900
10	11.0	18,000	9.4	14,800	8.8	13,600	5.8	7,670	5.2	6,410	7.8	11,700
M	10.3	16,600	10.4	16,800	8.3	12,700	5.8	7,670	5.2	6,410	7.6	11,400

*Mean for the day.
†Mean for 6-hour period.

East Barre Detention Reservoir on Jail Branch at East Barre, Vt.

Location.- Lat. 44°10', long. 72°27', in East Barre, Washington County, about three-quarters of a mile above gaging station on Jail Branch and 3½ miles above confluence with Stevens Branch. Zero of gage is 1127.9 feet above mean sea level.

Drainage area.- 32.2 square miles.

Gage-height record.- Graph constructed from one to several readings daily. Gage heights given to tenths.

Remarks.- Capacity of reservoir, 522,720,000 cubic feet. Capacity curve developed from areas furnished by Corps of Engineers, U. S. Army.

Gage height, in feet, and contents, in millions of cubic feet, at indicated time, 1936.

Hour	Gage height	Contents	Gage height	Contents	Gage height	Contents	Gage height	Contents	Gage height	Contents	Gage height	Contents
	March 8		March 9		March 10		March 11		March 12		March 13	
6									9.0	16.96	21.0	139.12
N									14.0	44.76	22.5	164.89
6									17.4	84.82	22.8	170.21
M	0.0	0.0	0.0	0.0	0.0	6.10	3.50	8.40	19.3	112.18	22.6	166.66
	March 14		March 15		March 16		March 17		March 18		March 19	
6	22.6	166.66	22.2	159.57	21.5	147.57	24.2	196.26	28.2	280.46	33.5	412.04
N	22.6	166.66	21.9	154.33	21.6	149.26	25.0	211.86	29.4	303.38	34.2	430.90
6	22.5	164.89	21.7	150.95	22.4	163.12	26.0	232.32	30.9	344.80	34.6	441.86
M	22.4	163.12	21.5	147.57	23.3	179.34	27.0	253.66	32.4	383.04	34.8	447.34
	March 20		March 21		March 22		March 23		March 24		March 25	
6	34.9	450.08	35.0	452.82	36.0	480.82	35.8	475.22	35.2	458.42	34.7	444.60
N	35.1	455.62	35.2	458.42	36.0	480.82	35.7	472.42	35.1	455.62	34.6	441.86
6	35.1	455.62	35.4	464.02	36.0	480.82	35.5	466.82	35.0	452.82	34.5	439.12
M	35.0	452.82	35.9	478.02	35.9	478.02	35.4	464.02	34.9	450.08	34.4	436.38
	March 26		March 27		March 28		March 29		March 30		March 31	
6	34.3	433.64	33.5	412.04	32.9	396.06	32.0	372.62	31.1	349.80	30.0	322.66
N	34.0	425.42	33.5	412.04	32.7	390.85	31.8	367.55	30.8	342.34	29.8	317.90
6	33.9	422.74	33.3	406.69	32.5	385.64	31.6	362.48	30.6	337.42	29.7	315.52
M	33.7	417.39	33.0	398.66	32.3	380.43	31.3	354.87	30.3	330.04	29.6	313.14
	April 1		April 2		April 3		April 4		April 5		April 6	
6	29.4	308.38	28.2	280.46	27.2	258.10	26.2	236.59	25.0	211.86	24.0	192.36
N	29.0	298.86	28.0	275.86	27.0	253.66	26.0	232.32	24.8	207.96	24.9	209.91
6	28.7	291.96	27.6	266.98	26.8	249.39	25.6	224.14	24.5	202.11	25.1	213.91
M	28.5	287.36	27.5	264.76	26.5	242.99	25.3	218.00	24.2	196.26	25.1	213.91
	April 7		April 8		April 9		April 10		April 11		April 12	
6	25.0	211.86	24.4	200.16	23.5	183.06	22.6	166.66	21.7	150.95	21.1	140.81
N	24.9	209.91	24.1	194.31	23.2	177.48	22.4	163.12	21.5	147.57	20.9	137.50
6	24.8	207.96	24.0	192.36	23.0	173.76	22.2	159.57	21.4	145.88	20.6	132.66
M	24.7	206.01	23.7	186.78	22.9	171.99	22.0	156.02	21.3	144.19	20.4	129.42
	April 13		April 14		April 15		April 16		April 17		April 18	
6	20.1	124.58	19.0	107.56	17.6	87.56	16.1	67.93	14.9	54.03	12.4	31.76
N	19.9	121.42	18.5	100.29	17.3	83.46	15.6	62.02	14.0	44.76	11.9	28.44
6	19.6	116.80	18.2	95.93	17.0	79.36	14.9	54.03	13.1	36.84	11.5	26.36
M	19.3	112.18	18.0	93.02	16.6	74.28	15.0	55.06	13.1	36.84	11.0	23.76
	April 19		April 20		April 21		April 22		April 23		April 24	
6	11.2	24.80	7.0	12.72	4.2	9.05	5.9	11.03	3.8	8.66	3.4	8.31
N	10.6	22.22	5.2	10.14	5.4	10.40	4.8	9.68	3.6	8.49	3.6	8.49
6	9.9	19.62	4.1	8.94	6.1	11.32	4.2	9.05	3.5	8.40	3.5	8.40
M	8.5	15.79	4.0	8.84	6.5	11.94	4.0	8.84	3.3	8.22	3.3	8.22

Jail Branch at East Barre, Vt.

Location.- Lat. 44°10', long. 72°27', in East Barre, Washington County, three-quarters of a mile below East Barre Flood Detention Reservoir and $2\frac{3}{4}$ miles above confluence with Stevens Branch. Zero of gage is 1,071.59 feet above mean sea level.

Drainage area.- 33.0 square miles (revised).

Gage-height records.- Water-stage recorder graph. Gage heights given to hundredths.

Stage-discharge relation.- Discharge affected by ice Mar. 10-13. Defined by current-meter measurements below 131 second-feet; extended to peak stage by determination of maximum flow over dam at control section (head, 1.50 feet; C, 3.50).

Maxima.- 1936: Discharge observed, 461 second-feet noon Mar. 18 (gage height, 2.15 feet); discharge corrected for storage, about 2,500 second-feet 6 p.m. Mar. 18.

1920-23, 1934-35: Discharge, 1,350 second-feet Apr. 10, 1922 (gage height, 8.38 feet, former site and datum).

1920-35: Discharge, 11,500 second-feet November 1927.

Remarks.- Flood run-off affected by storage in East Barre Detention Reservoir (capacity, 522,720,000 cubic feet). Daily and monthly discharges corrected for storage.

Mean discharge (second-feet) and gain or loss in storage (millions of cubic feet), 1936

Day	March			April			May		
	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge
1	15	0	15	369	-25.78	71	110	-1.43	93
2	14	0	14	365	-22.60	103	86	-0.35	82
3	14	0	14	365	-21.77	113	96	+2.67	127
4	15	0	15	357	-24.99	68	154	-1.80	133
5	18	0	18	349	-21.74	97	86	-1.05	74
6	23	0	23	357	+17.65	561	62	-0.50	56
7	17	0	17	353	-7.90	262	56	-0.30	53
8	17	0	17	341	-19.23	118	52	-0.07	51
9	18	0	18	337	-14.79	166	46	-0.08	45
10	24	0	24	333	-15.97	148	43	-0.08	42
11	50	+2.30	77	325	-11.83	188	40	-0.13	38
12	245	+103.78	1,450	321	-14.77	150	39	-0.12	38
13	345	+54.48	976	313	-17.24	113	52	+5.22	112
14	337	-3.54	296	298	-19.16	76	157	-2.99	122
15	321	-15.55	141	287	-18.74	70	66	-1.38	50
16	329	+31.77	697	275	-19.22	53	54	-0.37	50
17	357	+74.32	1,220	268	-18.22	57	56	+0.54	62
18	425	+129.38	1,920	256	-13.08	105	59	+0.44	64
19	405	+64.30	1,150	234	-7.97	142	104	+3.61	146
20	393	+5.48	456	143	-6.95	63	118	-3.79	74
21	397	+25.20	689	126	+3.10	162	59	-0.73	51
22	389	0	389	126	-3.10	90	46	-0.37	42
23	401	-14.00	239	79	-0.62	72	42	-0.43	37
24	393	-13.94	232	72	0	72	37	-0.18	35
25	393	-73.70	234	66	-0.08	65	33	-0.25	30
26	381	-18.99	161	59	-0.26	56	31	0	31
27	377	-18.73	160	54	-0.14	52	35	+0.86	45
28	377	-18.23	166	53	+0.57	60	46	0	46
29	381	-25.56	85	89	+1.96	112	37	-0.81	28
30	381	-24.83	94	164	0	164	32	0	32
31	373	-16.90	177				32	0	32

	March	April	May
Mean monthly discharge, in second-feet (observed)..........	246	238	63.4
Gain or loss in storage, in millions of cubic feet..........	+307.04	-302.87	-3.87
Mean monthly discharge, in second-feet (corrected)..........	361	121	62.0
Run-off, in inches (corrected)...........................	12.57	4.10	2.17

Jail Branch at East Barre, Vt.--Continued

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.-ft.	Feet	Sec.-ft.	Feet	Sec.-ft.	Feet	Sec.-ft.	Feet	Sec.-ft.	Feet	Sec.-ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
6	0.55	16	0.59	18	0.63	21	1.30	30	2.30	125	1.95	340
N	.55	16	.60	19	.65	23	1.30	35	2.55	230	1.88	350
6	.58	18	.60	19	1.00	25	1.66	50	2.30	300	1.88	350
M	.58	18	.60	19	1.07	27	1.96	95	2.20	320	1.87	349
	March 14		March 15		March 16		March 17		March 18		March 19	
6	1.86	345	1.80	321	1.79	317	1.87	349	2.04	417	2.00	401
N	1.83	333	1.80	321	1.81	325	1.87	349	2.15	461	2.00	401
6	1.83	333	1.81	325	1.84	337	1.93	373	2.07	429	2.01	405
M	1.81	325	1.81	325	1.88	353	1.92	369	2.03	413	1.99	397
	March 20		March 21		March 22		March 23		March 24		March 25	
6	1.97	389	1.97	389	1.96	385	1.97	389	1.98	393	1.99	397
N	1.97	389	1.97	389	1.96	385	2.01	405	1.98	393	1.98	393
6	1.99	397	2.02	409	1.97	389	2.01	405	1.97	389	1.97	389
M	1.98	393	1.97	389	1.97	389	2.00	401	1.97	389	1.97	389
	March 26		March 27		March 28		March 29		March 30		March 31	
6	1.96	385	1.94	377	1.92	369	1.96	385	1.95	381	1.94	377
N	1.95	381	1.94	377	1.93	373	1.94	377	1.95	381	1.94	377
6	1.95	381	1.94	377	1.95	381	1.95	381	1.95	381	1.94	377
M	1.94	377	1.94	377	1.96	385	1.95	381	1.95	381	1.93	373
	April 1		April 2		April 3		April 4		April 5		April 6	
6	1.92	369	1.91	365	1.91	365	1.89	357	1.88	353	1.88	353
N	1.91	365	1.92	369	1.91	365	1.89	357	1.87	349	1.90	361
6	1.91	365	1.92	369	1.90	361	1.88	353	1.87	349	1.87	349
M	1.91	365	1.92	369	1.90	361	1.88	353	1.86	345	1.85	341
	April 7		April 8		April 9		April 10		April 11		April 12	
6	1.89	357	1.87	349	1.84	337	1.83	333	1.81	325	1.80	321
N	1.87	349	1.85	341	1.84	337	1.82	329	1.81	325	1.80	321
6	1.87	349	1.85	341	1.84	337	1.82	329	1.81	325	1.79	317
M	1.87	349	1.85	341	1.83	333	1.81	325	1.81	325	1.79	317
	April 13		April 14		April 15		April 16		April 17		April 18	
6	1.78	313	1.76	306	1.71	287	1.69	279	1.66	268	1.64	260
N	1.78	313	1.75	302	1.71	287	1.69	279	1.66	268	1.64	260
6	1.77	310	1.73	294	1.70	283	1.68	275	1.65	264	1.63	256
M	1.76	306	1.72	291	1.70	283	1.67	272	1.64	260	1.62	253
	April 19		April 20		April 21		April 22		April 23		April 24	
6	1.60	245	1.44	188	1.15	96	1.32	148	1.10	83	1.06	75
N	1.58	238	1.29	138	1.27	132	1.25	126	1.07	77	1.06	75
6	1.55	227	1.15	96	1.34	154	1.17	102	1.08	79	1.05	72
M	1.51	213	1.12	88	1.36	161	1.13	91	1.07	77	1.04	70

Wrightsville Detention Reservoir on North Branch of Winooski River at Wrightsville, Vt.

Location.- Lat. 44°18'35", long. 72°34'30", in Wrightsville, Washington County, three-quarters of a mile above gaging station on North Branch of Winooski River and $4\frac{1}{4}$ miles above confluence with Winooski River. Zero of gage is 612.75 feet above mean sea level.

Drainage area.- 66.5 square miles.

Gage-height record.- Graph constructed from one or more readings daily. Gage heights given to tenths.

Remarks.- Capacity of reservoir, 893,000,000 cubic feet. Capacity curve developed from areas furnished by Corps of Engineers, U. S. Army.

Gage height, in feet, and contents, in millions of cubic feet, at indicated time, 1936

Hour	Gage height	Contents	Gage height	Contents	Gage height	Contents	Gage height	Contents	Gage height	Contents	Gage height	Contents
	March 8		March 9		March 10		March 11		March 12		March 13	
6							2.3	14.21	4.7	21.47	20.8	106.62
N							2.6	15.04	6.7	28.54	24.2	134.41
6							3.0	16.15	11.2	47.39	26.1	151.16
M			1.0	10.85	2.0	13.38	3.6	17.97	16.0	72.80	27.0	159.35
	March 14		March 15		March 16		March 17		March 18		March 19	
6	27.5	164.02	26.5	154.80	24.2	134.41	27.2	161.22	36.0	252.32	54.3	507.58
N	27.5	164.02	25.8	148.47	24.0	132.68	29.4	182.13	40.5	308.11	56.6	546.87
6	27.3	162.15	25.3	144.02	24.5	137.02	31.5	203.16	45.0	368.38	57.3	559.24
M	27.0	159.35	24.7	138.75	25.6	146.69	33.5	224.28	49.7	435.40	59.8	605.32
	March 20		March 21		March 22		March 23		March 24		March 25	
6	61.0	628.58	62.0	648.60	63.4	677.55	62.5	658.88	60.3	614.94	58.3	577.32
N	61.8	644.60	62.0	648.60	63.7	683.85	62.0	648.60	59.8	605.32	58.3	577.32
6	62.0	648.60	62.3	654.76	63.4	677.55	61.4	636.59	59.2	593.98	58.5	581.00
M	62.0	648.60	62.8	665.04	62.9	667.10	60.9	626.63	58.7	584.68	58.5	581.00
	March 26		March 27		March 28		March 29		March 30		March 31	
6	58.2	575.48	57.0	553.85	55.9	534.68	54.1	504.26	52.2	473.69	51.2	458.12
N	57.8	568.21	56.7	548.62	55.5	527.80	53.6	496.11	51.8	467.42	51.3	459.67
6	57.5	562.82	56.5	545.12	55.0	519.20	53.2	489.62	51.3	459.67	51.5	462.77
M	57.3	559.24	56.3	541.64	54.5	510.90	52.7	481.62	51.2	458.12	51.2	458.12
	April 1		April 2		April 3		April 4		April 5		April 6	
6	50.5	447.44	47.7	406.18	45.2	371.14	41.5	321.24	38.2	278.82	35.2	243.14
N	49.9	438.36	47.0	396.20	44.2	357.44	41.0	314.62	37.4	269.02	34.7	237.50
6	49.2	427.97	46.3	386.40	42.8	338.53	39.4	293.93	36.7	260.60	36.5	258.24
M	48.5	417.72	45.7	378.05	41.9	326.53	38.7	285.07	36.0	252.32	38.5	282.57
	April 7		April 8		April 9		April 10		April 11		April 12	
6	40.2	304.20	39.0	288.82	36.7	260.60	33.8	227.53	31.0	198.02	30.0	188.00
N	40.2	304.20	38.5	282.57	36.0	252.32	33.7	226.44	30.6	194.01	29.4	182.13
6	39.9	300.32	37.9	275.10	35.3	244.29	32.5	213.58	30.3	191.01	29.0	178.22
M	39.5	295.21	37.3	267.80	34.5	235.28	31.5	203.16	30.3	191.01	28.3	171.54
	April 13		April 14		April 15		April 16		April 17		April 18	
6	27.7	165.88	24.8	139.62	21.6	112.91	18.4	88.85	16.5	76.00	15.2	68.04
N	27.2	161.22	24.0	132.68	20.8	106.62	17.5	82.60	16.2	74.08	14.8	65.74
6	26.5	154.80	23.2	125.94	20.0	100.50	17.3	81.24	16.0	72.80	14.4	63.53
M	25.7	147.58	22.4	119.35	19.2	94.60	16.8	77.92	15.7	71.02	14.4	63.53
	April 19		April 20		April 21		April 22		April 23		April 24	
6	14.3	62.98	14.0	61.32	13.0	56.10	15.0	66.85	13.4	58.19	12.0	51.15
N	14.3	62.98	13.5	58.71	13.3	57.67	15.0	66.85	13.3	57.67	11.4	48.33
6	14.2	62.43	13.2	57.14	14.1	61.87	14.5	64.08	13.0	56.10	10.8	45.55
M	14.2	62.43	13.0	56.10	14.7	65.19	13.8	60.28	12.7	54.62	10.2	42.85
	April 25		April 26		April 27		April 28		April 29		April 30	
6	9.6	40.23	7.2	30.43	6.0	25.95	6.0	25.95	7.2	30.43	15.4	69.23
N	9.0	37.65	6.8	28.91	6.0	25.95	6.0	25.95	9.0	37.65	17.5	82.60
6	8.3	34.78	6.6	28.17	6.0	25.95	6.2	26.69	11.0	46.45	19.4	96.07
M	7.8	32.77	6.3	27.06	6.0	25.95	6.4	27.43	13.3	57.67	20.7	105.86
	May 1		May 2		May 3		May 4		May 5		May 6	
6	21.3	110.53	21.3	110.53	20.5	104.32	19.0	93.12	16.0	72.80	12.3	52.64
N	21.4	111.32	21.2	109.74	20.2	102.03	18.2	87.42	15.2	68.04	11.1	46.92
6	21.4	111.32	21.0	108.15	20.0	100.50	17.5	82.60	14.3	62.98	10.0	41.95
M	21.4	111.32	20.7	105.86	19.5	96.81	16.8	77.92	13.3	57.67	9.2	38.51

North Branch of Winooski River at Wrightsville, Vt.

Location.- Lat. 44°18'0", long. 72°34'45", in Wrightsville, Washington County, three-quarters of a mile below Wrightsville Detention Dam and 3½ miles above confluence with Winooski River. Zero of gage is 550.53 feet above mean sea level.
Drainage area.- 69.2 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights given to hundredths.
Stage-discharge relation.- Affected by ice Mar. 12, 13. Defined by current-meter measurements below 813 second-feet; extended to peak stage by determination of maximum flow through tunnel.
Maxima.- 1936: Discharge observed, 1,040 second-feet 2:30 p.m. Mar. 21 (gage height, 4.32 feet); discharge corrected for storage, about 4,830 second-feet 4 p.m. Mar. 18.
1933-35: Discharge observed, 2,170 second-feet Apr. 12, 1934 (gage height, 6.53 feet).
Maximum discharge previously known, 17,200 second-feet Nov. 3, 1927.
Remarks.- Flood run-off affected by storage in Wrightsville Detention Reservoir (capacity, 893,000,000 cubic feet). Daily and monthly discharges corrected for storage.

Mean discharge (second-feet) and gain or loss in storage (millions of cubic feet), 1936

Day	March			April			May		
	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge	Observed discharge	Gain or loss in storage	Corrected discharge
1	40		40	878	-0.40	410	592	+5.46	655
2	38		38	855	-39.67	396	592	-5.46	529
3	38		38	832	-51.52	236	575	-9.05	470
4	37		37	810	-41.46	330	540	-18.89	321
5	38		38	770	-32.75	391	488	-20.25	254
6	38		38	770	+30.25	1,120	410	-19.16	188
7	37		37	790	+12.64	936	319	-6.13	248
8	36		36	790	-27.41	473	199	-7.48	112
9	36		36	770	-32.52	394	153	-4.74	98
10	47	+2.53	76	730	-32.12	358	120	-1.28	105
11	67	+4.59	120	710	-12.15	569	99	-1.22	85
12	296	+54.83	931	690	-19.47	465	84	0	84
13	673	+86.55	1,670	670	-23.96	393	136	+37.94	575
14	675	0	675	630	-28.23	303	505	+27.00	817
15	658	-20.60	420	575	-24.75	289	522	-11.58	388
16	638	+7.94	730	540	-16.68	347	470	-19.87	240
17	720	+77.59	1,620	505	-6.90	425	396	-11.35	265
18	862	+211.12	3,300	488	-7.49	401	342	-8.20	247
19	945	+169.92	2,920	470	-1.10	457	268	+1.56	250
20	990	+43.28	1,490	455	-6.33	382	338	-.39	333
21	1,000	+16.44	1,190	455	+9.09	560	320	-4.97	262
22	990	+2.06	1,010	488	-4.91	431	226	-4.30	176
23	968	-40.47	500	455	-5.66	389	159	-2.03	136
24	951	-41.95	465	396	-11.77	260	124	-1.64	105
25	951	-3.68	908	342	-10.08	225	99	-1.56	81
26	945	-21.76	693	274	-5.71	208	79	-1.51	62
27	922	-17.60	718	213	-1.11	200	74	+1.81	95
28	922	-30.74	566	217	+1.48	234	100	0	100
29	900	-29.28	561	380	+30.24	730	87	-0.30	84
30	900	-23.50	628	532	+48.19	1,090	70	-1.21	56
31	878	0	878				62	-.91	51

	March	April	May
Mean monthly discharge, in second-feet (observed)	556	583	276
Gain or loss in storage, in millions of cubic feet	+447.27	-352.26	-89.71
Mean monthly discharge, in second-feet (corrected)	723	447	241
Run-off, in inches (corrected)	11.99	7.21	4.01

North Branch of Winooski River at Wrightsville, Vt.--Continued

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec. ft.	Feet	Sec. ft.	Feet	Sec. ft.	Feet	Sec. ft.	Feet	Sec. ft.	Feet	Sec. ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
6					0.84	41	0.99	56	1.89	138	3.45	670
N					.70	30	1.01	58	2.72	217	3.40	650
6			0.80	37	1.05	64	1.12	73	3.15	455	3.55	710
M			.82	39	.95	52	1.32	106	4.45	630	3.45	670
	March 14		March 15		March 16		March 17		March 18		March 19	
6	3.45	670	3.43	670	3.35	630	3.57	710	3.75	790	4.10	945
N	3.40	650	3.40	650	3.37	630	3.57	710	3.97	878	4.12	945
6	3.53	710	3.44	670	3.37	630	3.60	730	4.02	900	4.15	968
M	3.46	670	3.36	630	3.46	670	3.65	750	4.06	922	4.18	990
	March 20		March 21		March 22		March 23		March 24		March 25	
6	4.20	990	4.20	990	4.22	990	4.17	968	4.13	968	4.12	945
N	4.21	990	4.21	990	4.21	990	4.16	968	4.12	945	4.12	945
6	4.22	990	4.24	1,010	4.20	990	4.16	968	4.11	945	4.11	945
M	4.20	990	4.23	1,010	4.18	990	4.14	968	4.11	945	4.10	945
	March 26		March 27		March 28		March 29		March 30		March 31	
6	4.10	945	4.06	922	4.06	922	4.02	900	4.00	900	3.97	878
N	4.08	945	4.06	922	4.05	922	4.02	900	3.98	900	3.97	878
6	4.08	945	4.07	922	4.04	922	4.01	900	3.97	878	3.97	878
M	4.07	922	4.06	922	4.03	922	4.00	900	3.97	878	3.97	878
	April 1		April 2		April 3		April 4		April 5		April 6	
6	3.95	878	3.90	855	3.87	832	3.81	810	3.72	770	3.66	750
N	3.95	878	3.90	855	3.87	832	3.78	810	3.71	770	3.68	770
6	3.93	878	3.90	855	3.85	832	3.76	790	3.68	770	3.72	770
M	3.92	855	3.88	855	3.82	810	3.75	790	3.67	750	3.76	790
	April 7		April 8		April 9		April 10		April 11		April 12	
6	3.77	790	3.75	790	3.70	770	3.63	750	3.56	710	3.55	710
N	3.77	790	3.74	790	3.69	770	3.61	730	3.56	710	3.53	710
6	3.77	790	3.74	790	3.67	750	3.60	730	3.56	710	3.51	690
M	3.76	790	3.72	770	3.65	750	3.58	730	3.55	710	3.49	690
	April 13		April 14		April 15		April 16		April 17		April 18	
6	3.47	670	3.37	630	3.25	592	3.12	540	3.03	522	2.96	488
N	3.45	670	3.34	630	3.22	575	3.10	540	3.02	505	2.94	488
6	3.43	670	3.31	610	3.19	575	3.07	522	3.01	505	2.94	488
M	3.41	650	3.28	610	3.16	558	3.06	522	2.99	505	2.93	488
	April 19		April 20		April 21		April 22		April 23		April 24	
6	2.92	470	2.88	470	2.83	455	2.96	488	2.87	455	2.72	410
N	2.91	470	2.88	470	2.84	455	2.95	488	2.86	455	2.66	396
6	2.90	470	2.83	455	2.90	470	2.92	470	2.80	440	2.63	396
M	2.90	470	2.83	455	2.92	470	2.90	470	2.77	425	2.57	368

Dog River at Northfield Falls, Vt.

Location.- Lat. 44°10'55", long. 72°38'30", 1 mile below Northfield Falls, Washington County, and 1¼ miles below mouth of Cox Branch.
Drainage area.- 76.1 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights given to half tenths between 2.90 and 5.40 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Defined by current-meter measurements below 604 second-feet; extended to peak stage by determination of flood flow over dam (head, 4.91 feet; C, 3.70); verified by drainage-area comparison of instantaneous and total yield of flood with records for nearby streams.
Maxima.- 1936: Discharge, 5,700 second-feet 8 p.m. Mar. 18 (gage height, 8.49 feet).
Remarks.- Flood run-off not materially affected by artificial or natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	40	35	409	11	35	60	490	21	33	1,890	320
2	41	34	360	12	35	1,220	468	22	32	1,200	290
3	39	35	414	13	34	1,700	380	23	32	675	231
4	39	35	312	14	34	666	316	24	33	568	212
5	37	39	300	15	33	493	293	25	33	1,110	186
6	36	42	1,200	16	32	802	332	26	33	725	176
7	36	39	850	17	34	2,150	332	27	36	700	159
8	34	38	550	18	34	4,390	328	28	37	650	152
9	34	41	445	19	33	3,240	320	29	35	504	178
10	35	44	427	20	33	1,520	272	30		508	261
								31		602	
Mean monthly discharge, in second-feet									34.9	831	365
Run-off, in inches									0.50	12.57	5.36

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	-	-	1.47	91	5.3	2,280
4	1.12	39	1.13	40	1.14	41	1.26	54	1.54	105	5.4	2,380
6	-	-	-	-	-	-	-	-	1.69	136	5.35	2,330
8	-	-	-	-	-	-	-	-	2.18	275	5.2	2,190
10	1.09	36	1.14	41	1.16	42	1.28	57	2.65	468	4.95	1,960
N	-	-	-	-	-	-	-	-	3.7	1,020	4.7	1,750
2	-	-	-	-	-	-	-	-	4.3	1,440	4.5	1,590
4	1.09	36	1.15	42	1.19	45	1.32	63	4.9	1,920	4.3	1,440
6	-	-	-	-	-	-	-	-	5.2	2,190	4.1	1,290
8	-	-	-	-	-	-	-	-	5.3	2,280	3.9	1,150
10	1.12	39	1.15	42	1.21	47	1.39	75	5.4	2,380	3.75	1,050
M	-	-	-	-	-	-	-	-	5.4	2,380	3.6	955
	March 14		March 15		March 16		March 17		March 18		March 19	
2	3.45	865	2.69	486	2.77	522	4.65	1,710	5.7	2,660	7.7	4,780
4	3.35	808	2.68	481	2.77	522	4.9	1,920	5.9	2,860	7.3	4,340
6	3.25	752	2.67	476	2.73	504	5.1	2,100	6.2	3,160	6.9	3,900
8	3.15	700	2.64	463	2.73	504	5.25	2,240	6.6	3,580	6.6	3,580
10	3.1	675	2.63	458	2.81	540	5.3	2,280	6.9	3,900	6.4	3,380
N	3.05	650	2.63	458	2.95	602	5.25	2,240	7.4	4,460	6.1	3,060
2	3.05	650	2.63	458	3.15	700	5.1	2,100	7.8	4,900	5.9	2,860
4	3.05	650	2.69	486	3.45	865	5.05	2,060	8.2	5,360	5.7	2,660
6	2.95	602	2.76	517	3.7	1,020	5.15	2,140	8.4	5,590	5.7	2,760
8	2.89	576	2.82	544	3.85	1,110	5.25	2,240	8.5	5,700	5.6	2,560
10	2.83	548	2.83	548	4.05	1,260	5.35	2,330	8.2	5,360	5.6	2,560
M	2.75	512	2.82	544	4.35	1,470	5.5	2,470	8.0	5,130	5.4	2,380
	March 20		March 21		March 22		March 23		March 24		March 25	
2	5.2	2,190	3.75	1,050	4.8	1,840	3.25	752	2.9	580	3.4	835
4	5.0	2,010	3.65	988	4.6	1,670	3.2	725	2.88	571	4.05	1,260
6	4.75	1,790	3.6	955	4.4	1,510	3.1	675	2.84	553	4.3	1,440
8	4.55	1,630	3.6	955	4.2	1,360	3.05	650	2.80	535	4.25	1,400
10	4.35	1,470	3.65	988	4.0	1,220	3.05	650	2.77	522	4.15	1,320
N	4.25	1,400	3.9	1,150	3.9	1,150	3.1	675	2.76	517	4.0	1,220
2	4.2	1,360	4.7	1,750	3.8	1,080	3.1	675	2.78	526	3.8	1,080
4	4.2	1,360	6.3	3,270	3.7	1,020	3.1	675	2.80	535	3.7	1,020
6	4.15	1,320	6.6	3,580	3.65	988	3.1	675	2.90	580	3.65	988
8	4.1	1,290	6.2	3,160	3.5	895	3.1	675	2.95	602	3.6	955
10	4.0	1,220	5.7	2,660	3.4	835	3.05	650	3.0	625	3.55	925
M	3.85	1,110	5.2	2,190	3.3	780	3.0	625	3.1	675	3.45	865

Mad River near Moretown, Vt.

Location.- Lat. 44°16'40", long. 72°44'35", at highway bridge 2.4 miles below Moretown, Washington County.
Drainage area.- 139 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights given to half tenths between 5.50 and 7.40 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 12. Defined by current-meter measurements below 2,690 second-feet; extended to peak stage by determination of flood flow over dam (head, 6.35 feet; C, 3.4); verified by drainage-area comparison of instantaneous and total yield of flood with records for nearby streams.
Maxima.- 1936: Discharge, 9,070 second-feet 4 p.m. Mar. 18 (gage height, 9.98 feet).
1928-35: Discharge, 9,450 second-feet (revised) Apr. 12, 1934 (gage height, 10.20 feet). Maximum gage height, 11.20 feet Mar. 17, 1935 (ice jam).
Maximum known stage, about 20.5 feet Nov. 3, 4, 1927.
Remarks.- Flood run-off not materially affected by artificial or natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	70	75	795	11	68	240	776	21	62	2,400	580
2	75	70	643	12	65	4,590	700	22	65	1,680	520
3	70	75	786	13	62	3,240	572	23	65	993	402
4	68	80	550	14	60	1,080	470	24	65	801	369
5	65	95	484	15	65	742	435	25	60	1,480	320
6	65	130	1,950	16	62	1,500	520	26	65	1,150	320
7	62	100	1,320	17	62	4,150	520	27	70	1,050	308
8	60	95	867	18	60	7,020	520	28	95	1,040	332
9	60	100	668	19	60	4,520	528	29	85	786	636
10	70	140	635	20	60	2,210	435	30		848	1,320
								31		1,340	
Mean monthly discharge, in second-feet									66.2	1,414	643
Run-off, in inches									0.51	11.76	5.17

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	March 8 Feet	March 8 Sec.ft.	March 9 Feet	March 9 Sec.ft.	March 10 Feet	March 10 Sec.ft.	March 11 Feet	March 11 Sec.ft.	March 12 Feet	March 12 Sec.ft.	March 13 Feet	March 13 Sec.ft.
2	-	-	-	-	3.97	-	4.36	-	4.84	700	7.8	4,980
4	3.96	-	3.96	-	4.05	-	4.38	-	5.26	1,320	7.6	4,640
6	-	-	-	-	4.08	-	4.40	-	5.85	1,890	7.6	4,640
8	-	-	-	-	4.11	-	4.43	-	7.4	4,300	7.4	4,300
10	3.95	-	4.06	-	4.18	-	4.47	-	9.0	4,640	7.1	3,800
N	-	*95	4.04	*100	4.10	*140	4.48	*240	8.1	5,520	6.8	3,320
2	-	-	3.88	-	4.16	-	4.45	-	9.6	6,420	6.55	2,940
4	3.98	-	4.00	-	4.25	-	4.50	-	8.7	6,600	6.3	2,580
6	-	-	3.98	-	4.25	-	4.54	-	8.5	6,240	6.1	2,300
8	-	-	3.93	-	4.25	-	4.56	-	8.4	6,060	5.85	1,960
10	3.97	-	4.03	-	4.33	-	4.58	-	8.3	5,880	5.7	1,770
M	-	-	4.00	-	4.36	-	4.73	-	8.1	5,520	5.55	1,600

Hour	March 14 Feet	March 14 Sec.ft.	March 15 Feet	March 15 Sec.ft.	March 16 Feet	March 16 Sec.ft.	March 17 Feet	March 17 Sec.ft.	March 18 Feet	March 18 Sec.ft.	March 19 Feet	March 19 Sec.ft.
2	5.43	1,460	4.74	777	4.82	848	7.0	3,640	7.8	4,980	8.7	6,600
4	5.32	1,350	4.71	751	4.80	830	7.35	4,220	8.0	5,340	8.5	6,240
6	5.22	1,240	4.71	751	4.81	839	7.5	4,470	8.2	5,700	8.3	5,880
8	5.13	1,150	4.66	709	4.79	821	7.35	4,220	8.5	6,240	7.9	5,160
10	5.06	1,080	4.62	676	4.83	858	7.15	3,880	9.0	7,170	7.6	4,640
N	5.03	1,050	4.66	709	4.83	858	6.9	3,480	9.4	7,930	7.3	4,130
2	5.02	1,040	4.67	717	5.21	1,230	7.5	4,470	9.7	8,500	7.15	3,880
4	4.98	1,000	4.65	700	5.75	1,830	7.15	3,880	10.0	9,070	6.95	3,560
6	4.94	961	4.67	717	5.9	2,020	7.3	4,130	9.6	8,310	7.05	3,720
8	4.89	913	4.71	751	6.1	2,300	7.4	4,300	9.2	7,550	6.95	3,560
10	4.83	858	4.77	804	6.3	2,580	7.5	4,470	8.8	6,790	6.85	3,400
M	4.79	821	4.82	848	6.55	2,940	7.6	4,640	8.7	6,600	6.9	3,480

Hour	March 20 Feet	March 20 Sec.ft.	March 21 Feet	March 21 Sec.ft.	March 22 Feet	March 22 Sec.ft.	March 23 Feet	March 23 Sec.ft.	March 24 Feet	March 24 Sec.ft.	March 25 Feet	March 25 Sec.ft.
2	6.85	3,400	5.45	1,480	6.2	2,440	5.12	1,140	4.80	830	5.03	1,050
4	6.6	3,020	5.37	1,400	6.0	2,160	5.07	1,090	4.77	804	5.36	1,390
6	6.4	2,720	5.31	1,340	5.9	2,020	5.02	1,040	4.75	786	5.6	1,650
8	6.25	2,510	5.30	1,320	5.8	1,890	4.98	1,000	4.73	768	5.7	1,770
10	6.05	2,230	5.35	1,380	5.65	1,710	4.96	981	4.69	734	5.6	1,650
N	5.9	2,020	5.50	1,540	5.6	1,650	4.94	961	4.69	734	5.55	1,600
2	5.85	1,960	6.05	2,230	5.5	1,540	4.96	981	4.70	742	5.48	1,520
4	5.8	1,890	7.05	3,720	5.47	1,510	4.97	991	4.71	751	5.41	1,440
6	5.75	1,830	7.4	4,300	5.41	1,440	4.96	981	4.77	804	5.40	1,430
8	5.7	1,770	7.2	3,960	5.32	1,350	4.95	971	4.84	867	5.40	1,430
10	5.6	1,650	6.8	3,320	5.24	1,260	4.89	913	4.85	876	5.40	1,430
M	5.5	1,540	6.45	2,800	5.16	1,180	4.84	867	4.89	913	5.35	1,380

*Mean for the day.

Waterbury River near Waterbury, Vt.

Location.- Lat. 44°22'10", long. 72°46'10", 1 2/3 miles above mouth and 2½ miles north of Waterbury, Washington County.
Drainage area.- 111 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights given to half tenths between 2.7 and 5.7 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1, 2, 5-13, 16-20, 22-28, Mar. 5-11. Defined by current-meter measurements below 2,230 second-feet; extended to peak stage by determination of flood flow over dam (head, 3.33 feet; C, 3.5); verified by comparison of peak discharge and total run-off of flood with records for nearby streams.
Maxima.- 1936: Discharge, 5,510 second-feet 5 to 6 p.m. Mar. 18 (gage height, 19.38 feet).
Remarks.- Flood run-off not materially affected by storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	59	67	888	11	51	170	809	21	54	1,680	846
2	58	67	682	12	51	2,720	706	22	50	1,620	717
3	56	64	833	13	52	2,450	549	23	50	952	549
4	55	60	638	14	56	931	440	24	48	780	458
5	54	60	527	15	55	615	440	25	48	1,430	362
6	53	59	1,460	16	49	968	585	26	48	1,140	382
7	52	58	1,150	17	48	2,080	644	27	60	970	340
8	52	56	784	18	48	4,160	814	28	69	916	404
9	51	54	626	19	49	3,450	798	29	67	774	1,450
10	52	60	666	20	50	2,140	632	30		892	2,880
								31		1,350	
Mean monthly discharge, in second-feet									53.3	1,058	769
Run-off, in inches									0.52	10.99	7.73

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	1.54	-	1.61	-	1.53	-	2.50	-	7.2	1,000	14.4	3,340
4	1.53	-	1.63	-	1.52	-	3.05	-	8.0	1,200	14.2	3,260
6	1.53	-	1.65	-	1.52	-	3.2	-	9.2	1,540	14.0	3,180
8	1.53	-	1.67	-	1.51	-	3.25	-	10.5	1,930	13.4	2,950
10	1.53	-	1.62	-	1.51	-	2.8	-	11.4	2,210	12.9	2,750
N	1.58	*56	1.58	*54	1.51	*60	2.75	*170	13.0	2,790	12.3	2,530
2	1.56	-	1.58	-	1.51	-	2.95	-	13.6	3,020	11.8	2,350
4	1.57	-	1.57	-	1.53	-	4.5	-	15.5	3,800	11.3	2,180
6	1.57	-	1.56	-	1.57	-	4.9	-	15.8	3,930	10.8	2,020
8	1.59	-	1.55	-	1.59	-	5.15	-	15.6	3,840	10.2	1,840
10	1.59	-	1.54	-	1.62	-	5.05	-	15.4	3,760	9.4	1,600
M	1.60	-	1.53	-	1.68	-	6.8	-	15.0	3,590	8.8	1,420
	March 14		March 15		March 16		March 17		March 18		March 19	
2	8.3	1,280	5.7	617	6.0	689	9.9	1,750	12.9	2,750	16.4	4,180
4	8.0	1,200	5.8	641	6.0	689	10.5	1,930	13.4	2,950	16.0	4,010
6	7.6	1,090	5.7	617	6.0	689	10.8	2,020	13.9	3,140	15.6	3,840
8	7.3	1,010	5.65	605	6.0	689	10.9	2,050	14.5	3,380	15.1	3,630
10	7.0	935	5.5	570	6.0	689	10.8	2,020	15.0	3,590	14.8	3,510
N	6.9	910	5.45	558	6.3	761	10.5	1,930	16.0	4,010	14.6	3,430
2	6.8	885	5.5	570	6.9	910	10.5	1,930	17.5	4,660	14.2	3,260
4	6.7	860	5.6	593	7.5	1,060	10.8	2,020	19.2	5,420	14.0	3,180
6	6.6	835	5.8	641	8.0	1,200	11.1	2,110	19.4	5,510	13.8	3,100
8	6.4	785	5.8	641	8.3	1,280	11.5	2,240	18.8	5,240	13.7	3,060
10	6.1	713	5.9	665	8.7	1,390	12.0	2,420	17.8	4,790	13.8	3,100
M	5.9	665	5.9	665	9.3	1,570	12.5	2,600	17.0	4,440	13.8	3,100
	March 20		March 21		March 22		March 23		March 24		March 25	
2	13.6	3,020	9.1	1,510	11.5	2,240	7.6	1,100	6.6	856	6.9	928
4	13.2	2,870	8.8	1,420	11.1	2,110	7.4	1,050	6.4	809	7.5	1,070
6	12.6	2,640	8.6	1,360	10.6	1,960	7.2	1,000	6.3	786	8.1	1,220
8	12.0	2,420	8.4	1,300	10.2	1,840	7.0	952	6.2	763	8.6	1,360
10	11.4	2,210	8.3	1,280	9.7	1,690	6.9	928	6.1	740	9.3	1,570
N	10.9	2,050	8.3	1,280	9.4	1,600	6.8	904	6.1	740	9.6	1,660
2	10.5	1,930	8.4	1,300	9.1	1,510	6.8	904	6.0	717	9.7	1,690
4	10.2	1,840	9.3	1,570	8.9	1,450	6.9	928	6.1	740	9.6	1,660
6	10.0	1,780	10.7	1,990	8.7	1,390	6.9	928	6.2	763	9.3	1,570
8	9.8	1,720	11.6	2,280	8.4	1,300	6.9	928	6.3	786	9.2	1,540
10	9.6	1,660	12.1	2,460	8.1	1,220	6.9	928	6.4	809	9.0	1,480
M	9.4	1,600	11.9	2,380	7.8	1,150	6.7	880	6.6	856	8.9	1,450

Supplemental records.- Mar. 18, 5 to 6 p.m., 19.38 ft., 5,510 sec.-ft.
*Mean for the day.

Lamoille River at Johnson, Vt.

Location.- Lat. 44°37'20", long. 72°40'50", at falls 0.9 mile above Johnson, Lamoille County, and 1 1/8 miles above mouth of Gihon River.
Drainage area.- 335 square miles (revised).
Gage-height record.- Water-stage recorder graph except for period 3 p.m. Mar. 20 to noon Mar. 24, when it was based on shape of stage graphs at nearby stations. Gage heights given to half tenths between 3.2 and 4.5 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 11. Defined by current-meter measurements below 4,460 second-feet; extended to peak stage by determination of flood flow over dam (head, 5.58 feet; C, 3.7); verified by comparison of peak discharge and total run-off of flood with records for nearby streams.
Maxima.- 1936: Discharge, 13,000 second-feet 9 to 11 p.m. Mar. 18 (gage height, 16.48 feet).
1910-13, 1928-35: Discharge, about 11,700 second-feet Apr. 8, 1912 (gage height, 16.0 feet, former site and datum).
Remarks.- Flood run-off not materially affected by storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	145	175	1,760	11	135	400	1,900	21	145	4,420	1,580
2	120	220	1,220	12	125	3,140	2,170	22	140	4,220	1,540
3	145	180	1,660	13	115	7,010	1,640	23	125	2,840	1,140
4	130	200	1,270	14	130	4,270	1,240	24	195	1,840	1,030
5	120	200	1,050	15	135	2,220	1,100	25	155	2,830	805
6	130	235	3,120	16	125	2,320	1,500	26	175	2,480	788
7	140	210	3,500	17	185	5,340	2,070	27	200	2,060	764
8	135	170	2,040	18	155	10,700	2,060	28	230	2,180	788
9	120	220	1,570	19	165	10,500	1,990	29	210	1,660	1,270
10	115	210	1,610	20	155	7,860	1,660	30		1,610	3,410
								31		2,120	
Mean monthly discharge, in second-feet									148	2,711	1,642
Run-off, in inches									0.48	9.33	5.47

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	3.00	-	2.98	-	2.91	-	2.95	-	3.75	875	11.5	6,530
4	2.96	-	3.00	-	2.85	-	2.78	-	4.15	1,080	11.7	6,770
6	2.60	-	3.00	-	2.54	-	2.56	-	4.9	1,450	11.9	7,010
8	2.31	-	2.98	-	2.36	-	2.65	-	5.4	1,700	12.0	7,130
10	2.23	-	2.96	-	2.38	-	2.91	-	6.1	2,060	12.2	7,370
N	2.30	*170	3.14	*220	2.74	*210	3.12	*400	7.3	2,800	12.0	7,130
2	2.88	-	3.4	-	3.12	-	3.35	-	8.9	3,970	12.1	7,250
4	3.04	-	3.4	-	3.18	-	3.35	-	9.6	4,560	12.2	7,370
6	2.89	-	3.20	-	3.16	-	3.35	-	9.9	4,840	12.2	7,370
8	2.85	-	3.10	-	3.09	-	3.45	-	10.4	5,340	12.1	7,250
10	2.86	-	3.01	-	3.03	-	3.45	-	10.8	5,760	11.7	6,770
M	2.91	-	2.93	-	3.00	-	3.6	-	11.2	6,200	11.3	6,310
	March 14		March 15		March 16		March 17		March 18		March 19	
2	10.9	5,870	7.0	2,600	6.1	2,060	8.3	3,500	12.8	8,110	16.2	12,600
4	10.5	5,440	6.8	2,480	6.0	2,010	8.6	3,730	13.4	8,890	16.0	12,300
6	10.1	5,040	6.6	2,360	6.0	2,010	9.3	4,300	13.8	9,410	15.7	11,900
8	9.8	4,750	6.3	2,180	6.0	2,010	9.7	4,660	13.9	9,540	15.3	11,400
10	9.4	4,380	6.2	2,120	6.1	2,060	10.1	5,040	14.3	10,100	14.9	10,800
N	9.1	4,130	6.1	2,060	6.2	2,120	10.4	5,340	14.8	10,700	14.6	10,400
2	8.8	3,890	6.1	2,060	6.4	2,240	10.6	5,540	15.3	11,400	14.1	9,800
4	8.5	3,660	6.1	2,060	6.5	2,300	10.4	5,340	15.7	11,900	13.8	9,410
6	8.2	3,430	6.2	2,120	6.8	2,480	10.8	5,760	16.3	12,700	13.5	9,020
8	7.9	3,210	6.1	2,060	7.2	2,740	12.3	7,490	16.4	12,900	13.3	8,760
10	7.6	3,000	6.1	2,060	7.5	2,930	12.1	7,250	16.5	13,000	13.2	8,630
M	7.3	2,800	6.0	2,010	7.9	3,210	12.2	7,370	16.4	12,900	13.1	8,500
	March 20		March 21		March 22		March 23		March 24		March 25	
2	13.2	8,630	11.0	5,980	8.8	3,890	8.5	3,660	6.2	2,120	5.7	1,860
4	13.2	8,630	10.5	5,440	8.9	3,970	8.3	3,500	6.0	2,010	6.0	2,010
6	13.1	8,500	10.0	4,940	9.1	4,130	8.1	3,360	5.9	1,960	6.5	2,300
8	12.9	8,240	9.7	4,660	9.4	4,380	7.8	3,140	5.8	1,910	7.0	2,600
10	12.5	7,730	9.4	4,380	9.6	4,560	7.6	3,000	5.7	1,860	7.5	2,930
N	12.2	7,370	9.2	4,220	9.6	4,560	7.4	2,860	5.6	1,810	7.9	3,210
2	12.7	7,980	9.0	4,050	9.6	4,560	7.2	2,740	5.5	1,760	8.1	3,360
4	12.8	8,110	8.9	3,970	9.4	4,380	7.0	2,600	5.4	1,710	8.1	3,360
6	12.6	7,850	8.8	3,890	9.3	4,300	6.8	2,480	5.4	1,710	8.1	3,360
8	12.4	7,610	8.8	3,890	9.1	4,130	6.6	2,360	5.4	1,710	7.9	3,210
10	12.0	7,130	8.7	3,810	8.9	3,970	6.4	2,240	5.5	1,760	7.8	3,140
M	11.5	6,530	8.7	3,810	8.7	3,810	6.3	2,180	5.6	1,810	7.7	3,070

Supplemental records.- Mar. 18, 9 to 11 p.m., 16.48 ft., 13,000 sec.-ft.
*Mean for the day.

Lamoille River near Milton, Vt.

Location.- Lat. 44°40'15", long. 73°6'25", 2½ miles north of Milton, Chittenden County.
Drainage area.- 723 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights given to half tenths between 3.20 and 5.10 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 12. Defined by current-meter measurements below 14,700 second-feet; extended to peak stage by study of flow characteristics at control section; verified by drainage-area comparison of instantaneous and total yield of flood with records for nearby streams.
Maxima.- 1936: Discharge, 23,200 second-feet 10 a.m. to 2 p.m. Mar. 19 (gage height, 12.52 feet).
1929-35: Discharge, 16,600 second-feet Apr. 13, 1934 (gage height, 10.27 feet).
Remarks.- Flood run-off not materially affected by artificial or natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	260	415	4,270	11	220	1,000	3,380	21	320	9,680	3,380
2	270	410	2,850	12	265	8,000	4,270	22	305	9,020	3,540
3	280	410	3,700	13	250	14,600	3,460	23	275	6,940	2,780
4	275	435	3,150	14	270	12,300	2,780	24	300	4,370	2,410
5	280	435	2,410	15	230	6,580	2,340	25	350	5,620	2,140
6	270	540	2,970	16	255	5,690	3,150	26	430	6,110	1,880
7	270	485	7,160	17	285	8,710	4,440	27	430	4,440	1,880
8	255	380	5,000	18	335	14,300	5,500	28	540	4,440	1,880
9	275	390	3,620	19	330	21,700	4,610	29	500	3,700	2,890
10	290	530	3,220	20	315	15,600	3,780	30		3,150	6,580
								31		3,910	
Mean monthly discharge, in second-feet									308	5,622	3,514
Run-off, in inches									0.46	8.97	5.42

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	2.50	-	2.47	-	2.60	-	3.10	-	5.8	-	10.2	16,300
4	2.50	-	2.46	-	2.60	-	3.16	-	7.2	‡2,500	10.0	15,700
6	2.48	-	2.42	-	2.60	-	3.19	†750	6.7	-	9.8	15,200
8	2.40	-	2.37	-	2.57	-	3.20	-	6.8	-	9.6	14,600
10	2.33	-	2.35	-	2.57	-	3.3	-	7.8	‡6,000	9.5	14,400
N	2.26	*380	2.32	*390	2.58	*530	3.35	-	8.2	-	9.3	13,800
2	2.26	-	2.32	-	2.63	-	3.5	-	9.0	-	9.1	13,300
4	2.33	-	2.37	-	2.75	-	3.6	-	9.2	‡9,000	9.1	13,300
6	2.41	-	2.47	-	2.87	-	3.75	†1,250	9.3	-	9.4	14,100
8	2.47	-	2.51	-	2.90	-	4.0	-	9.6	12,500	9.5	14,400
10	2.47	-	2.55	-	2.95	-	4.45	-	10.9	14,500	9.7	14,900
M	2.47	-	2.58	-	3.02	-	5.0	-	10.4	16,900	10.0	15,700
	March 14		March 15		March 16		March 17		March 18		March 19	
2	10.2	16,300	7.2	8,480	5.9	5,700	6.6	7,160	8.4	11,400	11.4	19,800
4	10.0	15,700	7.0	8,000	5.8	5,500	6.7	7,370	8.5	11,700	11.8	21,100
6	9.7	14,900	6.7	7,370	5.7	5,320	6.7	7,370	8.6	12,000	12.1	22,000
8	9.4	14,100	6.6	7,160	5.6	5,140	6.9	7,790	8.8	12,500	12.4	22,900
10	9.0	13,000	6.4	6,740	5.6	5,140	7.1	8,240	8.9	12,700	12.5	23,200
N	8.7	12,200	6.2	6,320	5.6	5,140	7.2	8,480	9.2	13,500	12.5	23,200
2	8.4	11,400	5.9	5,700	5.6	5,140	7.2	8,480	9.4	14,100	12.5	23,200
4	8.1	10,700	5.8	5,500	5.8	5,500	7.3	8,720	9.7	14,900	12.3	22,600
6	7.9	10,200	5.7	5,320	6.0	5,900	7.6	9,440	10.0	15,700	12.1	22,000
8	8.0	10,400	6.1	6,110	6.2	6,320	7.8	9,920	10.3	16,600	11.8	21,100
10	7.7	9,680	6.2	6,320	6.4	6,740	8.1	10,700	10.7	17,700	11.5	20,200
M	7.5	9,200	6.0	5,900	6.4	6,740	8.2	10,900	11.0	18,600	11.2	19,200
	March 20		March 21		March 22		March 23		March 24		March 25	
2	11.0	18,600	8.7	12,200	7.1	8,240	7.5	9,200	5.5	4,960	4.9	3,940
4	10.8	18,000	8.5	11,700	7.1	8,240	7.4	8,960	5.5	4,960	5.0	4,100
6	10.6	17,400	8.3	11,200	7.1	8,240	7.2	8,480	5.4	4,780	5.2	4,440
8	10.4	16,900	8.0	10,400	7.2	8,480	7.0	8,000	5.3	4,610	5.5	4,960
10	10.1	16,000	7.8	9,920	7.3	8,720	6.7	7,370	5.2	4,440	5.8	5,500
N	10.0	15,700	7.6	9,440	7.4	8,960	6.5	6,950	5.2	4,440	6.0	5,900
2	9.9	15,400	7.5	9,200	7.6	9,440	6.3	6,530	5.1	4,270	6.1	6,110
4	9.7	14,900	7.3	8,720	7.6	9,440	6.1	6,110	5.0	4,100	6.2	6,320
6	9.5	14,400	7.2	8,480	7.7	9,680	5.9	5,700	4.95	4,020	6.2	6,320
8	9.3	13,800	7.2	8,480	7.7	9,680	5.8	5,500	4.9	3,940	6.3	6,530
10	9.1	13,300	7.1	8,240	7.7	9,680	5.7	5,320	4.9	3,940	6.3	6,530
M	8.9	12,700	7.1	8,240	7.6	9,440	5.6	5,140	4.9	3,940	6.4	6,740

*Mean for the day.
†Mean for 12-hour period.
‡Mean for 6-hour period.

146875—37——20

Missisquoi River near North Troy, Vt.

Location.- Lat. 44°58'20", long. 72°23'15", just above Big Falls, 1½ miles below mouth of Jay Branch, and 2½ miles above North Troy, Troy County.
Drainage area.- 131 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights given to half tenths between 3.20 and 5.30 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 16-18, Mar. 12. Defined by current-meter measurements below 1,650 second-feet; extended to peak stage using determination of flood flow over dam (head, 5.28 feet; C, 3.5 and 3.7); verified by drainage-area comparison of instantaneous and total yield of flood with records for nearby streams.
Maxima.- 1936: Discharge, 4,600 second-feet 10 p.m. to midnight Mar. 18 (gage height, 11.40 feet).
1931-35: Discharge, 5,140 second-feet (revised) Oct. 7, 1932 (gage height, 12.26 feet).
Remarks.- Flood run-off not materially affected by artificial or natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	55	71	953	11	52	183	770	21	48	1,690	700
2	55	63	634	12	50	1,100	810	22	48	1,850	550
3	50	61	770	13	48	3,280	700	23	47	935	450
4	52	71	493	14	48	1,640	400	24	48	741	380
5	55	83	406	15	50	988	450	25	49	1,250	340
6	55	85	1,340	16	45	1,020	1,530	26	58	1,150	340
7	50	78	1,660	17	45	1,800	1,220	27	77	1,010	380
8	50	66	850	18	47	3,760	1,260	28	80	1,120	693
9	52	74	634	19	48	3,820	1,150	29	85	790	1,440
10	52	78	634	20	50	2,820	861	30		910	2,490
								31		1,590	
Mean monthly discharge, in second-feet									534	1,102	843
Run-off, in inches									0.44	9.70	7.18

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	1.70	62	1.75	68	1.70	62	1.96	94	3.3	402	8.5	2,970
4	-	-	-	-	-	-	-	-	3.85	418	9.4	3,460
6	1.68	60	1.75	68	1.68	60	2.04	105	4.2	434	9.7	3,630
8	-	-	-	-	-	-	-	-	3.6	450	9.7	3,630
10	1.73	65	1.77	70	1.78	71	2.23	136	4.6	537	9.6	3,580
N	-	-	-	-	-	-	-	-	5.6	710	9.5	3,520
2	1.76	69	1.87	82	1.94	91	2.50	197	5.9	995	9.4	3,460
4	-	-	-	-	-	-	-	-	6.7	1,190	9.3	3,410
6	1.76	69	1.85	80	1.95	92	2.68	245	7.8	1,440	9.0	3,240
8	-	-	-	-	-	-	-	-	7.8	1,840	8.7	3,080
10	1.76	69	1.82	76	1.97	95	2.95	322	8.0	2,260	8.2	2,800
M	-	-	-	-	-	-	-	-	7.8	2,580	7.7	2,530
	March 14		March 15		March 16		March 17		March 18		March 19	
2	7.3	2,310	5.05	1,160	4.55	932	5.4	1,340	7.9	2,640	11.3	4,540
4	6.9	2,090	4.9	1,090	4.55	932	5.4	1,340	8.3	2,860	11.1	4,420
6	6.6	1,940	4.8	1,040	4.55	932	5.5	1,390	8.7	3,080	10.7	4,180
8	6.3	1,790	4.65	978	4.5	910	5.6	1,440	8.9	3,190	10.3	3,960
10	6.0	1,640	4.7	1,000	4.55	932	5.7	1,490	9.3	3,410	9.8	3,680
N	5.9	1,590	4.65	978	4.55	932	5.8	1,540	9.8	3,680	9.5	3,520
2	5.8	1,540	4.6	955	4.6	955	6.1	1,690	10.1	3,850	9.4	3,460
4	5.7	1,490	4.55	932	4.75	1,020	6.6	1,940	10.7	4,180	9.5	3,520
6	5.6	1,440	4.55	932	4.9	1,090	7.0	2,140	11.3	4,540	9.5	3,520
8	5.4	1,340	4.55	932	5.0	1,140	7.3	2,310	11.3	4,540	9.8	3,680
10	5.25	1,260	4.55	932	5.15	1,220	7.5	2,420	11.4	4,600	9.9	3,740
M	5.15	1,220	4.55	932	5.25	1,260	7.7	2,530	11.4	4,600	9.7	3,630
	March 20		March 21		March 22		March 23		March 24		March 25	
2	9.6	3,580	6.4	1,860	7.0	2,160	4.9	1,120	4.15	810	4.35	890
4	9.5	3,520	6.2	1,760	7.1	2,210	4.7	1,040	4.05	770	4.6	993
6	9.3	3,410	6.0	1,660	7.1	2,210	4.55	972	3.95	732	4.8	1,080
8	9.1	3,300	5.8	1,560	7.0	2,160	4.45	930	3.9	712	5.0	1,170
10	8.8	3,140	5.6	1,460	6.9	2,110	4.4	910	3.85	692	5.1	1,220
N	8.4	2,920	5.4	1,360	6.7	2,010	4.35	890	3.8	673	5.2	1,260
2	8.1	2,750	5.4	1,360	6.5	1,910	4.35	890	3.75	654	5.3	1,310
4	7.7	2,530	5.6	1,460	6.2	1,760	4.4	910	3.85	692	5.4	1,360
6	7.4	2,360	6.2	1,760	6.0	1,660	4.4	910	3.95	732	5.5	1,410
8	7.1	2,210	6.5	1,910	5.6	1,460	4.4	910	4.05	770	5.5	1,410
10	6.9	2,110	6.8	2,060	5.4	1,360	4.35	890	4.15	810	5.6	1,460
M	6.6	1,960	6.9	2,110	5.1	1,220	4.25	850	4.25	850	5.5	1,410

Missisquoi River near Richford, Vt.

Location.- Lat. 44°57'30", long. 72°41'55", 1 2/3 miles above mouth of Trout River, 3 miles south of Richford, Franklin County, and 3 3/4 miles below mouth of North Branch.
Drainage area.- 479 square miles.
Gage-height record.- Water-stage recorder graph. Gage heights given to half tenths between 4.20 and 6.20 feet; hundredths below and tenths above these limits.
Stage-discharge relation.- Affected by ice Feb. 1 to Mar. 15. Defined by current-meter measurements below 7,240 second-feet; extended to peak stage by study of flow characteristics at control section; verified by drainage-area comparison of instantaneous and total yield of flood with records for nearby streams.
Maxima.- 1936: Discharge, 14,000 second-feet midnight Mar. 19 to 4 a.m. Mar. 20 (gage height, 14.70 feet).
1909-35: Discharge, 45,000 second-feet November 1927 (gage height, 23.1 feet).
Remarks.- Flood run-off not materially affected by artificial or natural storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	200	270	3,640	11	200	600	2,360	21	180	8,700	3,000
2	200	270	2,490	12	190	3,250	2,600	22	180	7,160	2,380
3	190	260	2,700	13	180	6,500	2,220	23	180	5,370	1,830
4	200	260	2,120	14	180	9,000	1,720	24	170	3,710	1,600
5	210	290	1,650	15	190	6,000	1,630	25	180	4,270	1,430
6	200	290	2,690	16	170	4,270	3,290	26	230	3,970	1,350
7	190	270	4,960	17	170	5,810	5,410	27	270	3,530	1,350
8	190	260	4,300	18	180	11,000	5,960	28	290	3,420	1,390
9	200	260	2,950	19	190	13,100	4,890	29	280	3,000	3,000
10	200	280	2,360	20	180	12,700	3,920	30		2,600	5,030
								31		3,730	
Mean monthly discharge, in second-feet									199	4,013	2,874
Run-off, in inches									0.45	9.66	6.69

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	-	-	-	-	-	-	-	-	7.8	-	13.3	-
4	4.45	-	4.4	-	4.4	-	4.95	-	8.6	-	13.1	-
6	-	-	-	-	-	-	-	-	9.9	**1,500	12.9	-
8	-	-	-	-	-	-	-	-	10.8	-	12.7	-
10	4.45	-	4.35	-	4.45	-	5.15	-	11.1	-	13.8	-
N	-	*260	-	*260	-	*280	5.25	*600	12.5	-	14.1	*6,500
2	-	-	-	-	-	-	5.45	-	13.6	-	13.8	-
4	4.4	-	4.35	-	4.55	-	5.65	-	13.6	-	13.7	-
6	-	-	-	-	-	-	5.9	-	14.2	**5,000	14.3	-
8	-	-	-	-	-	-	6.2	-	14.1	-	14.7	-
10	4.4	-	4.4	-	4.75	-	6.7	-	13.8	-	14.8	-
M	-	-	-	-	-	-	7.3	-	13.6	-	14.9	-
	March 14		March 15		March 16		March 17		March 18		March 19	
2	14.9	-	13.1	-	8.5	4,850	7.6	3,860	11.6	8,740	13.9	12,600
4	14.8	-	12.9	-	9.1	5,560	7.6	3,860	11.7	8,890	14.0	12,700
6	14.7	-	12.7	-	8.5	4,850	7.7	3,970	11.8	9,040	14.0	12,700
8	14.6	-	12.5	-	8.1	4,410	7.9	4,190	12.7	10,500	14.0	12,700
10	14.4	-	12.5	-	8.0	4,300	8.1	4,410	13.0	11,000	14.1	12,900
N	14.2	*9,000	12.3	*6,000	7.8	4,080	8.6	4,960	13.0	11,000	14.1	12,900
2	14.1	-	12.2	-	7.7	3,970	9.2	5,680	13.2	11,300	14.1	12,900
4	13.9	-	12.1	-	7.7	3,970	10.0	6,640	13.4	11,700	14.2	13,100
6	13.8	-	10.0	-	7.6	3,860	10.6	7,370	13.7	12,200	14.2	13,100
8	13.7	-	8.6	-	7.6	3,860	11.0	7,890	13.9	12,600	14.4	13,500
10	13.6	-	8.4	-	7.5	3,750	11.3	8,300	13.9	12,600	14.5	13,600
M	13.4	-	8.3	-	7.5	3,750	11.5	8,590	13.9	12,600	14.7	14,000
	March 20		March 21		March 22		March 23		March 24		March 25	
2	14.7	14,000	12.8	10,600	10.8	7,630	9.7	6,280	7.9	4,190	7.4	3,640
4	14.7	14,000	12.6	10,300	10.8	7,630	9.6	6,160	7.8	4,080	7.7	3,970
6	14.6	13,800	12.3	9,830	10.8	7,630	9.5	6,040	7.6	3,860	8.1	4,410
8	14.4	13,500	12.0	9,350	10.7	7,500	9.3	5,800	7.5	3,750	8.2	4,520
10	14.3	13,300	11.7	8,890	10.6	7,370	9.1	5,560	7.3	3,530	8.2	4,520
N	14.1	12,900	11.4	8,440	10.5	7,240	9.0	5,440	7.2	3,420	8.1	4,410
2	14.0	12,700	11.1	8,020	10.4	7,120	8.8	5,200	7.2	3,420	8.0	4,300
4	13.8	12,400	10.9	7,760	10.3	7,000	8.7	5,080	7.3	3,530	8.0	4,300
6	13.6	12,000	10.9	7,760	10.2	6,880	8.6	4,960	7.5	3,750	8.0	4,300
8	13.4	11,700	11.0	7,890	10.1	6,760	8.5	4,850	7.5	3,750	8.0	4,300
10	13.2	11,300	11.0	7,890	10.0	6,640	8.3	4,630	7.4	3,640	8.0	4,300
M	13.1	11,200	10.8	7,630	9.9	6,520	8.1	4,410	7.4	3,640	8.0	4,300

*Mean for the day.
**Mean for 12-hour period.

Lake Memphremagog at Newport, Vt.

Location.- Lat. 44°56'10", long. 72°12'15", on concrete highway bridge in Newport, Orleans County. Zero of gage is 673.15 feet above mean sea level.
Gage-height record.- One reading daily.
Maxima.- 1936: Gage height observed, 12.79 feet Mar. 22.
1931-35: Gage height observed, 12.92 feet Apr. 20, 1933.
Remarks.- No record on days where no gage heights are shown. Water-surface area of Lake Memphremagog is 38.4 square miles.

Gage height, in feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.94	7.50	8.22	8.68	-	-	11.45	10.05	9.54	9.12	9.01	8.41
2	7.98	7.49	8.29	8.68	-	-	11.43	10.17	9.54	9.05	8.99	8.41
3	8.01	7.47	8.33	8.68	-	-	11.43	10.19	9.54	9.01	8.97	8.40
4	8.07	7.47	8.45	8.68	-	-	11.37	10.20	9.53	9.01	8.95	8.40
5	8.15	7.46	8.52	8.68	-	-	11.33	10.17	9.53	9.01	8.93	8.39
6	8.18	7.44	8.56	8.68	-	-	11.22	10.15	9.53	9.00	8.90	-
7	8.22	7.43	8.61	8.68	-	-	11.15	-	9.55	8.99	8.86	-
8	8.20	7.41	8.65	8.68	-	-	11.09	10.10	9.53	8.99	8.81	-
9	8.15	7.40	8.69	8.68	-	-	10.87	9.99	9.53	8.97	8.79	-
10	8.09	7.40	8.71	-	-	-	10.78	9.93	9.50	8.93	8.78	-
11	8.03	7.43	8.72	8.68	-	-	10.69	-	9.47	8.89	8.76	-
12	8.00	7.45	8.72	8.68	-	-	10.60	9.87	9.45	8.87	8.73	-
13	7.97	7.49	8.71	8.68	-	-	10.53	9.83	9.43	8.82	8.70	-
14	7.92	7.59	8.71	8.68	-	8.80	10.43	10.13	9.41	8.79	8.67	-
15	7.88	7.67	8.70	-	-	8.93	10.34	10.19	9.39	8.72	8.64	-
16	7.85	7.73	8.70	-	-	9.25	10.27	10.20	9.36	8.67	8.62	-
17	7.84	7.77	8.70	-	-	9.53	10.16	10.11	9.33	8.61	8.59	-
18	7.79	7.81	8.71	-	-	10.32	10.09	10.02	-	8.57	8.57	-
19	7.76	7.86	8.71	-	-	11.42	10.01	9.93	9.27	8.53	8.55	-
20	7.74	7.90	8.71	-	-	12.21	9.93	10.07	9.23	8.51	8.53	8.43
21	7.70	7.96	8.71	-	-	12.53	9.91	10.03	9.20	8.49	8.51	8.45
22	7.65	7.99	8.71	-	-	12.79	9.88	9.94	9.17	8.48	8.50	8.49
23	7.61	7.99	8.70	-	-	12.73	9.82	9.87	9.16	8.49	8.48	8.52
24	7.59	8.00	8.70	-	-	12.63	9.78	9.76	9.14	8.56	8.48	8.55
25	7.57	8.02	8.69	-	-	12.49	9.71	9.64	9.13	8.75	8.47	8.55
26	7.57	8.02	8.68	-	-	12.31	9.67	9.59	9.13	8.91	8.47	8.53
27	7.56	8.03	8.68	-	-	12.13	9.59	9.58	9.12	9.17	8.45	8.51
28	7.56	8.05	8.68	-	-	11.99	9.78	9.58	9.13	9.15	8.45	8.49
29	7.55	8.11	8.68	-	-	11.81	9.87	9.56	9.14	9.09	8.45	8.47
30	7.55	8.16	8.68	-		11.64	-	9.55	9.15	9.06	8.44	8.49
31	7.52		8.68	-		11.49		9.55		9.03	8.41	

Clyde River at Newport, Vt.

Location. Lat. 40°56'10", long. 72°10'50", just below plant of Newport Electric Light Co., Newport, Orleans County, 1 3/4 miles above mouth.
Drainage area.- 140 square miles.
Gage-height record.- Water-stage recorder graph except for periods Feb. 1-14, 16, 20-25, Feb. 29 to Mar. 3, Mar. 5-7, when there was no record. Gage heights given to hundredths below and half tenths above 4.5 feet.
Stage-discharge relation.- Affected by ice Feb. 1 to 18. Defined by current-meter measurements below 2,740 second-feet; extended to peak stage by determination of flood flow over dam (head, 2.16 feet; C, 2.64); verified by comparison of total run-off of flood with records for nearby streams.
Maxima.- 1936: Discharge, 3,900 second-feet 1 p.m. and 4 p.m. Mar. 20 (gage height, 5.76 feet).
1909-24, 1928-35: Discharge, 2,870 second-feet (revised) Apr. 19. 1933 (gage height, 5.19 feet).
Remarks.- Flood run-off affected by natural and artificial storage.

Mean discharge, in second-feet, 1936

Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.	Day	Feb.	Mar.	Apr.
1	80	76	1,020	11	77	67	956	21	88	3,230	620
2	80	76	1,020	12	76	80	854	22	86	2,690	613
3	79	75	900	13	75	586	780	23	84	2,270	540
4	80	74	830	14	73	1,100	710	24	80	2,030	491
5	82	76	770	15	72	1,220	647	25	80	1,700	464
6	81	80	791	16	73	1,330	647	26	89	1,430	444
7	80	85	1,000	17	98	1,640	665	27	82	1,300	424
8	79	83	1,200	18	107	2,470	665	28	78	1,240	431
9	78	82	1,210	19	91	3,150	692	29	77	1,160	300
10	77	70	1,110	20	90	3,610	665	30		1,090	405
								31		1,040	
Mean monthly discharge, in second-feet									81.8	1,136	729
Run-off, in inches									0.63	9.35	5.81

Gage height, in feet, and discharge, in second-feet, at indicated time, 1936

Hour	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.	Feet	Sec.ft.
	March 8		March 9		March 10		March 11		March 12		March 13	
2	2.39	78	2.40	80	2.38	76	2.27	57	2.25	54	2.47	95
4	2.39	78	2.40	80	2.36	72	2.26	56	2.25	54	2.56	118
6	2.42	84	2.39	78	2.38	76	2.26	56	2.29	60	2.90	245
8	2.39	78	2.39	78	2.38	76	2.31	63	2.33	67	3.01	300
10	2.45	91	2.39	78	2.35	70	2.35	70	2.50	102	3.30	475
N	2.42	84	2.40	80	2.32	65	2.29	60	2.44	89	3.38	535
2	2.38	76	2.41	82	2.31	63	2.32	65	2.42	84	3.62	751
4	2.46	93	2.42	84	2.30	61	2.32	65	2.39	78	3.72	857
6	2.44	89	2.43	87	2.36	72	2.50	102	2.49	100	3.83	980
8	2.38	76	2.43	87	2.33	67	2.39	78	2.43	87	3.86	1,010
10	2.45	91	2.43	87	2.32	65	2.35	70	2.49	100	3.82	968
M	2.41	82	2.40	80	2.28	58	2.25	54	2.40	80	3.83	980
	March 14		March 15		March 16		March 17		March 18		March 19	
2	3.83	980	4.02	1,200	4.09	1,290	4.24	1,480	4.7	2,110	5.25	2,980
4	3.84	991	4.03	1,220	4.06	1,250	4.26	1,510	4.7	2,110	5.25	2,980
6	3.86	1,010	4.03	1,220	4.07	1,260	4.25	1,500	4.75	2,180	5.2	2,890
8	3.87	1,030	4.03	1,220	4.10	1,300	4.26	1,510	4.8	2,260	5.25	2,980
10	3.94	1,110	4.04	1,230	4.11	1,310	4.26	1,510	4.8	2,260	5.3	3,060
N	3.93	1,100	4.05	1,240	4.13	1,340	4.27	1,520	4.9	2,410	5.3	3,060
2	3.96	1,130	4.02	1,200	4.12	1,330	4.31	1,570	5.0	2,560	5.35	3,150
4	3.98	1,160	4.02	1,200	4.13	1,340	4.40	1,690	5.05	2,640	5.35	3,150
6	3.98	1,160	4.04	1,230	4.11	1,310	4.35	1,620	5.1	2,720	5.4	3,240
8	4.02	1,200	4.06	1,250	4.16	1,380	4.50	1,830	5.1	2,720	5.45	3,330
10	4.03	1,220	4.05	1,240	4.23	1,470	4.65	2,040	5.15	2,800	5.5	3,420
M	4.02	1,200	4.07	1,260	4.21	1,440	4.65	2,040	5.2	2,890	5.5	3,420
	March 20		March 21		March 22		March 23		March 24		March 25	
2	5.55	3,520	5.6	3,610	5.2	2,870	4.95	2,440	4.8	2,190	4.57	1,820
4	5.6	3,610	5.6	3,610	5.15	2,780	4.9	2,350	4.8	2,190	4.55	1,800
6	5.4	3,240	5.5	3,420	5.1	2,690	4.9	2,350	4.75	2,110	4.55	1,800
8	5.4	3,240	5.35	3,150	5.1	2,690	4.85	2,270	4.7	2,030	4.54	1,780
10	5.6	3,610	5.4	3,240	5.1	2,690	4.85	2,270	4.7	2,030	4.50	1,720
N	5.7	3,800	5.35	3,150	5.1	2,690	4.85	2,270	4.67	1,980	4.48	1,690
2	5.7	3,800	5.35	3,150	5.05	2,600	4.8	2,190	4.66	1,970	4.46	1,660
4	5.75	3,900	5.3	3,060	5.05	2,600	4.8	2,190	4.67	1,980	4.45	1,640
6	5.65	3,700	5.4	3,240	5.05	2,600	4.8	2,190	4.68	2,000	4.44	1,630
8	5.6	3,610	5.3	3,060	5.05	2,600	4.75	2,110	4.65	1,950	4.45	1,640
10	5.65	3,700	5.2	2,890	5.0	2,520	4.75	2,110	4.64	1,930	4.41	1,580
M	5.65	3,700	5.2	2,890	5.0	2,520	4.75	2,110	4.59	1,860	4.38	1,540

Supplemental records.- Mar. 20, 1 p.m., 5.76 ft., 3,900 sec.-ft.

SUMMARY OF FLOOD DISCHARGES

Each volume of this report includes a table, "Summary of flood discharges", in which are assembled the results of the determinations of maximum flood flows at existing river-measurement stations and other places on streams in the basins covered in that volume. Table 9, following, presents this information for the New England rivers. For general information, some discharges are presented for streams in basins adjoining or near those most affected by the floods. The table gives the following information:

1. Map reference number, applicable to figures 35 to 38, to aid in the location of the place where the discharge was determined.

2. Name of stream and place of determination of discharge.

3. Drainage area, in square miles, tributary to the stream at the place of determination of discharge.

4. Period of record. This information is generally given only for the existing stations for measuring discharge and conforms to the period of their operation.

5. The date of the maximum discharge previously known and its magnitude in second-feet.

6. The day and time of day and the rate in second-feet, total and per square mile, of the maximum discharge during or concurrent with the floods of March 1936. A brief notation as to the method of determination is also included.

The discharges for the existing river-measurement stations were determined by methods described in greater detail in the presentation of the record for the respective stations in the preceding section of this report, or, in a few exceptional instances in which the particular station record is not there presented, in the water-supply paper in which that record is published. For existing river-measurement stations the method of determination is designated "Stage-discharge relation", because the determination is based on the comprehensive studies of that subject that are conducted at such stations.

Where the recorded discharge was not measured at a regular station a brief reference is made to the method of determination and, where practicable, coefficients of discharge used in the application of the method are given. A description of the methods of determination with respect to the significance of coefficients of discharge and other details is given in the section entitled "Determination of flood discharges."

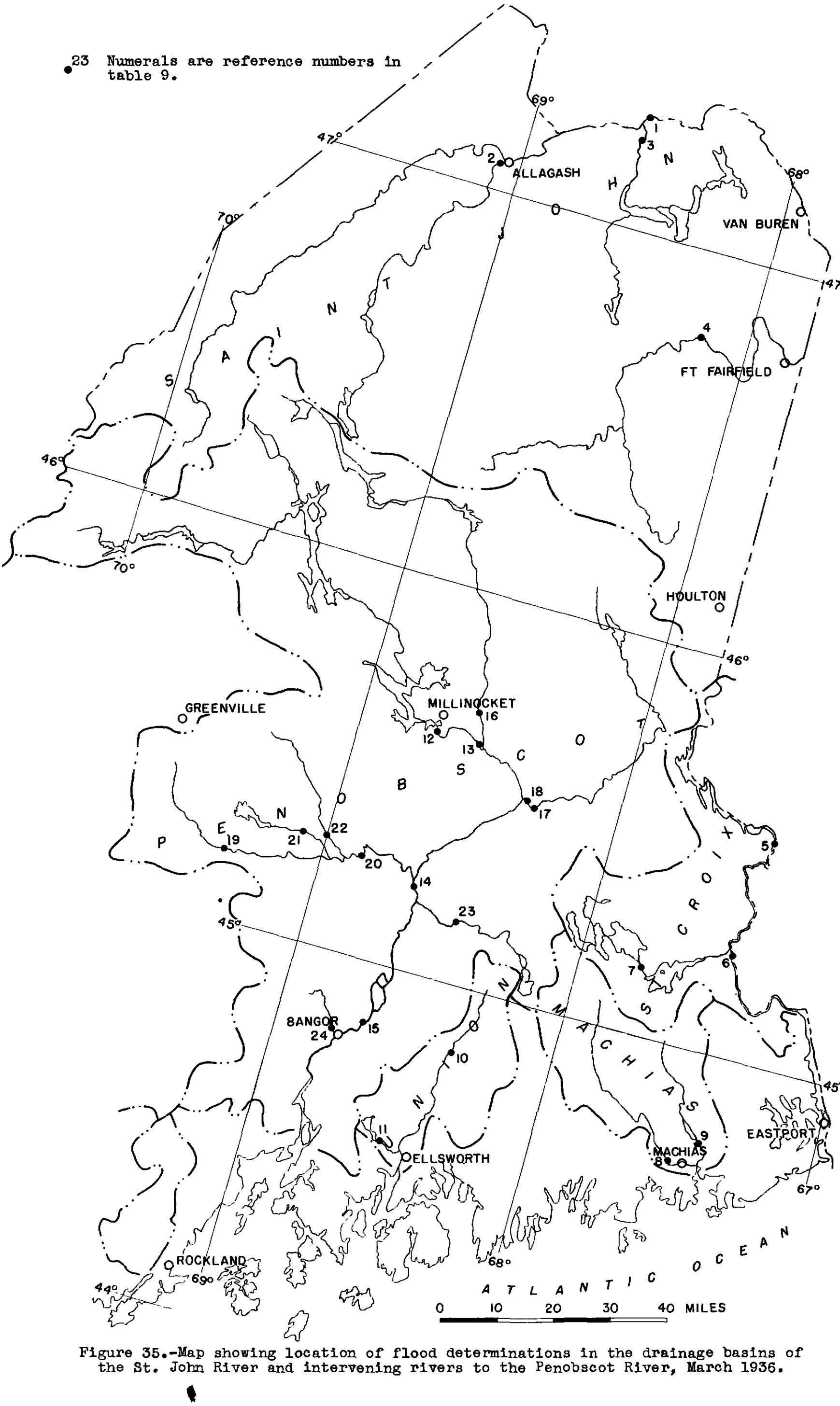

Figure 35.-Map showing location of flood determinations in the drainage basins of the St. John River and intervening rivers to the Penobscot River, March 1936.

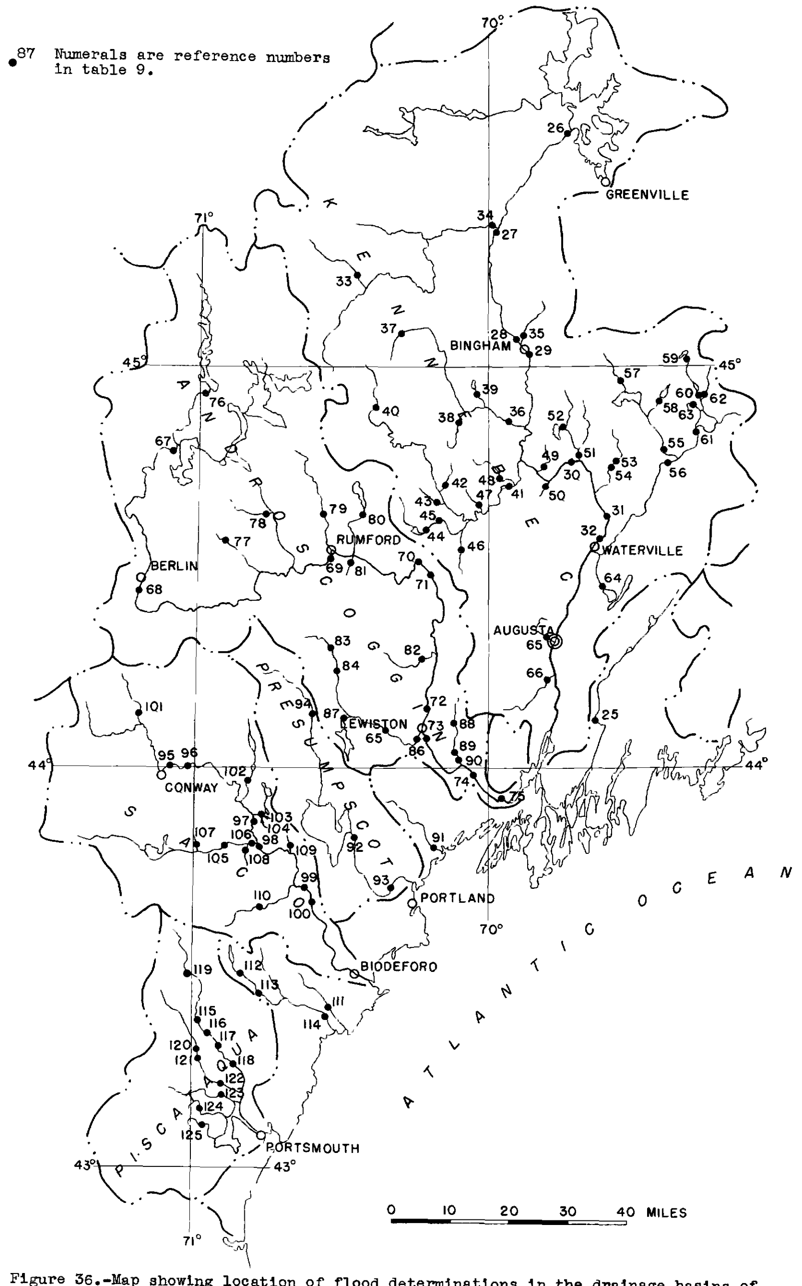

Figure 36.-Map showing location of flood determinations in the drainage basins of the Kennebec River and intervening rivers to the Piscataqua River, March 1936.

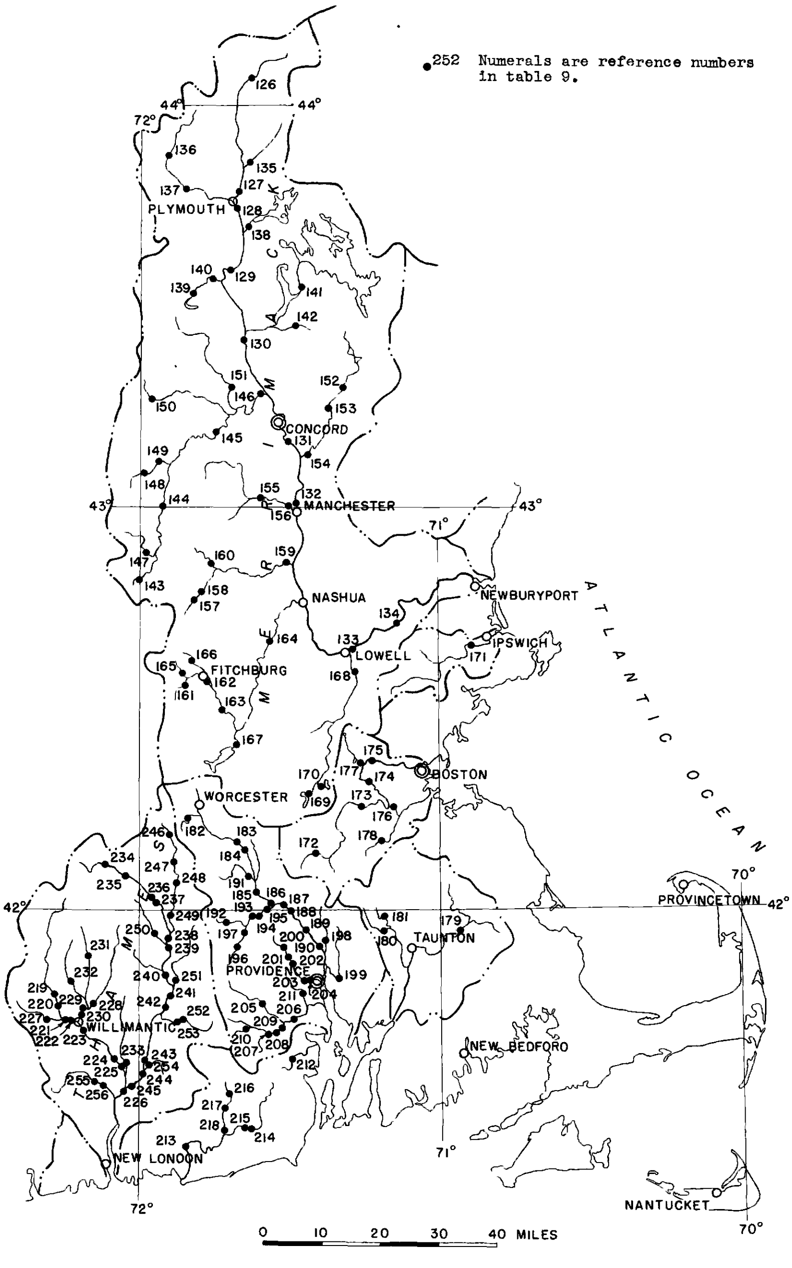

Figure 37.-Map showing location of flood determinations in the drainage basins of the Merrimack River and intervening rivers to the Thames River, March 1936.

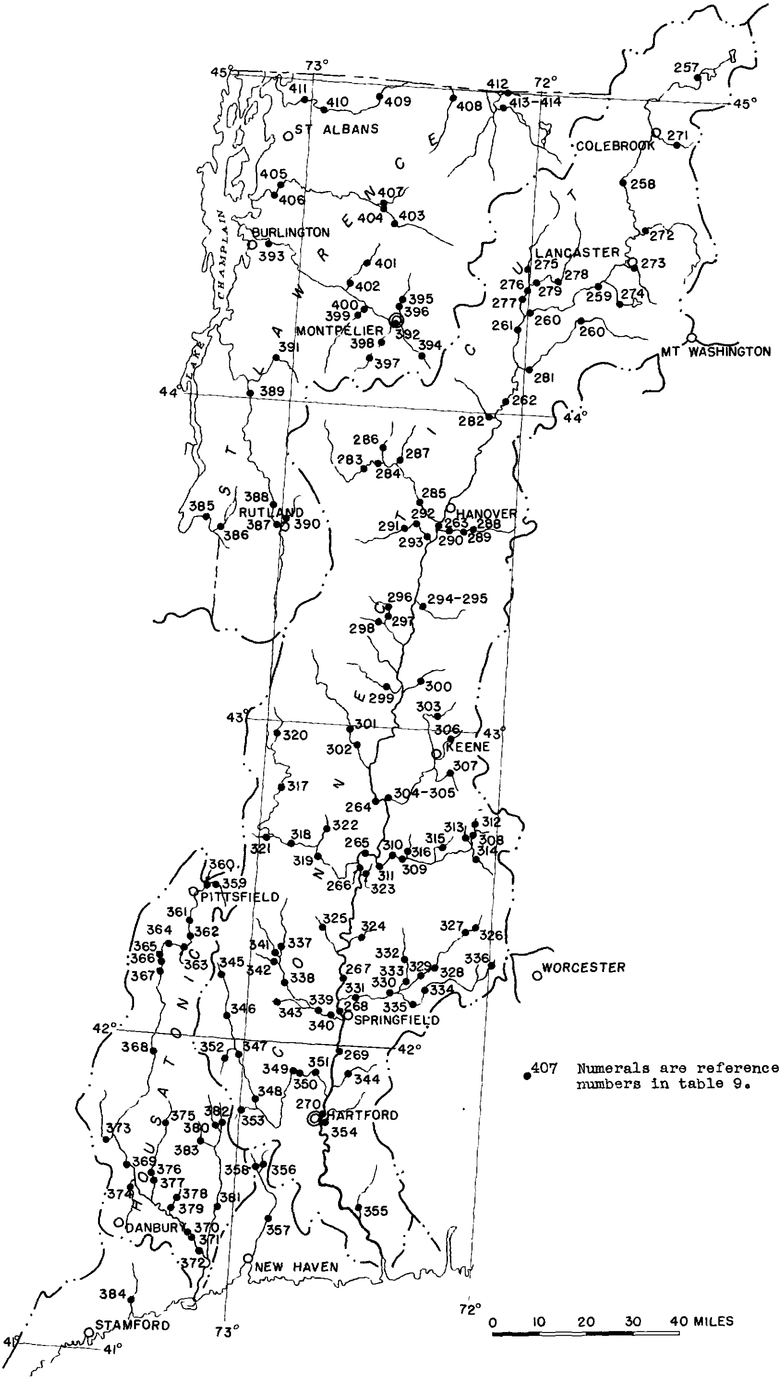

Figure 38.-Map showing location of flood determinations in the drainage basins of the Connecticut and Housatonic Rivers and tributaries of the St. Lawrence River in New England, March 1936.

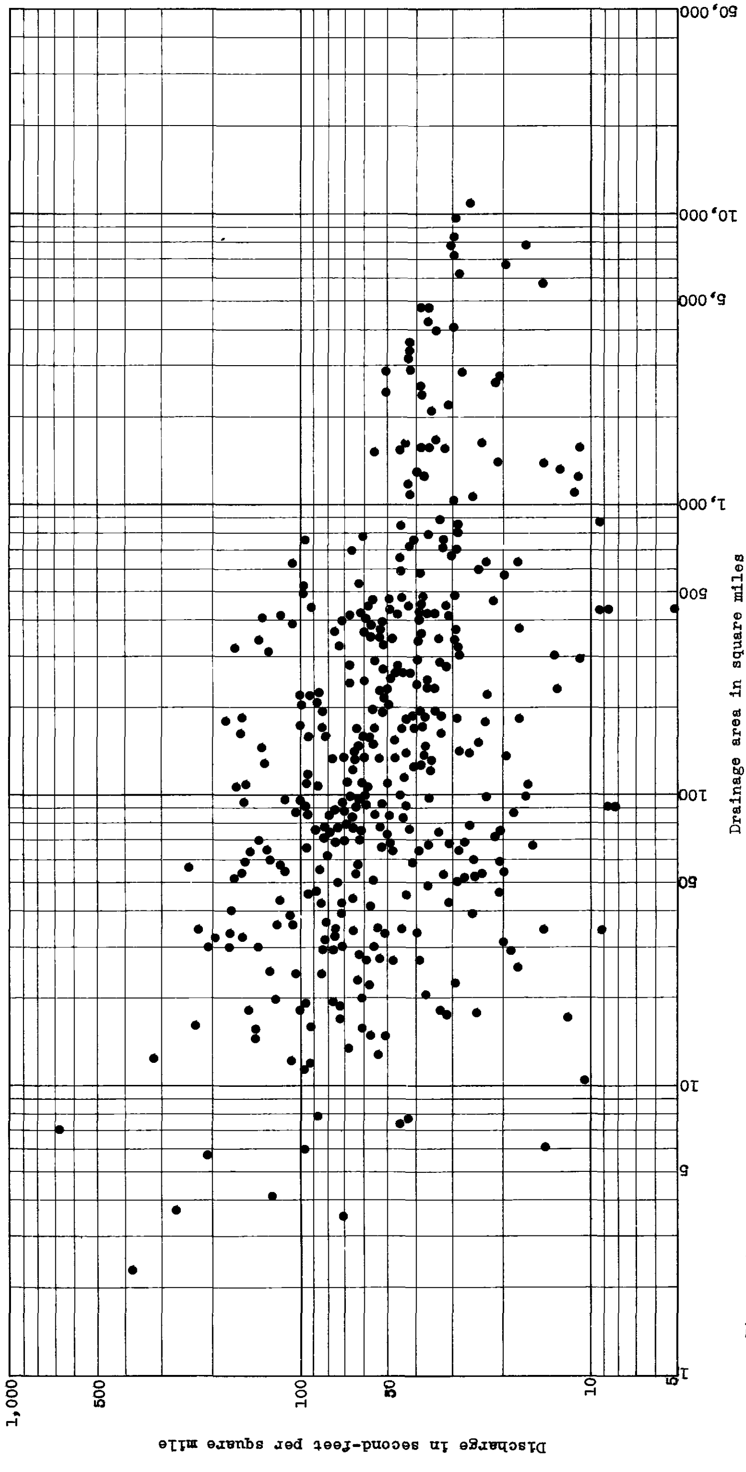

Figure 39.-Chart showing the flood discharges, in second-feet per square mile, determined for drainage areas in New England, March 1936.

Table 9.-Summary of flood discharges

No. on map	Stream and place of determination	Drainage area (sq. mi.)	Period of record	Maximum discharge previously known		Maximum discharge during floods of March 1936			
				Date	Second-feet	Time	Second-feet	Sec.-ft. per sq. mi.	Method of determination
	St. John River Basin								
1	St. John River below Fish River, at Fort Kent, Maine	5,690	1926-1936	May 5,1933	121,000	Mar.23,6pm	82,000	14.4	Stage-discharge relation.
2	Allagash River near Allagash, Maine	1,250	1910-1911 1931-1936	May 5,1933	23,400	Mar.23,11:30pm	13,900	11.1	Do.
3	Fish River near Fort Kent, Maine	867	1903-1908 1911 1929-1936	Apr.26,1934	11,000	Mar.24,5:45pm	8,210	9.5	Do.
4	Aroostook River at Washburn, Maine	1,620	1930-1936	Apr.21,1934	36,200	Mar.22,11-12am	37,800	23.3	Do.
	St. Croix River Basin								
5	St. Croix River at Vanceboro, Maine	435	1928-1936	Apr.23,1934	3,650	Mar.23,7:30am	4,010	9.2	Do.
6	St. Croix River near Baileyville, Maine	1,320	1919-1936	May 1,1923	23,300	Mar.23,12:30am	16,900	12.8	Do.
7	Grand Lake Stream at Grand Lake Stream, Maine	249	1928-1936	May 7,8,1929	1,520	Mar.23-24,midnight	225	.9	Do.
	Machias River Basin								
8	Machias River at Whitneyville, Maine	465	1903-1921 1929-1936	Sept.30,1909	11,100	Mar.20,9:30pm	10,000	21.5	Do.
9	East Machias River near East Machias, Maine	234	1926-1931	Apr.18,1934	2,680	Mar.20,9:50am	3,010	12.9	Do.
	Union River Basin								
10	West Branch of Union River at Amherst, Maine	139	1909-1919 1929-1936	Apr.17,1934	2,560	Mar.19,5pm	3,580	25.8	Do.
11	Union River near Ellsworth Falls, Maine	450	--	—	—	Mar.13	a14,000	31.1	Dam.
	Penobscot River Basin								
12	West Branch of Penobscot River at Millinocket, Maine	1,910	1901-1936	—	—	Mar.20	b2,740	1.4	Water wheels.
13	West Branch of Penobscot River near Medway, Maine	2,120	1916-1936	May 27,1928	24,100	Mar.20,noon	5,500	2.6	Stage-discharge relation.

14	Penobscot River at West Enfield, Maine	6,600	1901-1936	May 1,1923	153,000	Mar.21,1am	125,000	19.9	Do.
15	Penobscot River at Veazie, Maine	7,730	--	--	--	Mar.21	a130,000	16.8	Dam.
16	East Branch of Penobscot River at Grindstone, Maine	1,070	1902-1936	Apr.30,1923	35,100	Mar.20,6:30pm	26,900	25.1	Stage-discharge relation.
17	Mattawamkeag River near Mattawamkeag, Maine	1,400	1934-1936	Apr.24,1935	20,800	Mar.23,2:30pm	29,200	29.9	Do.
18	Mattawamkeag River at Mattawamkeag, Maine	1,500	1902-1934	May 1,1923	43,900	--	--	--	--
19	Piscataquis River near Dover-Foxcroft, Maine	286	1902-1936	Sept.29,1909	21,700	Mar.20,4am	19,300	67.5	Do.
20	Piscataquis River at Medford, Maine	1,170	1924-1936	Sept.18,1932	35,000	Mar.20,6pm	50,200	42.9	Do.
21	Sebec River at Sebec, Maine	344	1924-1936	Apr.21,1934	4,780	Mar.20,1:30pm	11,400	33.1	Do.
22	Pleasant River near Milo, Maine	322	1920-1936	Apr.30,1923	24,400	Mar.20,3:20am	23,400	72.7	Do.
23	Passadumkeag River at Lowell, Maine	301	1915-1936	May 2,1923	5,680	Mar.22,5:30pm	4,020	13.4	Do.
24	Kenduskeag River near Bangor, Maine	212	--	--	--	--	10,800	50.9	Dam (head 7.7 feet, C 3.54).
	Sheepscot River Basin								
25	Sheepscot River at Head Tide, Maine	164	--	--	--	Mar.13	7,330	44.7	Dam (head 8.3 feet, C 3.88).
	Kennebec River Basin								
26	Kennebec River at Moosehead, Maine	1,240	1919-1936	May 9,1929	13,600	+			Stage-discharge relation.
27	Kennebec River at The Forks, Maine	1,570	1901-1936	June 18,1917	23,700	Mar.20,6am	17,100	10.9	Do.
28	Kennebec River at Wyman Dam, Maine	2,612	--	--	--	Mar.20,7am	c54,000	20.7	Dam.
29	Kennebec River at Bingham, Maine	2,710	1907-1910 1930-1936	May 11,12, 1909	32,500	Mar.20,12:20pm	55,200	20.4	Stage-discharge relation.
30	Kennebec River at Skowhegan, Maine	3,950	--	--	--	Mar.20,3-5am	c133,500	33.8	Dam.
31	Kennebec River at Shawmut, Maine	4,250	--	--	--	Mar.19,10:30pm	153,500	36.1	Dam (head 10.5 feet, C 3.80).
32	Kennebec River at Waterville, Maine	4,270	1892-1936	Dec.16,1901	157,000	Mar.19,11pm	154,000	36.1	Dam (head 15.7 feet, C 3.33).
33	Dead River at Eustis, Maine	183	--	--	--	Mar.18,5pm	7,600	41.4	Dam (head 5.6 feet, C 3.50).
34	Dead River at The Forks, Maine	878	1901-1907 1910-1936	Apr.30,1923	23,800	Mar.20,11pm	28,700	32.7	Stage-discharge relation.
35	Austin Stream at Bingham, Maine	92	1931-1936	Sept.17,1932	5,820	Mar.19,7:15pm	5,480	59.6	Do.

a Records furnished by Bangor Hydroelectric Co.
b Records furnished by Great Northern Paper Co.
c Records furnished by Central Maine Power Co.
+ Flood flow controlled by storage in Moosehead and other lakes.

Table 9.-Summary of flood discharges--Continued

No. on map	Stream and place of determination	Drainage area (sq. mi.)	Period of record	Maximum discharge previously known		Maximum discharge during floods of March 1936			
				Date	Second-feet	Time	Second-feet	Sec.-ft. per sq. mi.	Method of determination
	<u>Kennebec River Basin-Continued</u>								
36	Carrabassett River near North Anson, Maine	351	1901-1907 1925-1936	Sept.17,1932	20,100	Mar.19,6pm	24,100	68.7	Stage-discharge relation.
37	Brackett Brook at Bigelow, Maine	5.7	—	—	--	—	1,190	209	Contracted opening (coefficient 0.80).
38	Lemon Stream at West New Portland, Maine	33.6	—	—	--	Mar.19,9pm	1,330	39.6	Dam (head 2.3 feet, C 3.49).
39	Gilman Stream at North New Portland, Maine	92.9	—	—	—	Mar.19,10pm	6,720	72.3	Dam (head 3.5 feet, C 3.10).
40	Sandy River near Mercer, Maine	534	1928-1936	Apr.13,1934	16,700	Mar.19-20,mid-night	33,000	61.8	Stage-discharge relation.
41	Orbeton Stream at Reeds, Maine	43.1	—	—	--	Mar.19	5,060	117	Contracted opening (coefficient 0.90).
42	Baker Stream near Farmington, Maine	18.8	—	—	—	Mar.19,2pm	1,820	96.8	Dam (head 2.7 feet, C 3.20).
43	Temple Stream at West Farmington, Maine	32.2	—	—	—	Mar.19,noon	5,090	158	Dam (head 4.5 feet, C 3.49).
44	Wilson Stream at Wilton, Maine	34.0	—	--	—	Mar.19,3pm	2,210	65.0	Dam (head 4.5 feet, C 3.68).
45	Wilson Stream at East Wilton, Maine	52.9	--	--	—	Mar.19	3,390	64.1	Dam (head 5.3 feet, C 2.7).
45	Little Norridgewock Stream at Chesterville, Maine	30.0	—	—	—	--	2,190	73.0	Contracted opening (coefficient 0.90).
47	Muddy Brook near New Sharon, Maine	16.9	—	--	—	--	1,230	72.8	Dam (head 2.0 feet, C 2.80).
48	Lemon Stream at Starks, Maine	29.3	—	--	—	Mar.14,am	2,420	82.6	Dam (head 7.9 feet, C 2.22).
49	Storer Brook near Norridgewock, Maine	3.5	--	--	—	—	251	71.7	Contracted opening (coefficient 1.00).
50	Mill Brook at Norridgewock, Maine	11.8	--	--	—	—	1,090	92.4	Dam (head 3.3 feet, C 2.64).
51	Wesserunsett Stream near Skowhegan, Maine	138	--	—	--	Mar.19,night	5,890	42.7	Dam (head 6.2 feet, C 3.28).
52	Wesserunsett Lake outlet at East Madison, Maine	17.1	—	--	--	—	203	11.9	Dam (head 1.0 feet, C 3.40).
53	Carrabassett Stream at Canaan, Maine	51.5	—	—	—	—	1,410	27.4	Dam (head 4.2 feet, C 3.18).
54	Carrabassett Stream below Canaan, Maine	52.5	—	--	--	Mar.19,night	1,280	24.4	Dam (head 4.9 feet, C 3.32).
55	West Branch of Sebasticook River at Pittsfield, Maine	320	—	—	—	Mar.18-22	9,030	28.2	Dam (head 6.5 feet, C 3.20).

56	Sebasticook River near Pittsfield, Maine	598	1928-1936	Apr.16,1934	9,890	Mar.22,6am	14,400	24.1	Stage-discharge relation.
57	Higgins Brook at Harmony, Maine	50.8	--	--	--	--	2,840	55.9	Dam (head 2.7 feet, C 3.39).
58	Indian Stream at St. Albans, Maine	27.0	--	--	--	Mar.13	1,430	53.0	Dam (head 1.58 feet, C 2.70).
59	East Branch of Sebasticook River at Dexter, Maine	10.4	--	--	--	Mar.25	107	10.3	Orifice (coefficient 0.64).
60	East Branch of Sebasticook Hiver at Corinna, Maine	33.4	--	--	--	--	1,700	50.9	Dam (head 4.2 feet, C 3.40).
61	East Branch of Sebasticook River at Newport, Maine	135	--	--	--	--	2,610	19.3	Dam (head 2.2 feet, C 2.70).
62	Alder Stream near Corinna, Maine	15.6	--	--	--	--	952	61.0	Dam (head 9.1 feet, C 2.58).
63	Mulligan Stream near Corinna, Maine	7.6	--	--	--	--	321	42.2	Dam (head 1.0 feet, C 2.69).
64	China Lake outlet at East Vassalboro, Maine	34.2	--	--	--	--	311	9.1	Dam (head 3.7 feet, C 3.13).
65	Bond Brook near Augusta, Maine	14.5	--	--	--	Mar.19,3-5pm	2,080	143	Dam (head 4.0 feet, C 3.70).
66	Cobbosseecontee Stream at Gardiner, Maine	220	1890-1936	May 19,1922	de4,250	Mar.21	d5,020	22.8	Dam.
	Androscoggin River Basin								
67	Androscoggin River at Errol Dam, N. H.	1,095	--	--	--	Mar.21	f12,400	11.3	Gates in dam.
68	Androscoggin River near Gorham, N. H.	1,390	1929-1936	May 4,1929	13,900	Mar.22,11am	19,900	14.3	Stage-discharge relation.
69	Androscoggin River at Rumford, Maine	2,090	1892-1936	Apr.15,1895	g55,200	Mar.20,12-1am	g74,000	35.4	Dam.
70	Androscoggin River at Riley, Maine	2,440	--	--	--	Mar.20,am	92,300	37.9	Dam (head 13.0 feet, C 3.12).
71	Androscoggin River at Chisholm, Maine	2,490	--	--	--	Mar.20,am	94,500	37.9	Dam (head 11.6 feet, C 3.50, 3.90).
72	Androscoggin River at Gulf Island Dam, near Lewiston, Maine	2,860	1926-1936	Nov.5,1927	c53,100	Mar.20,4am	c118,000	41.3	Dam.
73	Androscoggin River near Auburn, Maine	3,257	1928-1936	Apr.19,1933	45,400	Mar.20,5am	135,000	41.5	Stage-discharge relation.
74	Androscoggin River at Lisbon Falls, Maine	3,370	--	--	--	Mar.20,11am	140,000	41.5	Dam (head 12.0 feet, C 3.20).
75	Androscoggin River at Brunswick, Maine	3,430	--	--	--	Mar.20,3pm	143,000	41.7	Dam (head 15.5 feet, C 3.70).
76	Magalloway River at Aziscohos Dam, Maine	233	1912-1936	June 19,1917	f4,660	*	--	--	
77	Bear River near Newry, Maine	7.0	--	--	--	--	4,760	680	Dam (head 3.8 feet, C 2.90).

c Records furnished by Central Maine Power Co.
d Records furnished by S. D. Warren Co.
e Mean daily discharge.
f Mean daily discharge; records furnished by Union Water Power Co.
g Records furnished by Rumford Falls Power Co.
* Flood flow completely stored in Aziscohos Lake.

Table 9.--Summary of flood discharges--Continued.

No. on map	Stream and place of determination	Drainage area (sq. mi.)	Period of record	Maximum discharge previously known		Maximum discharge during floods of March 1936			
				Date	Second-feet	Time	Second-feet	Sec.-ft. per sq. mi.	Method of determination
	Androscoggin River Basin-Continued								
78	West Branch of Ellis River at Andover, Maine	35.5	--	--	--	--	4,280	120	Dam (head 5.9 feet, C 3.20).
79	Swift River near Roxbury, Maine	95	1929-1936	Sept.17,1932	13,000	Mar.19,8:30am	10,500	111	Stage-discharge relation.
80	Webb's River at Berry Mills, Maine	90.9	--	--	--	--	3,890	42.8	Dam (head 8.0 feet, C 3.24).
81	Spear's Stream at West Peru, Maine	24.7	--	--	--	--	3,160	128	Dam (head 5.6 feet, C 3.31).
82	Nezinscot River at Turner, Maine	158	--	--	--	Mar.21,1am	9,340	59.1	Dam (head 8.3 feet, C 3.35).
83	Little Androscoggin River above South Paris, Maine	76.2	1913-1924 1931-1936	Apr.14,1920	3,540	Mar.19,11am	6,980	91.6	Stage-discharge relation.
84	Little Androscoggin River near South Paris, Maine	107	--	--	--	Mar.19,11-12 noon	9,280	86.8	Dam (head 6.6 feet, C 3.77).
85	Little Androscoggin River at Mechanic Falls, Maine	251	--	--	--	Mar.20,1-4am	12,300	49.0	Dam (head 9.9 feet, C 3.33).
86	Little Androscoggin River near Auburn, Maine	345	--	--	--	Mar.20,noon	16,800	48.7	Dam (head 10.7 feet, C 3.70).
87	Thompson Lake outlet at Oxford, Maine	46	--	--	--	Mar.22,4pm	932	20.3	Dam (head 4.8 feet, C 2.70).
88	Sabattus River at Sabattus, Maine	35.1	--	--	--	Mar.20,2pm	1,880	53.6	Dam (head 3.4 feet, C 2.44).
89	Sabattus River at Lisbon, Maine	66.6	--	--	--	Mar.20,pm	3,240	48.8	Dam (head 3.9 feet, C 3.55).
90	Sabattus River at Lisbon Center, Maine	72.7	--	--	--	Mar.20,pm	3,630	49.9	Dam (head 4.0 feet, C 3.52).
	Royal River Basin								
91	Royal River at Yarmouth, Maine	96.5	--	--	--	--	6,370	66.0	Dam (head 3.7 feet, C 3.60).
	Presumpscot River Basin								
92	Presumpscot River at outlet of Sebago Lake, Maine	436	1887-1936	Apr.7,1902	7,000	**			Dam.
93	Presumpscot River at Cumberland Mills, Maine	570	--	Mar.1896	13,800	Mar.12 Mar.19	d11,200 d7,600	19.6 13.3	Dam.
94	Crooked River near Norway, Maine	86.0	--	--	--	--	8,830	103	Orifice (coefficient 0.62).

	Saco River Basin								
95	Saco River near Conway, N. H.	386	1903-1910 1929-1936	Nov.3,1907	24,000	Mar.19,9am	40,600	105	Stage-discharge relation.
96	Saco River at Fryeburg, Maine	442	---	---	---	Mar.19,6pm	40,100	90.7	Dam (head 10.2 feet, C 3.26).
97	Saco River at Hiram, Maine	837	---	---	---	Mar.21,11:30pm	h37,600	44.9	Dam.
98	Saco River at Cornish, Maine	1,298	1916-1936	May 2,1923	23,000	Mar.21,midnight to Mar.22,2am	51,300	39.5	Stage-discharge relation verified by orifice (coefficient 0.68).
99	Saco River at Bonny Eagle, Maine	1,560	---	---	---	Mar.22,8am	55,500	35.6	Dam (head 13.4 feet, C 3.14).
100	Saco River at West Buxton, Maine	1,572	1907-1916 1919-1936	May 2,1923	27,800	Mar.22, 8am	58,200	37.0	Dam (head 13.0 feet, C 3.90) and slope-area (n 0.048).
101	Ellis River at Goodrich Falls Electric Co. dam, at Goodrich Falls, N. H.	55.5	---	---	---	---	13,300	240	Dam (C 3.4, 3.6).
102	Moose Pond Brook at Denmark, Maine	26.8	---	---	---	Mar.22	1,270	47.4	Orifice (coefficient 0.62).
103	Hancock Brook at East Hiram, Maine	20.0	---	---	---	Mar.19-20	1,220	61.0	Dam (head 1.6 feet, C 3.75).
104	Hancock Brook at East Hiram, Maine	22.0	---	---	---	Mar.19-20	1,270	57.7	Dam (head 2.4 feet, C 3.48).
105	Ossipee River at Kezar Falls, Maine	412	---	---	---	Mar.21,11pm	12,700	30.8	Dam (head 4.6 feet, C 3.70).
106	Ossipee River at Cornish, Maine	453	1916-1936	Apr.19,1933	7,440	Mar.21-22,midnight	17,200	38.0	Stage-discharge relation.
107	Mine Pond outlet at East Freedom, N. H.	2.3	---	---	---	Mar.21,am	870	378	Dam (head 3.3 feet, C 2.64).
108	Little River at Cornish, Maine	7.8	---	---	---	Mar.21-22,midnight	681	87.3	Dam (head 4.1 feet, C 3.20).
109	Quaker Brook at East Baldwin, Maine	12.2	---	---	---	---	3,880	318	Dam (head 3.8 feet, C 3.50).
110	Little Ossipee River near Limerick, Maine	152	---	---	---	Mar.19,7am	8,530	56.1	Dam (head 5.6 feet, C 3.80).
	Kennebunk River Basin								
111	Kennebunk River near Kennebunk, Maine	38.1	---	---	---	Mar.1d	2,750	72.2	Dam (head 3.7 feet, C 3.70).
	Mousam River Basin								
112	Mousam River at Emery's Mills, Maine	31.0	---	---	---	Mar.12 Mar.22	243 610	7.8 19.7	Gates.

d Records furnished by S. D. Warren Co.

h Records furnished by Cumberland County Power & Light Co.

** Flood flow controlled by storage in Sebago and other lakes.

Table 9.-Summary of flood discharges—Continued

No. on map	Stream and place of determination	Drainage area (sq. mi.)	Period of record	Maximum discharge previously known		Maximum discharge during floods of March 1936			
				Date	Second-feet	Time	Second-feet	Sec.-ft. per sq. mi.	Method of determination
	Mousam River Basin-Continued								
113	Mousam River at Sanford, Maine	42.6	--	--	--	Mar.12 Mar.21	1,300 1,270	30.5 29.8	Dam (head 1.5 feet, C 3.65).
114	Mousam River at Kennebunk, Maine	120	--	--	--	Mar.12 Mar.22	3,440 4,260	28.7 35.5	Dam (head 4.5 feet, C 3.45).
	Piscataqua River Basin								
115	Salmon Falls River at North Rochester, N. H.	125	--	--	--	--	4,910	39.3	Dam (head 5.4 feet, C 3.38).
116	Salmon Falls River at East Rochester, N. H.	132	--	--	--	Mar.19	4,890	37.1	Dam (head 5.4 feet, C 3.57).
117	Salmon Falls River near South Lebanon, Maine	147	1928-1936	Apr.19,1933	3,550	Mar.19,7:30pm	5,490	37.3	Stage-discharge relation.
118	Salmon Falls River at Somersworth, N. H.	236	--	--	--	Mar.19,9pm	8,580	36.4	Dam (head 3.9 feet, C 3.40).
119	Branch River at Union, N. H.	29.9	--	--	--	--	11,650	55.2	Dam (head 4.1 feet, C 3.40).
120	Cocheco River at Wyandotte Worsted Co. dam, at Rochester, N. H.	61.0	--	--	--	--	4,920	80.7	Dam (C 2.6 to 3.7).
121	Cocheco River at Gonic Manufacturing Co. upper dam, at Gonic, N. H.	76.8	--	--	--	--	6,200	80.7	Dam (C 2.6 to 3.6).
122	Cocheco River at Waldron Dam, near Dover, N. H.	167	--	--	--	--	10,500	62.9	Dam (C 3.5 to 3.7).
123	Bellamy River at American Woolen Co. upper dam, at Sawyers, N. H.	27.9	--	--	--	--	1,730	62.0	Dam (C 2.6 to 3.5).
124	Lamprey River near Newmarket, N. H.	183	1934-1936	Jan.11,1935	1,820	Mar.20,2:30pm	5,490	30.0	Stage-discharge relation.
125	Oyster River near Durham, N. H.	12.1	--	--	--	Mar.19,8-10am	548	45.3	Do.
	Merrimack River Basin								
126	East Branch of Pemigewasset River near Lincoln, N. H.	104	1928-1936	May 3,1929	8,000	Mar.19,1am	17,000	163	Do.
127	Pemigewasset River at dam at Livermore Falls, N. H.	406	--	--	--	Mar.19	54,000	133	Dam (C 3.4 to 3.6).
128	Pemigewasset River at Plymouth, N. H.	622	1903-1936	Nov.4,1927	60,000	Mar.19,8am	65,400	105	Stage-discharge relation.

129	Pemigewasset River at Bristol, N. H.	746	—	Nov.4,1927	62,300	Mar.19,11am	71,400	95.7	Stage-discharge relation.
130	Merrimack River at Franklin Junction, N. H.	1,507	1903-1936	Nov.5,1927	63,000	Mar.19,2-4pm	83,000	55.1	Do.
131	Merrimack River at Garvins Falls, N. H.	2,427	—	Nov.5,1927	64,600	Mar.20,2am	122,000	50.3	Do.
132	Merrimack River at Manchester, N. H.	2,854	1924-1936	Nov.5,1927	70,300	Mar.20,4-8am	144,000	50.5	Do.
133	Merrimack River below Concord River, at Lowell, Mass.	4,635	1923-1936	Apr.23,1852	108,000	Mar.20,7-11pm	173,000	37.3	Do.
134	Merrimack River at Lawrence, Mass.	4,672	1879-1936	Apr.23,1852	108,000	Mar.20,8pm to Mar.21,4am	174,000	37.2	Do.
135	Mad River at Civilian Conservation Corps dam at Campton Village, N. H.	58.4	—	November 1927	12,000	Mar.18,11pm	9,000	154	Dam (C 3.6).
136	Bakers River at dam at Wentworth, N. H.	59.5	—	—	—	Mar.18,4pm	7,500	126	Dam (C 3.2 to 3.6).
137	Bakers River near Rumney, N. H.	143	1928-1936	Nov.3,1927	25,900	Mar.18,8pm to Mar.19,1am	19,100	134	Stage-discharge relation.
138	Squam Lake outlet at second dam below lake, at Ashland, N. H.	59.0	—	—	—	—	1,200	20.3	Dam (C 3.7).
139	Smith River at Danbury Novelty Company Dam, 1¼ miles northeast of Elmwood, N. H.	64.7	—	—	—	Mar.19	6,070	93.8	Dam (C 2.5 to 3.6).
140	Smith River near Bristol, N. H.	85.8	1918-1936	Nov.4,1927	5,800	Mar.19,8am	8,100	94.4	Stage-discharge relation.
141	Lake Winnipesaukee outlet at Lakeport, N. H.	363	—	—	—	Mar.19	ej27,600	76.0	
142	Tioga River at second dam above Belmont, N. H.	15.4	—	—	—	Mar.19	2,180	142	Dam (C 3.0).
143	Contoocook River at dam at East Jaffrey, N. H.	34.6	—	—	—	Mar.18	2,580	74.6	Dam (C 3.2).
144	Contoocook River at Bennington, N. H.	191	—	—	—	Mar.19	9,930	52.0	Dam (C 2.6 to 3.4).
145	Contoocook River at dam at West Hopkinton, N. H.	416	—	—	—	Mar.19	25,200	60.6	Dam (C 3.34, submerged).
146	Contoocook River at Penacook, N. H.	766	1928-1936	Apr.20,1933	17,600	Mar.20,6am	46,800	61.1	Stage-discharge relation.
147	Nubanusit Brook at dam at West Peterboro, N. H.	45.2	—	—	—	Mar.19,2am	4,140	91.6	Dam (C 3.7).
148	North Branch of Contoocook River near Antrim, N. H.	54.8	1924-1936	Apr.19,1933	2,370	Mar.19,2-4pm	6,160	112	Stage-discharge relation.
149	North Branch of Contoocook River at Jackman Dam, near Hillsboro, N. H.	63.9	—	—	—	Mar.20,1am	8,300	130	Dam (C 3.7).

e Mean daily discharge.
1 Records furnished by New Hampshire Water Resources Board.
j Corrected for storage.

Table 9.-Summary of flood discharges--Continued.

No. on map	Stream and place of determination	Drainage area (sq. mi.)	Period of record	Maximum discharge previously known		Maximum discharge during floods of March 1936			
				Date	Second-feet	Time	Second-feet	Sec.-ft. per sq. mi.	Method of determination
	Merrimack River Basin-Continued								
150	Warner River at dam at Bradford, N. H.	19.7	--	--	--	Mar.18-19, midnight	2,370	120	Dam (C 3.4).
151	Blackwater River near Webster, N. H.	129	1918-1936	Apr.14,1934	2,920	Mar.19,8pm	17,000	132	Stage-discharge relation.
152	Suncook River at Exeter Manufacturing Co. Dam, at Pittsfield, N. H.	131	--	--	--	Mar.19	10,100	77.1	Dam (C 2.4 to 3.4).
153	Suncook River at North Chichester, N. H.	157	1918-1936	Apr.7,1923	6,580	Mar.19,noon	12,900	82.2	Stage-discharge relation.
154	Suncook River at China Mill Dam, at Suncook, N. H.	259	--	--	--	Mar.19	12,100	46.7	Dam (C 3.8).
155	Piscataquog River at dam at Greggs Falls, N. H.	201	--	--	--	Mar.19	19,900	99.0	Dam (C 3.9).
156	Piscataquog River at dam at Kelleys Falls, at West Manchester, N. H.	219	--	--	--	Mar.19	21,800	99.5	Dam (C 3.8).
157	Souhegan River at Otis Mill Dam, at Greenville, N.H.	29.9	--	--	--	Mar.18	6,160	206	Dam (C 2.6 to 3.3).
158	Souhegan River at arch dam 0.38 mile below railroad bridge at Greenville, N. H.	34.2	--	--	--	Mar.18	7,580	222	Dam (C 2.9).
159	Souhegan River at Merrimack, N. H.	171	1909-1936	Apr.8,1924	9,260	Mar.19,8am	16,900	98.8	Stage-discharge relation.
160	Stony Brook at dam 0.05 mile above mouth, at Wilton, N. H.	33.2	--	--	--	Mar.18	5,780	174	Dam (C 3.34, submerged).
161	North Nashua River at Crocker-Burbank dam, at Fitchburg, Mass.	40	--	--	--	Mar.18	6,900	172	Dam (C 3.7).
162	North Nashua River at Arden Mill Dam, at Fitchburg, Mass.	63.1	--	--	--	Mar.18	9,380	149	Dam (C 3.8).
163	North Nashua River near Leominster, Mass.	107	1936	--	--	Mar.18,8pm	16,300	152	Stage-discharge relation.
164	Nashua River at East Pepperell, Mass.	433	1936	--	--	Mar.20,2-6am	20,900	48.3	Do.
165	Nookagee River at dam at Fitchburg, Mass.	15.9	--	--	--	Mar.18	3,640	229	Dam (C 3.7).
166	Fallulah Brook at Lovell Dam, near Fitchburg, Mass.	3.65	--	--	--	Mar.18	975	267	Dam (C 3.0).
167	South Branch of Nashua River at Clinton, Mass.	118.19	1896-1936	Feb.13,1900	k9,550	Mar.18,11:30pm	m11,100	93.9	Stage-discharge relation.

168	Concord River at dam at North Billerica, Mass.	374	--	--	--	Mar.15	6,490	17.4	Dam (C 2.6 to 2.8).
169	Sudbury River at Framingham Center, Mass.	75.2	1875-1936	Feb.14,1886	e2,050	Mar.12	e1,960	--	Stage-discharge relation.
170	Lake Cochituate outlet at Cochituate, Mass.	17.58	1898-1936	Mar.2,1900	e240	Mar.22	e248	--	Do.
	Ipswich River Basin								
171	Ipswich River near Ipswich, Mass.	124	1930-1936	Mar.7,1934	1,580	Mar.15,2pm	2,610	21.0	Do.
	Charles River Basin								
172	Charles River at West Medway, Mass.	52.8	--	--	--	--	1,680	31.8	Dam (C 2.6 to 3.25).
173	Charles River at Charles River Village, Mass.	182	--	--	--	--	3,170	17.4	Dam (C 3.5).
174	Charles River at New England Spun Silk Corporation dam, at Newton Upper Falls, Mass.	210	--	--	--	--	1,820	8.67	Dam (C 3.7).
175	Charles River at Waltham, Mass.	248	1931-1936	Apr.19,1933	1,520	Mar.19,4-6am	2,540	10.2	Stage-discharge relation.
176	Mother Brook at Dedham, Mass.	--	1931-1936	Apr.17,1935	467	Mar.19,4am	900	--	Do.
177	Stony Brook at outlet of Stony Brook Reservoir, near Waltham, Mass.	23.6	--	--	--	Mar.13	ej633	26.8	
	Neponset River Basin								
178	Neponset River at Plimpton Dam, at East Walpole, Mass.	25.4	--	--	--	--	446	17.6	Dam (C 2.60 to 2.67).
	Taunton River Basin								
179	Taunton River at State Farm, Mass.	260	1929-1936	Apr.14,1935	3,050	Mar.14,10am to 6pm	3,020	11.6	Stage-discharge relation.
180	Wading River near Norton, Mass.	42.4	1925-1936	June 11,1931	798	Mar.12,10pm to Mar.13,8am	1,030	24.3	Do.
181	Rumford River at outlet of Norton Reservoir, near Norton, Mass.	17.4	--	--	--	Mar.13	ej424	24.4	Weir ratings.
	Providence River Basin								
182	Blackstone River at Worcester, Mass.	31.3	1923-1936	Jan.10,1935	1,020	Mar.18,midnight	2,520	80.5	Stage-discharge relation.
183	Blackstone River at Fisherville Manufacturing Co. dam, at Fisherville, Mass.	133	--	--	--	--	7,970	59.9	Dam (C 3.50).

e Mean daily discharge.
j Corrected for storage.
k At site 2 miles downstream (drainage area, 119 square miles).
m Corrected for storage and diversions.

Table 9.--Summary of flood discharges--Continued

No. on map	Stream and place of determination	Drainage area (sq. mi.)	Period of record	Maximum discharge previously known		Maximum discharge during floods of March 1936			
				Date	Second-feet	Time	Second-feet	Sec.-ft. per sq. mi.	Method of determination
	Providence River Basin--Continued								
184	Blackstone River at Northbridge, Mass.	137	--	--	--	Mar.19,8am to noon	7,510	54.8	Dam (head 0 to 5.65 feet; C 3.5).
185	Blackstone River at South Uxbridge, Mass.	239	--	--	--	--	--	--	
186	Blackstone River at Blackstone Manufacturing Co. dam, at Blackstone, Mass.	259	--	--	--	--	11,800	45.6	Dam (C 3.50, 3.32).
187	Blackstone River at Blackstone, Mass.	354	--	--	--	Mar.19,6pm	13,600	38.4	Stage-discharge relation.
188	Blackstone River at Woonsocket, R. I.	416	1929-1936	November 1927	14,700	Mar.19,1-6pm	15,000	36.0	Do.
189	Blackstone River at dam at Albion, R. I.	434	--	--	--	--	16,800	38.7	Dam (C 3.60, 2.73).
190	Blackstone River at dam at Valley Falls, R. I.	446	--	--	--	--	18.700	41.9	Dam (C 3.33).
191	Mumford River at Uxbridge, Mass.	57	--	--	--	Mar.19,1:15pm	3,570	62.6	Stage-discharge relation.
192	Clear River at dam at Bridgeton, R. I.	13.3	--	--	--	--	906	68.1	Dam (C 3.33).
193	Branch River at dam at Mohegan, R. I.	75.2	--	--	--	--	4,700	62.5	Dam (C 3.50).
194	Branch River at dam at Nasonville, R. I.	75.4	--	--	--	--	4,800	63.7	Dam (C 3.40).
195	Branch River at dam at Slatersville, R. I.	91.1	--	--	--	--	5,780	63.4	Dam (C 3.60).
196	Chepachet River at dam at Chepachet, R. I.	12.7	--	--	--	--	686	54.0	Dam (C 3.10).
197	Chepachet River at dam at Mapleville, R. I.	20.4	--	--	--	--	750	36.8	Dam (C 3.45, 3.40).
198	Abbott Run at outlet of Cumberland Mills Pond, at Adamsdale, R. I.	26.9	--	--	--	Mar.12-13, midnight	1,040	38.7	Weir ratings.
199	Tenmile River at dam at East Providence Center, R.I.	53.7	--	--	--	--	1,050	19.6	Dam (C 3.55).
200	Woonasquatucket River at dam at Stillwater, R. I.	28.7	--	--	--	--	535	18.6	Dam (C 2.80).
201	Woonasquatucket River at Esmond Mills Dam, at Esmond, R. I.	34.6	--	--	--	--	498	14.4	Dam (C 3.20).
202	Woonasquatucket River at dam at Allendale, R. I.	39.2	--	--	--	--	1,000	25.5	Dam (C 3.30, 3.00).

203	Woonasquatucket River at dam at Olneyville, R. I.	48.1	--	--	--	--	1,750	36.4	Dam (C 3.31 to 3.43).
204	Moshassuck River at dam at Providence, R. I.	22.3	--	--	--	--	650	29.1	Dam (C 3.31).
	Pawtuxet River Basin								
205	Pawtuxet River at outlet of Scituate Reservoir, at Kent, R. I.	92.8	--	--	--	Mar.12	ej4,840	52.2	
206	Pawtuxet River dam at Natick, R. I.	182	--	--	--	--	5,180	28.5	Dam (C 3.40).
207	South West Branch of Pawtuxet River at dam at Washington, R. I.	64.1	--	--	--	--	1,810	28.2	Dam (C 3.30, 3.33).
208	South West Branch of Pawtuxet River at dam at Quidnick, R. I.	68.8	--	--	--	--	1,860	27.0	Dam (C 3.20, 3.33).
209	South West Branch of Pawtuxet River at dam at Arctic, R. I.	73.5	--	--	--	--	2,420	32.9	Dam (C 3.33).
210	Outlet of Coventry Center Pond at dam at Coventry, R. I.	6.06	--	--	--	--	86	14.2	Dam (C 3.40).
211	Pocasset River at dam at Cranston, R. I.	17.3	--	--	--	--	534	30.9	Dam (C 3.20).
	Potowomut River Basin								
212	Frenchtown River at dam at Davisville, R. I.	7.25	--	--	--	--	329	45.4	Dam (C 2.70).
	Pawcatuck River Basin								
213	Pawcatuck River at dam at White Rock, R. I.	293	--	--	--	--	3,150	10.8	Dam (C 3.33).
214	Charles River at dam at Horseshoe Falls, Shannock, R. I.	90.8	--	--	--	--	750	8.26	Dam (C 3.25, 3.33).
215	Charles River at Carmichael Dam at Shannock, R. I.	91.2	--	--	--	--	783	8.59	Dam (C 3.05 to 3.33).
216	Wood River at dam at Barberville, R. I.	53.3	--	--	--	--	1,280	24.0	Dam (C 3.60).
217	Wood River at dam at Hope Valley, R. I.	73.1	--	--	--	--	1,540	21.1	Dam (C 3.44).
218	Wood River at dam at Alton, R. I.	87.2	--	--	--	--	1,600	18.3	Dam (C 3.13, 3.33).
	Thames River Basin								
219	Willimantic River at Eagleville, Conn.	110	--	--	--	Mar.12	7,620	69.3	Dam (C 3.33, 3.39).
220	Willimantic River near South Coventry, Conn.	121	1931-1936	Mar.6,1934	4,200	Mar.12,4pm	7,880	65.1	Stage-discharge relation.

e Mean daily discharge. j Corrected for storage.

Table 9.-Summary of flood discharges--Continued

No. on map	Stream and place of determination	Drainage area (sq. mi.)	Period of record	Maximum discharge previously known		Maximum discharge during floods of March 1936			
				Date	Second-feet	Time	Second-feet	Sec.-ft. per sq. mi.	Method of determination
	Thames River Basin-Continued								
221	Willimantic River at dam of Connecticut Light and Power Co., at Willimantic, Conn.	224	--	--	--	Mar.12	11,700	52.3	Dam (C 3.32, 3.40).
222	Willimantic River at Willimantic, Conn.	224	--	--	--	Mar.12,6-8pm	11,200	50.0	Dam (C 3.38, 3.40, 2.82).
223	Shetucket River near Willimantic, Conn.	401	1904-5 1933-35	Mar.6,1934	10,800	Mar.12,6pm	23,900	59.6	Stage-discharge relation.
224	Shetucket River at Baltic, Conn.	445	--	--	--	Mar.12	25,800	58.0	Dam (C 3.22).
225	Shetucket River at Occum, Conn.	462	--	--	--	Mar.12	26,200	56.7	Dam (C 3.34).
226	Shetucket River at Greenville, Conn.	1,260	--	--	--	Mar.19,10-12am	47,600	37.8	Dam (C 3.32).
227	Hop River near Columbia, Conn.	76.2	1932-1936	Nov.10,1932	1,970	Mar.12,noon	3,300	43.3	Stage-discharge relation.
228	Natchaug River at North Windham, Conn.	83.5	--	--	--	Mar.12	6,600	79.0	Dam (C 3.40).
229	Natchaug River below Mansfield Hollow, Conn.	161	--	--	--	Mar.12	n10,000	--	Dam (C 3.40).
230	Natchaug River at Willimantic, Conn.	169	1930-1936	Jan.10,1935	4,100	Mar.18,9:10pm	14,200	84.0	Stage-discharge relation.
231	Mount Hope River above Warrenville, Conn.	6	--	--	--	Mar.12	575	95.8	Dam (C 3.40).
232	Fenton River at Gurleyville, Conn.	23	--	--	--	Mar.12,10am	1,450	63.0	Dam (C 3.40).
233	Little River at Versailles, Conn.	45	--	--	--	--	1,940	43.1	Dam (C 3.32).
234	Quinebaug River at Fiskdale, Mass.	67	--	--	--	Mar.18,3pm	2,390	35.7	Dam (C 3.35).
235	Quinebaug River at Southbridge, Mass.	99	--	--	--	Mar.19,6am	4,420	44.6	Dam (C 3.33, 3.39).
236	Quinebaug River above State line, Mass.	157	--	--	--	Mar.18,1pm	9,400	59.9	Dam (C 3.40).
237	Quinebaug River at Quinebaug, Conn.	157	1931-1936	Mar.5,1934	2,310	Mar.18,8:30pm	9,400	59.9	Stage-discharge relation.
238	Quinebaug River at dam of Nightingale-Morse Mills, Inc., at Putnam, Conn.	291	--	--	--	Mar.19,2:25pm	16,000	55.0	Dam (C 3.70, 3.74).
239	Quinebaug River at Putnam, Conn.	331	1929-1936	Mar.6,1934	6,830	Mar.19,2:45pm	17,200	52.0	Stage-discharge relation.
240	Quinebaug River at Williamsville, Conn.	377	--	--	--	Mar.19,7pm	21,400	56.8	Dam (C 3.49).

241	Quinebaug River at Dyer Dam, Conn.	465	--	--	--	Mar.19,10am-5pm	22,800	49.0	Dam (C 3.95).
242	Quinebaug River at Wauregan, Conn.	474	--	--	--	Mar.19,4:30pm	21,000	44.3	Dam (C 3.57).
243	Quinebaug River at dam of Aspinook Co., at Jewett City, Conn.	649	--	--	--	Mar.19,7-10pm	28,600	44.1	Dam (C 3.32, 2.64).
244	Quinebaug River at Jewett City, Conn.	711	1918-1936	Jan.11,1935	13,100	Mar.19,8-10pm	29,200	41.1	Stage-discharge relation.
245	Quinebaug River at Taftville, Conn.	743	--	--	--	Mar.19,9-11pm	30,100	40.5	Dam (C 3.32, 3.25).
246	French River at Rochdale, Mass.	19.3	--	--	--	--	1,480	76.7	Dam (C 3.38).
247	French River at North Oxford, Mass.	24.1	--	--	--	Mar.18,4-5:30pm	2,030	84.2	Dam (C 3.32),
248	French River at North Webster, Mass.	85	--	--	--	Mar.19,9am	4,700	55.3	Dam (C 3.18).
249	French River at North Grosvenordale, Conn.	98	--	--	--	Mar.19,11:45am	5,990	61.1	Dam (C 3.39).
250	Little River at Harrisville, Conn.	36	--	--	--	Mar.19,2:45am	2,920	81.1	Dam (C 3.39).
251	Fivemile River at Danielson, Conn.	77.6	--	--	--	Mar.12,10am	1,990	25.6	Dam (C 3.38).
252	Moosup River at dam of Aldrich Bros. Co., at Moosup, Conn.	77	--	--	--	Mar.12	4,100	53.2	Dam (C 3.70).
253	Moosup River at Moosup, Conn.	83.5	1932-1936	Jan.10,1935	2,190	Mar.12,1pm	4,080	48.9	Stage-discharge relation.
254	Pachaug River at Jewett City, Conn.	59.5	--	--	--	--	1,500	25.2	Dam (C 3.42).
255	Yantic River at Fitchville, Conn.	69.1	--	--	--	Mar.12,7:30am	5,250	76.0	Dam (C 3.63).
256	Yantic River at Yantic, Conn.	88.6	1930-1936	Jan.10,1935	2,350	Mar.12,10:30am	6,300	71.1	Stage-discharge relation.
	<u>Connecticut River Basin</u>								
257	Connecticut River at First Connecticut Lake, near Pittsburg, N. H.	83.0	1917-1936	May 27,1930	1,810	Mar.19	e j3,620	43.6	Do.
258	Connecticut River at North Stratford, N. H.	796	1930-1936	Apr.25,1934	21,700	Mar.19,2-10pm	28,400	35.7	Do.
259	Connecticut River near Dalton, N. H.	1,538	1927-1936	Apr.9,1928	43,800	Mar.20,1-4am	48,300	31.4	Do.
260	Connecticut River at outlet of Fifteenmile Falls Reservoir, near Barnet, Vt.	1,650	--	--	--	Mar.20,3:30am	e55,000	33.3	Do.
261	Connecticut River at McIndoes Falls, Vt.	2,200	--	--	--	Mar.20,8am	e68,000	30.9	Do.
262	Connecticut River at South Newbury, Vt.	2,825	1918-1936	Nov.5,1927	65,900	Mar.19,8pm to Mar.20,8am	77,800	27.5	Do.

e Mean daily discharge.
j Corrected for storage.
n Not absolute peak.

Table 9.-Summary of flood discharges—Continued

No. on map	Stream and place of determination	Drainage area (sq. mi.)	Period of record	Maximum discharge previously known		Maximum discharge during floods of March 1936			
				Date	Second-feet	Time	Second-feet	Sec.-ft. per sq. mi.	Method of determination
	Connecticut River Basin-Continued								
263	Connecticut River at White River Junction, Vt.	4,068	1911-1936	Nov.4,1927	136,000	Mar.19,3-4am	120,000	29.5	Stage-discharge relation.
264	Connecticut River at Vernon, Vt.	6,240	--	Nov.5,1927	155,000	Mar.19,8am to Mar.20,2am	176,000	28.2	Do.
265	Connecticut River at Turners Falls, Mass.	7,138	1915-1936	Nov.5,1927	160,000	Mar.19,8pm to Mar.20,6am	210,000	29.4	Do.
266	Connecticut River at Montague City, Mass.	7,840	1904-1936	Nov.5,1927	179,000	Mar.19,10am-8pm	236,000	30.1	Do.
267	Connecticut River at Holyoke, Mass.	8,284	1860-1936	Nov.5,1927	183,000	Mar.19,8pm to Mar.20,8am	244,000	29.5	Do.
268	Connecticut River at Springfield, Mass.	9,587	1801-1936	Nov.6,1927	188,000	Mar.19,midnight to Mar.20,8am	281,000	29.3	Do.
269	Connecticut River at Thompsonville, Conn.	9,637	1928-1936	Nov.6,1927	190,000	Mar.20,2-10am	282,000	29.3	Do.
270	Connecticut River at Hartford, Conn.								
271	Mohawk River at A. Washburn Dam, at Kidderville, N. H.	26.9	--	November 1927	o4,340	--	1,590	59.1	Dam (C 3.1).
272	Upper Ammonoosuc River at Groveton Paper Co. dam, at Groveton, N. H.	257	--	--	--	--	12,100	47.1	Dam (C 2.7 to 3.0).
273	Israel River at Frank Smith Corporation dam, at Lancaster, N. H.	133	--	November 1927	o8,840	--	6,260	47.1	Dam (C 3.5).
274	Johns River at F. P. Spaulding Co. dam, at Whitefield, N. H.	34.6	--	November 1927	1,080	--	1,540	44.5	Dam (C 3.85).
275	Passumpsic River at Pierces Mills, 3 miles above St. Johnsbury, Vt.	237	--	November 1927	33,000	--	9,300	39.2	Dam (C 3.9).
276	Passumpsic River at Twin State Electric Co. dam, near St. Johnsbury, Vt.	413	--	--	--	--	16,000	38.7	Dam (C 3.5).
277	Passumpsic River at Passumpsic, Vt.	423	1928-1936	Apr.19,1933	9,660	Mar.18,noon to 4pm	16,000	37.8	Stage-discharge relation.
278	Moose River at Concord, Vt.	96.7	--	--	--	--	3,460	35.8	Dam (C 3.7).

279	Moose River at St. Johnsbury, Vt.	126	1928-1936	Apr.30,1929	5,220	Mar.19,noon	4,780	37.9	Stage-discharge relation.
280	Ammonoosuc River at Saranac Glove Co. dam, at Littleton, N. H.	133	—	November 1927	o16,600	—	9,340	70.2	Dam (C 3.5).
281	Ammonoosuc River near Bath, N. H.	393	—	—	—	Mar.18,5,10pm	27,900	71.0	Stage-discharge relation.
282	Waits River at Bradford Electric Light Co. dam, at Bradford, Vt.	162	—	November 1927	10,500	—	5,280	32.6	Dam (C 3.33, 3.5).
283	White River near Bethel, Vt.	241	1931-1936	Apr.18,1933	12,200	Mar.18,4-6pm, 9-11pm	16,100	66.8	Stage-discharge relation.
284	White River at Central Vermont Public Service dam, near Bethel, Vt.	411	—	—	—	—	27,600	67.2	Dam (C 3.5).
285	White River at West Hartford, Vt.	690	1915-1936	Nov.4,1927	120,000	Mar.18,10pm	45,400	65.8	Stage-discharge relation.
286	Second Branch of White River at Hyde Mill dam, at East Bethel, Vt.	63.8	—	—	—	—	3,030	47.5	Dam (C 2.75 to 3.6).
287	First Branch of White River at Ralston Co. dam, at Royalton, Vt.	114	—	—	—	—	4,990	43.8	Dam (C 3.6).
288	Mascoma River at Mascoma, N. H.	153	1923-1936	Apr.19,1933	3,720	Mar.19	ej7,180	46.9	Stage-discharge relation.
289	Mascoma River at Boston Excelsior Co. dam, at Lebanon, N. H.	171	—	—	—	—	6,430	37.6	Dam (C 3.6).
290	Mascoma River at dam 2 miles above mouth, near Lebanon, N. H.	193	—	—	—	—	6,600	34.2	Dam (C 3.4).
291	Ottauquechee River at Taftsville, Vt.	190	—	November 1927	25,400	—	16,000	84.2	Dam (C 4.0).
292	Ottauquechee River at Deweys Mills, Vt.	208	—	November 1927	27,200	—	18,300	88.0	Dam (C 3.8).
293	Ottauquechee River at North Hartland, Vt.	221	1930-1936	November 1927	30,400	Mar.18,4pm	19,200	86.9	Stage-discharge relation.
294	Sugar River at West Claremont, N. H.	269	1928-1936	Apr.12,1934	10,500	Mar.19	p12,700	47.2	Do.
295	Sugar River at Coy Paper Co. dam, at West Claremont, N. H.	270	—	—	—	—	14,000	51.9	Dam (C 3.7).
296	Black River at Slate Mill dam, at Perkinsville, Vt.	116	—	—	—	—	10,900	94.0	Dam (C 3.3, 3.5).
297	Black River at North Springfield, Vt.	158	1929-1936	July 22,1931 Apr.12,1934	10,000	Mar.18,2pm	14,700	93.0	Stage-discharge relation.

e Mean daily discharge.
j Corrected for storage.
o In near vicinity of dam used in 1936.
p Mean daily discharge corrected for storage in Lake Sunapee.

Table 9.--Summary of flood discharges--Continued

No. on map	Stream and place of determination	Drainage area (sq. mi.)	Period of record	Maximum discharge previously known		Maximum discharge during floods of March 1936			
				Date	Second-feet	Time	Second-feet	Sec.-ft. per sq. mi.	Method of determination
	Connecticut River Basin--Continued								
298	Great Brook at Mill Dam, at North Springfield, Vt.	11.3	--	--	--	--	1,110	98.2	Dam (C 3.7).
299	Saxtons River at Saxtons River, Vt.	69.5	--	--	--	--	9,620	138	Dam (C 3.5).
300	Cold River at Alstead, N. H.	73.6	--	--	--	--	5,880	79.9	Dam (C 3.6).
301	West River at Newfane, Vt.	308	1919-1936	Nov.3,1927	53,100	Mar.18,4pm	39,000	127	Stage-discharge relation.
302	West River at West Dummerston, Vt.	410	--	November 1927	54,000	--	47,000	115	Dam (C 3.6).
303	Ashuelot River near Gilsum, N. H.	71.1	1922-1936	Apr.12,1934	3,580	Mar.18,10pm to Mar.19,2am	4,400	61.9	Stage-discharge relation.
304	Ashuelot River at dam, at Hinsdale, N. H.	420	--	Nov.4,1927	c6,580	--	16,400	39.0	Dam (C 3.65, 3.4).
305	Ashuelot River at Hinsdale, N. H.	420	1907-1936	Mar.29,1920	18,000	Mar.19,4am-6pm	16,600	39.5	Stage-discharge relation.
306	Otter Brook near Keene, N. H.	41.8	1923-1936	Nov.4,1927	3,180	Mar.18,9pm	3,580	85.6	Do.
307	South Branch of Ashuelot River at Webb, near Marlboro, N. H.	36.6	1920-1936	Nov.4,1927	3,560	Mar.18,5pm	3,880	106	Do.
308	Millers River near Winchendon, Mass.	83.8	1916-1936	Apr.13,1934	1,610	Mar.19,4am	5,530	66.0	Do.
309	Millers River at Wendell Depot, Mass.	351	--	--	--	--	18,700	53.3	Dam (C 3.8).
310	Millers River at Erving, Mass.	370	1914-1936	Apr.19,1933	6,000	Mar.19,1-5pm	19,700	53.2	Stage-discharge relation.
311	Millers River at Millers Falls Paper Co. dam, at Millers Falls, Mass.	386	--	--	--	--	20,100	52.1	Dam (C 3.7).
312	Sip Pond Brook near Winchendon, Mass.	19.0	1916-1936	Nov.4,1927	420	Mar.18,11pm to Mar.19,2am	1,430	75.3	Stage-discharge relation.
313	Priest Brook near Winchendon, Mass.	18.8	--	Nov.5,1927	1,000	--	1,840	97.9	Contracted opening (surface drop 1.25 feet).
314	Otter River at Wait Chair Co. dam, at Baldwinsville, Mass.	43.6	--	--	--	--	2,880	66.1	Dam (C 2.7).
315	East Branch of Tully River near Athol, Mass.	49.9	1916-1936	Nov.4,1927	1,970	Mar.18,11pm to Mar.19,4am	3,700	74.1	Stage-discharge relation.

316	Moss Brook at Wendell Depot, Mass.	12.2	1916-1936	Nov.4,1927	775	Mar.19,1-4am	1,300	107	Do.
317	Deerfield River at outlet of Harriman Reservoir, at Davis Bridge, Vt.	184	—	—	—	Mar.18,10am	j29,000	158	Do.
318	Deerfield River at Charlemont, Mass.	q178	1913-1936	July 8,1915	38,200	Mar.18,11am	32,200	181	Do.
319	Deerfield River at Plant No. 2 of New England Power Co., near Shelburne Falls, Mass.	q316	—	—	—	—	r52,500	166	
320	East Branch of Deerfield River at outlet of Somerset Reservoir, near Somerset, Vt.	30.0	—	—	—	Mar.18,9am	j5,200	173	Gate.
321	Cold River near Charlemont, Mass.	32.0	—	November 1927	7,760	—	6,200	194	Contracted opening (surface drop 2.4 feet).
322	East Branch of North River at Foundry Village, Mass.	51.3	—	—	—	—	8,640	168	Dam (C 2.6).
323	Saw Mill River at Martin Machine Co. dam, at Montague, Mass.	29.6	—	—	—	—	2,220	75.0	Dam (C 3.7).
324	Fort River at Sanctuary Dam, at Mill Valley, near Amherst, Mass.	41.3	—	—	—	—	2,360	57.1	Dam (C 3.75).
325	Mill River at Haydenville Mill dam, in Haydenville, Mass.	29.8	—	—	—	—	4,130	139	Dam (C 2.6, 2.7).
326	Ware River at Cold Brook, Mass.	96.8	—	—	—	Mar.19,11am	5,990	61.9	Stage-discharge relation.
327	Ware River at Wool Combing Mills dam, at South Barre, Mass.	104	—	—	—	—	6,220	59.8	Dam (C 3.0).
328	Ware River at Ware, Mass.	169	—	—	—	Mar.19,3am	9,520	56.3	Stage-discharge relation.
329	Ware River at Gibbs Crossing, Mass.	199	1912-1936	Sept.17,1933	2,960	Mar.19,6am	11,200	56.3	Do.
330	Chicopee River at Red Bridge, Mass.	665	—	—	—	—	19,900	29.9	Dam (C 3.6).
331	Chicopee River at Bircham Bend, Mass.	703	1928-1936	Apr.20,1933	6,790	Mar.19,8pm to midnight	20,400	29.0	Stage-discharge relation.
332	Swift River at West Ware, Mass.	186	1910-1936	Apr.7,1923	2,390	Mar.19,6pm	7,590	40.8	Do.
333	Swift River at Boston Duck Mill upper dam, at Bondsville, Mass.	194	—	—	—	—	7,600	39.2	Dam (C 2.6 to 3.4).

j Corrected for storage.
o In near vicinity of dam used in 1936.
q Exclusive of drainage area above Harriman Reservoir.
r Furnished by New England Power Co.

Table 9.--Summary of flood discharges--Continued

No. on map	Stream and place of determination	Drainage area (sq. mi.)	Period of record	Maximum discharge previously known		Maximum discharge during floods of March 1936			
				Date	Second-feet	Time	Second-feet	Sec.-ft. per sq. mi.	Method of determination
	Connecticut River Basin-Continued								
334	Quaboag River at West Brimfield, Mass.	151	1909-1936	Mar.17,1920	1,980	Mar.18,6:30pm	3,620	24.0	Stage-discharge relation.
335	Quaboag River at Central Massachusetts Electric Co. dam, at Blanchardville, Mass.	179	--	--	--	--	4,120	23.0	Dam (C 2.62 to 3.6).
336	Turkey Hill Brook at Wickwire Spencer Co. dam, at Wire Village, Mass.	15.8	--	--	--	--	1,440	91.1	Dam (C 2.5 to 3.32).
337	Westfield River at Knightville, Mass.	162	1909-1936	Nov.3,1927	16,000	Mar.18,noon	25,700	159	Stage-discharge relation.
338	Westfield River at Westfield River Paper Co. dam, at Russell, Mass.	341	--	November 1927	c30,100	--	47,000	139	Dam (C 2.6 to 3.7).
339	Westfield River near Westfield, Mass.	497	1914-1936	Nov.4,1927	42,500	Mar.18,6pm	48,200	97.0	Stage-discharge relation.
340	Westfield River at Strathmore Paper Co. dam, at West Springfield, Mass.	513	--	--	--	--	49,800	97.1	Dam (C 3.6).
341	Middle Branch of Westfield River at Goss Heights, Mass.	52.6	1910-1936	Sept.17,1933	8,020	Mar.18,9:30am	8,400	160	Stage-discharge relation.
342	West Branch of Westfield River at Huntington, Mass.	93.7	--	--	--	Mar.18,10am	14,400	154	Do.
343	Westfield Little River at outlet of Cobble Mountain Reservoir, near Westfield, Mass.	45.8	s1905-1936	sNov.3,1927	s6,100	Mar.18	ej4,070	88.9	Do.
344	Scantic River at Broad Brook, Conn.	98.4	1928-1936	Mar.6,1934	1,550	Mar.13,1am	1,620	16.5	Do.
345	Farmington River at North Otis, Mass.	14.9	--	--	--	--	851	57.1	Dam (C 3.13).
346	Farmington River near New Boston, Mass.	92.0	1913-1936	Nov.3,1927	6,610	Mar.18,9:30am	9,080	98.7	Stage-discharge relation.
347	Farmington River at Riverton, Conn.	216	1929-1936	Nov.19,1932	9,720	Mar.18,10:30am	19,900	92.1	Do.
348	Farmington River at Collinsville, Conn.	354	--	--	--	Mar.18,10:30am to 3:30pm	21,000	59.3	Dam (C 3.58).
349	Farmington River at Tariffville, Conn.	578	1928-1936	Nov.21,1932	7,610	Mar.19,3pm	22,200	38.4	Stage-discharge relation.
350	Farmington River at dam of Hartford Electric Light Co., at Tariffville, Conn.	578	--	--	--	Mar.19,2pm	22,000	38.1	Dam (C 3.65, 2.63).

351	Farmington River at Rainbow, Conn.	590	—	Nov.5,1927	22,300	Mar.19,3:30pm	26,600	45.1	Dam.t
352	Still River at Winsted, Conn.	42.6	—	—	—	—	3,060	71.8	Dam (C 3.20).
353	Burlington Brook near Burlington, Conn.	4.1	1931-1936	Sept.9,1934	403	Mar.12,4:10am	503	123	Stage-discharge relation.
354	Hockanum River near East Hartford, Conn.	74.5	1919-1921 1928-1936	Mar.5,1934	1,640	Mar.12,11am	1,530	20.5	Do.
355	Salmon River near East Hampton, Conn.	105	1905-6 1928-36	Mar.5,1929	3,700	Mar.12,10am	6,250	59.5	Do.
	Quinnipiac River Basin								
356	Quinnipiac River at Southington, Conn.	17.6	1935-1936	—	—	Mar.12,9:10am	568	32.3	Do.
357	Quinnipiac River at Wallingford, Conn.	109	1930-1936	Mar.5,1934	1,320	Mar.12,11pm	1,750	16.1	Do.
358	Eightmile River at Plantsville, Conn.	14.9	1935-1936	—	—	Mar.12,noon	755	50.7	Do.
	Housatonic River Basin								
359	Housatonic River at Dalton, Mass.	55	—	—	—	Mar.18,1pm	4,650	84.5	Dam (C 3.40).
360	Housatonic River at Coltsville, Mass.	57.1	1936	—	—	Mar.18,3-4pm	6,670	117	Stage-discharge relation.
361	Housatonic River at Lenox Furnace, Mass.	170	—	—	—	—	6,840	40.2	Dam (C 3.54).
362	Housatonic River at Lee, Mass.	184	—	—	—	—	6,920	37.6	Dam (C 3.65).
363	Housatonic River at South Lee, Mass.	232	—	—	—	Mar.18,2:30pm	8,230	35.5	Dam (C 3.40, 3.41).
364	Housatonic River at Glendale, Mass.	276	—	—	—	—	8,710	31.5	Dam (C 3.93).
365	Housatonic River at Van Deusenville, Mass.	280	—	—	—	Mar.19,pm	8,870	31.7	Dam (C 3.65).
366	Housatonic River near Great Barrington, Mass.	280	1913-1936	Nov.5,1927	7,910	Mar.19,4pm to midnight	8,990	32.1	Stage-discharge relation.
367	Housatonic River at Great Barrington, Mass.	333	—	—	—	Mar.19,4-8pm	9,600	28.8	Dam (C 4.05).
368	Housatonic River at Falls Village, Conn.	632	1912-1936	Nov.5,1927	11,700	Mar.20,2am	14,600	22.9	Stage-discharge relation.
369	Housatonic River above Rocky River, Conn.	1,024	—	—	—	Mar.12,noon	30,000	29.3	Rating curve.c
370	Housatonic River at Stevenson, Conn.	1,544	—	—	—	Mar.12,9am	69,400	45.0	Dam.u
371	Housatonic River at Stevenson, Conn.	1,545	1928-1936	Mar.5,1934	23,700	Mar.12,9am	69,500	45.0	Stage-discharge relation.

c Records furnished by Central Maine Power Co.
e Mean daily discharge.
j Corrected for storage.
o In near vicinity of dam used in 1936.
s At site 3 miles downstream; drainage area, 48.5 square miles
t Records furnished by the Stanley Works, New Britain, Conn.
u Records furnished by Connecticut Light and Power Co., Waterbury, Conn.

Table 9.-Summary of flood discharges—Continued.

No. on map	Stream and place of determination	Drainage area (sq. mi.)	Period of record	Maximum discharge previously known		Maximum discharge during floods of March 1936			
				Date	Second-feet	Time	Second-feet	Sec.-ft. per sq. mi.	Method of determination
	Housatonic River Basin-Continued								
372	Housatonic River at Derby, Conn.	1,581	—	—	--	Mar.12,10am	69,600	44.0	Dam.
373	Tenmile River near Gaylordsville, Conn	204	1929-1936	Mar.5,1934	3,500	Mar.12,11am	10,200	50.0	Stage-discharge relation.
374	Still River near Lanesville, Conn.	68.5	1931-1936	Nov.20,1932	950	Mar.12,5pm	2,080	30.4	Do.
375	Shepaug River at Woodville, Conn.	38.0	—	—	—	Mar.12,10-11am	4,070	107	Dam.v
376	Shepaug River at Roxbury Station, Conn.	132	—	—	—	—	8,440	w63.9	Dam (C 3.58).
377	Shepaug River near Roxbury, Conn.	133	1930-1936	Mar.5,1934	4,150	Mar.12,5am	7,000	52.6	Stage-discharge relation.
378	Pomperaug River at Southbury, Conn.	75.3	1932-1936	Sept.17,1934	5,860	Mar.12,9am	6,600	87.6	Do.
379	Pomperaug River at South Britain, Conn.	87.4	—	—	—	--	6,720	76.9	Dam (C 3.39).
380	Naugatuck River near Thomaston, Conn.	71.9	1931-1936	Sept.17,1934	5,000	Mar.12,7am	5,950	82.8	Stage-discharge relation.
381	Naugatuck River near Naugatuck, Conn.	246	1918-1924 1928-1936	November 1927	18,300	Mar.12,9am	14,800	60.2	Do.
382	Leadmine Brook near Thomaston, Conn.	24.0	1930-1936	Sept.17,1934	2,800	Mar.12,5:30am	2,470	103	Do.
383	Branch of Naugatuck River near Thomaston, Conn.	18.0	—	—	—	Mar.12,3am	2,700	150	Dam.v
	Saugatuck River Basin								
384	Saugatuck River near Westport, Conn.	77.5	1932-1936	Sept.17,1934	3,100	Mar.12,11:30am	5,310	68.5	Stage-discharge relation.
	St. Lawrence River Basin								
385	Poultney River below Fair Haven, Vt.	187	1928-1936	Nov.20,1932	6,030	Mar.18,10pm to midnight	6,190	33.1	Do.
386	Castleton River at Fair Haven, Vt.	97.8	—	—	--	—	2,210	22.6	Dam (C 3.25).
387	Otter Creek at Center Rutland, Vt.	307	1928-1936	Apr.18,1933	6,470	Mar.18-19,mid-night to Mar.19, 4am	8,580	27.9	Stage-discharge relation.
388	Otter Creek at Proctor, Vt.	363	—	—	—	--	10,500	28.9	Dam (C 3.33).

389	Otter Creek at Middlebury, Vt.	628	1903-7 1910-20 1928-35	Nov.4,1927	13,600	Mar.20,8pm to Mar.21-22,midnight	11,000	17.5	Stage-discharge relation.
390	East Creek at Central Vermont Public Service Corp. dam, 2 miles above Rutland, Vt.	51.2	—	November 1927	4,750	—	1,440	28.1	Dam (C 3.20).
391	New Haven River in Bristol Village, Vt.	69.1	—	—	—	—	4,840	70.0	Dam (C 3.40).
392	Winooski River at Montpelier, Vt.	433	1909-1936	Nov.3,1927	57,000	Mar.18,6pm	20,000	46.2	Stage-discharge relation.
393	Winooski River near Essex Junction, Vt.	1,079	1928-1936	Nov.4,1927	113,000	Mar.19,noon	45,300	42.0	Do.
394	Jail Branch at East Barre, Vt.	33.0	1920-1936	November 1927	11,500	jMar.18,6pm	2,500	75.8	Do.
395	North Branch at tunnel at Wrightsville, Vt.	66.5	—	—	—	—	1,040	15.6	Pipe flow formula.
396	North Branch at Wrightsville, Vt.	69.2	1933-1936	Nov.3,1927	17,200	jMar.18,4pm	4,830	69.8	Stage-discharge relation.
397	Dog River at dam at Northfield, Vt.	60.5	—	November 1927	9,160	—	4,890	80.8	Dam (C 3.70).
398	Dog River at Northfield Falls, Vt.	76.1	1936	—	—	Mar.18,8pm	5,700	74.9	Stage-discharge relation.
399	Mad River near Moretown, Vt.	139	1928-1936	Apr.12,1934	x9,450	Mar.18,4pm	9,070	65.3	Do.
400	Mad River at Green Mountain Power dam, at Moretown, Vt.	143	—	Nov.3,1927	23,000	—	9,030	63.1	Dam (C 3.40).
401	Waterbury River at dam in Moscow, Vt.	65.8	—	—	—	—	3,440	52.3	Dam (C 3.50).
402	Waterbury River near Waterbury, Vt.	111	1935-1936	—	—	Mar.18,5-6pm	5,510	49.6	Stage-discharge relation.
403	Lamoille River at Cadys Falls, Vt.	293	—	November 1927	36,600	—	11,500	39.2	Dam (C 3.70).
404	Lamoille River at Johnson, Vt.	335	1910-1913 1928-1936	Apr.8,1912	11,700	Mar.18,9-11pm	13,000	38.8	Stage-discharge relation.
405	Lamoille River near Milton, Vt.	723	1929-1936	Apr.13,1934	16,600	Mar.19,10am-2pm	23,200	32.1	Do.
406	Lamoille River at Public Electric Light Co. dam, at Milton, Vt.	726	—	—	—	—	23,300	32.1	Dam (C 4.00).
407	Gihon River at Stearns Dam, at Johnson, Vt.	64.4	—	—	—	—	2,500	38.8	Dam (C 3.70).
408	Missisquoi River near North Troy, Vt.	131	1931-1936	Oct.7,1932	5,140	Mar.18,10pm to midnight	4,600	35.1	Stage-discharge relation.

j Corrected for storage.
v Records furnished by Bureau of Engineering, Waterbury, Conn.
w Includes 1,900 second-feet by-passing left abutment of dam as determined, after the flood, from high-water marks and cross-sectional area of scoured by-pass channel. It is possible that less than half of the cross-sectional area of by-pass channel had been scoured when peak stage at the dam was reached, thus 1,900 second-feet of overflow may be as much as twice the actual overflow at the time of the peak stage.
x Stage 10.20 feet; maximum known stage about 20.5 feet Nov. 3-4, 1927.

Table 9.-Summary of flood discharges--Continued.

No. on map	Stream and place of determination	Drainage area (sq. mi.)	Period of record	Maximum discharge previously known		Maximum discharge during floods of March 1936			
				Date	Second-feet	Time	Second-feet	Sec.-ft. per sq. mi.	Method of determination
	St. Lawrence River Basin-Continued								
409	Missisquoi River near Richford, Vt.	479	1909-1936	November 1927	45,000	Mar.19-20,midnight to Mar. 20,4am	14,000	29.2	Stage-discharge relation.
410	Missisquoi River at Sheldon Springs, Vt.	812	--	November 1927	62,900	--	23,600	29.1	Dam (C 3.60).
411	Missisquoi River at Swanton Dam, at Hygate Falls, Vt.	826	--	--	--	--	23,800	28.8	Dam (C 3.90).
412	Tomifobia River at Butterfield Co. dam, at Rock Island, Quebec	58.0	--	November 1927	8,700	--	2,440	42.1	Dam (C 3.60).
413	Clyde River at Newport, Vt.	140	--	--	--	--	3,920	28.0	Dam (C 2.64).
414	Clyde River at Newport, Vt.	140	1909-1924 1928-1936	Apr.19,1933	2,870	Mar.20,1,4pm	3,900	27.9	Stage-discharge relation.

At some places on streams only information of maximum stages is available, and that information is presented with an appropriate footnote. For other places, pertinent information regarding stages antedating the period of record of discharge is shown by a footnote. Although the tabulation is intended to be reasonably complete, the reader should consult the section "Records of previous floods" for possible additional references to notable floods not included in the summary table. Numerous explanatory footnotes on other features of the table are also included.

The basic data and computations for the determinations of discharge are filed in the district offices of the Geological Survey in the several districts where the floods occurred. The data for any drainage basin may be examined in the district office having supervision of the investigation in that area.

Figure 39 shows the 1936 flood discharges in second-feet per square mile in table 9 plotted against the corresponding drainage areas. In this connection it should be understood that except for a limited number of items as indicated in the table the discharges are given as observed and in many instances are affected by artificial storage. Information regarding such storage is presented in the preceding section "Stages and discharges at river-measurement stations during the flood period."

STORAGE

Scope and utility

Basic information on storage and discussion of the effects of storage on flood run-off are presented in the sections headed "Stages and discharges at river-measurement stations during the flood period" and "Rainfall and run-off studies." The treatment of storage in this section is limited to a brief discussion of some of the outstanding examples of storage regulation and the presentation of supplemental information as to storage facilities in some of the river basins.

The detention or retardation of flood waters by means of some kind of storage, thereby reducing the peak stages of rivers at critical times, is usually a most attractive and effective method of reducing flood damages. The storage reservoirs on New England rivers, both natural and artificial, contributed substantially to the lowering of flood peaks in March 1936 below what they would otherwise have been.

The development of storage reservoirs has been general throughout New England, first in connection with the use of water for paper mills and other industries and more recently in connection with hydroelectric power systems. The reservoirs are usually empty, or nearly so, in the early spring, when floods are most likely to occur, the larger reservoirs usually being full not more than 2 months in the year. Even when full they generally have an appreciable effect in reducing the flood flows because of the retardation of flow through the reservoirs at critical times.

Reservoirs in controlled natural lakes

The effectiveness of the control of flood waters by reservoirs created by the artificial regulation of natural lakes may be seen from the available records in the section "Stages and discharges at river-measurement stations during the flood period."

In the headwaters of the Androscoggin River six storage reservoirs retained about 16,300,000,000 cubic feet of flood water during the period March 9-22. During this same period only about 5,250,000,000 cubic feet of water was allowed to pass the control works of the lowest reservoir. Therefore 75 percent of the total possible run-off of about 21,550,000,000 cubic feet from 1,095 square miles of drainage basin did not join the flood waters in the lower reaches of the river. At Auburn, Maine, during the comparable period of March 10-23 the observed run-off was about 58,900,000,000 cubic feet, and 22 percent of the total possible run-off of about 75,200,000,000 cubic feet from the 3,257 square miles of drainage area above Auburn was retained in the six storage reservoirs on the headwaters. The six reservoirs have an aggregate capacity of about 29,200,000,000 cubic feet, and 3 of them, with a total capacity of about 5,540,000,000 cubic feet were filled to capacity.

In the Presumpscot River Basin records of storage in Sebago Lake and of the discharge of the Presumpscot River at the outlet of Sebago Lake indicate that the maximum mean daily run-off from 436 square miles was about 11,000 second-feet on March 22. About 2,240 second-feet was allowed to pass the control works, and the remainder, or about 8,760 second-feet, was stored in the lake. In addition to Sebago Lake there were in this basin 10 other lakes and ponds that stored a volume of water equivalent to about 50 percent of that stored in Sebago Lake. If allowance could have been made for the water stored in these other reservoirs, the indicated natural mean daily flow above the outlet of Sebago Lake on March 22 would have exceeded 11,000 second-feet.

In the Merrimack River Basin control works built about 1845 on the outlet of Lake Winnipesaukee at Lakeport, N. H., permit the use of about 7,000,000,000 cubic feet of storage by lowering the water surface of the lake 44 inches below the full lake level. Lake Wentworth, a tributary to Lake Winnipesaukee, has an additional storage capacity of about 700,000,000 cubic feet. There is, therefore, available above the outlet of Lake Winnipesaukee a total storage capacity of about 7,700,000,000 cubic feet, which is equivalent to a depth of about 9.1 inches over the 363 square miles of contributing drainage area. It was reported that on March 10, 1936, the reservoir capacity available for storage of flood waters above the outlet of Lake Winnipesaukee was about 6,000,000,000 cubic feet, which was equivalent to a depth of about 7.1 inches over the drainage area.

During the floods of March 1936 storage of water in Lake Winnipesaukee began on March 11 and continued through March 24. During this period the run-off from the drainage area was about 9,835,000,000 cubic feet, of which about 9,010,000,000 cubic feet was stored and about 825,000,000 cubic feet passed the control works. Lake Winnipesaukee rose about 17 inches above its normal level when full and thus provided an emergency storage capacity of an additional 3,000,000,000 cubic feet. Records indicate that the maximum mean daily run-off from the drainage basin above Lakeport, N. H., was about 27,600 second-feet on March 19, but on that date a mean daily discharge of only 178 second-feet was allowed to pass the control works. Figure 33 indicates that, if the flow had not been controlled by storage, the maximum flow from the Lake Winnipesaukee drainage area on March 19 would probably have synchronized with and joined the maximum flow of the Pemigewasset River at Franklin, N. H., to produce at points downstream mean daily flows greater than those observed by approximately 25,000 second-feet and instantaneous flows greater than those observed by amounts probably in excess of 25,000 second-feet. The flood stages and damage would also have been increased.

The reservoirs discussed above are formed by natural lakes with control works. Therefore a part of the storage was natural and a part was created by the operation of control works.

Artificial storage on the Deerfield River

On the Deerfield River, tributary to the Connecticut River in western Massachusetts, where natural storage is relatively small, there are two artificial reservoirs, the Somerset and Harriman Reservoirs, with contributing drainage areas of 30 and 184 square miles respectively. The New England Power Co. built the Somerset Reservoir in 1913 and the Harriman Reservoir in 1924. The Somerset Reservoir, on the East Branch of the Deerfield River near Somerset, Vt., has a storage capacity equivalent to a depth of 38.9 inches on the contributing drainage basin, and the Harriman Reservoir has a storage capacity equivalent to a depth of 14.1 inches on the 154 square miles of drainage basin below the Somerset Reservoir.

The Somerset Reservoir stored after March 11 the entire run-off from the contributing drainage area of 30 square miles. From March 11 to 23 about 692,000,000 cubic feet of water, equivalent to a depth of about 10 inches over the drainage area, was stored in this reservoir. Records indicate that the maximum mean daily flow into the reservoir was about 2,040 second-feet on March 18.

During the period March 11-23 the Harriman Reservoir, at Davis Bridge, Vt., stored about 4,170,000,000 cubic feet of water, equivalent to a depth of about 11.7 inches over the 154 square miles of drainage area controlled below the Somerset Reservoir and discharging into the Harriman Reservoir. During this same period about 502,000,000 cubic feet of water was allowed to pass the control works. The records indicate that the maximum mean daily flow into the reservoir was about 15,600 second-feet on March 18, and on that day a mean discharge of only 138 second-feet was allowed to pass the control works. The operation of these two reservoirs during the flood of March 1936 resulted in almost complete control of the discharge from 184 square miles.

Detention reservoirs

In the Winooski River Basin in Vermont there are two detention reservoirs designed and constructed under the supervision of the Corps of Engineers, U. S. Army, to provide for floods like that of 1927. These dams were built with gateless outlet works so designed that the flow through them with a full reservoir will not exceed a specified rate. During the floods of March 1936 the full capacity of these reservoirs was not utilized.

The larger of these reservoirs is created by the dam on the North Branch of the Winooski River at Wrightsville, Vt. During the period March 9-22 the storage in this reservoir was about 673,000,000 cubic feet, equivalent tc a depth of about 4.4 inches over the 66.5 square miles of drainage basin. Records indicate that the maximum run-off occurred on

March 18, when the mean daily flow into the reservoir was about 3,300 second-feet, whereas the mean daily discharge through the outlet works on that date was only 862 second-feet.

The smaller reservoir, created by a dam on the Jail Branch of the Winooski River at East Barre, Vt., stored during the period March 10-22 about 481,000,000 cubic feet, equivalent to about 6.4 inches over the 32.2 square miles of drainage basin. Records indicate that the maximum mean daily flow into the reservoir was about 1,920 second-feet on March 18, whereas the mean daily discharge through the outlet works on that date was only about 425 second-feet.

The manner in which these two reservoirs operated during the floods of March 1936 can be illustrated by constructing hydrographs of observed and computed natural flow for both reservoirs from data given in the section "Stages and discharges at river-measurement stations during the flood period." These reservoirs are situated in a region where some of the highest rates of flow were recorded in the flood of 1927. Although the peak discharges of the floods of 1936 in these drainage areas were small in comparison with those for the flood of 1927, the total run-off was large enough to show the effectiveness of the reservoirs in reducing flood crests.

Records of operation of storage reservoirs

For many storage reservoirs where reliable information was available as to capacity and gain or loss in storage, the natural run-off above the outlets of the reservoirs was computed for the flood period. The basic observations and the computed results for those reservoirs are included in the section "Stages and discharges at river-measurement stations during the flood period." For other reservoirs where the basic observations were more intermittent, descriptive matter and tabulations are also presented with the records for river-measurement stations.

Discussions and analyses of the effects of artificial storage on the run-off of the New England rivers during the flood period are included in the section "Rainfall and run-off studies."

Surface areas of lakes, ponds, reservoirs, and swamps

Information regarding storage in most of the larger and more important controlled lakes and reservoirs of the New England rivers is presented in the manner indicated above. Many other bodies of water, both natural and artificial, also exerted a substantial influence on the flood run-off.

The Boston district office of the Geological Survey has supervised and conducted with technical assistants supplied by the Works Progress Administration a project for determining the surface areas of those lakes, ponds, and reservoirs in the Merrimack and Connecticut River Basins where the area was greater than 5 acres. In these determinations Geological Survey topographic maps were used as a basis for the determination of areas except for a small portion of the upper Connecticut River Basin, where information was obtained from maps prepared by C. H. Hitchcock, former State geologist of New Hampshire.

For the Merrimack River Basin 657 lakes and ponds were tabulated, with an aggregate water surface area of 183.4 square miles, and for the Connecticut River Basin 888 lakes and ponds were tabulated, with a total area of 90.4 square miles. In the latter basin the water-surface areas of Harriman, Cobble Mountain, and Borden Brook Reservoirs were omitted.

The total swamp areas as shown on the topographic maps were also tabulated and grouped for each principal tributary and strategic point along the main rivers. A total of 130.2 square miles of swamp area was measured in the Merrimack River Basin and 218.8 square miles of swamp area in the Connecticut River Basin.

Tables 10 and 11 present a summary of the results obtained for the Merrimack and Connecticut River Basins respectively. The "items numbers" in the first column refer to the numbers assigned to the individual items in a tabulation of lakes and ponds which is not published here. They are helpful in showing the extent of the data recorded in the corresponding lines of the table. The remainder of the columns are self-explanatory. The summary proceeds from the headwater tributaries downstream, and at appropriate places a summation of the upstream data is given. It is obvious that the accuracy of this information as to areas cannot exceed that of the maps used in obtaining them.

It will be noted from the table that the swamp area exceeds the water-surface area in the Connecticut River Basin, but the reverse is true in the Merrimack River Basin. The combined total areas of lakes, ponds, and swamps are equivalent to 6.3 percent of the total Merrimack drainage area and 1.9 percent of the total Connecticut drainage area.

Table 10.-Areas of lakes, ponds, and swamps in the Merrimack River Basin

Items numbers (Lakes and ponds)	Stream	Drainage area (square miles)	Areas of lakes, ponds, and swamps: Square miles: Lakes and ponds	Swamps	Total	Percent of drainage area
1- 6	East Branch of Pemigewasset River, above mouth	115	0.09	0	0.09	0.1
7- 10	Pemigewasset River, above mouth of East Branch of Pemigewasset River	34.8	.14	.46	.60	1.7
16- 17	Mad River, above mouth	145	.08	.27	.35	.2
18- 26	Beebe River, above mouth	29.0	.22	.36	.58	2.0
29- 41	Baker River, above mouth	213	1.44	1.72	3.16	1.5
1- 41	Pemigewasset River, above U. S. Geological Survey gaging station at Plymouth, N. H.	622	2.36	4.88	7.24	1.2
44- 52	Squam River, above mouth	73.1	12.04	1.36	13.40	18.3
57- 60	Newfound River, above mouth	98.0	6.85	.95	7.80	8.0
1- 60	Pemigewasset River, below mouth of Newfound River at Bristol, N. H.	847	21.72	7.33	29.05	3.4
61- 70	Smith River, above mouth	88.1	.58	2.22	2.80	3.2
71- 77	Salmon Brook, above mouth	23.4	.40	.69	1.09	4.7
80-124	Winnipesaukee River, above mouth	486	91.81	10.39	102.20	21.0
1-124	Merrimack River, above U. S. Geological Survey gaging station at Franklin Junction, N. H.	1,507	115.81	21.80	137.61	9.1
133-171	Contoocook River, above mouth of North Branch of Contoocook River	221	5.07	7.69	12.76	5.8
172-183	North Branch of Contoocook River, above U. S. Geological Survey gaging station near Antrim, N. H.	54.8	1.96	2.66	4.62	8.4
172-197	North Branch of Contoocook River, above mouth	120	3.87	5.03	8.90	7.4
216-236	Warner River, above mouth	150	2.60	3.84	6.44	4.3
237-255	Blackwater River, above mouth	136	1.88	6.12	8.00	5.9
172-260	Contoocook River, above U. S. Geological Survey gaging station at Penacook, N. H.	766	9.61	25.56	35.17	4.6
1-274	Merrimack River, above Concord, N. H.	2,385	131.82	50.18	182.00	7.6
280-289	Soucook River, above mouth	90.8	.87	2.52	3.39	3.7
290-309	Suncook River, above U. S. Geological Survey gaging station at North Chichester, N. H.	157	3.93	4.95	8.88	5.7
290-321	Suncook River, above mouth	260	6.41	7.58	13.99	5.4
1-326	Merrimack River, above Manchester, N. H.	2,854	139.81	64.10	203.91	7.1
327-346	Piscataquog River, above mouth	220	2.52	6.94	9.46	4.3
359-374	Souhegan River, above U. S. Geological Survey gaging station at Merrimack, N. H.	171	.64	2.76	3.40	2.0
359-378	Souhegan River, above mouth	220	1.05	4.93	5.98	2.7
416-452	North Nashua River, above U. S. Geological Survey gaging station near Leominster, Mass.	107	2.37	.49	2.86	2.7
416-454	North Nashua River, above mouth	132	2.45	.52	2.97	2.2
390-415	South Branch of Nashua River, above mouth	131	8.25	.46	8.71	6.6
390-482	Nashua River, above U. S. Geological Survey gaging station at East Pepperell, Mass.	433	13.19	5.84	19.03	4.4
390-492	Nashua River, above mouth	530	13.79	8.88	22.67	4.3
1-492	Merrimack River, above Nashua, N. H. (including Nashua River)	3,982	162.20	89.31	251.51	6.3
494-505	Salmon Brook, above mouth	32.1	.67	1.54	2.21	6.9
527-539	Beaver Brook, above mouth	94.9	1.43	2.16	3.59	3.8
540-574	Assabet River, above mouth	176	2.78	4.77	7.55	4.3
575-606	Sudbury River, above mouth	165	6.93	16.21	23.14	14.0
540-608	Concord River, above mouth	406	9.83	26.56	36.39	9.0
1-608	Merrimack River, above Lowell, Mass. (including Concord River)	4,635	175.94	121.97	297.91	6.4
1-610	Merrimack River, above Essex Co. dam, Lawrence, Mass.	4,672	176.36	122.42	298.78	6.4
611-623	Spicket River, above mouth	72.7	1.97	.97	2.94	4.0
624-633	Shawshine River, above mouth	73.1	.42	6.12	6.54	8.9
1-637	Merrimack River, above mouth of Little River above Haverhill, Mass.	4,860	179.80	129.51	309.31	6.4
647-657	Powow River, above mouth	58.8	2.26	.33	2.59	4.4
1-657	Merrimack River, above Newburyport, Mass.	4,997	183.41	130.20	313.61	6.3

Table 11.-Areas of lakes, ponds, and swamps in the Connecticut River Basin

Items numbers (Lakes and ponds)	Stream	Drainage area (square miles)	Areas of lakes, ponds, and swamps: Square miles: Lakes and ponds	Swamps	Total	Percent of drainage area
1- 8	Connecticut River, above U. S. Geological Survey gaging station at First Connecticut Lake near Pittsburg, N. H.	83.0	7.13	4.93	12.06	14.5
1- 32	Connecticut River, above U. S. Geological Survey gaging station at North Stratford, N. H.	796	9.37	50.87	60.24	7.6
46- 60	Upper Ammonoosuc River, above mouth	260	1.61	4.17	5.78	2.2
None	Israel River, above mouth	134	0	2.99	2.99	2.2
66- 76	Johns River, above mouth	77.4	1.13	1.54	2.67	3.4
1- 76	Connecticut River, above U. S. Geological Survey gaging station near Dalton, N. H.	1,538	14.22	68.13	82.35	5.4
1- 78	Connecticut River, above U. S. Geological Survey gaging station at Waterford, Vt.	1,603	14.75	70.13	84.88	5.3
81- 82	Moose River, above U. S. Geological Survey gaging station at St. Johnsbury, Vt.	126	.22	.55	.77	.6
83- 85	Passumpsic River, above U. S. Geological Survey gaging station at Passumpsic, Vt.	423	1.09	2.37	3.46	.8
81- 89	Passumpsic River, above mouth	485	2.85	2.37	5.22	1.1
106-118	Ammonoosuc River, above U. S. Geological Survey gaging station near Bath, N. H.	393	.68	1.96	2.64	.7
106-119	Ammonoosuc River, above mouth	400	.72	2.07	2.79	.7
1-124	Connecticut River, above U. S. Geological Survey gaging station at South Newbury, Vt.	2,825	21.18	77.54	98.72	3.5
None	White River, above U. S. Geological Survey gaging station near Bethel, Vt.	241	0	.08	.08	0
145-154	White River, above U. S. Geological Survey gaging station at West Hartford, Vt.	690	.37	.98	1.35	.2
145-154	White River, above mouth	713	.37	1.06	1.43	.2
1-154	Connecticut River, above U. S. Geological Survey gaging station at White River Junction, Vt.	4,068	24.78	80.84	105.62	2.6
155-175	Mascoma River, above U. S. Geological Survey gaging station at Mascoma, N. H.	153	5.17	2.95	8.12	5.3
155-175	Mascoma River, above mouth	194	5.17	3.19	8.36	4.3
176-180	Ottauquechee River, above U. S. Geological Survey gaging station at North Hartland, Vt.	221	.23	.05	.28	.1
176-180	Ottauquechee River, above mouth	222	.23	.05	.28	.1
185-222	Sugar River, above U. S. Geological Survey gaging station at West Claremont, N. H.	269	9.86	3.50	13.36	5.0
185-222	Sugar River, above mouth	275	9.86	3.54	13.40	4.9
225-233	Black River, above U. S. Geological Survey gaging station at North Springfield, Vt.	158	.99	1.63	2.62	1.7
225-233	Black River, above mouth	204	.99	2.34	3.33	1.6
235	Williams River, above mouth	118	.01	.83	.84	.7
237-238	Saxtons River, above mouth	78.2	.03	.34	.37	.5
249-259	West River, above U. S. Geological Survey gaging station at Newfane, Vt.	308	.85	.73	1.58	.5
249-261	West River, above mouth	423	1.02	.84	1.86	.4
264-282	Ashuelot River, above U. S. Geological Survey gaging station near Gilsum, N. H.	71.1	1.82	4.76	6.58	9.3
290-296	Otter Brook above U. S. Geological Survey gaging station near Keene, N. H.	41.8	.74	1.88	2.62	6.3
309-316	South Branch of Ashuelot River, above U. S. Geological Survey gaging station near Marlboro, N. H.	36.6	.45	.97	1.42	3.9
264-328	Ashuelot River, above U. S. Geological Survey gaging station at Hinsdale, N. H.	420	5.48	10.02	15.50	3.7
264-328	Ashuelot River, above mouth	421	5.48	10.02	15.50	3.7
356-358	Sip Pond Brook, above U. S. Geological Survey gaging station near Winchendon, Mass.	19.0	.61	.62	1.23	6.5
334-360	Millers River, above U. S. Geological Survey gaging station near Winchendon, Mass.	83.8	3.37	1.64	5.01	6.0

Table 11.-Areas of lakes, ponds, and swamps in the Connecticut River Basin--Continued

Items numbers (Lakes and ponds)	Stream	Drainage area (square miles)	Areas of lakes, ponds, and swamps: Square miles: Lakes and ponds	Square miles: Swamps	Square miles: Total	Percent of drainage area
397-398	Priest Brook, above U. S. Geological Survey gaging station near Winchendon, Mass.	18.8	0.05	0.22	0.27	1.4
399-406	East Branch of Tully River, above U. S. Geological Survey gaging station near Athol, Mass.	49.9	.56	.26	.82	1.6
426-428	Moss Brook, above U. S. Geological Survey gaging station at Wendell Depot, Mass.	12.2	.18	.18	.36	3.0
334-430	Millers River, above U. S. Geological Survey gaging station at Erving, Mass.	370	7.78	3.50	11.28	3.0
334-432	Millers River, above mouth	391	7.89	3.50	11.39	2.9
1-432	Connecticut River, above dam at Turners Falls, Mass.	7,138	57.77	111.10	168.87	2.4
433-449	Deerfield River, above U. S. Geological Survey gaging station at Charlemont, Mass.	362	a1.36	.68	a2.04	a.6
433-456	Deerfield River, above mouth	664	a1.86	.68	a2.54	a.4
1-456	Connecticut River, above U. S. Geological Survey gaging station at Montague City, Mass.	7,840	a59.63	111.78	a171.41	a2.2
476-478	Mill River, above mouth	55.7	.31	0	.31	.6
497-527	Ware River, above U. S. Geological Survey gaging station at Cold Brook, Mass.	96.8	2.42	1.72	4.14	4.3
497-541	Ware River, above U. S. Geological Survey gaging station at Gibbs Crossing, Mass.	199	3.08	1.72	4.80	2.4
546-571	Swift River, above U. S. Geological Survey gaging station at West Ware, Mass.	186	1.64	.08	1.72	.9
581-626	Quaboag River, above U. S. Geological Survey gaging station at West Brimfield, Mass.	151	3.89	1.65	5.54	3.7
497-643	Chicopee River, above U. S. Geological Survey gaging station at Bircham Bend, Mass.	703	9.83	3.73	13.56	1.9
497-643	Chicopee River, above mouth	721	9.83	3.73	13.56	1.9
654-659	Westfield River, above U. S. Geological Survey gaging station at Knightville, Mass.	162	.37	.12	.49	.3
662	Middle Branch of Westfield River, above U. S. Geological Survey gaging station at Goss Heights, Mass.	52.6	.01	.22	.23	.4
663-672	West Branch of Westfield River, above U. S. Geological Survey gaging station at Huntington, Mass.	93.7	.95	.07	1.02	1.1
676-680	Westfield Little River, above U. S. Geological Survey gaging station near Westfield, Mass.	48.5	b.40	0	b.40	b.8
654-685	Westfield River, above U. S. Geological Survey gaging station near Westfield, Mass.	497	3.08	.41	3.49	.7
654-688	Westfield River, above mouth	517	3.44	.41	3.85	.7
1-695	Connecticut River, above U. S. Geological Survey gaging station at Thompsonville, Conn.	9,637	c76.16	117.74	c193.90	c2.0
707-724	Farmington River, above U. S. Geological Survey gaging station near New Boston, Mass.	92.0	2.78	.42	3.20	3.5
707-765	Farmington River, above mouth	608	5.54	.42	5.96	1.0
1-766	Connecticut River, above U. S. Weather Bureau gaging station at Hartford, Conn.	10,480	c81.99	118.54	c200.53	c1.9
1-827	Connecticut River, above Middletown, Conn.	10,850	c85.61	124.80	c210.41	c1.9
1-888	Connecticut River, above mouth	11,240	c90.44	128.40	c218.84	c1.9

a Does not include area of Harriman Reservoir.
b Does not include areas of Cobble Mountain and Borden Brook Reservoirs.
c Does not include areas of Harriman, Cobble Mountain, and Borden Brook Reservoirs.

The summary table for the Merrimack River Basin indicates that 1.2 percent of the drainage area above Plymouth, N. H., is water surface or swamp, and that the effect of natural and artificial storage is comparatively insignificant, especially for flood flows of the magnitude experienced in March 1936. Between Plymouth and Franklin Junction, N. H., the effect of storage is considerably greater than for any other part of the basin. The table shows that 18.3 percent of the total drainage area of the Newfound River and 21 percent of the total drainage area of the Winnipesaukee River consist of water surface and swamps. Progressing downstream, it is notable that the total water-surface and swamp area for the principal tributaries ranges between 2 and 7 percent of the total drainage areas, except on the Sudbury and Concord Rivers, where this percentage is greater because of large swamps and artificial storage.

An examination of the summary table for the Connecticut River Basin shows that the greatest percentage of water-surface and swamp area is above First Connecticut Lake, where considerable storage has been developed. Tributary basins which include the greatest percentage of water-surface and swamp areas are those of the Mascoma River, Sugar River, Ashuelot River, Otter Brook, Sip Pond Brook, Millers River, Deerfield River, Quaboag River, Ware River, and Farmington River. With the exception of the storage mentioned above, the percentage of total-water surface and swamp areas for the remaining part of the basin indicates that they probably have comparatively little storage effect during high floods.

Valley-storage capacities for the Merrimack River

The Boston office of the Corps of Engineers, U. S. Army, has computed and made available for publication in this report the valley-storage capacity for the main system of the Merrimack River, extending from Plymouth, N. H., on the Pemigewasset River, to Lawrence, Mass., on the Merrimack River.

The water-surface profile for zero storage was determined, and the valley or "flood-channel" storage capacity for two assumed water-surface profiles were computed as shown by the results in table 12. The higher water-surface profile that was assumed corresponds closely to the crest-stage profile of the flood of March 1936, the data for which are published in a subsequent section of this report. The basic information as to inundated areas below the assumed water surface was determined from topographic maps of the Geological Survey.

Table 12.-Valley storage capacity in the channel of the Merrimack River

Reach of river		*Water level at lower end of reach	Valley storage in million cubic feet	
From mile	To mile		In given reach and below given altitude	At crest of flood of March 1936
147	130.71	-	-	a1,398
130.71	118.50	320.7	729.9	-
		316.0	341.9	-
		311.6	0	-
147	118.50	-	-	2,127.9
118.50	116.66	318.8	41.1	-
		314.0	10.4	-
		310.0	0	-
147	116.66	-	-	2,169.0
116.66	115.60	292.6	68.8	-
		285.0	45.3	-
		280.0	31.3	-
		275.0	19.1	-
		270.0	9.2	-
		265.0	2.6	-
		260.2	0	-
147	115.60	-	-	2,237.8
115.60	110.50	277.6	602.4	-
		275.0	432.1	-
		270.0	281.8	-
		265.0	162.0	-
		260.0	64.5	-
		254.5	0	-
147	110.50	-	-	2,840.2
110.50	100.84	268.1	1,502.8	-
		265.0	1,200.1	-
		260.0	795.0	-
		255.0	437.8	-
		250.0	176.4	-
		243.5	0	-
147	100.84	-	-	4,343.0
100.84	97.83	257.7	355.0	-
		255.0	231.7	-
		250.0	65.3	-
		244.8	0	-
147	97.83	-	-	4,698.0
97.83	86.80	230.8	2,343.5	-
		225.0	1,365.6	-
		220.0	629.4	-
		216.9	0	-
147	86.80	-	-	7,041.5
86.80	81.05	203.4	505.3	-
		197.0	215.6	-
		192.0	76.2	-
		187.0	0	-
147	81.05	-	-	7,546.8
81.05	73.14	188.5	609.8	-
		185.0	429.1	-
		180.0	215.6	-
		175.0	69.7	-
		171.1	0	-
147	73.14	-	-	8,156.6
73.14	65.15	136.8	1,206.6	-
		130.0	916.9	-
		125.0	729.6	-
		120.0	555.4	-
		115.0	396.4	-
		110.0	257.0	-
		105.0	139.4	-
		97.8	0	-
147	65.15	-	-	9,363.2
65.15	59.67	132.7	1,448.4	-
		125.0	940.9	-
		120.0	710.0	-
		115.0	522.7	-
		110.0	361.5	-
		105.0	217.8	-
		100.0	95.8	-
		93.9	0	-
147	59.67	-	-	10,811.6
59.67	49.91	121.6	2,099.6	-
		115.0	1,367.8	-
		110.0	943.1	-
		105.0	583.7	-
		100.0	341.9	-
		95.0	165.5	-
		90.0	47.9	-
		86.9	0	-
147	49.91	-	-	12,911.2
49.91	40.55	107.0	1,938.4	-
		102.0	1,123.8	-
		97.0	509.7	-
		92.0	130.7	-
		87.2	0	-
147	40.55	-	-	14,849.6
40.55	28.98	54.0	1,642.2	-
		48.0	923.5	-
		43.0	457.4	-
		39.2	0	-
147	28.98	-	-	16,491.8

* Altitude, in feet, above mean sea level.
a Estimated.

The volume of valley-storage capacity below the crest-stage profile of March 1936 in the 147 miles of river channel shown in the tabulation approximates 16,500,000,000 cubic feet. However, as crest stages did not occur simultaneously throughout the 147 miles, the determination of the actual volume of storage capacity at a given time would require that account be taken of the actual stages prevailing in the various parts of the reach at that time. The records of stage presented in this report, together with the data in table 12, afford a basis for estimating the volume of valley storage in the 147 miles of river channel at selected times.

The accuracy of these data on channel-storage capacity is necessarily limited by the refinement of the basic maps used in obtaining them. The data afford an indication of only a part of the total channel storage in the river system - that of the 147 miles of main river channel. Despite these limitations, the data present factual information on a subject of interest to students of the flow of rivers.

RAINFALL AND RUN-OFF STUDIES

Method of analysis

The simultaneous occurrence of unusual floods in all drainage basins from the Penobscot River in Maine to the James River in Virginia is an incident of rare occurrence. Because of the magnitude of the floods of March 1936 and the extent of the area that was affected, the Geological Survey has undertaken to collect, analyze, and present in this report basic information pertaining to the meteorologic and hydrologic causes of the floods, together with available data regarding flood discharges.

One of the principal objectives in the detailed analyses of the rainfall and run-off records was to develop some of the significant features of the relations between rainfall and run-off in these major floods. A second objective probably of equal importance was to utilize the results of the analyses so far as practicable in checking the accuracy and reasonableness of the basic data published in this report. The results of these analyses have furnished a background of information that is useful in a consideration of the deficiencies in the basic data. The value of this study has become apparent and is largely in addition to the original expectations as to the use of the analyses. These matters are discussed in more detail farther on in this section.

From the viewpoint of a student of relations between rainfall and run-off, the timing of the meteorologic events that caused the floods was extremely complex. From Maine to the headwaters of the Potomac River in West Virginia the ground just prior to the storm of March 11 and 12 was covered with snow ranging in depth from a few inches to 60 inches and having an equivalent water content of 20 to 30 percent or more. In addition ice, with or without snow, was prevalent along the coastal areas from Boston to New Jersey. Although it is known that melting snow and ice furnished a comparatively large part of the flood run-off, exact information in regard to the water content of the snow and ice prior to the floods is not available for much of the area, even though special efforts have been made to collect all the obtainable data pertaining to the subject.

There was frost in the ground throughout much of the James, Potomac, Susquehanna, and lower Delaware River Basins and in other areas where depths of snow were not great. In some areas where the snow cover was deep and the snow fell early in the winter there may have been little or no frost. Before the run-off resulting from the first rain storm and the associated melting snow had passed out of the basins a second storm occurred, accompanied by warm weather and rapid melting of the snow. Except for some areas along the coast and in parts of New England, the precipitation of the second storm was in general greater than that of the first storm. In many areas before the run-off resulting from the second storm had passed out of the basin a minor storm on March 20-21 resulted in broadening the base of the flood-flow hydrograph without affecting the peak, thus introducing difficulty in analyzing the individual contributions of the different storms associated with the flood run-off. An accurate quantitative study is further complicated by the fact that in some areas snow still remained on the ground at the end of the storm period, and little if any definite information is available showing the depletion in water content of the snow throughout the storm period.

The method used in arriving at an estimate of the water content of the snow and the classification of precipitation by storms and by drainage basins is described under "Meteorologic and hydrologic conditions." (See columns 4, 5, 6, 7, and 8, table 13, for results of determinations.) The records of mean daily discharge as published in the section showing stages and discharges at gaging stations have been used as a basis for the determination of the direct run-off resulting from the rain and melting snow. A discharge hydrograph was constructed for each gaging station, covering the period from about February 1 to April 30. The hydrograph for the Westfield River at Knightville, Mass. (fig. 40), shows the general character of the hydrographs for the other gaging stations that have been studied and analyzed.

A general thaw throughout the southern part of the area early in March tended to break up the channel ice and raised the storms somewhat. Stream flow in the northern part of the area is illustrated by the hydrograph for the Westfield River (fig. 40). These northern streams did not in general experience an ice break-up prior to the first flood. The stream flow in these northern areas was low and consisted chiefly of outflow from ground water flowing under thick ice cover until about March 10 (line A-B, fig. 40), when all stations recorded sharp increases in stage and discharge, culminating in a peak (D) occurring on the streams on varying days between March 11 and 14. This peak was followed by a decline in stage that was interrupted (E) by the oncoming flood waters of the second storm, which caused a second peak (F), generally between March 18 and 20. The flow then generally decreased until, as shown at G, the added run-off of the small storm of March 20-21 caused a smaller rise (H). This rise in turn was followed by another decline to a point where the stream flow was sustained at a more nearly uniform rate (I-J) by run-off resulting from local rains after March 22, supplemented by run-off from the melting snow still remaining.

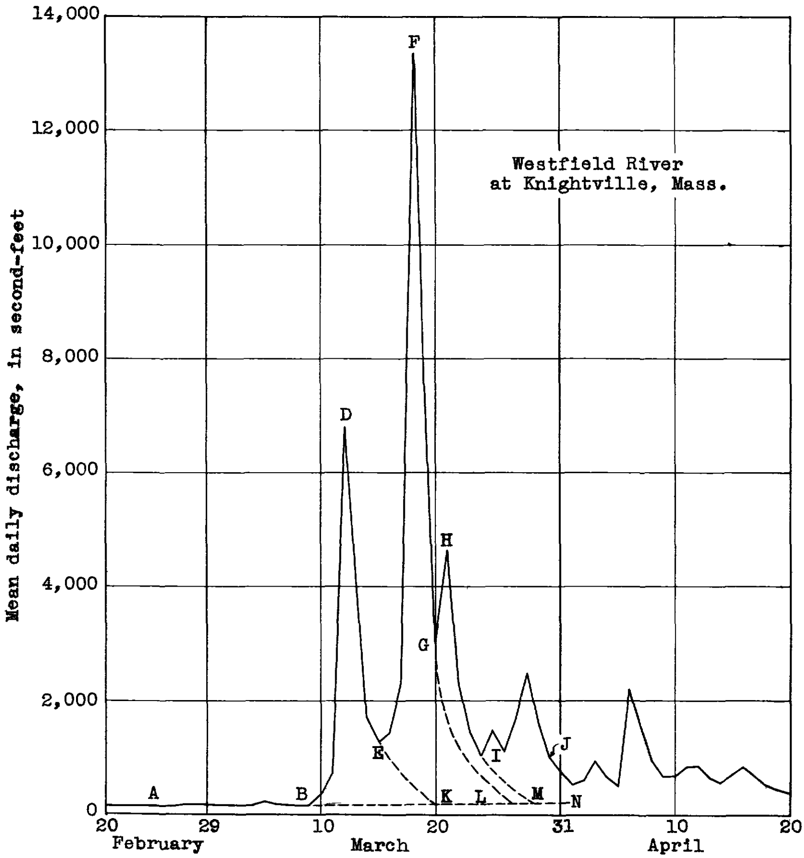

Figure 40.- Analysis of hydrograph in determining direct run-off associated with each storm and total storm period, March 1936.

The total area under the hydrograph represents the total direct run-off resulting from the rains and melting snow plus the stream flow that would have been maintained from antecedent sources if there had been no increment of direct run-off beyond A. The run-off directly attributable to the melting snow and rain has been estimated by making an approximation (B-N) of the position of the graph of flow maintained from antecedent sources and assuming that the area above that line within the observed hydrograph of total stream flow represents the increment in stream flow resulting from the action of meteorologic events after March 9. This increment has been further analyzed to show, first, the run-off directly attributable to the precipitation and melting snow associated with the first storm; second, the run-off directly attributable to the precipitation and melting snow associated with the second storm; and third, the run-off directly attributable to the precipitation and melting snow during the total storm period March 9 to 22. This analysis has involved the estimation of recession curves E-K, G-L, and I-M for each individual decline of the hydrograph, assuming no subsequent rise. It follows that area B D E K represents the run-off resulting from the first storm, area E F G L K the run-off resulting from the second storm, and area B D E F G H I M the total run-off resulting from the precipitation and melting snow for the period March 9-22. The results of these analyses expressed as depth in inches over the drainage basins of the New England rivers are presented in columns 9, 10, and 11, table 13. It is evident that these estimates of direct run-off are less than the total natural stream flow by reason of the exclusion of the flow maintained from antecedent sources.* Other investigators might, of course, estimate such maintained flow differently or construct somewhat different recession curves. In general, such differences in judgment would result in differences that are relatively small in relation to the magnitude of the run-off as a whole. Moreover, any change in one area under the recession curve of the hydrograph must be accompanied by a similar change of opposite sign in the adjacent area, because the total area underneath the hydrograph must check with the figure for run-off in inches actually measured. It is believed that this division makes possible a better understanding of the flood characteristics than can otherwise be obtained. At some of the stations there was difficulty in separating the probable run-off of the small third storm (G H I M L) from the run-off of the second storm, and at some stations the amount of run-off attributable to each storm may be slightly underestimated by reason of the fact that the time available did not permit a more refined determination of the shape of the

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* For a discussion of principles underlying stream-flow separation, see Hoyt, W. G., and others, Studies of relations of rainfall and run-off in the United States: U. S. Geol. Survey Water-Supply Paper 772, pp. 111-118, 1936; and Horton, R. E., Surface run-off phenomena, pt. 1, Analysis of the hydrograph: Horton Hydrol. Lab. Pub. 101, Feb. 1, 1935.

lower end of recession curves applicable to the drainage basins above the gaging stations. Errors resulting from these determinations, however, are believed to be comparatively small.

For river basins where there was artificial storage and where records of the operation of reservoirs were available, the run-off records used in the rainfall and run-off studies have been corrected for storage in the reservoirs. For a few gaging stations that were immediately below the storage reservoirs and where daily records of change in storage were available, the run-off following each storm was corrected, as well as the run-off for the entire period (cols. 9, 10, and 11, table 13). For other gaging stations where daily records of change in storage were not available or that were located some distance downstream from the reservoirs, only the total run-off (col. 11) for the period was corrected. For these stations the figures showing the run-off associated with each storm (cols. 9 and 10) are not directly comparable with the indicated natural run-off for the storm period (col. 11).

Discussion of results*

The data relative to rainfall and run-off have been largely summarized in table 13. It is believed that engineers and hydrologists will readily realize the approximations that may have been necessary with respect to individual items. Users are cautioned to apply the data only after a thorough understanding of the explanatory text and the footnotes accompanying the table.

The gaging stations at which daily-discharge records were available for the entire flood period are listed in columns 1 and 2. Column 3 shows the drainage areas in square miles above the gaging stations. In column 4 is given an estimate of the average water content of snow in inches over the drainage areas above the gaging stations on March 9. The probable accuracy of the estimates of water content for the individual drainage basins and of the estimates of the water content of snow remaining in the drainage basins after March 22 is discussed elsewhere in this report. Columns 5, 6, and 7 show the precipitation in inches over the drainage basins for each storm and for the total storm period as determined from a study of all available precipitation records. As explained under "Meteorologic and hydrologic conditions", the precipitation for the

* The reader is referred to Water-Supply Papers 799 and 800 for a discussion of the rainfall and run-off studies relating to areas outside of New England affected by the flood.

first storm includes that for the period March 9-13 and the precipitation for the second storm includes that for the period March 16-19. Column 8 is the sum of column 7 and column 4 and represents an estimate of the total amount of water in inches over the drainage basins available as potential run-off. Column 9 gives the direct run-off in inches from the drainage basins associated with the first storm and first flood.

The direct run-off is derived from rainfall and snow and can never exceed its supply, being less by reason of loss by evaporation or basin detention in the form of infiltration and surface storage. This principle may be used to test the accuracy of the data, and where it cannot be met, the discrepancy must be explained by inaccuracies in the basic data or inadequacy of the methods of analysis. As the run-off for the flood period as given in column 11 is generally believed to be accurate within about 10 percent, inconsistencies greater than this may be indicative of deficiencies in other basic data or limitations in the analysis of the data.

On the assumption that all the data are correct, run-off from melting snow is indicated if the run-off shown in column 9 is greater than the storm precipitation shown in column 5. With the possible exception of those for the streams in the Androscoggin River Basin, all general averages indicate that there was a contribution of 1 to 2 inches of snow water to the run-off during the first flood. There seems to be some relation between temperature and run-off from melted snow, as indicated by the average contribution of about 1 inch in the northern basins and between $1\frac{1}{2}$ and 2 inches for the basins in southern New England. It is possible, however, that the greater depth of snow in the northern basins may have released less water for run-off during the first flood because of the retention of water in the snow. The data show that in the Androscoggin River Basin there was no apparent change in the water content of about 40 inches of snow as a result of a 4- to 6-inch rain during the first storm, as the run-off immediately after that storm was approximately the same as the amount of precipitation. Column 10 is the run-off associated with the second storm and second flood. If all the data are correct, run-off from melting snow was evidently present during the second flood if the run-off shown in column 10 is greater than the storm precipitation shown in column 6.

Figure 41 shows isothermal lines for mean temperature for the period March 9-22 over the flooded region and affords an indication of the possible influence of variations in temperature upon the melting of snow.

The committee on floods of the Boston Society of Civil Engineers, in its report* discusses run-off from melting snow for relatively short periods and small rains and shows that for each degree-day above 27.1°F. there is an increase of 0.0126 inch in run-off from snow. A brief study of the

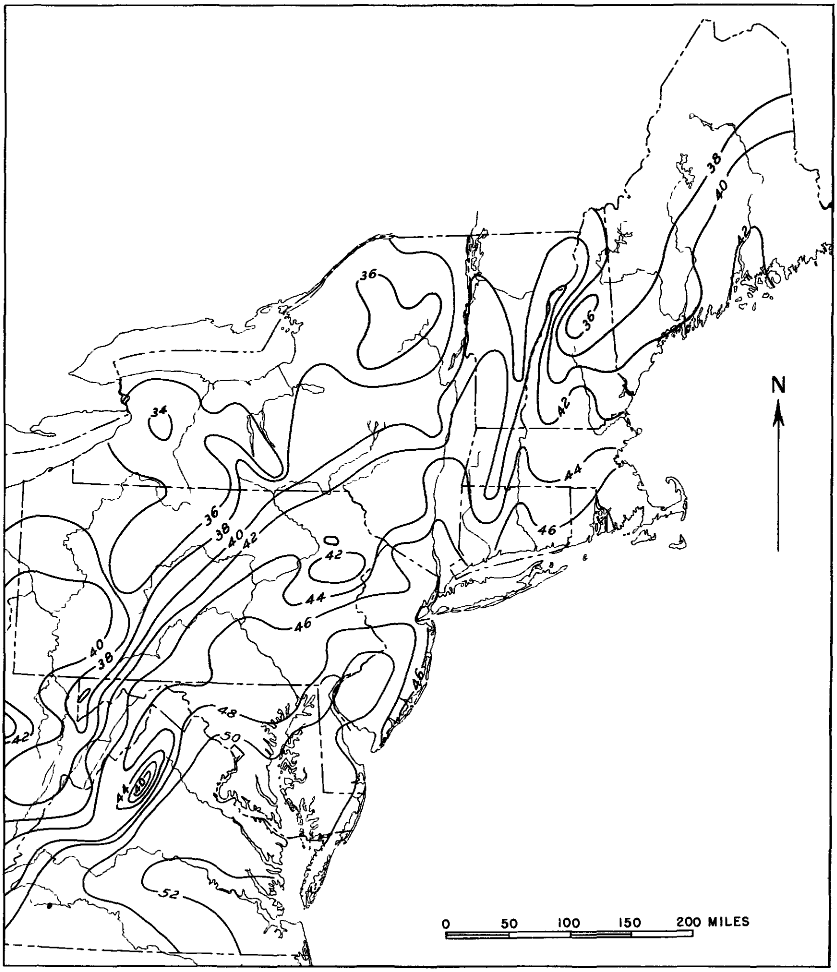

Figure 41.- Map of the northeastern United States, showing isothermal lines of mean temperature, in degrees Fahrenheit, March 9-22, 1936.

relationship between run-off from melting snow and the mean temperature for the 14-day flood period March 9-22, 1936, indicates negligible run-off from snow at a mean temperature of about 31°F. and that for each degree-day above this temperature the run-off from melting snow increases between 0.03 and 0.05 inch.

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* Boston Soc. Civil Eng. Jour., vol. 17, no. 7, pp. 354-365, Sept. 1930.

Table 13.- Rainfall and run-off
(Mean depth, in inches,

No. on figs. 35-37	Stream	Point of measurement	Drainage area (square miles)	Water content of snow Mar. 9
	1	2	3	4
	Penobscot River Basin			
14	Penobscot River	West Enfield, Maine	6,600	8.6
19	Piscataquis River	Dover-Foxcroft, Maine	286	8.5
20	Piscataquis River	Medford, Maine	1,170	8.5
21	Sebec River	Sebec, Maine	344	8.8
22	Pleasant River	Milo, Maine	322	9.0
	Kennebec River Basin			
26	Kennebec River	Moosehead, Maine	1,240	9.5
27	Kennebec River	The Forks, Maine	1,570	9.3
28	Kennebec River	Wyman Dam, Maine	2,612	9.5
29	Kennebec River	Bingham, Maine	2,710	9.5
32	Kennebec River	Waterville, Maine	4,270	9.2
34	Dead River	The Forks, Maine	878	10.0
35	Austin Stream	Bingham, Maine	92	8.3
36	Carrabassett River	North Anson, Maine	351	9.4
41	Sandy River	Mercer, Maine	534	9.5
56	Sebasticook River	Pittsfield, Maine	598	6.5
66	Cobbosseecontee Stream	Gardiner, Maine	220	7.6
	Androscoggin River Basin			
68	Androscoggin River	Gorham, N. H.	1,390	10.4
69	Androscoggin River	Rumford, Maine	2,090	10.4
72	Androscoggin River	Gulf Island Dam, Maine	2,860	10.0
73	Androscoggin River	Auburn, Maine	3,257	9.9
76	Magalloway River	Aziscohos Dam, Maine	233	10.5
79	Swift River	Roxbury, Maine	95	9.8
83	Little Androscoggin River	South Paris, Maine	76.2	9.2
	Presumpscot River Basin			
92	Presumpscot River	Outlet of Sebago Lake, Maine	436	8.1
	Saco River Basin			
95	Saco River	Conway, N. H.	386	9.1
98	Saco River	Cornish, Maine	1,298	8.0
100	Saco River	West Buxton, Maine	1,572	7.8
106	Ossipee River	Cornish, Maine	453	6.8
	Piscataqua River Basin			
117	Salmon Falls River	South Lebanon, Maine	147	6.0
124	Lamprey River	New Market, N. H.	183	3.5
125	Oyster River	Durham, N. H.	12.1	3.7
	Merrimack River Basin			
126	East Branch of Pemigewasset River	Lincoln, N. H.	104	8.0
128	Pemigewasset River	Plymouth, N. H.	622	7.2
129	Pemigewasset River	Bristol, N. H.	746	6.2
130	Merrimack River	Franklin Junction, N. H.	1,507	5.9
131	Merrimack River	Garvins Falls, N. H.	2,427	5.3

a Not corrected for storage.

b Corrected for 13,183,000,000 cubic feet of storage Mar. 9-22 in Long Pond, Onawa Lake, Sebec Lake, North Twin and Ripogenus Lakes, equivalent to 0.86 inches over basin.

c Corrected for 1,483,000,000 cubic feet of storage Mar. 9-22 in Long Pond, Onawa Lake, and Sebec Lake, equivalent to 0.55 inch over basin above Medford and to 1.85 inches over basin above Sebec.

d Observed run-off for March 0.94 inch; run-off for March, corrected for storage, 8.27 inches.

e One peak only, on Mar. 20; run-off corrected for 14,345,000,000 cubic feet of storage, equivalent to 3.93 inches over basin.

f Corrected for 15,131,000,000 cubic feet of storage Mar. 9-22, equivalent to 2.49 inches over basin above Wyman Dam, 2.41 inches over basin above Bingham, and 1.53 inches over basin above Waterville.

g Corrected for 696,000,000 cubic feet of storage Mar. 9-22, equivalent to 0.34 inch over basin.

h Corrected for 1,599,000,000 cubic feet of storage on Great Moose Pond Mar. 9-22, equivalent to 1.16 inches over basin.

i Effect of storage made run-off analysis impossible; run-off during March corrected for storage equivalent to 10.93 inches over basin.

j Corrected for 16,358,000,000 cubic feet of storage Mar. 9-22 in Rangely system of lakes, Aziscohos Lake, and Umbagog Lake, equivalent to 5.06 inches over basin above Gorham and 3.37 inches over basin above Rumford.

of floods of March 1936
over drainage basins)

Precipitation			Column 4 plus column 7	Direct run-off associated with each storm and total storm period			Column 11 minus column 7	Column 8 minus column 11	No. on figs. 35-37
First storm	Second storm	Total period Mar. 9-22		First storm	Second storm	Total storm period			
5	6	7	8	9	10	11	12	13	
2.6	1.85	5.3	13.9	a3.13	a4.76	b8.75	3.45	5.15	14
4.5	3.0	7.95	16.45	5.36	7.05	13.70	5.75	2.75	19
4.15	2.85	7.5	16.0	a5.81	a8.05	c14.41	6.9	1.6	20
4.25	3.1	7.95	16.75	a7.28	a5.57	c14.70	6.75	2.05	21
4.15	3.0	7.6	16.6	5.80	8.29	14.09	6.5	2.5	22
1.6	1.9	4.3	13.8	-	-	(d)	-	-	26
1.8	2.1	4.85	14.15	-	-	e5.45	.6	8.7	27
1.9	2.2	5.35	14.85	a.70	a3.96	f7.15	1.8	7.7	28
2.0	2.25	5.4	14.9	a.74	a4.27	f8.03	2.65	6.85	29
2.8	2.55	6.6	15.8	a2.21	a5.46	f9.20	2.6	6.6	32
1.8	2.4	5.75	15.75	a.89	a7.79	g9.02	3.25	6.75	34
4.5	3.2	9.35	17.65	5.37	6.52	11.89	2.55	5.75	35
3.95	3.3	9.45	18.85	4.58	7.71	14.02	4.55	4.85	36
4.45	3.45	9.6	19.1	4.81	6.47	12.86	3.2	6.25	41
3.6	1.8	5.25	11.75	a4.67	a6.26	h12.09	6.85	-.35	56
4.5	1.9	7.4	15.0	-	-	(i)	-	-	66
1.95	3.15	6.95	17.35	a.22	a5.01	j10.29	3.35	7.05	68
3.15	3.8	8.65	19.05	a1.66	a5.73	j11.41	2.75	7.65	69
3.6	3.75	8.9	18.9	a3.61	a7.56	k13.70	4.8	5.2	72
3.85	3.7	9.0	18.9	a3.56	a6.97	m12.87	3.85	6.05	73
1.4	2.5	5.65	16.15	(n)	(n)	p6.92	1.25	9.25	76
4.0	4.5	10.8	20.6	3.90	9.00	14.15	3.35	6.45	79
5.9	4.5	11.5	20.7	6.10	7.22	14.69	3.2	6.0	83
5.5	3.4	10.4	18.5	-	-	q13.06	2.66	5.44	92
7.6	7.45	17.5	26.6	4.63	10.03	15.96	-1.55	10.65	95
6.2	5.1	14.0	22.0	a5.39	a12.12	r18.59	4.6	3.4	98
5.75	4.6	13.0	21.8	(s)	(s)	(s)	-	-	100
5.3	3.8	12.5	19.3	a6.01	a8.86	t17.14	4.65	2.15	106
3.6	2.75	9.1	15.1	a4.06	a6.75	u14.42	5.3	.7	117
3.2	2.1	7.4	10.9	4.30	4.91	9.96	2.55	.95	124
3.1	2.0	7.1	10.8	4.35	4.18	9.53	2.45	1.25	125
6.2	4.45	12.25	20.25	5.42	12.65	20.10	7.85	.15	126
4.8	3.95	10.2	17.9	4.35	9.20	15.20	5.0	2.7	128
4.8	4.0	10.3	16.5	(v)	(v)	(v)	-	-	129
4.3	3.65	9.4	15.3	a2.95	a6.26	w12.65	3.25	2.65	130
3.85	3.3	8.65	13.95	(v)	(v)	(v)	-	-	131

k Corrected for 16,851,000,000 cubic feet of storage Mar. 9-22, equivalent to 2.54 inches over basin above Gulf Island Dam.

m Corrected for 17,712,000,000 cubic feet of storage Mar. 9-22, equivalent to 2.34 inches over basin above Auburn.

n Total discharge stored in Aziscohos Lake.

p Run-off determined from increase in storage in Aziscohos Lake Mar. 9-22, amounting to 3,759,000,000 cubic feet, or 6.92 inches over basin.

q Hydrograph for period Mar. 9-22 determined from outflow of Sebago Lake, corrected for daily changes in storage; total run-off for period corrected for additional storage of 3,148,000,000 cubic feet in other lakes and ponds.

r Corrected for 3,258,000,000 cubic feet of storage during flood period Mar. 9-22, equivalent to 1.08 inches over basin.

s Affected by storage and record incomplete because of partial dam failure.

t Corrected for 2,390,000,000 cubic feet of storage during flood period Mar. 9-22, equivalent to 2.27 inches over basin.

u Corrected for 887,500,000 cubic feet of storage in Lovell Lake, Great East Pond, Wilsons Pond, Horns Pond, Three (Milton) Ponds, equivalent to 2.60 inches over basin.

v Run-off data available for 14 days only. Total run-off for complete period not determined.

w Corrected for 8,955,000,000 cubic feet of storage in Lake Winnipesaukee Mar. 9-24, equivalent to 2.56 inches over drainage basin above Franklin Junction.

Table 13.- Rainfall and run-off
(Mean depth, in inches,

No. on fig. 37	Stream 1	Point of measurement 2	Drainage area (square miles) 3	Water content of snow Mar. 9 4
	Merrimack River Basin--Continued			
132	Merrimack River	Manchester, N. H.	2,854	5.0
133	Merrimack River	Lowell, Mass.	b4,424	4.0
134	Merrimack River	Lawrence, Mass.	b4,461	4.0
137	Bakers River	Rumney, N. H.	143	9.0
140	Smith River	Bristol, N. H.	85.8	5.0
141	Outlet of Lake Winnipesaukee	Lakeport, N. H.	363	6.0
146	Contoocook River	Penacook, N. H.	766	4.5
148	North Branch of Contoocook River	Antrim, N. H.	54.8	5.0
151	Blackwater River	Webster, N. H.	129	4.7
153	Suncook River	North Chichester, N. H.	157	4.7
159	Souhegan River	Merrimack, N. H.	171	3.2
163	North Branch of Nashua River	Leominster, Mass.	107	4.1
164	Nashua River	East Pepperill, Mass.	b324	3.6
167	South Branch of Nashua River	Clinton, Mass.	b108.84	4.0
-	Asnebumskit Brook	Eagleville, Mass.	9.43	2.8
169	Sudbury River	Framingham Center, Mass.	75.2	2.5
	Ipswich River Basin			
171	Ipswich River	Ipswich, Mass.	b124	1.5
	Mystic River Basin			
-	Outlet of Winchester Reservoir	Medford, Mass.	1.25	2.0
	Charles River Basin			
175	Charles River	Waltham, Mass.	b225	2.5
177	Stony Brook	Waltham, Mass.	23.6	2.0
	Taunton River Basin			
179	Taunton River	State Farm, Mass.	260	.8
180	Wading River	Norton, Mass.	42.4	1.0
	Providence River Basin			
182	Blackstone River	Worcester, Mass.	31.3	2.5
188	Blackstone River	Woonsocket, R. I.	417	2.1
198	Abbott Run	Adamsdale, R. I.	26.9	.8
	Pawtuxet River Basin			
205	Pawtuxet River	Kent, R. I.	92.8	2.5
	Thames River Basin			
220	Willimantic River	South Coventry, Conn.	121	2.6
223	Shetucket River	Willimantic, Conn.	401	2.4
-	Thames River	Mouth	1,471	2.3
227	Hop River	Columbia, Conn.	76.2	2.1
230	Natchaug River	Willimantic, Conn.	169	2.5
237	Quinebaug River	Quinebaug, Conn.	157	3.5
239	Quinebaug River	Putnam, Conn.	331	3.2
244	Quinebaug River	Jewett City, Conn.	711	2.6
253	Moosup River	Moosup, Conn.	83.5	2.2
256	Yantic River	Yantic, Conn.	88.6	1.5

a Run-off data available for 14 days only. Total run-off for complete period not determined.
b Does not include areas of diverted streams.
c Not corrected for storage.
d Corrected for storage in Lake Winnipesaukee, equivalent to 0.87 inch over effective area of 4,424 square miles above Lowell, Mass. and corrected for 1,010,000,000 cubic feet of inflow, equivalent to 0.10 inch over effective area, from deducted drainage area of South Branch of Nashua River above Clinton, Mass. Net correction, 7,945,000,000 cubic feet, equivalent to 0.77 inch over effective area.
e Corrected for storage in Lake Winnipesaukee.
f Some artificial storage; records not corrected.
g Run-off from net area of 324 square miles with no correction for released water from Wachusett Reservoir.

of floods of March 1936--Continued
over drainage basins)

Precipitation			Column 4 plus column 7	Direct run-off associated with each storm and total storm period			Column 11 minus column 7	Column 8 minus column 11	No. on fig. 37
First storm	Second storm	Total period Mar. 9-22		First storm	Second storm	Total storm period			
5	6	7	8	9	10	11	12	13	
3.8	3.25	8.6	13.6	(a)	(a)	(a)	-	-	132
3.5	3.3	8.2	12.2	c3.70	c6.25	d11.53	3.45	.55	133
3.5	3.3	8.2	12.2	(a)	(a)	(a)	-	-	134
2.95	3.5	8.15	17.15	7.99	9.71	18.58	10.45	-1.45	137
2.8	3.6	6.8	11.8	4.22	10.70	15.43	8.65	-3.65	140
4.2	3.05	9.45	15.45	e4.82	e6.62	e12.33	2.9	3.1	141
2.95	2.85	7.2	11.7	3.46	8.43	13.02	5.8	-1.3	146
2.4	2.6	6.9	11.9	4.96	10.51	16.65	9.75	-4.75	148
3.0	3.0	6.7	11.4	4.70	8.80	15.42	8.7	-4.0	151
3.8	3.1	8.9	13.6	6.60	7.14	14.93	6.05	-1.35	153
3.15	4.2	8.7	11.9	4.75	7.04	13.33	4.65	-1.45	159
3.5	5.0	9.45	13.55	f4.17	f6.60	f11.47	2.0	2.1	163
3.3	4.45	8.7	12.3	g4.63	g7.98	h11.27	2.55	1.05	164
3.4	4.55	8.7	12.7	(i)	(i)	j10.08	1.4	2.6	167
3.4	7.0	11.0	13.8	k4.91	k5.04	k11.18	.15	2.65	-
3.0	4.0	7.5	10.0	c4.54	c3.14	m9.92	2.4	.1	169
2.25	1.75	4.75	6.25	-	-	n8.65	3.9	-2.40	171
2.4	2.0	5.0	7.0	k4.40	k2.05	k7.07	2.05	-.05	-
2.7	2.8	5.9	7.0	(o)	(o)	(o)	-	-	175
2.5	2.8	5.5	7.5	k3.74	k1.38	k6.22	.7	1.3	177
2.4	1.5	4.6	5.4	2.48	1.16	3.84	.75	1.55	179
2.9	2.0	5.75	6.75	4.68	2.33	7.01	1.25	-.25	180
3.15	6.1	9.8	12.3	3.65	5.06	9.23	-.55	3.05	182
2.8	4.5	8.4	10.5	5.40	4.95	10.35	1.95	.15	188
2.5	3.0	7.0	7.8	4.51	3.14	7.65	.65	.15	198
2.5	3.0	6.8	9.3	p5.38	p3.57	p9.46	2.65	-.15	205
2.75	4.15	7.6	10.2	3.84	3.42	7.64	.05	2.55	220
2.8	4.2	7.85	10.25	4.88	4.53	9.88	2.05	.35	223
2.65	4.1	7.7	10.0	-	-	-	-	-	-
2.5	3.5	7.0	9.1	3.82	2.78	7.05	.05	2.05	227
3.0	4.65	8.55	11.05	4.90	4.09	9.48	.95	1.55	230
2.95	5.25	9.2	12.7	4.92	5.78	10.70	1.5	2.0	237
2.8	5.2	9.0	12.2	4.92	5.69	10.61	1.6	1.6	239
2.65	4.35	8.1	10.7	4.39	5.03	9.42	1.3	1.3	244
2.5	3.35	6.85	9.05	4.73	3.53	8.26	1.4	.8	253
2.5	3.05	6.65	8.15	4.08	2.56	7.29	.65	.85	256

h Run-off from net area of 324 square miles corrected for 1,010,000,000 cubic feet of inflow released from Wachusett Reservoir, equivalent to 1.34 inches over effective area.

i Run-off not determined.

j Run-off computed from observed flow corrected for storage in Wachusett Reservoir, diversions into the basin from Ware River, diversions from reservoir, and deduction of flow from Asnebumskit Brook, the area of which is not included in the net area.

k Run-off determined from outflow from reservoir corrected for daily change in storage.

m Corrected for storage in Framingham Reservoir No. 1, equivalent to 1.83 inches over effective area.

n Affected by storage; only one peak.

o Regulated; natural run-off not determined.

p Daily discharge corrected for storage in Scituate Reservoir.

Table 13.- Rainfall and run-off
(Mean depth, in inches,

No. on fig. 38	Stream 1	Point of measurement 2	Drainage area (square miles) 3	Water content of snow Mar. 9 4
	Connecticut River Basin			
257	Connecticut River	Pittsburgh, N. H.	83.0	9.0
258	Connecticut River	North Stratford, N. H.	796	7.8
259	Connecticut River	Dalton, N. H.	1,538	7.9
260	Connecticut River	Outlet of Fifteenmile Falls Reservoir, Barnet, Vt.	1,650	7.8
261	Connecticut River	McIndoes Falls, Vt.	2,200	7.7
262	Connecticut River	South Newbury, Vt.	2,825	7.8
263	Connecticut River	White River Junction, Vt.	4,068	7.6
264	Connecticut River	Vernon, Vt.	6,240	7.1
265	Connecticut River	Turners Falls, Mass.	7,138	6.8
266	Connecticut River	Montague City, Mass.	7,840	6.7
267	Connecticut River	Holycke, Mass.	8,284	6.5
269	Connecticut River	Thompsonville, Conn.	9,637	6.3
-	Connecticut River	Mouth	11,243	5.7
277	Passumpsic River	Passumpsic, Vt.	423	7.4
279	Moose River	St. Johnsbury, Vt.	126	7.5
281	Ammonoosuc River	Bath, N. H.	393	8.8
283	White River	Bethel, Vt.	241	8.6
285	White River	West Hartford, Vt.	690	7.4
288	Mascoma River	Mascoma, N. H.	153	6.5
293	Ottauquechee River	North Hartland, Vt.	221	7.0
294	Sugar River	West Claremont, N. H.	269	5.0
297	Black River	North Springfield, Vt.	158	7.4
301	West River	Newfane, Vt.	308	7.3
303	Ashuelot River	Gilsum, N. H.	71.1	4.8
305	Ashuelot River	Hinsdale, N. H.	420	4.7
306	Otter Brook	Keene, N. H.	41.8	5.0
307	South Branch of Ashuelot River	Marlboro, N. H.	36.6	5.5
308	Millers River	Winchendon, Mass.	83.8	5.5
310	Millers River	Erving, Mass.	370	5.2
312	Sip Pond Brook	Winchendon, Mass.	19.0	5.5
315	East Branch of Tully River	Athol, Mass.	49.9	5.5
316	Moss Brook	Wendell Depot, Mass.	12.2	4.8
317	Deerfield River	Davis Bridge, Vt.	184	8.0
318	Deerfield River	Charlemont, Mass.	362	7.4
320	East Branch of Deerfield River	Somerset, Vt.	30.0	8.1
326	Ware River	Cold Brook, Mass.	96.8	3.5
328	Ware River	Ware, Mass.	169	3.6
329	Ware River	Gibbs Crossing, Mass.	199	3.8
331	Chicopee River	Bircham Bend, Mass.	703	4.0
332	Swift River	West Ware, Mass.	186	4.5
334	Quaboag River	West Brimfield, Mass.	151	3.4
337	Westfield River	Knightville, Mass.	162	5.6
339	Westfield River	Westfield, Mass.	497	5.3
341	Middle Branch of Westfield River	Goss Heights, Mass.	52.6	6.0
342	West Branch of Westfield River	Huntingdon, Mass.	93.7	6.2
343	Westfield Little River	Westfield, Mass.	45.8	5.5
344	Scantic River	Broad Brook, Conn.	98.4	1.7
346	Farmington River	New Boston, Mass.	92.0	6.0
347	Farmington River	Riverton, Conn.	216	5.7
349	Farmington River	Tariffville, Conn.	578	4.0
353	Burlington Brook	Burlington, Conn.	4.1	3.0
354	Hockanum River	East Hartford, Conn.	74.5	1.1
355	Salmon River	East Hampton, Conn.	105	1.5

a Corrected for storage in First and Second Connecticut Lakes; volume stored Mar. 10-25, 1,654,000,000 cubic feet.
b Not corrected for storage.
c Corrected for storage in Fifteenmile Falls Reservoir only.
d Corrected for storage in First and Second Connecticut Lakes and in Fifteenmile Falls Reservoir.
e Corrected for storage in pond at McIndoes Falls only.
f Corrected for storage in pond at McIndoes Falls, in Fifteenmile Falls Reservoir, and in First and Second Connecticut Lakes.
g Corrected for storage on Sugar River, Mascoma River, and Connecticut River.
h Corrected for storage on Deerfield River, Sugar River, Mascoma River, and Connecticut River.
i Corrected for storage in Cobble Mountain Reservoir in addition to storage noted under h.

of floods of March 1936--Continued
over drainage basins)

Precipitation			Column 4 plus column 7	Direct run-off associated with each storm and total storm period			Column 11 minus column 7	Column 8 minus column 11	No. on fig. 38
First storm 5	Second storm 6	Total period Mar. 9-22 7	8	First storm 9	Second storm 10	Total storm period 11	12	13	
1.0	2.4	5.05	14.05	a1.82	a6.10	a9.00	3.95	5.05	257
1.3	1.8	4.85	12.65	b1.41	b5.81	a8.80	3.95	3.85	258
1.6	2.1	5.75	13.65	b1.71	b6.93	a9.10	3.35	4.55	259
1.65	2.1	5.7	13.5	c1.67	c7.27	d9.37	3.65	4.15	260
1.75	1.95	5.55	13.25	e1.60	e7.01	f8.99	3.45	4.25	261
1.9	2.05	5.85	13.65	b2.33	b7.05	f9.67	3.8	4.0	262
1.85	2.15	5.65	13.25	b3.34	b7.18	f10.72	5.05	2.55	263
2.1	2.45	6.0	13.1	b3.40	b6.16	g10.56	4.55	2.55	264
2.15	2.55	6.15	12.95	b3.62	b7.00	g10.84	4.7	2.1	265
2.2	2.7	6.3	13.0	b3.71	b6.72	h10.89	4.6	2.1	266
2.2	2.75	6.35	12.85	b4.26	b6.72	h11.42	5.05	1.45	267
2.25	2.9	6.45	12.75	b4.21	b6.54	i11.18	4.75	1.55	269
2.3	2.9	6.4	12.1	-	-	-	-	-	-
2.05	1.5	5.0	12.4	3.95	4.86	9.74	4.75	2.65	277
2.05	1.5	5.4	12.9	6.72	3.30	11.30	5.9	1.6	279
3.1	2.6	7.8	16.6	4.04	6.51	11.57	3.75	5.05	281
1.6	2.5	4.7	13.3	2.59	6.68	10.18	5.5	3.1	283
1.75	2.5	5.25	12.65	2.70	6.74	10.10	4.85	2.55	285
1.95	2.95	6.0	12.5	j2.80	j5.66	j9.56	3.55	2.95	288
2.5	2.7	6.3	13.3	3.05	7.45	11.42	5.1	1.9	293
2.0	2.7	5.9	10.9	b3.17	b6.10	k10.61	4.7	.3	294
3.0	3.2	6.8	14.2	3.43	6.20	10.85	4.05	3.35	297
3.0	3.65	7.65	14.95	2.94	7.39	11.70	4.05	3.25	301
1.75	2.5	6.0	10.8	3.66	6.72	11.34	5.35	-.55	303
2.15	2.85	6.8	11.5	3.63	7.26	10.89	4.1	.6	305
2.0	2.5	6.4	11.4	3.63	5.65	10.14	3.75	1.25	306
2.5	3.4	6.5	12.0	3.75	5.07	9.95	3.45	2.05	307
2.5	3.85	7.7	13.2	4.23	7.32	11.55	3.85	1.65	308
2.4	3.65	6.95	12.15	3.43	8.19	11.62	4.65	.55	310
2.5	3.5	6.9	12.4	1.92	7.04	9.84	2.95	2.55	312
2.5	3.5	6.5	12.0	3.63	6.32	10.55	4.05	1.45	315
2.5	3.5	6.5	11.3	3.02	6.62	10.26	3.75	1.05	316
3.15	4.0	8.25	16.25	m3.30	m7.41	n13.16	4.9	3.1	317
3.0	4.0	7.95	15.35	b1.90	b4.59	n13.64	5.7	1.7	318
3.0	3.5	7.5	15.6	o3.46	o6.32	o10.48	3.0	5.1	320
2.15	4.75	7.9	11.4	p4.13	p7.12	p11.25	3.35	.15	326
2.15	4.7	7.6	11.2	2.60	7.27	p10.59	3.0	.6	328
2.15	4.65	7.3	11.1	2.75	6.42	p9.77	2.45	1.35	329
2.1	4.25	7.2	11.2	4.52	4.34	p9.03	1.85	2.15	331
2.15	3.9	6.85	11.35	3.69	5.44	9.13	2.3	2.2	332
2.6	5.4	9.1	12.5	5.95	5.11	11.06	1.95	1.45	334
2.8	4.5	8.0	13.6	2.93	7.47	11.47	3.45	2.15	337
2.95	4.25	8.0	13.3	3.55	5.67	q10.96	2.95	2.35	339
3.1	4.8	8.5	14.5	4.41	6.77	11.92	3.4	2.6	341
3.15	4.7	8.2	14.4	3.24	6.16	10.18	2.0	4.2	342
3.25	4.5	8.1	13.6	q4.54	q7.54	q12.75	4.65	.85	343
1.6	3.2	5.3	7.0	2.76	2.30	5.64	.35	1.35	344
2.65	4.0	7.3	13.3	b3.58	b5.66	r11.65	4.35	1.65	346
3.0	3.7	7.4	13.1	b3.11	b5.08	r9.47	2.05	3.65	347
3.1	3.1	6.95	10.95	b3.80	b4.56	s9.17	2.2	1.8	349
3.5	2.6	7.0	10.0	4.38	3.03	8.06	1.05	1.95	353
2.35	3.05	5.55	6.65	b1.88	b1.46	t4.96	-.6	1.7	354
2.5	2.5	6.5	8.0	4.07	2.02	6.67	.15	1.35	355

j Corrected for storage in Mascoma and Crystal Lakes, Goose and Grafton Ponds.
k Corrected for storage in Lake Sunapee; volume stored Mar. 9-22, 840,000,000 cubic feet.
m Corrected for storage in Harriman Reservoir only.
n Corrected for storage in Harriman and Somerset Reservoirs.
o Corrected for storage in Somerset Reservoir.
p Run-off includes diversion for Boston water supply; total diversions Mar. 11-14, 18, 3,217 sec.-ft. days.
q Corrected for storage in Cobble Mountain Reservoir.
r Corrected for storage in Otis Reservoir.
s Corrected for storage in Otis, Nepaug, East Branch, and Barkhamsted Reservoirs.
t Corrected for storage in Shenipsit Lake.

Table 13.- Rainfall and run-off
(Mean depth, in inches,

No. on fig. 38	Stream 1	Point of measurement 2	Drainage area (square miles) 3	Water content of snow Mar. 9 4
	Quinnipiac River Basin			
357	Quinnipiac River	Wallingford, Conn.	109	1.0
	Housatonic River Basin			
360	Housatonic River	Coltsville, Mass.	57.1	6.2
366	Housatonic River	Great Barrington, Mass.	280	5.6
368	Housatonic River	Falls Village, Conn.	632	5.0
371	Housatonic River	Stevenson, Conn.	1,545	4.0
-	Housatonic River	Mouth	1,949	3.8
373	Tenmile River	Gaylordsville, Conn.	204	3.8
374	Still River	Lanesville, Conn.	68.5	2.5
377	Shepaug River	Roxbury, Conn.	133	4.2
378	Pomperaug River	Southbury, Conn.	75.3	3.5
380	Naugatuck River	Thomaston, Conn.	71.9	4.7
381	Naugatuck River	Naugatuck, Conn.	246	3.7
382	Leadmine Brook	Thomaston, Conn.	24.0	4.5
	Saugatuck River Basin			
384	Saugatuck River	Westport, Conn.	77.5	2.5
	St. Lawrence River Basin			
385	Poultney River	Fair Haven, Vt.	187	3.6
387	Otter Creek	Center Rutland, Vt.	307	7.0
389	Otter Creek	Middlebury, Vt.	628	6.5
392	Winooski River	Montpelier, Vt.	433	7.4
393	Winooski River	Essex Junction, Vt.	1,079	6.3
394	Jail Branch	East Barre, Vt.	33.0	7.5
396	North Branch of Winooski River	Wrightsville, Vt.	69.2	6.5
398	Dog River	Northfield Falls, Vt.	76.1	7.6
399	Mad River	Moretown, Vt.	139	6.9
402	Waterbury River	Waterbury, Vt.	111	4.8
404	Lamoille River	Johnson, Vt.	335	5.6
405	Lamoille River	Milton, Vt.	723	4.4
408	Missisquoi River	North Troy, Vt.	131	4.2
409	Missisquoi River	Richford, Vt.	479	3.7
414	Clyde River	Newport, Vt.	140	6.5

a Not corrected for storage.
b Corrected for storage during flood period in Candlewood Lake and Shepaug Reservoir, equivalent to 0.22 inch over drainage basin.
c Corrected for storage in Shepaug Reservoir, equivalent to 0.02 inch over drainage basin.
d Only one peak.

of floods of March 1936--Continued
over drainage basins)

Precipitation			Column 4 plus column 7	Direct run-off associated with each storm and total storm period			Column 11 minus column 7	Column 8 minus column 11	No. on fig. 38
First storm 5	Second storm 6	Total period Mar. 9-22 7	8	First storm 9	Second storm 10	Total storm period 11	12	13	
2.9	2.5	6.0	7.0	2.55	1.50	4.26	-1.75	2.75	357
2.5	4.3	6.9	13.1	3.72	6.94	11.17	4.25	1.95	360
2.1	3.3	5.6	11.2	4.26	5.09	9.35	3.75	1.85	366
2.15	2.85	5.3	10.3	4.57	4.07	8.64	3.35	1.65	368
2.4	2.55	5.45	9.45	a4.40	a3.07	b8.42	2.95	1.05	371
2.6	2.6	5.6	9.4	-	-	-	-	-	-
2.0	2.0	5.0	8.8	4.87	2.55	7.89	2.9	.9	373
2.5	2.5	5.5	8.0	3.14	2.09	5.53	.05	2.45	374
3.0	2.5	6.5	10.7	a5.27	a4.90	c10.66	4.15	.05	377
3.25	2.5	5.75	9.25	4.77	1.95	7.03	1.3	2.2	378
3.3	3.2	6.95	11.65	5.42	4.11	10.19	3.25	1.45	380
3.6	2.75	6.5	10.2	3.69	2.56	6.85	.35	3.35	381
3.25	2.5	6.0	10.5	5.28	3.32	9.20	3.25	1.3	382
2.5	2.5	5.6	-	-	-	-	-	-	384
2.05	2.5	4.8	8.4	3.32	4.58	7.90	3.1	.5	385
2.0	2.5	5.0	12.0	3.24	4.00	7.64	2.65	4.35	387
1.85	2.45	4.7	11.2	(d)	(d)	8.46	3.75	2.75	389
1.5	2.4	4.95	12.35	a3.33	a5.13	e10.02	5.05	2.35	392
1.5	2.05	4.5	10.8	a3.99	a4.87	e9.84	5.35	.95	393
1.5	2.5	5.5	13.0	f3.57	f6.75	f11.10	5.6	1.9	394
1.5	2.0	4.5	11.0	g2.45	g5.83	g9.18	4.7	1.8	396
1.5	2.5	4.75	12.35	2.86	6.94	10.82	6.05	1.55	398
1.5	2.2	4.5	11.4	3.07	6.37	10.07	5.55	1.35	399
1.5	1.75	4.75	9.55	3.06	5.25	9.07	4.3	.5	402
1.6	1.55	4.25	9.85	2.74	4.79	7.98	3.75	1.85	404
1.55	1.5	3.85	8.25	3.34	4.04	7.82	3.95	.45	405
1.5	.9	3.5	7.7	2.74	4.49	7.77	4.25	-.05	408
1.45	.75	3.45	7.15	3.20	5.28	8.48	5.05	-1.35	409
1.5	1.25	3.6	10.1	(d)	(d)	8.95	5.35	1.05	414

e Corrected for 1,110,000,000 cubic feet of storage Mar. 9-23 in detention reservoirs on Jail Branch and North Branch, equivalent to 1.10 inches over basin above Montpelier and to 0.40 inch over basin above Essex Junction.

f Corrected for storage in detention reservoir at East Barre.

g Corrected for storage in detention reservoir at Wrightsville.

In many of the basins in the southern part of New England, where there was relatively less snow on March 9 than in the northern basins, the run-off during the second flood was generally less than the precipitation during the second storm. This indicates that in those basins the greater part of the water content of the snow appeared as run-off during the first storm. In all the northern basins, however, where there were large quantities of snow, the snow water contributed during the second flood greatly exceeded the contribution during the first flood and averaged between 3 and 5 inches.

Column 11 is the total direct run-off associated with the total storm precipitation and the melting snow. If all the data are correct, a measure of the extent to which melting snow contributed to the direct run-off is indicated by the excess of the run-off shown in column 11 over the total storm precipitation shown in column 7. This difference is shown in column 12. The minimum total contribution from snow apparently was approximately proportional to the amount of water in the form of snow and ice on March 9 and ranged from about 1 inch in the Thames River Basin to between 4½ and 5 inches in basins in northern New England. These figures represent the minimum snow contribution under the assumption that all of the rain during the storm period appeared as run-off.

Errors in basic data are indicated where the residual shown in column 12 exceeds the estimated water content of snow shown in column 4. Such discrepancies are probably caused by errors in the figures for snow unless otherwise explained. Column 13 shows the difference between the run-off indicated in column 11 and the combined water content of the snow and storm precipitation as shown in column 8. The positive figures in this column represent within the limits of accuracy of the basic data the total amount of water in inches of depth over the drainage basin not accounted for by the direct run-off. This residual may have consisted of some or all of the following parts: (a) Water content of snow that did not appear as run-off during the period analyzed, (b) total natural surface storage and in a few places artificial storage or diversion where records of such items were lacking, (c) infiltration that did not appear as stream flow as analyzed, and (d) evaporation and other losses.

Basin averages indicate that the accumulated natural surface storage, infiltration, and evaporation during the flood period ranged from about 1.4 inches in the Thames River Basin to about 2.6 inches in the

Penobscot, Androscoggin, and Merrimack River Basins, with an average of about 2 inches for all the basins in New England that were affected by the flood.

In arriving at this estimate for New England the records of 337 precipitation stations, 202 snow surveys, and 122 snow observations have been compiled and analyzed. Hydrographs of mean daily discharge for the months of February, March, and April have been plotted and analyzed for 156 gaging stations. The estimates as they relate to New England, therefore, may be used with confidence as being representative of the amount of surface storage, evaporation, and infiltration that occurred during the flood period of March 1936. Analyses for other major drainage basins are published in Water-Supply Papers 799 and 800 and show comparable estimates as follows: Hudson River Basin above Mechanicville, N. Y., 3.2 inches (includes snow remaining after Mar. 22); Delaware River Basin above Riegelsville, N. J., 0.8 inch; Susquehanna River Basin above Harrisburg, Pa., 1.8 inches; Potomac River Basin above Washington, D. C., 1.65 inches; and James River Basin above Richmond, Va., 2.2 inches.

The general uniformity of results suggests that for the New England area and for other areas affected by the flood for which records are available the direct run-off was a function of the total amount of water in the area in the form of rain and melted snow and that differences in cover, topography, channel conditions, and other features apparently had little influence on the total direct run-off. These factors, however, may have influenced the concentration of the run-off with respect to time, as measured by the ratio between the direct run-off during the maximum day of each flood and the total direct run-off during each flood. Preliminary analyses of the hydrographs for all the gaging stations in New England indicate that at about 10 percent of the stations the direct run-off during the maximum day was 40 percent or more of the total run-off. These high ratios were obtained for gaging stations situated in headwater areas. At about 20 percent of the gaging stations the run-off during the maximum day was only 20 percent or less of the total run-off. The gaging stations where these low ratios were obtained were in general in the lower parts of the basins. At the remaining 70 percent of the gaging stations the ratios of the run-off during the maximum day to the total run-off were from 20 to 40 percent.

Deficiencies or errors in basic data are suggested where minus quantities are shown in column 13 or, in other words, where the run-off is shown as exceeding the indicated water available for run-off.

There are deficiencies in information regarding snow for all areas where snow surveys are not available for the determination of the snow depth and its water content. Estimates of water content of the snow that are based solely on snow depths as recorded at stations in urban areas are generally too small. During the floods of March 1936 there was apparently a very considerable amount of water in the form of ice in the drainage basins in southern New England. Because of lack of information regarding the water content of this accumulated ice, no definite conclusions can be reached as to the relation between rainfall and run-off in this area during the flood period. So far as the rainfall characteristics of the storms during the period of March 9-22 are concerned, the analyses that have been made indicate insufficient basic precipitation data in the headwater areas of the Penobscot River, especially in the vicinity of Mount Katahdin, also along the eastern front of the Presidential Range in New Hampshire, and along the eastern slope of the divide between the Merrimack River and the Connecticut River. Analyses of other storm periods or of storms having different characteristics probably would disclose in a similar way other areas where the data are incomplete because of a lack of precipitation stations.

The individual items presented in the tables summarizing the results of the study of rainfall and run-off data may be subject to error. However, when the mass of data that entered into the compilation of these tables is taken into account, it seems that the composite results shown for major basins or for groups of minor basins may be very significant and close to the truth and as such should be of great value in the study of flood problems and flood remedial measures, especially those relating to operations in headwater areas.

Penobscot River Basin

Several factors make it difficult to analyze the relations of rainfall and run-off in the Penobscot River Basin. Ordinarily snow surveys are made in the basin during the later part of March, but in 1936 no surveys were made on account of the disruption of usual activities by the floods. Consequently the estimates of water content of the snow given for this basin in column 4, table 13, have been based on the results of snow surveys in the headwater areas of the Kennebec and Androscoggin Rivers. Furthermore, there are no precipitation stations that reflect any influence of the high altitude of Mount Katahdin on precipitation in the upper part of the basin. Because of these conditions the estimates of water in the basin shown in column 8, table 13, may be subject to some inaccuracy. In general, it is believed that the figures presented may underestimate rather than overestimate the snow and rainfall in the basin.

In addition to the large amounts of artificial storage in the basin (more than 13,180,000.000 cubic feet of storage capacity was filled with water between March 9 and March 22), there is a large amount of natural lake and channel storage, all of which delayed the direct run-off during the floods, making analyses of the run-off difficult and the results somewhat uncertain. On most of the basins of comparable size for which the records have been analyzed the hydrograph study indicates that the greater part of the run-off resulting from the great March storm and melting snow had passed out of the basins by early in April. Because of the large lake and channel storage in the Penobscot River Basin, the direct run-off continued up to the middle of April and perhaps somewhat later. Because of the retardation of direct run-off it is believed that the estimates of total run-off shown in column 11 include practically all of the water content of snow that may have been on the ground on March 22.

All the tributary basins except those of the Piscataquis River above Dover-Foxcroft and the Pleasant River above Milo have large amounts of artificial storage. On these two basins, where natural flow conditions prevail, the run-off during the first flood amounted to about 5.6 inches. The precipitation during the first storm was 4.3 inches, indicating a contribution of about 1.3 inches of melted snow to the run-off of that storm. For the same two basins the direct run-off during the second flood, compared with the precipitation during the second storm, indicated a snow contribution of nearly 5 inches. In the total run-off from both storms a minimum snow contribution of somewhat over 6 inches is shown. If it can be assumed that the run-off as shown includes all the water from the snow, the residual of 2.6 inches shown in column 13 for these two basins represents the amount of infiltration, natural storage, and losses during the flood period.

The ratios of the direct run-off during the peak day of each flood to the total run-off during the same flood were between 17 and 24 percent. These ratios are characteristic of basins with large amounts of natural storage and small slopes such as exist in the Penobscot River Basin.

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Kennebec River Basin

Rainfall and run-off relations in the Kennebec River Basin are complicated by artificial regulation in Moosehead Lake and lakes above it, where over 13,600,000,000 cubic feet of water was stored during the flood period March 9 to 22, and in addition by the storage of about 4,300,000,000 cubic feet on tributary streams. Natural run-off conditions prevail in only three of the basins - namely, Austin Stream and the Carrabassett and Sandy Rivers. Averages at the gaging stations on these three streams indicate that the direct run-off during the first flood was 4.9 inches and the average rainfall during the first storm was 4.3 inches, indicating a minimum contribution of water from melting snow of 0.6 inch. The run-off during the second flood averaged 6.9 inches and the precipitation during the second storm was 3.3 inches, indicating a minimum snow contribution during the second flood of 3.6 inches. The indicated average contribution during the entire period was between 3 and 4 inches. The residual between rainfall and run-off as shown in column 13, table 13, is believed to include a very considerable amount of water in the form of snow storage on March 22 which is not included in the indicated run-off during the storm period.

On the basis of general observations, it is estimated that the amount of water in the snow on March 22 ranged from somewhat less than 4 inches in the Carrabassett and Sandy River Basins to 6 inches in the Dead River Basin. These estimates and assumptions indicate that the infiltration, surface storage, evaporation, and other losses amounted to about 2 inches in the Kennebec River Basin. The excess of run-off over available water supply as shown for the gaging station on the Sebasticook River at Pittsfield probably results from an underestimation of the storm precipitation and water content of the snow on March 9.

Androscoggin and Presumpscot River Basins

Rainfall and run-off relations in the Androscoggin and Presumpscot River Basins were complicated by large amounts of artificial storage (more than 17,700,000,000 cubic feet in the former and 8,900,000,000 cubic feet in the latter) and also by the snow cover of 35 to over 40 inches, part of which did not appear as stream flow associated with the floods. Only in two of the tributary rivers - the Swift and Little Androscoggin - was the stream flow unaffected by artificial storage. For the other rivers in these basins the total direct run-off during the flood period, as shown in column 11, table 13, has been corrected for storage. It has not been considered practicable, however, to attempt to apply the corrections for each flood separately, and therefore the figures given in columns 9 and 10 represent observed run-off and not corrected run-off except for the Swift and Little Androscoggin Rivers.

The snow estimates are based on results of snow surveys presented in the section on "Meteorologic and hydrologic conditions" in this report. It has been estimated that on these two basins there was between 3 and 4 inches of the water content of the snow that did not appear as stream flow during the flood periods as determined from the analysis of run-off. In other words, the residual shown in column 13, table 13, includes on the average between 3 and 4 inches of water in the form of snow remaining on the ground after March 22. The arithmetical average of the observed precipitation at 12 stations within these basins gave results consistent with determinations made by the isohyetal method, in which some weight was given to the influence of altitude.

It is interesting to note that in the two subsidiary river basins in the Androscoggin River Basin where natural conditions prevailed there was, when the first storm occurred, about 35 to 40 inches of snow on the ground. The run-off after the first storm was approximately the same as the total precipitation during the first storm, thus indicating no material change in the water content of the snow or storage. The run-off during the second flood, however, greatly exceeded the storm precipitation. For the Androscoggin River Basin as a whole, the minimum run-off that can be attributed to snow (column 12) was 3.2 inches. This is about the same figure as was obtained for basins like that of the more southerly Housatonic River, where the run-off attributable to snow was 2.9 inches, although the water content of the snow on March 9 averaged less than one-half of that in the Androscoggin River Basin.

Taking into account all the records except those for the Magalloway River at Aziscohos Dam and the Presumpscot River at the outlet of Sebago Lake, where the flow was to a large extent controlled by storage, we find that the combined water content of snow and the storm precipitation averaged about 19 inches. The run-off during the two floods was nearly 13 inches, leaving a residual of about 6.0 inches, and it is probable that from 3 to 5 inches of this residual was in the form of snow. From the available information it can be assumed that 4 inches is a fairly representative figure for the water content of the snow remaining on the ground. Therefore it appears that the infiltration, evaporation, surface storage (other than in the form of snow), and other losses must have amounted to about 2.0 inches or more.

With a given temperature and a heavy rainfall such as occurred during the two storm periods, there is apparently a limit to the amount of run-off that will be contributed by a thick snow cover such as 35 to 40 inches. Average figures for run-off from melting snow in the basins under consideration indicate that the contributions in this flood were between 3 and 4 inches. This amount in such a flood apparently depends very largely on the temperature. Although no studies have been made of run-off ratios when there was no snow there seems to be little indication that a thick snow cover acted as a retarding agent in materially delaying the time of concentration of the flood waters, for in the Little Androscoggin River Basin the ratio of run-off during the maximum day of each flood to the total flood run-off was about 32 percent, and in the Swift River Basin it was between 33 and 42 percent. The flow at the other gaging stations in these basins is regulated so extensively that comparable figures cannot be presented.

Saco and Piscataqua River Basins

A study of the water sources of the floods in the Saco River Basin is complicated by the absence of precipitation records in that part of the basin east of Pinkham Notch and Bartlett, N. H. Precipitation records at Hiram, Maine, are incomplete for the storm period, but records are available at Sebago Lake and North Bridgton, Maine. These stations, however, are at low altitudes, and consequently there are few if any data upon which to base the distribution of precipitation and its diminution eastward from the maximum of 22.43 inches recorded at Pinkham Notch.

It appears from a study of rainfall and run-off relations for the Saco River at Conway, N. H., that the computed precipitation of 17.5 inches over the basin (column 7, table 13) is more than that which actually occurred. In other words, the isohyetals for the higher rainfalls shown on figures 13, 17, and 21 include too wide an area in the western part of the basin. This probable inaccuracy, coupled with the large amount of water in the snow after the flood, is reflected in the indicated large residual of 10.65 inches in column 13.

The snow estimates are based on snow surveys and should be fairly indicative of actual conditions, but there is considerable uncertainty as to the amount of water in the form of snow remaining on the basins at the end of the storm period, the run-off from which is not included in the total indicated run-off shown in column 11. There may have been 5 or 6 inches of water in the snow in the upper parts of the basin on March 22, which would not be included in the estimated direct run-off for the gaging station at Conway, N. H., but which would be included in the estimated direct run-off at the lower station at Cornish, Maine. This discrepancy arises from the fact that the direct storm run-off at Cornish is spread over a considerably longer period than that at Conway by reason of the large amounts of intervening channel storage, estimated as more than 6,000,000,000 cubic feet, so that run-off from later melting snows may be reflected in the results for the lower station.

In view of the possible errors in the rainfall determinations and the uncertainty with respect to run-off from snow, coupled with the influence of the large amounts of channel storage, it is impracticable to present at this time a satisfactory analysis of rainfall and run-off relations for the upper Saco River Basin. That there was an exceptionally large amount of water on the basin in the form of snow and rain, however, is indicated by the run-off of over 17 inches from the 1,572 square miles of drainage area in the Saco River Basin above West Buxton, Maine.

There is considerable natural and artificial storage in the basins of the Ossipee River, tributary to the Saco River, and the Salmon Falls and Lamprey Rivers, tributaries to the Piscataqua River, and the corrections for the storage in these basins may be subject to question. On the assumption, however, that the precipitation and snow records are correct, there is an indicated residual (column 13) averaging somewhat over 1 inch, which represents the infiltration, surface storage, and evaporation in these basins. In all probability the total amount of water in the form of rain and snow in these basins is somewhat underestimated, as it is known that there are large amounts of natural storage in the Lamprey River above New Market, and yet the total indicated residual for that basin is somewhat less than 1 inch.

In general, the estimates of water content of the snow in these basins are based on percentage of depths of snow on the ground in urban areas, rather than on snow surveys, and in all probability they may indicate a smaller amount of water than was actually available over the entire areas of the basins.

Merrimack River Basin

The study of rainfall and run-off relations in the Merrimack River Basin, regardless of the complications caused by artificial storage and thick snow cover, has disclosed a serious deficiency in the basic meteorologic data necessary for a satisfactory analysis and comparison of the rainfall and run-off of these two floods. The estimates of water in the form of snow and the storm precipitation were compiled in the manner previously described, and all compilations relating thereto for this and other basins were completed prior to the time when the run-off records became available. Thus the quantities of precipitation in all the basins were determined independently of a knowledge of the run-off.

In most of the basins analyzed, from the James River in Virginia to and including the Penobscot River in Maine, the results of the studies have been so consistent that the general reasonableness and accuracy of the data presented seem assured. In the Merrimack River Basin, however, inconsistencies are shown in seven nearly contiguous subordinate basins. The reasons for these inconsistencies are discussed beyond.

Except for snow surveys made for the area tributary to Lake Winnipesaukee and measurements of snow depths at a few Weather Bureau stations, the estimates of water content of snow on March 9 have of necessity been based on observations made in adjacent basins. The accuracy of the estimates of water content is therefore open to question, although over much of the area they are believed to represent approximately the actual conditions. The figures for rainfall have been based on observations at 32 stations in the Merrimack River Basin, and it was believed that the isohyetal lines based on these observations would represent actual conditions fairly well, especially in view of the fact that some weight was given to the effect of altitude. The comparison of rainfall and run-off for the Bakers, Smith, Contoocook, Blackwater, Suncook, and Souhegan River Basins in west-central and southwestern New Hampshire, however, indicates considerable error in the estimates.

The average run-off for these basins during the first flood was 3.80 inches, and the indicated average precipitation during the first storm was 3 inches, indicating a minimum snow contribution of 0.8 inch, closely comparable with conditions in the Connecticut River Basin. During the second storm the average run-off for the seven basins was 8.90 inches. The indicated precipitation of the second storm was only 3.3 inches, thus indicating a snow-water contribution of 5.6 inches. As the average snow content at the beginning of the first storm was only 5.4 inches, of which about 1 inch probably ran off during the first flood, it is apparent that the indicated run-off during the second flood exceeded the indicated water available for run-off by 1 to 2 inches. The average indicated run-off for the total flood period for the seven basins exceeded the total indicated water available by about 2½ inches. If it is assumed that 2 inches represents a fair estimate of the probable infiltration, surface storage, and other losses, it would appear that there is a net error of 4 to 5 inches in the figures given for available water for these seven basins.

The indicated residual of 2.65 inches for the Merrimack River above Franklin Junction appears reasonable when it is considered that this result may include some water in the form of unmelted snow on March 22. The indicated residuals for the minor basins in the southern part of the Merrimack Basin also appear reasonable. The indicated residual for the entire basin above Lowell, Mass., amounting to only about half an inch, appears too low on the basis of results obtained for other major basins, and it seems that there must be some error in the indicated amounts of snow and rain in the central portion of the basin, especially in the basins draining the eastern slope of the divide between the Merrimack and Connecticut Rivers. This inference supports the conclusion in the preceding paragraph reached after a consideration of the results obtained from several tributary basins.

The precipitation in this area has of necessity been based on records collected at Plymouth, Franklin, Concord, Manchester, and Nashua, N. H., in the Merrimack Valley, and Hanover, N. H., Bellows Falls, Vt., and Keene, N. H., in the Connecticut River Valley. Examination of the maps showing lines of equal precipitation and water content of snow in this area indicates that it would be possible to revise the results to show greater depths and still be consistent with the recorded precipitation at the stations indicated. An examination of the rainfall and run-off relations, however, shows that altitude was not of necessity a controlling factor, because in the Connecticut River Basin rainfall and run-off relations seem consistent without regard to altitude. It appears, therefore, that during the second storm and possibly during the first storm the precipitation on the eastern slope of the divide between the Merrimack and Connecticut Rivers was probably much heavier than that indicated by any of the precipitation stations. Likewise, it is possible that the water content of snow in this area was somewhat greater than that indicated by the lines of water content of snow as drawn

In the headwater areas of the East Branch of the Pemigewasset River the water in the form of snow and the storm precipitation apparently exceeded 20 inches, an amount approaching the limit indicated for any of the minor basins in New England for which run-off records are available. The measured direct run-off during the total storm period in these headwater areas approximates 20 inches, thus indicating practically 100 percent run-off for the storm period. Unquestionably there was some water remaining in the form of snow after March 22. It seems reasonable to suppose that there was even more water in the basin than indicated by the estimate of 20 inches. There is strong reason to believe that the measured run-off of 20 inches during the storm period is reasonably correct, and this figure gives some idea of the amount of run-off that may be produced in a mountainous timbered headwater area from a combination of early spring rains and accumulations of snow. Nearly all minor basins in the Merrimack River Basin showed run-offs averaging from 14 to 16 inches during the storm period.

Ipswich, Mystic, Charles, Taunton, Providence, and Pawtuxet River Basins

The estimates for water content of the snow in eastern Massachusetts and Rhode Island are based entirely on observations of snow depths and the application of an estimated reduction factor. Most of the observations were made in urban areas and may not accurately represent conditions in rural areas. If there were large amounts of ice present in the basins on March 9 the coefficient of about 30 percent used to estimate water content may underestimate actual conditions. The figures for precipitation are believed to be correct with the possible exception of the precipitation during the second storm, for which the extent of the area of the greater depths may not be accurately defined. In general, however, there is reason to believe that the computations of water available, shown in column 7, are fairly accurate. In four of the basins the indicated total flood run-off expressed in inches over the drainage area is in excess of the indicated amount of water available for run-off. The indicated excesses (less than 1 inch) for the Wading River (Taunton River Basin), Pawtuxet River (Pawtuxet River Basin), and Winchester Reservoir Area (Mystic River Basin) are small and can readily be accounted for by deficiencies in meteorologic information. However, in the Ipswich River Basin the run-off is 2.4 inches in excess of the total indicated storm precipitation and water content of the snow. On the assumption that 2 inches represents the probable amount of infiltration and surface storage, it is apparent that the indicated amount of available water may be between 4 and 5 inches too low. The rainfall determinations in the Ipswich River Basin are based on records at a large number of stations, none of which show total storm precipitation in excess of 5 inches. Weather Bureau records indicate that about 11 inches of precipitation in the form of rain and snow fell in the Ipswich River Basin during January and February 1936. The measured run-off for these 2 months was 3.58 inches, leaving approximately 7 inches of water stored in the basin, in the form of either exceptionally compact snow or ice, not considering infiltration or evaporation during the 2 months. No data are available, however, to demonstrate conclusively that this quantity was in the basin on March 9.

The indicated residuals for the Taunton River above State Farm, Mass., the Blackstone River above Worcester, Mass., and the Stony Brook above Waltham, Mass., seem consistent with those for other basins in New England. The other basins in this general area show inconsistencies that cannot be easily explained, although it appears probable that they have been caused by errors in the estimated water content of the snow and ice at the beginning of the storm period. There may have been water in the form of ice and snow considerably in excess of the amount indicated by data obtained in the urban sections of these areas. The inability to ascertain this water content in a thickly populated area represents a serious deficiency in the basic hydrologic data.

Thames River Basin

There is, in general, little artificial storage in the Thames River Basin, so that the run-off as shown in table 13 represents natural-flow conditions. The water content of the snow, shown in column 4, is based on observations of snow depths, translated into water equivalent by the use of a coefficient of about 25 percent. The figures for precipitation should be reasonably accurate with the possible exception of those for the second storm in connection with which existing stations may not have accurately defined the areal extent of the heaviest precipitation.

The direct run-off during the first flood was about 4.5 inches as compared with a precipitation of 2.8 inches during the first storm, indicating a contribution from melting snow of 1.7 inches, a result comparable to those obtained in other basins. The run-off during the second flood was in general less than the precipitation during the second storm, indicating little if any contribution from snow. To the total run-off an average of about 1.1 inches was contributed by melting snow as indicated in column 12. The average residual shown for all the stations is 1.45 inches, a result somewhat less than is shown in other basins for infiltration, evaporation, and surface storage. If the indicated precipitation during the second storm is somewhat too low for certain of the tributary basins, the indicated residual would be correspondingly too low. The uniformity with which the residuals for other basins are found to lie between 1½ and 2½ inches suggests that the true figure for the Thames Basin, if it were known, would probably also be between these limits.

Connecticut River Basin

For the Connecticut River Basin as a whole, it is believed that the determinations of water content of the snow and storm precipitation as shown in table 13 are reasonably accurate. The snow estimates were based largely on extensive snow surveys by the New England Power Co. and the New England Power Association. The estimates of storm precipitation were based on records at 110 places in the basin, and the arithmetical averages of these observations closely agree with the results obtained by the use of isohyetals. The comparative uniformity of the relations between rainfall and run-off shown in table 13 promotes confidence in the records and in their interpretations as a whole. In only one basin, that of the Ashuelot River above Gilsum, N. H., is there a discrepancy in the relations. This basin is adjacent to the Contoocook River Basin, tributary to the Merrimack River Basin, and it appears that the deficiencies in meteorologic data as discussed for the Merrimack River Basin are present also in the Ashuelot River Basin.

The observed discharge at all the river-measuring stations on the Connecticut River and also on most of its important tributaries was affected by storage. The run-off for the total flood period shown in column 11, table 13, for these stations was corrected for known artificial storage, but the run-off for the component flood rises for these stations was not corrected for storage except where noted, and the footnotes in table 13 indicate all run-off estimates that do not approximate natural-flow conditions. All available information relating to the operation of the storage reservoirs is presented elsewhere in this report. Briefly, the run-off shown for the Connecticut River at First Connecticut Lake, near Pittsburg, N. H., was corrected for storage of 1,654,000,000 cubic feet in First and Second Connecticut Lakes. This amount of storage was equivalent to 0.90 inch over the basin above North Stratford, N. H., and 0.46 inch over the basin above Dalton, N. H. The run-off for each flood at the outlet of Fifteenmile Falls Reservoir was corrected for the storage in that reservoir and the total run-off for this storage (net total 312,700,000 cubic feet) plus all upstream storage, amounting to 0.43 inch above Barnet, Vt. A similar situation exists with respect to the records for the Connecticut River at McIndoes Falls, Vt., where the run-off during each flood was corrected for local storage only and the total run-off was corrected for all upstream storage, which amounted to about 0.38 inch over the area. The total run-off above South Newbury, Vt., was corrected for 1,926,000,000 cubic feet of storage, which amounted to 0.29 inch over the drainage area. This correction above White River Junction, Vt., amounted to 0.20 inch. Above Vernon, Vt., the correction was 0.25 inch, and included 1,624,000,000 cubic feet of storage on the Sugar and Mascoma Rivers. Above Turners Falls, Mass., the correction was 0.22 inch. The storage above Montague City, Mass., amounted to 0.46 inch over the entire area and included storage of 4,841,000,000 cubic feet in the Somerset and Harriman Reservoirs, in the Deerfield River Basin, and 3,550,000,000 cubic feet stored in the Connecticut River Basin above Turners Falls, a total of 8,391,000,000 cubic feet. The total storage correction was equivalent to 0.44 inch over the basin above Holyoke, Mass. A total of 1,286,000,000 cubic feet was stored in Cobble Mountain and Borden Brook Reservoirs on the Westfield Little River, tributary to the Connecticut River between Holyoke, Mass., and Thompsonville, Conn., which made the total storage for the 9,637 square miles above Thompsonville about 9,677-000,000 cubic feet.

In the Farmington River Basin the storage in Otis Reservoir during the flood period amounted to about 385,000,000 cubic feet. This was equivalent to 1.80 inches on the drainage area above New Boston, Mass., 0.76 inch above Riverton, Conn., and 0.29 inch above Tariffville, Conn. In Nepaug Reservoir about 323,000,000 cubic feet was stored during the flood period; in East Branch Reservoir, about 356,000,000 cubic feet; and in Barkhamsted Reservoir, about 8,000,000 cubic feet. The combined storage for these three reservoirs was about 687,000,000 cubic feet, equivalent to 0.52 inch on the area above Tariffville. The total storage in the Farmington River Basin, including Otis Reservoir, was about 1,072,000,000 cubic feet, which was equivalent to 0.81 inch over the drainage area above Tariffville. In the Hockanum River Basin at Shenipsit Lake the total storage amounted to about 188,000,000 cubic feet, equivalent to 1.09 inches over the drainage area above the East Hartford gage. In the 10,640 square miles of drainage area of the Connecticut River above and including the Hockanum River there was a total artificial storage of about 10,937,000,000 cubic feet, which, large as it seems, represented only 0.44 inch over that drainage area, or 3½ percent of the mean depth of 12½ inches of water on the basin in the form of precipitation and previously accumulated snow.*

In addition to the known artificial storage above indicated there was considerable storage in numerous artificially regulated ponds and small reservoirs, whose combined capacity is unknown.

On March 22 there was some snow in the Connecticut River Basin, especially above South Newbury, Vt., the run-off from which is not included in the flood run-off as analyzed. It is estimated on the basis of the run-off records above First Connecticut Lake, N. H., that the water equivalent of this unmelted snow may have amounted to several inches in the headwater areas and may have averaged between 1½ and 2 inches over the basin above South Newbury.

On the basis of differences between the total run-off at the gaging stations on the main Connecticut River and the total storm precipitation indicated in column 12, table 13, it is estimated that the minimum snow contribution to the total flood run-off was between 4 and 4½ inches over the basin as a whole, and that after deducting for the water in the snow remaining on the ground after the flood period, the residual shown in column 13, representing infiltration, surface storage, evaporation, and other losses, would be about 2 inches. The general accuracy of this

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* In this connection it is of interest to note that the so-called Miami (Ohio) storm of March 23-27, 1913, which was the largest northern storm of record up to that time with respect to average depth of precipitation and area covered, had an estimated average precipitation in 5 days of 9.5 inches over 10,000 square miles.

estimate is confirmed by the uniformity of results obtained on the forty tributary basins for which rainfall and run-off records have been analyzed.

The run-off during the first flood averaged 3½ inches for all the tributary basins, as compared with an average precipitation of 2½ inches during the first storm, or an indicated contribution of 1 inch for the run-off from melting snow. A comparison of the flood run-off during the second flood with the rainfall during the second storm indicated a contribution of water from melting snow of about 3½ inches in the basin above the mouth of the Deerfield River and ranging from 2 inches to zero in the basins south of the Deerfield. Comparison of the total flood run-off with the total storm precipitation indicates an average contribution from melting snow of about 4.4 inches in the basin above the Deerfield River and about 2.2 inches in lower portions of the basin. The residuals shown in column 13 indicate an average of 2.2 inches for all the tributary basins above the Deerfield River and 1.8 inches for all the basins below. In the upper part of the basin, at least, this residual includes some water in the form of snow remaining after March 22. In other words, the average infiltration, surface storage, and other losses, as indicated by these averages, amounted to approximately 2 inches.

Although there is considerable uniformity in the residual results, there is wide variation in the run-off concentration with respect to time, as indicated by the ratios between the run-off during the maximum day and the total run-off during each flood. These ratios ranged from about 13* percent for stations on the main stream to over 40 percent on the upper Westfield River and the Farmington River, which drain the eastern slopes of the Berkshire Hills. Drainage basins in which low ratios prevailed include those of the Ashuelot, Millers, Chicopee, Swift, and Quaboag Rivers.

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* A brief study of similar ratios of direct run-off at the river-measurement station formerly operated on the Connecticut River at Sunderland, Mass., for ten previous floods, two of which involved run-off from melting snow, and four resulted from typical isolated rainstorms, showed ratios between 17 and 25 percent, thus exceeding the ratios obtained for 1936. Brief studies for the Delaware and Susquehanna Rivers (Water-Supply Paper 799) show similar characteristics. The lower ratios for the flood rise of March 1936 may result from a combination of rain and melting snow that was peculiar to that flood.

Housatonic River Basin

No records are available for the water content of snow in the Housatonic Basin on March 9. The estimates shown in column 4, table 13, are based on observations of water content at comparable altitudes in basins north of the Housatonic River Basin and on a few observations of snow depths in northwestern Connecticut. In drawing the lines of equal water content shown on figure 28 some weight was given to the influence of altitude. The amount of the storm precipitation appears to be fairly well defined by records at 19 stations, and the arithmetical average of these records closely agrees with the average for the basin determined by the use of isohyetals.

Artificial storage above Stevenson, Conn., comprises 776,400,000 cubic feet in Candlewood Lake (Rocky River Reservoir) and 5,360,000 cubic feet in Shepaug Reservoir, at Woodville, Conn., which combined is equivalent to 0.22 inch over the area above Stevenson, Conn. Otherwise, the observed run-off represents natural-flow conditions.

At the beginning of the first storm the basin was covered with snow ranging in depth from 6 inches to 2 feet or more, the depths probably varying somewhat with the altitude. Precipitation during the first storm was unusually heavy over the southeastern part of the basin (see fig. 15), and the average precipitation over most of the basin exceeded that recorded during the second storm. This condition is the reverse of that found in most of the areas affected by the two storms and in the lower part of the Housatonic Basin resulted in higher peaks and larger run-off during the first flood than during the second flood. The direct run-off during the first flood was, in general, about 2 inches greater than the precipitation recorded during the first storm. At most of the gaging stations the run-off during the second flood was also greater than the precipitation during the second storm, indicating the presence of snow run-off during both floods. No snow was reported on the ground in the basin after March 18.

With the exception of the areas drained by the Shepaug River above Roxbury, Conn., and the Naugatuck River above Naugatuck, Conn., the differences between the total direct run-off and the total water available are remarkably consistent, averaging 1.70 inches over all the tributary streams and ranging from 1.95 inches to 1.05 inches on the main stream from Coltsville, Mass., to Stevenson, Conn. In view of the large amount of water in the basin in the form of snow and rain, averaging nearly 10 inches for the basin as a whole, with a maximum of over 13 inches, the indicated average difference of about 1.75 inches between rainfall and run-off seems notably small and may reflect the effects of frost and other factors in restricting infiltration.

The comparative uniformity of this difference, which represents natural surface storage, infiltration, and evaporation, inspires confidence in the reliability of the data and suggests that the total direct run-off from the basin was a residual between the available water and a quantity that was similar on the average for the different basins. Differences in cover, topography, channel conditions, and related features apparently had little influence on the total run-off of the flood. These factors may, however, have influenced the concentration of run-off with respect to time as measured by the ratio between the direct run-off during the maximum day of each flood and the total direct run-off during each flood. From 40 to 45 percent of the run-off during each flood occurred during the day of maximum run-off on the Pomperaug and Naugatuck Rivers, Leadmine Brook, and the Housatonic River above Coltsville. The ratio was from 20 to 30 percent for the Shepaug, Still, and Tenmile Rivers and for the Housatonic River at Stevenson, Conn., and from 15 to 20 percent for the Housatonic River at Great Barrington, Mass., and Falls Village, Conn.

St. Lawrence River Basin

Estimates of the water content of the snow on areas in Vermont tributary to the St. Lawrence River Basin on March 9 are based largely on observed depths of snow and reduction factors determined from snow surveys made in the upper Connecticut River Basin. As snow depths as measured along river valleys are generally less than the average snow depths at the higher altitudes in the more remote parts of the areas, the estimates of water content shown for some of the basin may be considerably in error. Insufficient information in regard to depths of snow and its water content in the Missisquoi River Basin is probably the reason why the indicated direct run-off from that basin is in excess of the total indicated water content of the snow and the storm precipitation.

Not including those areas affected by storage in detention reservoirs, the average run-off from the St. Lawrence River tributaries in Vermont during the first flood was about 3 inches and the precipitation during the first storm was about 1.6 inches, indicating a contribution of water from melting snow of 1.4 inches. The run-off during the second flood averaged 5.1 inches and the precipitation during the second storm was 1.8 inches, which indicates a snow contribution of 3.3 inches to the second flood. The average snow contribution to the total run-off was about 4.3 inches (column 12, table 13). Not including the two stations in the Missisquoi River Basin where the run-off was somewhat in excess of the total water indicated as available, the average residual shown in column 13 for infiltration, surface storage, and evaporation, was about 1.75 inches.

Those interested in the effect of channel storage on stream-flow characteristics are referred to the records for the gaging stations on Otter Creek, where the stream-flow characteristics are radically changed as a result of channel storage between Center Rutland and Middlebury, Vt. Instead of two distinct flood peaks, one on March 13 and one on March 19, the Middlebury record shows only one peak, on March 21, and the ratio of this peak to the total run-off is only about 7 percent as compared to ratios of about 20 percent at Center Rutland.

In the Winooski River Basin detention in the reservoirs had a similar effect on the downstream flow, and the effect was much more pronounced than that caused by the channel storage referred to above.

Effect of first storm on the second flood rise

As heretofore pointed out there were, in general, two distinct flood peaks during the flood period. Although in most areas the second peak was the larger of the two, in many basins both peaks rank as exceptional floods which, under the laws of probability, would be expected to occur but rarely. The interval between the two major storms that caused the floods was not long enough in most of the basins to permit the direct run-off from the first storm to pass out of the river systems before the rivers were required to accommodate the water of the second storm. As a result, stages and discharges during the second flood except on basins draining 100 square miles or less were greater than those that would have been caused by an isolated storm of a magnitude equivalent to that of the second storm.

The hydrograph analyses described in this section furnish a means for studying the portions of the stages and discharges of the second flood that were due to the first storm. Table 14 shows the results of such a study at a few selected river measurement stations.

Table 14.- Effect of first storm (Mar. 9-13) on the stages and discharges reached during the second flood rise

	Penobscot River at West Enfield, Maine	Merrimack River at Lowell, Mass.	Connecticut River at Montague City, Mass.	Connecticut River at Thompsonville, Conn.
Approximate water stage, in feet, March 9	5.5	43.0	9.0	1.3
Maximum discharge, in second-feet, observed during second flood rise	125,000	173,000	236,000	282,000
Maximum stage, in feet, observed during second flood rise	22.0	68.4	49.2	16.6
Estimated discharge, in second-feet, at time of second flood peak due only to first storm	32,000	21,000	45,000	50,000
Estimated discharge, in second-feet, at time of second flood peak if first storm had not occurred	93,000	152,000	191,000	232,000
Estimated maximum stage, in feet, which would have been reached if first storm had not occurred	18.3	66.0	44.2	14.2
Estimated increase in stage, in feet, at time of second flood peak caused by first storm	3.7	2.4	5.0	2.4

FLOOD CRESTS

During or immediately after the floods of March 1936 various agencies of the Federal and State governments, together with public-service companies and individuals, began the work of identifying and marking crest stages reached by the rivers in the flood areas. Field parties examined important streams to obtain comprehensive and systematic information from existing flood marks. Local organizations of the Works Progress Administration and the Corps of Engineers, U. S. Army, contributed in a notable way in these activities. Except as otherwise noted, the flood marks were referred to the mean sea level datum of the United States Coast and Geodetic Survey. Their relative positions were identified by distances along the rivers.

Table 15 presents records of flood-crest stages for the major river systems in the region covered by this report. These records are of special interest in presenting a limiting factor with respect to future developments along the rivers and in furnishing basic information as to velocity of transmission of flood crests, valley or flood-channel storage, the effects of channel constrictions, natural or artificial, and other aspects of river behavior. The table shows the observation points by reference to local features and river distances, date and time of crest (where known), and altitude of crest at available places of observation, generally sufficient in number for satisfactory definition of the profile of the flood crest along the river. Where observations were more plentiful than needed for adequate definition of a flood profile, selection for publication has been limited to those that are essential for that purpose. Some of the observations that were close together have been combined and the mean recorded as at one point. Certain observations that were obviously unreliable or that were impracticable of reference to mean sea level are not included.

The times of crest at river-measurement stations and at certain other points, such as power dams, are in general well established, and at many other points this information is approximate.

It has been found that the crests of floods within the building limits of cities and towns and at other places more or less distant from a river may, for various reasons, be materially different from those along the main river channel and seemingly inconsistent if consideration is not given to the effect of the slope. Consequently such apparent inconsistencies may appear to exist between local information and the records as herein published. Flood crests on opposite banks of a stream may differ materially because of the effects of bends and obstructions in the channel.

In the table "upstream" signifies that the observation was made at the upstream side of a bridge or other structure; "downstream" signifies that the observation was made at the downstream side of the structure.

For rivers of Maine, information of great practical value was collected regarding clearance heights of many bridges in relation to flood crests and other aspects of river stages. Such information is not generally included in this report but is available for examination in the district office of the Geological Survey at Augusta, Maine, by those who may be interested.

Table 15.-Flood crest stages

Stream and location	Miles above mouth	Date and time	Altitude in feet
Penobscot River Basin			
Penobscot River:			
Medway, Maine, headwater gage, left bank	105.4	--	a257.5
Medway, Maine, 40 feet upstream from highway bridge over mouth of East Branch Penobscot River, left bank	105.0	--	241.2
Mattawamkeag, Maine, 0.5 mile above mouth of Mattawamkeag River, left bank	93.9	--	200.8
Winn, Maine, on road to ferry, left bank	88.2	--	197.6
North Lincoln, Maine, on road to ferry, left bank	85.2	--	178.6
Lincoln Center, Maine, at Ferryman's house, left bank	81.3	--	178.4
Lincoln, Maine, at old concrete power house of Eastern Mfg. Co., left bank	79.6	--	177.7
Lincoln, Maine, at Stowell-McGregor mill, left bank	75.1	--	174.4
Enfield-Lincoln town line, 0.1 mile north of, left bank	73.9	--	175.5
Enfield-Lincoln town line, 0.3 mile south of, left bank	73.6	--	174.7
Enfield-Lincoln town line, 0.8 mile south of, left bank	73.1	--	167.6
Enfield-Lincoln town line, 1.1 miles south of, left bank	72.8	--	169.8
West Enfield, Maine, Bangor Hydro-Electric Co. headwater, left bank	67.6	--	b158.4
West Enfield, Maine, Bangor Hydro-Electric Co. tailwater, left bank	67.4	--	148.2
West Enfield, Maine, Advance Paper Co. pump house, right bank	66.8	Mar.21 1am	147.2
West Enfield, Maine, highway bridge, gage, left bank	66.7	Mar.21 1am	147.2
Passadumkeag, Maine, 300 feet above mouth of Passadumkeag River, left bank	62.3	Mar.21	144.4
Olamon, Maine, 800 feet below mouth of Olamon Stream, left bank	56.2	Mar.21	127.4
Costigan, Maine, post office, left bank	48.3	Mar.21	121.7
Milford, Maine, below Sunkhaze Stream, left bank	46.5	Mar.21	120.6
Milford, Maine, Bodwell dam, headwater gage, left bank	43.3	Mar.21	c107.1
Milford, Maine, Bodwell dam, at crest	43.3	Mar.21	106.0
Milford, Maine, Bodwell dam, tailwater gage, left bank	43.3	Mar.21	98.2
Old Town, Maine, Old Town Furniture Co., right bank	42.9	Mar.21	98.2
Old Town, Maine, 200 feet below R.R. bridge, right bank	42.8	Mar.21	96.6
Old Town, Maine, at Maine State Liquor Store No. 26, right bank	42.6	Mar.21	96.7
Old Town, Maine, below Maine Central R.R. Co. bridge, right bank	42.5	Mar.21	95.6
Old Town, Maine, Great Works dam, headwater, right bank	41.3	Mar.21	d88.2
Old Town, Maine, Great Works dam, tailwater, right bank	41.2	Mar.21	86.2
Bradley, Maine, mark on Groceau house, left bank	41.0	Mar.21	81.1
Old Town, Maine, 3,600 feet below dam, right bank	40.7	Mar.21	76.8
Orono, Maine, mouth of Stillwater River, right bank	38.0	Mar.21	58.7
Orono, Maine, International Paper Co., boiler room, right bank	37.9	Mar.21	56.6
Orono, Maine, International Paper Co., pulp mill, right bank	37.8	Mar.21	55.5
Orono, Maine, Ayers Island, hose house, right bank	37.4	Mar.21	55.8
Orono, Maine, Basin Mills, southeast abutment on east bridge, right bank	37.2	Mar.21	53.0
Orono, Maine, Basin Mills, barn at 31 Onion Street, right bank	37.1	Mar.21	50.6
Orono, Maine, Basin Mills, right bank	37.0	Mar.21	50.5
Veazie, Maine, dam of Bangor Hydro-Electric Co., headwater, right bank	34.4	Mar.21	e42.2
Veazie, Maine, 500 feet below dam, right bank	34.1	Mar.21	36.2
Bangor, Maine, 2,500 feet above Bangor dam, right bank	31.5	Mar.21	27.0
Bangor, Maine, Water Works dam, headwater, right bank	31.0	Mar.21	f26.5
Bangor, Maine, Water Works dam, tailwater, right bank	31.0	Mar.21	17.9
Bangor, Maine, Peoples Fish Market, right bank	29.3	Mar.21	15.4
Steele Point, Maine, mouth	0	--	--
Piscataquis River:			
Guilford, Maine, 300 feet above dam, left bank	48.8	Mar.20	g395.3
Guilford, Maine, 300 feet below dam, right bank	48.6	Mar.20	387.2
Guilford, Maine, just below Lows Bridge, U.S. Geological Survey gage, left bank	44.9	Mar.20 4am	373.9
Dover-Foxcroft, Maine, 100 feet above Water Works dam, left bank	42.0	Mar.20	360.5
Dover-Foxcroft, Maine, 100 feet below Water Works dam, left bank	42.0	Mar.20	h357.8

a Altitude of crest of dam, 253.7 feet.
b Altitude of crest of dam, 148.4 feet.
c Altitude of crest of dam, 97.2 feet.
d Altitude of crest of dam, 74.7 feet; of crest of side dam at forebay, 79.2 feet.
e Altitude of crest of main dam, 27.9 feet; of crest of side dam over tailrace, 31.9 feet.
f Altitude of crest, 14.4 feet.
g Altitude of crest of dam, 384.9 feet (original condition); after damage by flood, 381.0 feet.
h Altitude of crest of dam, 351.9 feet (original condition); after damage by flood, 348.5 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Penobscot River Basin--Continued			
Piscataquis River--Continued:			
Dover-Foxcroft, Maine, 100 feet above Foxcroft dam, left bank	40.3	Mar.20	i350.2
Dover-Foxcroft, Maine, Foxcroft dam, 150 feet downstream, left bank	40.2	Mar.20	345.1
Dover-Foxcroft, Maine, Foxcroft dam, 200 feet downstream, left bank	40.2	Mar.20	338.8
Dover-Foxcroft, Maine, 500 feet above Brown dam, left bank	39.9	Mar.20	j335.8
Dover-Foxcroft, Maine, canal gates at crest of Brown dam, left bank	39.8	Mar.20	334.6
Dover-Foxcroft, Maine, Brown dam, 500 feet below, left bank	39.7	Mar.20	313.5
South Sebec, Maine, 200 feet above highway bridge, left bank	30.2	Mar.20	290.0
South Sebec, Maine, farm of Charles Chase, left bank	30.1	Mar.20	288.8
Milo, Maine, home of J. Wilenski, 0.35 mile west of railroad, left bank	22.6	Mar.20	284.3
Milo, Maine, Laughing Water Camps, left bank	22.5	Mar.20	282.2
Medford, Maine, U.S. Geological Survey gage, left bank	16.0	Mar.20 6pm	263.4
Medford, Maine, mouth of Schoodic Stream, left bank	12.3	Mar.20	245.8
Medford, Maine, on Clapp's Rips, left bank	9.5	Mar.20	211.2
Medford, Maine, below Hardy Brook, left bank	6.9	Mar.20	176.8
Medford, Maine, 0.4 mile above Maxy Brook, left bank	5.4	Mar.20	172.1
Howland, Maine, 300 feet above Bangor Hydro-Electric Co. dam, right bank	0.1	Mar.20	k152.3
Howland, Maine, 100 feet below dam, right bank	0	Mar.20	147.2
Stillwater River:			
Stillwater, Maine, concrete bridge, east end, right bank	2.7	Mar.21	101.4
Stillwater, Maine, wooden bridge, 50 feet west of west end, right bank	2.7	Mar.21	102.6
Stillwater, Maine, northeast corner covered wooden bridge, abutment, left bank.	2.7	Mar.21	101.7
Stillwater, Maine, Stillwater dam, east abutment, left bank	2.6	Mar.21	98.3
Stillwater, Maine, Bangor Hydro-Electric Co. plant 8 inches above top of retaining wall, right bank	2.5	Mar.21	97.0
Stillwater, Maine, northwest corner of new power house, 0.25 foot below top of concrete foundation, right bank	2.5	Mar.21	84.0
Stillwater, Maine, residence of Prof. C. P. Weston, left bank	2.4	Mar.21	86.0
Orono, Maine, Mitchell's, 150 feet above highway bridge	0.5	Mar.21	81.7
Orono, Maine, Lurd's house, 13 Summer Street, 400 feet below highway bridge	0.4	Mar.21	79.5
Orono, Maine, top of wing wall on right bank, International Paper Co. dam	0.1	Mar.21	m78.1
Orono, Maine, boiler room of International Paper Co., left bank	0.1	Mar.21	56.6
Confluence with Penobscot River	0	--	--
Kennebec River Basin			
Kennebec River:			
Moosehead Lake Dam, headwater, left bank	164.7	Mar.19 8am	1,023.6
Moosehead, Maine, U.S. Geological Survey gage, 0.1 mile below dam, right bank	164.6	Mar.19 noon	1,017.9
Moosehead, Maine, railroad bridge, right bank	164.5	--	--
The Forks, Maine, U. S. Geological Survey gage, right bank	141.6	Mar.20 6am	577.6
The Forks, Maine, highway bridge	141.0	--	--
Dead River, mouth of, right bank	140.7	--	--
Bingham, Maine, Central Maine Power Co. Wyman dam above, headwater, left bank	119.2	Mar.20 7am	n485.4
Bingham, Maine, Central Maine Power Co. Wyman dam above, tailwater, left bank	119.2	Mar.20 7-12am	356.0
Austin Stream, railroad bridge, upstream abutment, 1 foot below girders, left bank	118.0	Mar.20	349.6
Austin Stream, mouth of, left bank	118.0	--	--
Bingham, Maine, U.S. Geological Survey gage, right bank	117.5	Mar.20 12:20pm	344.4
Bingham, Maine, south of highway bridge and U.S. Geological Survey gage, right bank	117.3	Mar.20	344.0

i Altitude of crest of dam, 340.2 feet.
j Altitude of crest of main dam, 362.2 feet; of crest of side dam, 325.2 feet.
k Altitude of crest of dam, 144.5 feet.
m Altitude of crest of dam, 70.0 feet; of concrete crest, 72.9 feet.
n Altitude of normal crest of dam, 485.0 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Kennebec River Basin--Continued			
Kennebec River--Continued:			
Solon, Maine, 0.15 mile above Carratank Falls dam, left bank	110.7	Mar.20 4pm	o315.2
Solon-Embden railroad bridge,	110.6	--	--
Solon-Embden highway bridge, left bank	109.0	Mar.20 4pm	288.0
North Anson, Maine, "Old Patterson Bridge", right bank	102.6	Mar.19 7-8pm	269.0
Carrabassett River, mouth of, right bank	101.3	--	--
North Anson, Maine, Carrabassett River highway bridge, 0.1 mile below, right bank	102.2	Mar.19	267.0
North Anson, Maine, Smith Oxbow Road, right bank	100.9	Mar.19	266.4
North Anson, Maine, 2.5 miles below, right bank	98.0	Mar.19	265.0
Madison, Maine, 1.0 mile above highway bridge, right bank	96.5	Mar.19	260.5
Madison, Maine, 0.3 mile above highway bridge, right bank	95.8	Mar.19	258.6
Madison, Maine, above railroad bridge, right bank	95.8	Mar.19	258.5
Madison-Anson railroad bridge	95.7	--	--
Madison, Mainê, above Great Northern Paper Co. dam, left bank	95.6	Mar.19 10-11pm	257.3
Madison, Maine, above Great Northern Paper Co. dam, right bank	95.6	Mar.19 10-11pm	255.9
Madison, Maine, Great Northern Paper Co. dam, headwater, right bank	95.5	Mar.19 10-11pm	p255.1
Madison, Maine, Great Northern Paper Co. dam, tailwater, right bank	95.4	Mar.19 10-11pm	239.6
Madison, Maine, Great Northern Paper Co. dam, 0.2 mile below, right bank	95.3	Mar.19	236.4
Madison, Maine, Hollingsworth & Whitney Co. dam, headwater, left bank	95.1	Mar.19 10-11pm	q228.6
Madison, Maine, Hollingsworth & Whitney Co. dam, tailwater, left bank	95.0	Mar.19 10-11pm	193.0
Sandy River, mouth of, right bank	92.9	--	187.7
Old Point Spring, right bank	92.5	Mar.19 or 20	186.9
Moore's Eddy, right bank	92.1	Mar.19 or 20	185.8
Wadleigh's Farm near railroad crossing, right bank	91.4	Mar.19 or 20	183.9
Bambazee Rips, Maine, right bank	89.9	Mar.19 or 20	178.5
Norridgewock, Maine, highway bridge	86.7	--	--
Norridgewock, Maine, grist mill, right bank	86.3	Mar.20 morning	171.7
Norridgewock, Maine, 0.8 mile below highway bridge, right bank	85.9	Mar.20 morning	171.8
Skowhegan Pond, Maine, right bank	81.7	Mar.20 morning	166.4
Skowhegan, Maine, south channel above highway bridge, right bank	81.6	Mar.20 morning	163.7
Skowhegan, Maine, highway bridge	81.5	--	--
Skowhegan, Maine, Central Maine Power Co. Weston dam, headwater, right channel, left bank	81.5	Mar.20 3-5am	r162.5
Skowhegan, Maine, Central Maine Powsr Co. Weston dam, tailwater, right channel, left bank	81.5	Mar.20 4-9am	150.0
Great Eddy, Maine, 1.0 mile below Skowhegan dam, left bank	80.5	Mar.20	137.2
Pine-dale Cabins, Maine, 2.0 miles below Skowhegan dam, left bank	79.5	Mar.20	134.9
Hinckley highway bridge, bottom of planking, right bank	73.2	--	126.5
Shawmut, Maine, Central Maine Power Co. dam, headwater, right bank	68.4	Mar.19 10:30pm	s118.5
Shawmut, Maine, Central Maine Power Co. dam, tailwater, generator room, right bank	68.4	Mar.19 10:30pm	105.2
Fairfield, Maine, Keys Fibre Co. dam (partly washed out)	65.5	--	(t)
Fairfield-Benton railroad bridge	65.4	--	--
Fairfield, Maine, 0.01 mile above highway bridge, left bank	65.0	Mar.19	95.2
Fairfield, Maine, 0.01 mile above highway bridge, American Woolen Co. building, right bank	65.0	Mar.19	95.1
Waterville, Maine, Hollingsworth & Whitney Co. dam, headwater, left bank	62.6	Mar.19 11pm	u87.3
Waterville, Maine, Hollingsworth & Whitney Co. dam, tailwater, left bank	62.5	Mar.19 11pm	68.9
Waterville-Winslow railroad bridge	61.5	--	--

o Altitude of crest of dam, 307.5 fset.
p Altitude of crest of dam, 241.7 feet.
q Altitude of crest of dam, 219.7 feet.
r Altitude of crest of dam, 149.0 fset.
s Altitude of crest of dam, 108.0 feet.
t Altitude of crest of dam, 88.1 feet.
u Altitude of crest of dam, 71.6 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Kennebec River Basin--Continued			
Kennebec River--Continued:			
Waterville, Maine, Lockwood Co. dam, headwater, right bank	61.5	Mar.20	v65.0
Waterville-Winslow highway bridge	61.4	--	--
Waterville, Maine, Lockwood Co. dam, power house, tailwater, right bank	61.4	Mar.20 noon	57.3
Sebasticook River, mouth of, left bank	60.8	--	--
Messalonskee Stream, mouth of, right bank	59.2	--	--
Vassalboro, Maine, 0.8 mile below railroad station, left bank	53.2	Mar.20	48.7
Augusta, Maine, Cushnoc Co. dam, 0.04 mile above dam, right bank	43.7	Mar.20 11am	w35.4
Augusta, Maine, Cushnoc Co. dam, tailwater, 0.02 mile below, left bank	43.7	Mar.14 2:30am	34.9
Augusta, Maine, Cushnoc Co. dam, motor room, left bank	43.7	Mar.14 2:30am	34.5
Augusta, Maine, Cushnoc Co. dam, below, Edwards Co. buildings, right bank	43.6	Mar.14 2:30am	30.9
Augusta, Maine, Cushnoc Co. dam, 0.2 mile below, right bank	43.5	Mar.14 2:30am	30.7
Augusta, Maine, railroad bridge over lower chord	43.3	Mar.14 2:30am	--
Augusta, Maine, highway bridge	43.1	--	--
Hallowell, Maine, 136 Water Street, building, right bank	40.9	Mar.14 2:30am	29.6
Farmingdale, Maine, Central Maine Power Co. steam plant, right bank	37.6	Mar.14 2:30am	27.9
Gardiner, Maine, railroad station, 3 feet above floor, right bank	36.9	Mar.14 2:30am	26.4
Cobbosseecontee Stream, mouth of, right bank	36.9	--	--
Gardiner-Randolph highway bridge	36.8	--	--
Gardiner, Maine, Johnson Hotel, right bank	36.8	Mar.14 2:30am	26.5
South Gardiner, Maine, 0.1 mile above railroad station, right bank	32.4	Mar.14 morning	23.6
Richmond-Dresden highway bridge	26.4	Mar.14 morning	(x)
Richmond, Maine, highway bridge, downstream, right bank	26.3	Mar.14 morning	19.4
Richmond, Maine, Water Works pump house, 3.5 feet above floor, right bank	26.0	Mar.14 11am	16.5
Richmond, Maine, Ames Worsted Co., 0.15 mile below Water Works, right bank	25.8	Mar.14 11am	14.1
Abagadassett Point, Maine, right bank	19.2	--	--
Bath, Maine, highway bridge	12.0	--	--
Huniwell Point	0	--	--
Carrabassett River:			
Kingfield, Maine, 0.2 mile above, mouth of West Branch Carrabassett River, right bank	21.5	Mar.12	565.7
Kingfield, Maine, 50 feet above highway bridge, left bank	21.3	Mar.12	y560.0
Kingfield, Maine, 2.5 miles below, 350 feet below culvert	18.9	--	528.7
New Portland, Maine, 2.7 miles above, right bank	17.1	--	512.2
New Portland, Maine, 0.5 mile north of, 40 feet above suspension bridge	14.5	Mar.19 9pm	464.6
New Portland, Maine, 0.5 mile north of, mouth of Lemon Stream	14.5	Mar.19 9pm	464.1
East New Portland, Maine, headwater at dam	9.1	--	z388.3
East New Portland, Maine, 0.2 mile below dam	8.9	--	369.0
East New Portland, Maine, 0.5 mile below, mouth of Gilman Stream	8.5	Mar.19 10pm	356.7
North Anson, Maine, 4.5 miles above, 0.5 mile above U.S. Geological Survey gage, headwater at Franklin Power Co. dam, right bank	5.2	--	aa341.7
North Anson, Maine, 4.5 miles above, 800 feet below dam, right bank	5.1	--	328.1
North Anson, Maine, 4 miles above, U.S. Geological gage	4.6	Mar.19 6pm	324.5
North Anson, Maine, 2 miles above, house nearest river, left bank	3.2	--	318.5
North Anson, Maine, 0.5 mile above, headwater at dam	1.4	--	bb310.1
North Anson, Maine, 0.5 mile above, Maine Central R.R. Co. bridge	1.3	--	305.7
North Anson, Maine, mouth of Mill Stream	1.2	--	--

v Altitude of crest of dam, 51.0 feet.
w Altitude of crest of dam, 22.1 feet.
x First of three spans carried away by ice Mar. 14, 4:15 am.
y Altitude of crest of dam below highway bridge, 553.6 feet.
z Average altitude of cres of dam, 379.0 feet.
aa Altitude of crest of dam, 331.9 feet.
bb Altitude of crest of dam, 300.8 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Kennebec River Basin--Continued			
Carrabassett River--Continued:			
North Anson, Maine, highway bridge	1.0	--	270.3
North Anson, Maine, 0.1 mile below highway bridge	.9	--	267.0
North Anson, Maine, 1 mile below, confluence with Kennebec River	0	--	--
Sandy River:			
Farmington, Maine, highway bridge, left bank	29.6	--	357.5
Farmington, Maine, 0.5 mile below, mouth of Temple Stream, right bank	29.0	--	352.8
Farmington Falls, Maine, 0.2 mile above, mouth of Wilson Stream	22.8	--	--
Farmington Falls, Maine, headwater of dam	22.6	Mar.19 5pm	cc344.1
Farmington Falls, Maine, tailwater of dam, right bank	22.6	Mar.19	343.6
Farmington Falls, Maine, 600 feet below highway bridge, left bank	22.5	Mar.19	339.8
New Sharon, Maine, 2.5 miles above, near a big bend, left bank	18.6	Mar.19 10pm	337.2
New Sharon, Maine, 1 mile above, mouth of Muddy Brook	17.4	--	--
New Sharon, Maine, highway bridge	16.3	--	--
Davis Ferry, Maine, 100 feet above, U.S. Geological Survey gage, right bank	8.7	Mar.19 midnight	213.8
Davis Ferry, Maine, 1.5 miles below, mouth of Lemon Stream	7.2	--	--
Davis Ferry, Maine, 4.5 miles below, headwater of Madison Electric Co. dam, right bank	3.9	Mar.20	dd190.0
Confluence with Kennebec River	0	Mar.20	187.7
Sebasticook River:			
Harmony, Maine, Higgins Brook dam, headwater, left bank (ice jam)	49.6	Mar.13 morning	312.6
Harmony, Maine, Higgins Brook dam, headwater, left bank	49.6	Mar.21 night	ee313.6
Harmony, Maine, Higgins Brook dam, tailwater, left bank (ice jam)	49.6	Mar.13 morning	312.6
Harmony, Maine, Higgins Brook dam, tailwater, left bank	49.6	Mar.21 night	306.4
Harmony, Maine, highway bridge	49.6	--	--
Harmony, Maine, Higgins Brook "Bartlett" dam, below (partly broken)	49.5	Mar.12 11pm	--
Hartland, Maine, above, Moose Pond dam, headwater, both banks (mean)	40.6	Mar.22	ff249.9
Hartland, Maine, above, Moose Pond dam, tailwater, 0.03 mile below dam, right bank	40.6	Mar.22	241.7
Thompson, Maine, Negro Bridge	38.2	--	--
Pittsfield, Maine, above, Water Works dam, headwater, right bank	33.0	Mar.19 morning	gg221.0
Pittsfield, Maine, above, Water Works dam, tailwater, right bank	33.0	Mar.19 morning	209.9
Pittsfield, Maine, American Woolen Co. dam, headwater, right bank	32.2	--	hh207.2
Pittsfield, Maine, American Woolen Co. dam, 0.03 mile below, right bank	32.1	--	198.4
East Branch of Sebasticook River, mouth of, left bank	28.8	--	--
Central Maine Power Co. "Burnham" dam, headwater, right bank	22.2	Mar.22 7-9am	ii169.5
Central Maine Power Co. "Burnham" dam, right bank	22.2	Mar.22 4-5am	150.8
Pittsfield, Maine, near, U.S. Geological Survey gage, right bank	21.7	Mar.22 6am	147.1
Burnham, Maine, highway bridge, 0.02 mile above, right bank	19.9	Mar.21 9pm	143.8
Burnham, Maine, highway bridge, (ice touching chords, 3.4 feet under flood), right bank	19.9	Mar.21 9pm	143.5
Burnham, Maine, highway bridge, 0.02 mile below, right bank	19.9	Mar.21 9pm	143.3
Burnham, Maine, Maine Central R.R. Co. bridge, (dropped during flood)	19.8	Mar.18 night	--
Clinton, Maine, Central Maine Power Co. dam (failed)	11.0	--	--
Clinton, Maine, highway bridge (washed out) right bank	10.9	--	120.3
Benton Falls, Maine, above, Central Maine Power Co. dam	8.4	--	--
Benton Falls, Maine, highway bridge (4.5 feet under bottom) right bank	5.8	--	--

cc Altitude of crest of dam, 331.5 feet.
dd Altitude of crest of dam, 176.5 feet.
ee Altitude of crest of dam, 310.9 feet.
ff Altitude of crest of Moose Pond dam, 244.0 feet, of crest of American Woolen Co. dam 0.3 mile downstream, 233.1 feet.
gg Altitude of crest of dam, 214.9 feet.
hh Altitude of crest of dam, 200.8 feet.
ii Altitude of crest of dam, 162.0 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Kennebec River Basin--Continued			
Sebasticook River--Continued:			
Benton Falls, Maine, United Paper Board Co. dam (failed)	5.3	--	--
China Lake outlet Stream, mouth of, left bank	1.0	--	--
Winslow, Maine, Central Maine Power Co. "Fort Halifax" dam, headwater, right bank	.4	Mar.20 7am	jj59.7
Winslow, Maine, Central Maine Power Co. "Fort Halifax" dam, tailwater, right bank	.4	Mar.20 7am	58.2
Winslow, Maine, highway bridge (over bridge floor)	.2	Mar.20	--
Winslow, Maine, Maine Central R.R. Co. bridge (over rails)	.2	Mar.20	--
Confluence with Kennebec River	0	--	--
East Branch of Sebasticook River:			
Newport, Maine, 0.4 mile above, dam at outlet of Sebasticook Lake, headwater, left bank	8.6	--	kk203.6
Newport, Maine, 0.4 mile above, dam at outlet of Sebasticook Lake, tailwater, right bank	8.6	--	200.4
Newport, Maine, concrete dam, headwater	8.2	--	mm197.3
Newport, Maine, concrete dam, tailwater, 50 feet above railroad bridge, left bank	8.1	--	189.4
Newport, Maine, 1.9 miles below, mouth of Martin Stream (outlet of Plymouth Pond)	6.3	--	--
Detroit, Maine, 3.8 miles below, confluence with Sebasticook River	0	--	--
Androscoggin River Basin			
Androscoggin River:			
Gorham, N. H., U.S. Geological Survey gage, right bank	135.1	Mar.22 11am	(nn)
Gorham, N. H., Brown Co. dam, headwater, right bank	132.6	--	818.6
Gorham, N. H., 300 feet above Boston & Maine R.R. bridge, right bank	132.3	--	797.5
Gorham, N. H., 300 feet below bridge, right bank	132.2	--	796.8
Gorham, N. H., near lower end of canal, right bank	131.7	--	791.4
Gorham, N. H., 400 feet above Twin State Gas & Electric Co. dam, right bank	130.3	--	oo782.8
Gorham, N. H., mouth of Peabody River, right bank	130.2	--	769.7
Shelburne, N. H., 5 miles above, on Peabody Rips, right bank	129.8	--	749.8
Shelburne, N. H., 4 miles above, on Peabody Rips, right bank	128.8	--	741.0
Shelburne, N. H., Lead Mine dam, headwater, right bank	127.6	--	pp740.0
Shelburne, N. H., Lead Mine dam, tailwater, right bank	127.6	--	736.1
Shelburne, N. H., Boston & Maine R.R. station, right bank	125.0	--	703.5
Shelburne, N. H., 1 mile below, upstream end Evans' Island, right bank	124.1	--	700.7
Shelburne, N. H., 4 miles below, mouth of Connor Brook, right bank	122.1	--	698.4
Gilead, Maine, mouth of Wild River, right bank	119.6	Mar.19	697.5
Gilead, Maine, above rips at Peabodys Island, right bank	118.5	Mar.19	679.9
Gilead, Maine, 2 miles below, house, right bank	117.6	Mar.19	676.0
West Bethel, Maine, mouth of Pleasant River, right bank	114.0	Mar.19	662.6
West Bethel, Maine, 1 mile below, right bank	112.0	Mar.19	658.4
Bethel, Maine, 1.5 miles above, right bank	110.5	Mar.19	652.0
Bethel, Maine, highway bridge, U.S. Geological Survey flood mark, right bank	109.0	Mar.19 2pm	651.2
Bethel, Maine, 0.7 mile below, right bank	108.3	Mar.19	651.1
Bethel, Maine, 2 miles below, Thurston house, left bank	107.0	Mar.19	649.6
North Bethel, Maine, 0.8 mile above mouth of Sunday River, left bank	106.1	Mar.19	649.2
North Bethel, Maine, mouth of Sunday River, left bank	105.7	Mar.19	648.5
North Bethel, Maine, island below Sunday River, left bank	105.4	Mar.19	645.5
Newry, Maine, 0.9 mile above, Gray Farm, left bank	104.5	Mar.19	643.9
Newry, Maine, mouth of Bear River, left bank	103.6	Mar.19	641.9
Newry, Maine, 0.6 mile below, island, left bank	103.0	Mar.19	638.9
Newry, Maine, 1.1 miles below, Bartlett farm, left bank	102.5	Mar.19	635.9
Hanover, Maine, left bank	99.5	Mar.19	633.9
Rumford Point, Maine, 0.5 mile above mouth of Ellis River, left bank	97.8	Mar.19	633.3

jj Altitude of crest of dam, 50.3 feet.
kk Altitude of crest of dam, 201.4 feet.
mm Altitude of crest of dam, 196.5 feet.
nn Gage height, 9.99 feet, local datum.
oo Altitude of crest of dam, 770.2 feet.
pp Altitude of crest of dam, 725.2 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Androscoggin River Basin--Continued			
Androscoggin River--Continued:			
Rumford Point, Maine, dwelling house, left bank	96.9	Mar.19	631.4
Rumford Point, Maine, 0.9 mile below, "The Pines" roadside stand, left bank	96.0	Mar.19	630.2
Rumford Point, Maine, 2.6 miles below, "Pine Hill" farm, left bank	94.3	Mar.19	629.8
Rumford Center, Maine, 0.6 mile above, left bank	93.2	Mar.19 7-11pm	628.2
Rumford Center, Maine, 3 miles below, near mouth of Zircon Brook, left bank	89.9	Mar.19	626.6
Virginia, Maine, 1 mile above, Virgil Abbott barn, left bank	89.0	Mar.19	624.8
Rumford, Maine, 550 feet above upper dam of Rumford Falls Power Co., left bank	87.5	Mar.19 midnight	623.1
Rumford, Maine, upper dam, headwater, left bank	87.4	Mar.20 12-1am	qq613.3
Rumford, Maine, just below upper dam	87.4	Mar.20	581.7
Rumford, Maine, 0.05 mile below upper dam	87.4	Mar.20	567.0
Rumford, Maine, 0.1 mile below upper dam	87.3	Mar.20	516.7
Rumford, Maine, middle dam of Rumford Falls Power Co. headwater, right bank	87.2	Mar.20	rr514.5
Rumford, Maine, middle dam, tailwater, left bank	87.1	Mar.20	501.7
Rumford, Maine, 0.1 mile below middle dam, left bank	87.0	Mar.20	491.7
Rumford, Maine, 0.2 mile below middle dam, left bank	86.9	Mar.20	466.7
Rumford, Maine, concrete arch Memorial Bridge, left bank	86.8	Mar.20	448.0
Mexico, Maine, mouth of Swift River, left bank	86.3	Mar.20	444.6
Mexico, Maine, tree near Library building, left bank	86.2	Mar.20	444.1
Ridlonville, Maine, barber shop, left bank	85.8	Mar.20	437.8
Mexico, Maine, 1.5 miles below, opposite Smith's crossing, left bank	84.8	Mar.20	433.0
Mexico, Maine, 2.5 miles below, Riverside Park, left bank	83.8	Mar.20	424.4
Dixfield, Maine, 1.4 miles above, head of second island above highway bridge, left bank	83.4	Mar.20	423.7
Dixfield, Maine, Maine Central R.R. Co. station, copper plate, left bank	82.0	Mar.20 2am	417.5
Dixfield, Maine, mouth of Webb River, right bank	81.8	Mar.20	417.2
Dixfield, Maine, 1.4 miles below, near mouth of small brook, right bank	80.6	Mar.20	415.2
Dixfield, Maine, 2.1 miles below, near lower end of island, right bank	79.9	Mar.20	410.8
Peru, Maine, 0.5 mile below, head of Green Island, right bank	78.0	Mar.20	407.9
East Peru, Maine, near Maine Central R.R. Co. station, right bank	76.6	Mar.20	406.2
East Peru, Maine, mouth of Worthley Brook, right bank	76.3	Mar.20	406.0
Gilbertville, Maine, highway bridge, left bank	71.7	Mar.20	397.4
Gilbertville, Maine, 3.0 miles below, near Stevens Island, right bank	68.7	Mar.20	395.5
Riley, Maine, International Paper Co. "Riley" dam, headwater, right bank	66.6	Mar.20 morning	ss384.2
Riley, Maine, dam at tailwater	66.6	Mar.20	377.2
Riley, Maine, 0.2 mile below dam, right bank	66.4	Mar.20	377.0
Riley, Maine, 1.0 mile below dam, right bank	65.6	Mar.20	375.3
Riley, Maine, 1.4 miles below dam, right bank	65.2	Mar.20	373.1
Jay, Maine, 0.7 mile above, island, left bank	64.5	Mar.20	368.0
Jay, Maine, International Paper Co. "Jay" dam, headwater, right bank	63.8	Mar.20 3am	tt367.5
Jay, Maine, dam at tailwater	63.8	Mar.20	357.4
Chisholm, Maine, 0.6 mile above, Maine Central R.R. Co. bridge, left bank	62.4	Mar.20	353.2
Chisholm, Maine, International Paper Co. "Otis" dam, headwater	61.8	Mar.20 morning	uu349.9
Chisholm, Maine, dam, tailwater	61.8	Mar.20	334.6
Livermore Falls, Maine, International Paper Co. "Livermore" dam, headwater, right bank	61.0	Mar.20	vv322.3
Livermore Falls, Maine, dam, tailwater, left bank	60.9	Mar.20	305.0
Livermore Falls, Maine, 2.0 miles below, narrows, left bank	59.0	Mar.20	303.9
Livermore Falls, Maine, 3.6 miles below, near Fish Meadow Brook, left bank	57.4	Mar.20	302.0
East Livermore, Maine, 0.9 mile below, left bank	55.1	Mar.20	299.0
East Livermore, Maine, 1.6 miles below, head of rips, left bank	54.4	Mar.20	295.8
Strickland Ferry, Maine, 0.3 mile below, house, left bank	52.9	Mar.20	294.0

qq Altitude of crest of dam, 598.7 feet.
rr Altitude of crest of dam, 501.9 feet.
ss Altitude of crest of dam, 371.2 feet.
tt Altitude of crest of dam, 351.0 feet.
uu Altitude of crest of dam, 337.7 feet.
vv Altitude of crest of dam, 310.3 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Androscoggin River Basin--Continued			
Androscoggin River--Continued:			
North Turner, Maine, 3.0 miles above, mouth of Dead River, left bank	52.0	Mar.20	293.2
North Turner, Maine, 2.3 miles above, field, left bank	51.3	Mar.20	291.7
North Turner, Maine, 1.1 miles above, head of island, right bank	50.1	Mar.20	290.2
North Turner, Maine, highway bridge, right bank	49.0	Mar.20	285.6
North Turner, Maine, 1.2 miles below, right bank	47.8	Mar.20	282.1
North Turner, Maine, 2.3 miles below, foot of Ram Island, right bank	26.7	Mar.20	276.9
Keens Mills, Maine, mouth of Nezinscot River, right bank	44.9	Mar.20	275.6
Keens Mills, Maine, foot of Griswold Island, right bank	43.6	Mar.20	275.0
East Turner, Maine, highway bridge, right bank	42.6	Mar.20	274.6
East Turner, Maine, 2.3 miles below, Gulf Island Pond, right bank	40.3	Mar.20	273.2
East Turner, Maine, 4.0 miles below, Gulf Island Pond, left bank	38.6	Mar.20	269.5
East Turner, Maine, 5.9 miles below, Gulf Island Pond, left bank	36.7	Mar.20	269.4
Lewiston, Maine, 3.8 miles above, Gulf Island Dam, headwater, left bank	34.4	Mar.20 4am	ww265.6
Lewiston, Maine, 3.8 miles above, dam, tailwater, left bank	34.4	Mar.20	215.8
Lewiston, Maine, 3.0 miles above, Deer Rips dam, headwater, left bank	33.6	Mar.20	xx210.3
Lewiston, Maine, 2.0 miles above, foot of rips (ice jam) left bank	32.6	Mar.19 10-12pm	186.7
Lewiston, Maine, 2.0 miles above, foot of rips, left bank	32.6	Mar.20 4am	184.7
Lewiston, Maine, Bobbin Mill, left bank	32.1	Mar.20	184.3
Lewiston, Maine, 0.7 mile above North Bridge, left bank	31.3	Mar.20	180.1
Lewiston, Maine, Union Water Power Co. dam, headwater, left bank	30.8	Mar.20	yy177 7
Lewiston, Maine, North Bridge, upstream	30.6	Mar.20	144.9
Auburn, Maine, Grand Trunk Ry. bridge, downstream	30.3	Mar.20	140.5
Auburn, Maine, mouth of Little Androscoggin River, right bank	30.1	Mar.20	139.6
Auburn, Maine, South Bridge, right bank	30.1	Mar.20	139.6
Auburn, Maine, 0.5 mile below South Bridge, right bank	29.6	Mar.20	139.0
Auburn, Maine, U.S. Geological Survey gage, right bank	28.4	Mar.20 5am	136.8
Auburn, Maine, 3.1 miles below South Bridge, near Penley's Corner, right bank	27.0	Mar.20	135.5
Auburn, Maine, 4.5 miles below, mouth of brook from Harmon's Corner, right bank	25.6	Mar.20	130.6
Auburn, Maine, 5.0 miles below, J. Turgeon farm, right bank	25.1	Mar.20	130.3
Durham, Maine, 3.9 miles above ferry crossing, L. Lessard farm, right bank	24.4	Mar.20	128.9
Durham, Maine, 2.5 miles above ferry crossing, near school house, right bank	23.0	Mar.20	127.8
Durham, Maine, 1.3 miles above ferry crossing, Berlie Miller house, right bank	21.8	Mar.20	127.5
Durham, Maine, near mouth of Gerrish Brook, right bank	21.0	Mar.20	127.0
Durham, Maine, ferry crossing, right bank	20.5	Mar.20	124.1
Durham, Maine, 0.9 mile below, mouth of brook, left bank	19.6	Mar.20	119.8
Lisbon Falls, Maine, 2.3 miles above Worumbo dam, head of Donovan Rips, left bank	18.3	Mar.20	116.7
Lisbon Falls, Maine, 1.7 miles above Worumbo dam, mouth of Sabattus River, left bank	17.7	Mar.20	115.1
Lisbon Falls, Maine, 0.7 mile above Worumbo dam, left bank	16.7	Mar.20	107.7
Lisbon Falls, Maine, Worumbo Manufacturing Co. dam, headwater, left bank	16.1	Mar.20 11am	zz107.2
Lisbon Falls, Maine, dam, tailwater, left bank	16.0	Mar.20	101.7
Lisbon Falls, Maine, United States Gypsum Co. dam, headwater, left bank	15.7	Mar.20	ab96.7
Lisbon Falls, Maine, dam, tailwater, left bank	15.7	Mar.20	86.7
Lisbon Falls, Maine, 0.2 mile below United States Gypsum Co. dam, left bank	15.5	Mar.20	86.6
Lisbon Falls, Maine, 1.2 miles below United States Gypsum Co. dam, left bank	14.5	Mar.20	85.5
Lisbon Falls, Maine, 2.5 miles below United States Gypsum Co. dam, left bank	13.4	Mar.20	80.1

ww Altitude of crest of dam, 255.0 feet.
xx Altitude of crest of dam, 201.6 feet.
yy Altitude of crest of dam, 164.3 feet.
zz Altitude of crest of dam, 95.2 feet.
ab Altitude of crest of dam, 76.3 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Androscoggin River Basin--Continued			
Androscoggin River--Continued:			
Pejepscot, Maine, Pejepscot Paper Co. dam, headwater	12.5	Mar.20	ac79.1
Pejepscot, Maine, dam, tailwater	12.5	Mar.20	75.7
Brunswick, Maine, 1.8 miles above Maine Central R.R. Co. bridge, left bank	10.4	Mar.20	66.4
Brunswick, Maine, 1.3 miles above Maine Central R.R. Co. bridge, head of island, right bank	9.9	Mar.20	64.5
Brunswick, Maine, 400 feet above Maine Central R.R. Co. bridge, right bank	8.6	Mar.20	63.6
Brunswick, Maine, 0.2 mile below Maine Central R.R. Co. bridge, left bank	8.4	Mar.20	55.1
Brunswick, Maine, upper dam, headwater, left bank	8.2	Mar.20	ad54.1
Brunswick, Maine, upper dam, tailwater, left bank	8.2	Mar.20	35.9
Brunswick, Maine, lower dam, headwater, left bank	8.0	Mar.20 3pm	ae35.9
Brunswick, Maine, lower dam, tailwater, left bank	8.0	Mar.20	23.4
Brunswick, Maine, 1.4 miles below, head of Cow Island, left bank	6.6	--	19.5
Brunswick, Maine, 4.3 miles below, head of Freyer Island, left bank	3.7	--	14.4
Brunswick, Maine, 4.8 miles below lower dam, left bank	3.2	--	11.0
Brunswick, Maine, 6.1 miles below lower dam, left bank	1.9	--	10.0
Brick Island, Merrymeeting Bay	0	--	--
Swift River:			
Roxbury, Maine, 1.8 miles above, mouth of Thomas Farm Brook, left bank	11.3	Mar.19	739.5
Roxbury, Maine, 1.1 miles above, left bank	10.5	Mar.19	725.4
Roxbury, Maine, 0.4 mile below, at railroad grade crossing, left bank	9.0	Mar.19	709.4
Roxbury, Maine, 1.3 miles below, left bank	8.0	Mar.19	668.0
Frye, Maine, 1.5 miles above, 300 feet above U.S. Geological Survey gage, left bank	7.3	Mar.19	626.9
Frye, Maine, 1.5 miles above, U.S. Geological Survey gage, left bank	7.3	Mar.19 8am	626.7
Frye, Maine, 1.5 miles above, 50 feet below U.S. Geological Survey gage, left bank	7.3	Mar.19	611.6
Frye, Maine, 1.1 miles above, mouth of Birch Brook, left bank	6.9	Mar.19	600.7
Frye, Maine, highway bridge, right bank	5.8	Mar.19	571.8
Frye, Maine, 1.1 miles below, right bank	4.8	Mar.19	554.3
Hale, Maine, between highway and railroad bridge	3.0	Mar.19	534.7
Hale, Maine, dam, headwater, right bank	2.8	Mar.19	af517.0
Hale, Maine, dam, tailwater, right bank	2.8	Mar.19	501.6
Hale, Maine, 0.7 mile below, right bank	2.3	Mar.19	475.6
Mexico, Maine, 1 mile above, mouth of brook, right bank	1.3	Mar.19	448.6
Mexico, Maine, highway bridge	.1	Mar.19	444.8
Mexico, Maine, confluence with Androscoggin River	0	--	--
Webb River:			
Berry Mills, Maine, 3.6 miles above, outlet of Lake Webb, left bank	15.0	--	685.3
Berry Mills, Maine, 2.8 miles above, rips, left bank	14.2	--	674.0
Berry Mills, Maine, 2 miles above, 75 feet above concrete highway bridge	13.4	--	612.3
Berry Mills, Maine, 2 miles above, 75 feet below concrete highway bridge	13.4	--	608.2
Berry Mills, Maine, 1.4 miles above, steel highway bridge	12.8	--	591.8
Berry Mills, Maine, 0.6 mile above, 200 feet below mouth of Basin Brook, right bank	12.0	--	563.5
Berry Mills, Maine, 75 feet above highway bridge	11.4	--	512.2
Berry Mills, Maine, 100 feet below highway bridge	11.4	--	508.4
Carthage, Maine, 0.8 mile above, above rips, right bank	10.2	--	460.3
Carthage, Maine, 50 feet above highway bridge	9.4	--	450.2
Carthage, Maine, 50 feet below highway bridge	9.4	--	449.7
Carthage, Maine, 1.0 mile below, 100 feet above highway bridge	8.4	--	442.0
Carthage, Maine, 1.0 mile below, 150 feet below highway bridge	8.4	--	441.3
Carthage, Maine, 3.8 miles below, above rapids at Carthage-Dixfield town line, left bank	5.6	--	437.9
Dixfield, Maine, 2.8 miles above, sharp bend in river, left bank	2.8	--	433.5
Dixfield, Maine, 1 mile above, 200 feet above bridge	1.0	--	433.2
Dixfield, Maine, 1 mile above, bridge	1.0	--	432.8

ac Altitude of crest of dam, 61.2 feet.
ad Altitude of crest of dam, 39.1 feet.
ae Altitude of crest of dam, 18.4 feet.
af Altitude of cre t of dam, 509.9 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Androscoggin River Basin--Continued			
Webb River--Continued:			
Dixfield, Maine, 0.9 mile above, 300 feet below bridge	0.9	--	429.2
Dixfield, Maine, confluence with Androscoggin River	0	Mar.20	417.2
Nezinscot River:			
West Sumner, Maine, 1.7 miles above, highway bridge	25.8	--	481.9
West Sumner, Maine, 0.3 mile east of, highway bridge, left bank	24.1	--	477.7
West Sumner, Maine, 1 mile below, highway bridge, right bank	23.2	--	472.3
West Sumner, Maine, 2.4 miles below, highway bridge, left bank	21.8	--	463.4
North Buckfield, Maine, 1.5 miles above, small brook, right bank	20.7	--	443.2
North Buckfield, Maine, 0.9 mile above, washed out bridge, right bank	19.9	--	434.9
North Buckfield, Maine, at dam destroyed by flood, right bank	19.1	--	417.3
North Buckfield, Maine, 60 feet below highway bridge, right bank	19.0	--	402.6
North Buckfield, Maine, 1.3 miles below, highway bridge, left bank	17.7	--	368.0
Buckfield, Maine, Maine Central R.R. Co. bridge, right bank	15.2	--	352.1
Buckfield, Maine, highway bridge, left bank	15.1	--	349.4
Buckfield, Maine, 0.15 mile below, dam, headwater, left bank	15.0	--	ag344.9
Buckfield, Maine, 0.15 mile below, dam, tailwater, left bank	15.0	--	340.2
Buckfield, Maine, 0.25 mile below, dam, headwater, right bank	14.8	--	ah337.8
Buckfield, Maine, 0.25 mile below, dam, tailwater, left bank	14.8	--	328.8
Buckfield, Maine, 0.9 mile below, mouth of East Branch Nezinscot River, right bank	14.2	--	324.7
Buckfield, Maine, 1.2 miles below, highway bridge, right bank	13.9	--	324.6
Buckfield, Maine, 3.3 miles below, at highway bridge, left bank	11.8	--	313.7
Buckfield, Maine, 3.8 miles below, mouth of Bog Brook, left bank	11.3	--	313.7
Turner, Maine, 3.7 miles above, highway bridge, right bank	9.8	--	313.6
Turner, Maine, 1.8 miles above, right bank	7.9	--	311.4
Turner, Maine, highway bridge, 150 feet above dam, left bank	6.1	Mar.21 morning	310.9
Turner, Maine, dam, headwater, left bank	6.1	Mar.21 morning	ai309.8
Turner, Maine, dam, tailwater, right bank	6.1	--	302.4
Turner Center, Maine, highway bridge, right bank	3.8	--	290.8
Turner Center, Maine, 0.6 mile below, highway bridge, right bank	3.2	--	284.2
Turner Center, Maine, 1.5 miles below, highway bridge, left bank	2.3	--	281.7
Keens Mills, Maine, above old dam, 200 feet above bridge, right bank	.4	--	277.1
Keens Mills, Maine, below old dam, highway bridge, left bank	.4	--	276.7
Keens Mills, Maine, 0.4 mile below, confluence with Androscoggin River	0	Mar.20	275.6
Little Androscoggin River:			
West Paris, Maine, 200 feet above concrete highway bridge, left bank	69.6	Mar.19	481.2
West Paris, Maine, Irish Brothers dam, headwater, left bank	68.6	Mar.19	aj471.0
West Paris, Maine, highway bridge, left bank	68.6	Mar.19	466.2
West Paris, Maine, mouth of Andrews Brook, left bank	68.4	Mar.19	461.1
Snow Falls, Maine, above falls, left bank	66.9	Mar.19	456.5
Snow Falls, Maine, below falls, left bank	66.8	Mar.19	425.0
South Paris, Maine, U.S. Geological Survey gage at Bisco Falls, right bank	65.6	Mar.19 11am	406.2
South Paris, Maine, just below old dam at Bisco Falls, right bank	65.6	Mar.19 11am	394.3
South Paris, Maine, foot of rips below Bisco Falls, right bank	65.5	Mar.19	392.6

ag Altitude of crest of dam, 340.5 feet.
ah Altitude of crest of dam, 331.7 feet.
ai Altitude of crest of dam, 301.5 feet.
aj Altitude of crest of dam, 466.2 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Androscoggin River Basin--Continued			
Little Androscoggin River--Continued:			
South Paris, Maine, bend in river 2 miles below Bisco Falls, right bank	63.6	Mar.19	368.1
South Paris, Maine, 1.5 miles above village, mouth of brook, right bank	62.3	Mar.19	356.8
South Paris, Maine, concrete highway bridge, left bank	60.8	Mar.19	356.6
South Paris, Maine, concrete dam, headwater, left bank	60.2	Mar.19	ak349.6
South Paris, Maine, 275 feet below dam, left bank	60.1	Mar.19	342.5
South Paris, Maine, 0.5 mile below, Grand Trunk Ry. bridge, left bank	59.3	Mar.19	342.3
Norway, Maine, 0.1 mile above mouth of Pennesseewassee Lake outlet, right bank	58.5	Mar.19	342.2
Norway, Maine, mouth of Pennesseewassee Lake outlet, right bank	58.4	Mar.19	326.0
Norway, Maine, 1.5 miles below, highway bridge on Norway-Welchville road, left bank	56.9	Mar.19	324.2
Oxford, Maine, 3.3 miles above, field, left bank	55.3	Mar.19	318.3
Oxford, Maine, wooden highway bridge, right bank	52.0	Mar.19	312.9
Oxford, Maine, mouth of Thompson Lake outlet, right bank	51.9	Mar.19	311.5
Welchville, Maine, dam, headwater, left bank	49.6	Mar.19	am306.9
Welchville, Maine, dam, tailwater, right bank	49.6	Mar.19	305.0
Welchville, Maine, 800 feet below dam, left bank	49.4	Mar.19	304.9
Welchville, Maine, 1.4 miles below, near Coy's crossing, left bank	48.2	Mar.19	298.8
Mechanic Falls, Maine, 2.1 miles above, at highway bridge, left bank	45.4	Mar.19	286.5
Mechanic Falls, Maine, 0.7 mile above, Maine Central R.R. Co. bridge, left bank	44.0	Mar.20	283.5
Mechanic Falls, Maine, 0.6 mile above, concrete highway bridge	43.9	Mar.20	283.0
Mechanic Falls, Maine, Waterfalls Paper Co. dam, headwater, left bank	43.3	Mar.20 1-4am	an281.2
Mechanic Falls, Maine, dam, tailwater	43.3	Mar.20 1-4am	272.2
Mechanic Falls, Maine, 0.15 mile below dam, left bank	43.2	Mar.20	251.9
Mechanic Falls, Maine, mouth of Bog Brook, left bank	42.3	Mar.20	250.2
Mechanic Falls, Maine, 1.8 miles below, head of island, right bank	41.5	Mar.20	250.0
Hacketts Mills, Maine, highway bridge, left bank	39.0	Mar.20	244.6
Hacketts Mills, Maine, Rogers Fibre Co. dam, headwater, both banks (average)	38.9	Mar.20 12:40am	ao243.4
Hacketts Mills, Maine, dam, tailwater	38.9	Mar.20 12:40am	236.2
Minot Corner, Maine, highway bridge, upstream, left bank	38.2	Mar.20	235.1
Minot Corner, Maine, below highway bridge and rips, right bank	38.2	Mar.20	231.7
Minot Corner, Maine, 0.15 miles below, left bank	38.0	Mar.20	228.6
Littlefield, Maine, highway bridge, left bank	34.6	Mar.20	225.4
Littlefield, Maine, Central Maine Power Co. upper dam, headwater	34.0	Mar.20	ap225.0
Littlefield, Maine, Central Maine Power Co. lower dam, headwater, right bank	33.9	Mar.20	aq218.7
Littlefield, Maine, lower dam, tailwater, right bank	33.9	Mar.20	208.7
Rumford Junction, Maine, highway bridge, left bank	33.2	Mar.20	206.9
Auburn, Maine, Maine Central R.R. Co. bridge, left bank	32.1	Mar.20	204.1
Auburn, Maine, Central Maine Power Co. upper dam, headwater, left bank	30.8	Mar.20 noon	ar200.9
Auburn, Maine, upper dam, tailwater, left bank	30.8	Mar.20	176.3
Auburn, Maine, lower dam, headwater, left bank	30.6	Mar.20	as161.4
Auburn, Maine, lower dam, tailwater, left bank	30.6	Mar.20	141.8
Auburn, Maine, Main Street bridge, left bank	30.3	Mar.20	140.6
Auburn, Maine, confluence with Androscoggin River, left bank	30.1	Mar.20	139.6
Saco River Basin			
Saco River:			
Bartlett, N. H., steel highway bridge, right bank	110.8	--	576.3
Glen, N. H., 200 feet below R.R. bridge above Glen, left bank	105.8	--	554.8

ak Altitude of crest of dam, 343.0 feet.
am Altitude of crest of dam, 299.0 feet.
an Altitude of crest of dam, 271.3 feet.
ao Altitude of crest of dam, 234.4 feet.
ap Altitude of crest of dam, 211.0 feet.
aq Altitude of crest of dam, 204.0 feet.
ar Altitude of crest of dam, 188.9 feet.
as Altitude of crest of dam, 154.0 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Saco River Basin--Continued			
Saco River--Continued:			
Glen, N. H., 200 feet above mouth of Ellis River, left bank	104.6	--	524.3
Glen, N. H., 200 feet below mouth of Ellis River, left bank	104.5	--	523.4
Lower Bartlett, N. H., 200 feet above mouth of East Branch River, left bank	103.6	--	511.4
Lower Bartlett, N. H., 200 feet below mouth of East Branch River, left bank	103.5	--	510.3
North Conway, N. H., inlet of Center Branch River, right bank	101.0	--	483.6
North Conway, N. H., covered bridge on River Road, left bank	100.2	--	477.9
North Conway, N. H., mouth of Center Branch, left bank	100.0	--	473.9
North Conway, N. H., mouth of Kearsarge Brook, left bank	98.9	--	467.8
North Conway, N. H., 2 miles below, 150 feet above Boston & Maine R.R. bridge, left bank	97.2	--	462.0
North Conway, N. H., 2 miles below, 200 feet below Boston & Maine R.R. bridge, right bank	97.2	--	459.5
Conway, N. H., 50 feet above mouth of Swift River,	93.7	--	452.4
Conway, N. H., 150 feet above covered highway bridge, left bank	93.6	Mar.19	452.1
Conway, N. H., 150 feet below covered highway bridge, left bank	93.6	Mar.19	448.8
Conway, N. H., 3 miles below, wooden highway bridge on Center Conway-Redstone road, both banks (average)	90.7	Mar.19	430.7
Conway, N. H., 3 miles below, 200 feet above railroad bridge, right bank	90.5	--	429.0
Conway, N. H., 3 miles below, 100 feet below railroad bridge, right bank	90.5	--	428.3
Center Conway, N. H., mouth of Conway Lake outlet, right bank	88.0	--	424.3
Maine-New Hampshire State line, right bank	85.1	--	423.6
Fryeburg, Maine, 25 feet below Weston's bridge, left bank	84.2	--	412.1
Fryeburg, Maine, half a mile below Weston's bridge, left bank	83.7	--	410.6
Fryeburg, Maine, 100 feet below Fryeburg Academy, right bank	82.7	--	407.1
Swans' Falls, Maine, Central Maine Power Co. dam, headwater, both banks (average)	81.1	Mar.19 6pm	at402.6
Swans' Falls, Maine, tailwater, both banks (average)	81.1	Mar.19 6pm	397.9
Fryeburg Center, Maine, concrete bridge on Fryeburg-Lovell highway, both banks (average)	77.0	--	390.1
Fryeburg Center, Maine, 3 miles below, mouth of old course of Saco River, right bank	73.8	--	380.9
Fryeburg, Maine, 3 miles east of, steel bridge on Fryeburg-Bridgton road, upstream, left bank	70.0	--	379.5
East Brownfield, Maine, mouth of Shepard Brook, right bank	63.3	--	379.0
East Brownfield, Maine, bridge on Denmark-Brownfield road, upstream, left bank	62.2	Mar.21	379.3
East Brownfield, Maine, bridge on Denmark-Brownfield road, downstream, right bank	62.2	Mar.21	378.5
East Brownfield, Maine, mouth of Burnt Meadow Brook right bank	61.8	--	377.4
East Brownfield, Maine, 2 miles below, mouth of Tenmile River, right bank	57.0	--	374.6
Hiram, Maine, 2 miles north of, 950 feet southeast of railroad crossing, right bank	51.6	--	368.2
Hiram, Maine, highway bridge, upstream, both banks (average)	48.8	--	365.3
Hiram, Maine, highway bridge, downstream, both banks (average)	48.8	--	364.8
Bridgton Junction, Maine, railroad station, both banks (average)	48.2	--	363.6
Hiram Falls, Maine, three-quarters of a mile above, railroad crossing, left bank	46.9	--	361.8
Hiram Falls, Maine, Cumberland County Power & Light Co. dam, headwater, both banks (average)	46.1	Mar.21 11:30pm	au354.1
Hiram Falls, Maine, dam, tailwater, left bank	46.1	Mar.21 11:30pm	298.9
Cornish, Maine, mouth of Ossipee River, left bank	43.1	Mar.22	286.7
Cornish, Maine, U.S. Geological Survey gage, 300 feet above bridge, left bank	42.7	Mar.22 1-2am	285.6
Cornish, Maine, concrete bridge, upstream, right bank	42.6	Mar.22 1-2am	288.4

at Altitude of crest of dam, 392.4 feet.
au Altitude of crest of dam, 342.9 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Saco River Basin--Continued			
Saco River--Continued:			
Cornish, Maine, concrete bridge, downstream, both banks (average)	42.6	Mar.22 1-2am	283.3
Cornish, Maine, 4 miles below, Sawyerville, left bank	38.5	--	275.1
Steep Falls, Maine, Cumberland County Power & Light Co. dam, headwater, left bank	34.5	--	av268.6
Steep Falls, dam, tailwater, both banks (average)	34.5	--	257.8
East Limington, Maine, 200 feet above concrete highway bridge, right bank	30.0	--	233.6
East Limington, Maine, bridge, downstream, right bank	30.0	--	231.3
East Limington, Maine, mouth of Little Ossipee River, right bank	29.5	--	230.7
Bonny Eagle, Maine, Cumberland County Power & Light Co. diversion dam, headwater, both banks (average)	25.1	Mar.22 8am	aw225.1
Bonny Eagle, Maine, diversion dam, tailwater, both banks (average)	25.1	Mar.22 8am	217.3
Bonny Eagle, Maine, 0.5 mile below diversion dam	24.6	--	188.0
West Buxton, Maine, Cumberland County Power & Light Co. dam, headwater, both banks (average)	23.6	Mar.22 8am	ax186.4
West Buxton, Maine, dam, tailwater, both banks	23.6	Mar.22 8am	167.8
West Buxton, Maine, 4,600 feet below dam, both banks (average)	22.5	Mar.22	165.8
Bar Mills, Maine, railroad bridge, left bank	19.3	--	160.9
Bar Mills, Maine, Cumberland County Power & Light Co. dam, headwater, left bank	19.0	--	156.8
Bar Mills, Maine, dam, tailwater, left bank	19.0	--	151.6
Salmon Falls, Maine, 1500 feet above highway bridge, left bank	18.9	--	141.0
Salmon Falls, Maine, 100 feet above highway bridge, right bank	17.6	--	139.6
Salmon Falls, Maine, highway bridge, right bank	17.6	--	139.1
Salmon Falls, Maine, 200 feet below highway bridge, right bank	17.6	--	136.5
Salmon Falls, Maine, 400 feet below highway bridge, right bank	17.6	--	133.9
Salmon Falls, Maine, 700 feet below highway bridge, right bank	17.5	--	125.5
Salmon Falls, Maine, 1,000 feet below highway bridge, right bank	17.4	--	125.3
Salmon Falls, Maine, 1,300 feet below highway bridge, right bank	17.4	--	124.6
Salmon Falls, Maine, 1,550 feet below highway bridge, right bank	17.3	--	111.2
Salmon Falls, Maine, 1,750 feet below highway bridge, right bank	17.3	--	110.6
Salmon Falls, Maine, 2,050 feet below highway bridge, right bank	17.2	--	109.0
Salmon Falls, Maine, 2,550 feet below highway bridge, right bank	17.1	--	95.8
Salmon Falls, Maine, mouth of Cooks Brook, left bank	16.9	--	87.0
Union Falls, Maine, 1,100 feet above highway bridge, right bank	15.9	--	83.6
Union Falls, Maine, 600 feet above highway bridge, left bank	15.8	--	81.9
Union Falls, Maine, 150 feet above highway bridge, left bank	15.7	--	77.8
Union Falls, Maine, 150 feet below highway bridge, left bank	15.7	--	72.8
Union Falls, Maine, 3 miles below, bridge on Waterboro-Saco road, upstream, left bank	12.7	--	72.3
Union Falls, Maine, 3 miles below, bridge on Waterboro-Saco road, downstream, left bank	12.7	--	69.9
Little Falls, Maine, 4 miles above Saco, above falls, right bank	9.9	--	67.9
Little Falls, Maine, 4 miles above Saco, below falls, right bank	9.8	--	66.4
Biddeford, Maine, 3 miles above, mouth of brook from Goodwins Mills, right bank	9.2	--	64.6
Biddeford, Maine, upper railroad bridge, upstream, both banks (average)	6.7	Mar.22	63.1
Biddeford, Maine, upper railroad bridge, downstream, both banks (average)	6.7	Mar.22	62.0
Saco, Maine, Pine Street bridge, left bank	6.4	Mar.22	61.9
Saco, Maine, Elm Street bridge, upstream, left bank	6.2	Mar.22	60.3
Saco, Maine, headwater Spring dam, left bank	6.2	Mar.22	59.2
Saco, Maine, Spring dam, tailwater, both banks (average)	6.2	Mar.22	58.3
Saco, Maine, Cataract dam, headwater, left bank	6.0	Mar.22	55.0
Saco, Maine, Cataract dam, tailwater, left bank	6.0	--	12.9
Saco, Maine, Basket Island, mouth	0	--	--

av Altitude of crest of dam, 254.8 feet.
aw Altitude of crest of dam, 211.7 feet.
ax Altitude of crest of dam, 173.7 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Saco River Basin--Continued			
Ossipee River:			
Effingham Falls, N. H., Cumberland County Power & Light Co. dam, headwater, both banks (average)	17.6	Mar.24 8am	ay413.6
Effingham Falls, N. H., dam, tailwater, both banks (average)	17.6	Mar.24 8am	410.3
Effingham Falls, N. H., 150 feet above steel highway bridge, both banks (average)	17.2	Mar.24	396.9
East Freedom, N. H., highway bridge, both banks (average)	13.1	--	393.3
Maine-New Hampshire State line, left bank	12.9	--	388.0
Porter, Maine, mouth of South River, left bank	10.8	--	384.9
Porter, Maine, covered highway bridge, left bank	9.5	--	384.5
Kezar Falls, Maine, log-crib dam of Kezar Falls Woolen Co., headwater, left bank	6.6	Mar.21	az370.6
Kezar Falls, Maine, Kezar Falls Woolen Co. dam, tailwater, left bank	6.6	Mar.21	367.8
Kezar Falls, Maine, 100 feet below concrete arch bridge, right bank	6.3	Mar.21	363.8
Kezar Falls, Maine, Kezar Falls Light & Power Co. dam, headwater, right bank	6.1	Mar.21 11pm	bc355.1
Kezar Falls, Maine, Kezar Falls Light & Power Co. dam, tailwater, both banks (average)	6.1	Mar.21 11pm	350.4
Kezar Falls, Maine, mouth of Ridlon Brook, left bank	6.0	--	347.8
Cornish, Maine, 1.5 miles above, bridge on Cornish-South Hiram road, left bank	2.8	--	304.3
Cornish, Maine, 1.5 miles above, 100 feet below Cornish-South Hiram highway bridge, right bank	2.8	Mar.21	300.2
Cornish, Maine, 500 feet above concrete bridge on Cornish-Hiram road, left bank	1.1	Mar.21	293.6
Cornish, Maine, 100 feet below concrete bridge, U.S. Geological Survey gage, left bank	1.0	Mar.21-22 midnight	292.7
Cornish, Maine, 1,500 feet below concrete bridge on Cornish-Hiram road, left bank	.7	Mar.22	292.7
Cornish, Maine, 2,000 feet above confluence with Saco River, left bank	.4	Mar.22	291.1
Cornish, Maine, 200 feet above confluence with Saco River, right bank	0	Mar.22	289.8
Cornish, Maine, confluence with Saco River, left bank	0	--	--
Piscataqua River Basin			
Salmon Falls River:			
Milton, N. H., Salmon Shoe Mfg. Co. dam, headwater, right bank	*35.1	Mar.19	bd407.0
Milton, N. H., Salmon Shoe Mfg. Co. dam, 0.02 mile below, right bank	*35.0	Mar.19	404.8
Milton, N. H., Leather Board Co., 0.04 mile above, right bank	*34.9	Mar.19	398.9
Milton, N. H., Leather Board Co., 0.04 mile below, right bank	*34.8	Mar.19	370.4
Milton, N. H., 0.02 mile above, Twin State Gas & Electric Co. dam, right bank	*34.7	Mar.19	be370.0
Milton, N. H., 0.04 mile below, Twin State Gas & Electric Co. dam, right bank	*34.6	Mar.19	353.2
Milton, N. H., 0.04 mile above, J. Spaulding & Sons "upper" dam, right bank	*34.5	Mar.19	bf352.1
Milton, N. H., 0.05 mile below, J. Spaulding & Sons "upper" dam, right bank	*34.4	Mar.19	325.8
Milton, N. H., 0.02 mile above, J. Spaulding & Sons "lower" dam, right bank	*34.1	Mar.19	bg260.3
Milton, N. H., 0.03 mile below, J. Spaulding & Sons "lower" dam, right bank	*34.1	Mar.19	253.2
N. Rochester, N. H., 0.04 mile above, J. Spaulding & Sons dam, right bank	*32.6	Mar.19	244.6
N. Rochester, N. H., J. Spaulding & Sons dam, headwater, right bank	*32.5	Mar.19	bh244.6
N. Rochester, N. H., J. Spaulding & Sons dam, 0.01 mile below, right bank	*32.5	Mar.19	235.8
N. Rochester, N. H., 0.5 mile below, J. Spaulding & Sons dam, left bank	*32.0	Mar.19	232.4
N. Rochester, N. H., 0.5 mile below, J. Spaulding & Sons dam, right bank	*32.0	Mar.19	230.6
East Rochester, N. H., above, highway bridge	*30.4	--	--

ay Altitude of crest of dam, 405.2 feet.
az Altitude of crest of dam, 365.1 feet.
bc Altitude of crest of dam, 350.5 feet.
bd Altitude of crest of dam, 399.4 feet.
be Altitude of crest of dam, 362.1 feet.
bf Altitude of crest of dam, 344.1 feet.
bg Altitude of top of flashboards, 255.5 feet.
bh Altitude of top of flashboards, 244.8 feet, of crest of dam, 239.2 feet.
* Distance above mouth of Piscataqua River.

Table 15.-Flood crest stages--Continued

Stream and Location	Miles above mouth	Date and time	Altitude in feet
Piscataqua River Basin--Continued			
Salmon Falls River--Continued:			
East Rochester, N. H., Cocheco Woolen Mfg. Co. "upper" dam, headwater, right bank	*29.0	Mar.19 night	bi214.4
East Rochester, N. H., 0.01 mile below, Cocheco Woolen Mfg. Co. "upper" dam, right bank	*29.0	Mar.19 night	207.2
East Rochester, N. H., Cocheco Woolen Mfg. Co. "lower" dam, headwater, right bank	*28.6	Mar.19 night	bj204.5
East Rochester, N. H., 0.02 mile below, Cocheco Woolen Mfg. Co. "lower" dam, right bank	*28.6	Mar.19 night	201.3
East Rochester, N. H., 0.20 mile below, Cocheco Woolen Mfg. Co. "lower" dam, right bank	*28.4	Mar.19 night	194.9
South Lebanon, Maine, U.S. Geological Survey gage, near, left bank (backwater)	*27.8	Mar.19 7:30pm	bk12.31
Little River, mouth of, left bank	*25.3	--	--
North Somersworth, N. H., 0.04 mile above, Public Service Co. of New Hampshire "Mast Point" dam, right bank	*24.3	Mar.19 night	184.4
North Somersworth, N. H., 0.01 mile above, Public Service Co. of New Hampshire "Mast Point" dam, right bank	*24.2	Mar.19 night	bm184.2
North Somersworth, N. H., 0.04 mile below, Public Service Co. of New Hampshire "Mast Point" dam, right bank	*24.2	Mar.19 night	181.5
Somersworth, N. H., 0.17 mile above, Public Service Co. of New Hampshire "stone" dam, left bank	*21.6	Mar.19 9pm	175.6
Somersworth, N. H., Public Service Co. of New Hampshire "stone" dam, headwater, right bank	*21.4	Mar.19 9pm	bn174.1
Somersworth, N. H., 0.19 mile below steam electric power plant, right bank	*20.6	Mar.19 night	110.6
Somersworth, N. H., 0.04 mile above, Public Service Co. of New Hampshire "new" dam, right bank	*20.5	Mar.19 night	bo109.4
Somersworth, N. H., 0.08 mile below Public Service Co. of New Hampshire "new" dam, right bank	*20.4	Mar.19 night	80.6
Salmon Falls, N. H., New Hampshire Mfg. Co. dam, 0.04 mile above, right bank	*18.0	Mar.19 night	bp76.4
Salmon Falls, N. H., New Hampshire Mfg. Co. dam, 0.04 mile below, right bank	*17.9	Mar.19 night	57.6
Salmon Falls, N. H., New Hampshire Mfg. Co. dam, 0.11 mile below, left bank	*17.8	Mar.19 night	52.9
Salmon Falls, N. H., New Hampshire Mfg. Co. dam, 0.15 mile below, left bank	*17.7	Mar.19 night	32.7
Salmon Falls, N. H., New Hampshire Mfg. Co. dam, 0.3 mile below, left bank	*17.6	Mar.19 night	28.9
South Berwick, Maine, Salmon Falls Power Co. dam, 0.02 mile below, left bank	16.8	Mar.19 night	bq10.8
Below dam tidewater begins	*16.8	--	--
Great Works River, mouth of, left bank	*16.1	--	--
South Berwick Junction, Maine, railroad bridge	*13.8	--	--
Cocheco River, mouth of (head of Piscataqua River) right bank	*12.9	--	--
Piscataqua River:			
Portsmouth, N. H.-Kittery, Maine, highway bridge	4.6	--	--
Whaleback Light House, Maine, mouth of Piscataqua River, left bank	0.0	--	--
Branch River:			
Union, N. H., above, 0.03 mile above New Hampshire Public Service Power Co. "Meadow" dam, right bank	4.6	--	br501.5
Union, N. H., Geo. Drew dam (partly washed out), headwater, right bank	4.4	--	bs497.8
Union, N. H., W. M. Lord & Co. dam, 0.04 mile above, right bank	4.3	--	bt491.1
Union, N. H., 0.03 mile above Reunion Grange Hall, right bank	4.3	--	490.4
Union, N. H., W. M. Lord & Co. dam, 0.03 mile below, right bank	4.3	--	480.9
Union, N. H., Bailer & Blendinger Mill dam, mill buildings, right bank	4.1	--	bu478.9
Union, N. H., Boston & Maine R.R. bridge, left bank	4.0	--	464.3
Union, N. H., Lyle Drew Mill dam, 0.6 mile below, right bank	3.9	--	452.2
Confluence of Salmon Falls River and Branch River, right bank	0	--	--

bi Altitude of top of flashboards, 209.0 feet.
bj Altitude of crest of dam, 201.3 feet.
bk Arbitrary gage datum.
bm Altitude of top of flashboards, 176.7 feet.
bn Altitude of crest of dam, 170.2 feet.
bo Altitude of crest of dam, 102.6 feet.
bp Altitude of crest of dam, 70.3 feet.
bq Altitude of crest of dam, 22.4 feet.
br Altitude of top of flashboards, 496.4 feet.
bs Altitude of top of flashboards, 494.1 feet.
bt Altitude of top of flashboards, 487.0 feet.
bu Altitude of top of flashboards (rebuilt), 474.1 feet.
* Distance above mouth of Piscataqua River.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Merrimack River Basin			
Pemigewasset River:			
Livermore Falls, N. H., dam, headwater, right bank	149.05	Mar.19	bv524.5
Livermore Falls, N. H., dam, tailwater, right bank	149.05	Mar.19	501.6
Livermore Falls, N. H., bridge below dam	149.0	Mar.19	501.0
Livermore Falls, N. H., 0.1 mile below bridge	148.9	Mar.19	500.0
Livermore Falls, N. H., 0.15 mile below bridge, left bank	148.85	Mar.19	490.4
Livermore Falls, N. H., 0.5 mile below bridge, right bank	148.5	Mar.19	488.2
Bakers River, 0.75 mile above mouth	148.0	Mar.19	488.0
Bakers River, mouth of, right bank	147.25	Mar.19	486.1
Bakers River, 0.10 mile below mouth of, right bank	147.15	Mar.19	486.2
Plymouth, N. H., bridge, 200 feet above U.S. Geological Survey gage, both banks (average)	146.95	Mar.19	485.9
Plymouth, N. H., U.S. Geological Survey gage, right bank	146.9	Mar.19 8am	485.8
Plymouth, N. H., 300 feet below U.S. Geological Survey gage, right bank	146.85	Mar.19	485.8
Plymouth, N. H., 0.15 mile below U.S. Geological Survey gage, left bank	146.75	Mar.19	485.8
Plymouth, N. H., 0.35 mile below U.S. Geological Survey gage, right bank	146.55	Mar.19	485.7
Plymouth, N. H., 0.95 mile below U.S. Geological Survey gage, right bank	145.95	Mar.19	485.6
Glove Hollow Brook, 0.7 mile above mouth, right bank	145.35	Mar.19	485.8
Glove Hollow Brook, mouth of, right bank	144.65	Mar.19	485.4
Glove Hollow Brook, 1.1 miles below mouth, right bank	143.5	Mar.19	485.3
Plymouth and Ashland, N. H., bridge on Highway 3 between, right bank	142.75	Mar.19	481.6
Boston & Maine R.R. bridge, right bank	142.7	Mar.19	481.6
Railroad bridge, 200 feet below, left bank	142.65	Mar.19	481.7
Boston & Maine R.R. bridge, 0.70 mile below	142.0	Mar.19	479.7
Squam River, 0.1 mile above mouth, left bank	140.95	Mar.19	477.7
Squam River, mouth, left bank	140.85	Mar.19	477.4
Squam River, 1.2 miles below mouth, left bank	139.65	Mar.19	475.4
Squam River, 1.4 miles below mouth, right bank	139.45	Mar.19	471.4
Woodman and Fogg Brooks, mouth	138.55	Mar.19	471.2
Woodman and Fogg Brooks, 0.45 mile below mouth, right bank	138.1	Mar.19	471.2
Woodman and Fogg Brooks, 1.15 miles below mouth, right bank	137.4	Mar.19	471.4
Harpers Brook, mouth	136.55	Mar.19	467.0
Bagoon Brook, mouth	136.1	Mar.19	465.0
New Hampton, N. H., 0.3 mile above bridge, right bank	134.9	Mar.19	462.5
New Hampton, N. H., 0.2 mile above bridge, right bank	134.8	Mar.19	459.9
New Hampton, N. H., 0.1 mile above bridge, both banks (average)	134.7	Mar.19	459.7
New Hampton, N. H., 0.4 mile below bridge, right bank	134.2	Mar.19	459.4
Tenmile Brook, 0.15 mile below mouth, right bank	133.55	Mar.19	459.4
Bristol, N. H., 1.9 miles above dam, right bank	132.85	Mar.19	459.5
Bristol, N. H., 0.75 mile above dam, right bank	131.7	Mar.19	459.7
Bristol, N. H., dam, headwater, left bank	130.95	Mar.19 11am	bw460.3
Bristol, N. H., dam, tailwater, left bank	130.95	Mar.19	393.2
Bristol, N. H., 0.1 mile below dam, left bank	130.85	Mar.19	393.2
Bristol, N. H., 0.2 mile below dam, left bank	130.75	Mar.19	386.9
Bristol, N. H., 0.45 mile below dam, left bank	130.5	Mar.19	378.9
Bristol, N. H., 0.1 mile above bridge, left bank	130.1	Mar.19	369.9
Bristol, N. H., just above bridge, right bank	130.0	Mar.19	365.1
Bristol, N. H., just below bridge, both banks (average)	129.95	Mar.19	364.6
Newfound River, mouth, right bank	129.9	Mar.19	363.9
Newfound River, 0.7 mile below mouth, left bank	129.2	Mar.19	347.4
Blake Brook, 0.15 mile above mouth, left bank	128.85	Mar.19	343.6
Smith River, 0.8 mile above mouth, left bank	128.2	Mar.19	340.0
Smith River, mouth, both banks (average)	127.4	Mar.19	336.8
Dyer Brook, mouth, right bank	126.8	Mar.19	335.9
Dyer Brook, 0.3 mile below mouth, right bank	126.5	Mar.19	334.8
Prescott Brook, 0.3 mile above mouth, right bank	125.9	Mar.19	334.3
Prescott Brook, mouth, right bank	125.6	Mar.19	332.2
Prescott Brook, 0.6 mile below mouth, right bank	125.0	Mar.19	331.0
Needle Shop Brook, 0.75 mile above mouth, right bank	124.3	Mar.19	329.4
Needle Shop Brook, 0.05 mile below mouth, left bank	123.5	Mar.19	328.7
Knox Brook, mouth, bridge, right bank	123.4	Mar.19	327.9
Bennett Brook, 0.05 mile above mouth, left bank	123.05	Mar.19	326.7
Weeks Brook, 0.75 mile above mouth, left bank	121.7	Mar.19	325.3
Weeks Brook, 0.3 mile above mouth, left bank	121.25	Mar.19	324.1
Salmon Brook, mouth	119.95	Mar.19	322.1
Salmon Brook, 0.55 mile below mouth, left bank	119.4	Mar.19	321.5
Salmon Brook, 1.15 miles below mouth, left bank	118.8	Mar.19	320.8
Salmon Brook, 1.65 miles below mouth, right bank	118.3	Mar.19	320.7
Franklin, N. H., 0.5 mile above dam at Eastman Falls, left bank	117.15	Mar.19	319.3

bv Altitude of crest of dam, 511.0 feet, with flashboards, 514.0.
bw Altitude of crest of dam, 445.3 feet, with flashboards, 452.3.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Merrimack River Basin--Continued			
Pemigewasset River--Continued:			
Franklin, N. H., dam at Eastman Falls, headwater, right bank	116.65	Mar.19	318.9
Franklin, N. H., dam at Eastman Falls, tailwater, right bank	116.6	Mar.19	298.5
Franklin, N. H., mouth, Chance Pond Brook	116.5	Mar.19	297.2
Franklin, N. H., highway bridge, both banks (average)	116.25	Mar.19	294.5
Confluence of Pemigewassett and Winnipesaukee Rivers, both banks (average)	115.7	Mar.19	292.2
Merrimack River:			
Confluence of Pemigewasset and Winnipesaukee Rivers, 0.1 mile below, both banks (average)	115.6	Mar.19	292.4
Franklin Junction, N. H., U.S. Geological Survey gage, left bank	114.65	Mar.19	287.8
Franklin Junction, N. H., U.S. Geological Survey gage, right bank	114.65	Mar.19 2-4pm	286.8
Franklin Junction, N. H., Boston & Maine R.R. bridge, downstream, right bank	114.6	Mar.19	287.5
Punch Brook, 0.2 mile above mouth, right bank	113.9	Mar.19	285.7
Punch Brook, mouth, right bank	113.7	Mar.19	285.0
Punch Brook, 0.3 mile below mouth, right bank	113.4	Mar.19	283.5
Cross Brook, 0.85 mile above mouth, right bank	112.4	Mar.19	283.6
Cross Brook, 0.15 mile below mouth, right bank	111.4	Mar.19	282.3
Stirrup Iron Brook, 0.5 mile above mouth, right bank	111.0	Mar.19	282.0
Stirrup Iron Brook, mouth, right bank	110.5	Mar.19	278.1
Stirrup Iron Brook, 0.7 mile below mouth, right bank	109.8	Mar.19	277.5
Glines Brook, mouth	109.2	Mar.19	276.5
Bryant Brook, mouth	107.6	Mar.19	273.5
Tannery Brook, 0.1 mile above mouth, left bank	105.3	Mar.19	269.4
Boscawen, N. H., highway bridge, upstream, both banks, (average)	105.05	Mar.19	269.4
Boscawen, N. H., highway bridge, downstream	105.0	Mar.19	269.0
Boscawen, N. H., 1 mile below highway bridge	104.05	Mar.19	268.7
Penacook, N. H., bridge 0.1 mile above mouth of Contoocook River, right bank	100.9	Mar.19	268.2
Penacook, N. H., mouth of Contoocook River	100.75	Mar.19	266.5
Penacook, N. H., 0.15 mile below mouth of Contoocook River, left bank	100.60	Mar.19	266.2
Burnham Brook, 0.2 mile below mouth, right bank	99.9	Mar.19	265.5
Sewalls Falls, N. H., dam, headwater, right bank	97.85	Mar.19	bx257.6
Sewalls Falls, N. H., dam, tailwater	97.85	Mar.19	248.2
Beaver Meadow Brook, 0.05 mile above mouth, right bank	97.5	Mar.19	247.8
Rattlesnake Brook, 0.5 mile above mouth, left bank	95.9	Mar.19	245.2
East Concord, N. H., highway bridge, right bank	94.35	Mar.19	244.8
Concord, N. H., highway bridge, upstream, right bank	91.6	Mar.19	244.2
Concord, N. H., highway bridge, downstream, right bank	91.6	Mar.19	243.3
Concord, N. H., 0.45 mile below highway bridge, right bank	91.15	Mar.19	243.2
Concord, N. H., 0.4 mile above bridge on U.S. Highway 3	90.65	Mar.20	242.5
Concord, N. H., bridge on U.S. Highway 3, both banks (average)	90.25	Mar.20	242.2
Boston & Maine R.R. bridge, 1.1 miles above	89.0	Mar.20	239.4
Boston & Maine R.R. bridge	87.9	Mar.20	237.2
Garvins Falls, N. H., dam, headwater, right bank	86.8	Mar.20 2am	by231.0
Garvins Falls, N. H., 0.1 mile below dam, tailwater, right bank	86.7	Mar.20	214.4
Soucook River, mouth	85.8	Mar.20	212.1
Soucook River, 0.7 mile below mouth, right bank	85.1	Mar.20	210.4
Suncook River, mouth	82.9	Mar.20	210.2
Suncook River, 0.35 mile below mouth, left bank	82.55	Mar.20	210.0
Hooksett, N. H., dam, headwater	81.05	Mar.20	bz203.5
Hooksett, N. H., dam, tailwater	81.05	Mar.20	203.2
Hooksett, N. H., 0.3 mile below dam, left bank	80.75	Mar.20	202.8
Hooksett, N. H., Boston & Maine R.R. bridge, both banks (average)	80.55	Mar.20	201.5
Peters Brook, 0.8 mile above mouth	79.0	Mar.20	198.2
Peters Brook, 0.2 mile below mouth, left bank	78.0	Mar.20	195.5
Messer Brook, 0.05 mile above mouth, right bank	76.85	Mar.20	195.4
Messer Brook, 0.3 mile below mouth, left bank	76.5	Mar.20	195.1
Millstone Brook, 0.35 mile below mouth, left bank	74.4	Mar.20	189.8
Manchester, N. H., Amoskeag Dam, headwater, left bank	73.15	Mar.20 4-8am	cd188.3
Manchester, N. H., Amoskeag Dam, headwater, right bank	73.15	Mar.20 4-8am	185.1
Manchester, N. H., 0.25 mile below Amoskeag Dam, left bank	72.9	Mar.20	158.05

bx Altitude of crest of dam, 240.9 feet.
by Altitude of crest of dam, 216.8 feet; with flashboards, 218.8 feet.
bz Altitude of crest of dam, 187.0 feet.
cd Altitudes of crest of dam, 173.0 and 171.0 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Merrimack River Basin--Continued			
Merrimack River--Continued:			
Manchester, N. H., 0.3 mile below Amoskeag Dam, left bank	72.85	Mar.20	155.6
Manchester, N. H., 0.4 mile below Amoskeag Dam, left bank	72.75	Mar.20	155.0
Manchester, N. H., McGregor highway bridge, upstream, left bank	72.55	Mar.20	153.6
Manchester, N. H., 0.05 mile below McGregor highway bridge, left bank	72.5	Mar.20	153.3
Manchester, N. H., 0.1 mile below McGregor highway bridge, left bank	72.45	Mar.20	153.4
Manchester, N. H., 0.25 mile below McGregor highway bridge, left bank	72.3	Mar.20	152.7
Manchester, N. H., Granite Street highway bridge, right bank	71.95	Mar.20	150.5
Manchester, N. H., 0.15 mile below Granite Street highway bridge, right bank	71.8	Mar.20	149.6
Manchester, N. H., 0.35 mile below Granite Street highway bridge, right bank	71.6	Mar.20	149.1
Manchester. N. H., Boston & Maine R.R. bridge, right bank	71.45	Mar.20	148.7
Piscataquog River, 0.1 mile below mouth, left bank	71.2	Mar.20	147.8
Manchester, N. H., Queen City Avenue highway bridge, upstream, left bank	71.1	Mar.20	147.3
Manchester, N. H., Queen City Avenue highway bridge, downstream, left bank	71.05	Mar.20	146.8
Manchester, N. H., 0.1 mile below Queen City Avenue highway bridge, left bank	70.95	Mar.20	146.8
Baker Brook, 0.1 mile above mouth, left bank	70.8	Mar.20	146.6
Baker Brook, 0.1 mile below mouth, left bank	70.6	Mar.20	146.3
Bowman Brook, 0.45 mile above mouth, right bank	70.3	Mar.20	145.2
Bowman Brook, mouth, right bank	69.85	Mar.20	144.8
Bowman Brook, 0.75 mile below mouth, both banks (average)	69.1	Mar.20	143.9
Bowman Brook, 0.95 mile below mouth, both banks (average)	68.9	Mar.20	143.7
Boston & Maine R.R. bridge, upstream, left bank	68.05	Mar.20	143.4
Boston & Maine R.R. bridge, downstream, left bank	68.05	Mar.20	142.5
Boston & Maine R.R. bridge, 0.15 mile below, right bank	67.9	Mar.20	142.5
Cohas Brook, mouth	67.7	Mar.20	141.8
Little Cohas Brook, 0.05 mile below mouth, right bank	67.0	Mar.20	140.0
Little Cohas Brook, 0.35 mile below mouth, left bank	66.7	Mar.20	138.1
Stebbins Brook, 0.2 mile above mouth, right bank	66.5	Mar.20	137.7
Stebbins Brook, 0.8 mile below mouth, right bank	65.5	Mar.20	136.9
Sawmill Brook, 0.7 mile above mouth, right bank	64.9	Mar.20	136.3
Sawmill Brook, 0.6 mile above mouth, right bank	64.8	Mar.20	134.7
Sawmill Brook, 0.65 mile below mouth, both banks (average)	63.55	Mar.20	134.0
Merrimack, N. H., mouth of Souhegan River, both banks (average)	62.35	Mar.20	132.5
Merrimack, N. H., 0.2 mile below mouth of Souhegan River, left bank	62.15	Mar.20	132.4
Merrimack, N. H., 1 mile below mouth of Souhegan River, left bank	61.35	Mar.20	132.0
Naticook Brook, mouth, right bank	60.7	Mar.20	132.0
Nesenkeag Brook, 0.7 mile below mouth, left bank	59.65	Mar.20	131.9
Pennichuck Brook, mouth, right bank	57.65	Mar.20	129.2
Pennichuck Brook, 1.5 miles below mouth, right bank	56.15	Mar.20	128.3
Nashua River, 0.2 mile above mouth, right bank	55.0	Mar.20	128.0
Nashua River, highway bridge, left bank	54.55	Mar.20	127.4
Nashua, N. H., 0.15 mile below highway bridge, right bank	54.4	Mar.20	127.1
Nashua, N. H., Boston & Maine R.R. bridge, right bank	54.3	Mar.20	126.1
Boston & Maine R.R. bridge, 0.4 mile below, left bank	53.9	Mar.20	125.5
Salmon Brook, 0.3 mile below mouth, both banks (average)	53.2	Mar.20	124.4
Massachusetts-New Hampshire State line, 1.7 miles above	51.5	Mar.20	123.5
Massachusetts-New Hampshire State line, 0.85 miles above, both banks (average)	50.65	Mar.20	123.0
Massachusetts-New Hampshire State line, 0.2 mile above, both banks (average)	50.0	Mar.20	120.6
Massachusetts-New Hampshire State line, 0.15 mile below, both banks (average)	49.6	Mar.20	119.9
Musquash Brook, 0.45 mile below mouth, right bank	48.65	Mar.20	119.0
Tyngsborough, Mass., 0.55 mile above highway bridge, both banks (average)	47.9	Mar.20	116.8
Tyngsborough, Mass., 0.4 mile above highway bridge, right bank	47.75	Mar.20	115.7
Tyngsborough, Mass., highway bridge, right bank	47.35	Mar.20	115.5
Tyngsborough, Mass., 0.4 mile below highway bridge, right bank	46.95	Mar.20	115.4
Lawrence Brook, 0.1 mile below mouth, right bank	46.55	Mar.20	114.0

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Merrimack River Basin--Continued			
Merrimack River--Continued:			
Lawrence Brook, 0.4 mile below mouth, right bank	46.25	Mar.20	113.7
Tyngs Island	45.1	Mar.20	112.1
Scarlet Brook, mouth, left bank	44.05	Mar.20	111.4
North Chelmsford, Mass., mouth of Deep Brook, right bank	43.45	Mar.20	110.7
North Chelmsford, Mass., mouth of Stony Brook, right bank	43.15	Mar.20	109.7
North Chelmsford, Mass., 0.3 mile below mouth of Stony Brook, right bank	42.85	Mar.20 6pm	109.3
Lowell, Mass., 1.45 miles above Pawtucket Dam, left bank	42.0	Mar.20	109.2
Lowell, Mass., 1.2 miles above Pawtucket Dam, both banks (average)	41.75	Mar.20	109.0
Lowell, Mass., 0.8 mile above Pawtucket Dam, left bank	41.35	Mar.20	108.9
Lowell, Mass., 0.25 mile above Pawtucket Dam, right bank	40.8	Mar.20	107.6
Lowell, Mass., 0.2 mile above Pawtucket Dam, left bank	40.75	Mar.20	107.7
Lowell, Mass., 0.15 mile above Pawtucket Dam, left bank	40.7	Mar.20	107.7
Lowell, Mass., 0.1 mile above Pawtucket Dam, right bank	40.65	Mar.20	107.6
Lowell, Mass., Pawtucket Dam, headwater, both banks (average)	40.55	Mar.20	ce107.5
Lowell, Mass., 0.05 mile below Pawtucket Dam, left bank	40.5	Mar.20	101.8
Lowell, Mass., 0.1 mile below Pawtucket Dam, left bank	40.45	Mar.20	101.8
Moody Street Bridge, upstream, center span	40.15	Mar.20	89.6
Moody Street Bridge, 0.15 mile below	40.0	Mar.20	82.5
Lowell, Mass., mouth of Beaver Brook, left bank	39.8	Mar.20	80.4
Lowell, Mass., Aiken Street Bridge, upstream, left bank	39.6	Mar.20	80.0
Lowell, Mass., Aiken Street Bridge, overflow section, left bank	39.6	Mar.20	79.8
Lowell, Mass., 0.1 mile below Aiken Street Bridge, left bank	39.5	Mar.20	79.3
Lowell, Mass., 0.2 mile below Aiken Street Bridge, left bank	39.4	Mar.20	78.8
Lowell, Mass., Opposite Boott Mill gage, left bank	38.95	Mar.20	76.9
Lowell, Mass., Boott Mill gage, right bank	38.95	Mar.20	--
Lowell, Mass., Centralville bridge, upstream, left bank and center	38.85	Mar.20	76.6
Lowell, Mass., 0.05 mile below Centralville bridge, right bank	38.8	Mar.20	75.9
Lowell, Mass., mouth of Concord River, right bank	38.75	Mar.20	75.9
Lowell, Mass., 0.1 mile below mouth of Concord River, left bank	38.65	Mar.20	74.4
Lowell, Mass., U.S. Geological Survey gage, right bank	38.55	Mar.20 7-11pm	73.6
Lowell, Mass., 0.3 mile below U.S. Geological Survey gage, left bank	38.25	--	73.1
Lowell, Mass., 0.45 mile below U.S. Geological Survey gage, left bank	38.1	--	71.3
Lowell, Mass., 0.55 mile below U.S. Geological Survey gage, left bank	38.0	--	70.9
Lowell, Mass., 0.8 mile below U.S. Geological Survey gage, left bank	37.75	--	70.2
Lowell, Mass., 1.0 mile below U.S. Geological Survey gage, left bank	37.55	--	69.9
Lowell, Mass., 1.2 miles below U.S. Geological Survey gage, left bank	37.35	--	70.1
Richardson Brook, 0.6 mile above mouth, left bank	36.95	--	69.4
Richardson Brook, 0.4 mile above mouth, left bank	36.75	--	67.8
Richardson Brook, 0.3 mile above mouth, left bank	36.65	--	68.1
Richardson Brook, 0.2 mile above mouth, left bank	36.55	--	67.7
Richardson Brook, mouth, left bank	36.35	--	68.0
Richardson Brook, 0.1 mile below mouth, left bank	36.25	--	67.7
Trull Brook, 0.1 mile above mouth, left bank	36.05	--	67.2
Trull Brook, mouth, left bank	35.95	--	66.5
Trull Brook, 0.2 mile below mouth, left bank	35.75	--	66.4
Trull Brook, 0.8 mile below mouth, left bank	35.15	--	64.0
Trull Brook, 0.9 mile below mouth, left bank	35.05	--	62.5
Trull Brook, 1.1 miles below mouth, left bank	34.85	--	62.3
Fish Brook, 1.35 miles above mouth, left bank	34.4	--	61.3
Fish Brook, 1.25 miles above mouth, left bank	34.3	--	61.3
Fish Brook, 0.85 mile above mouth, left bank	33.9	--	60.0
Fish Brook, 0.6 mile above mouth, left bank	33.65	--	59.1
Fish Brook, 0.05 mile above mouth, left bank	33.1	--	57.8
Fish Brook, 0.55 mile below mouth, left bank	32.5	--	57.7
Bartletts Brook, 0.4 mile above mouth, left bank	32.3	--	57.6
Bartletts Brook, 0.2 mile above mouth, left bank	32.1	--	57.3
Bartletts Brook, mouth, left bank	31.9	--	57.1
Bartletts Brook, 0.2 mile below mouth, left bank	31.7	--	57.1

ce Altitude of crest of dam, 87.2 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Merrimack River Basin--Continued			
Merrimack River--Continued:			
Bartletts Brook, 0.4 mile below mouth, left bank	31.5	--	56.7
Bartletts Brook, 0.5 mile below mouth, left bank	31.4	--	56.0
Bartletts Brook, 0.8 mile below mouth, left bank	31.1	--	56.0
Lawrence, Mass., 0.85 mile above Essex Co. dam, left bank	29.85	--	54.3
Lawrence, Mass., 0.4 mile above Essex Co. dam, left bank	29.4	--	54.3
Lawrence, Mass., 0.1 mile above Essex Co. dam, left bank	29.1	Mar.20, 8pm to Mar.21,4am	cf53.9
Lawrence, Mass., Essex Co. dam, headwater, gage, right bank	29.0	--	--
Lawrence, Mass., 0.15 mile below Essex Co. dam, downstream	28.85	--	46.5
Lawrence, Mass., Central Street highway bridge	28.6	--	46.0
Lawrence, Mass., Duck Street highway bridge, downstream, right bank	28.2	--	45.1
Lawrence, Mass., 0.05 mile below mouth of Spickett River, left bank	27.8	--	44.4
Shawshine River, 0.3 mile below mouth, both banks (average)	27.15	--	43.8
Shawshine River, 2.4 miles below mouth	25.05	--	42.0
North Andover-Haverhill town line, right bank	24.35	Mar.21 3-5am	39.9
Hawkes Brook, 0.35 mile above mouth, left bank	23.2	--	39.8
Creek Brook, 0.05 mile below mouth, left bank	21.8	--	38.4
Haverhill, Mass., 1.0 mile above County highway bridge, left bank	20.15	--	30.8
Haverhill, Mass., 0.55 mile above County highway bridge, both banks (average)	19.7	--	29.9
Haverhill, Mass., 0.3 mile above County highway bridge, left bank	19.45	--	29.5
Haverhill, Mass., County highway bridge, upstream, left bank	19.15	--	29.2
Haverhill, Mass., County highway bridge, downstream, left bank	19.15	--	28.2
Haverhill, Mass., Boston & Maine R.R. bridge, downstream	19.1	--	28.0
Haverhill, Mass., 0.05 mile below mouth of Little River, left bank	18.8	--	27.9
Haverhill, Mass., 0.15 mile below mouth of Little River, left bank	18.7	--	27.9
Haverhill, Mass., highway bridge, both banks (average)	18.5	--	28.0
Haverhill, Mass., 0.05 mile below highway bridge, left bank	18.45	--	27.4
Haverhill, Mass., 0.5 mile below highway bridge, left bank	18.0	--	26.2
Haverhill, Mass., 1.15 miles below highway bridge, both banks (average)	17.35	--	26.0
Groveland highway bridge, 1.2 miles above, left bank	16.9	--	25.8
Groveland highway bridge, 0.6 mile above, both banks (average)	16.3	--	25.7
Groveland highway bridge, both banks (average)	15.7	--	24.7
Groveland highway bridge, 0.2 mile below, left bank	15.5	--	24.2
Neal Pond Brook, 0.25 mile above, left bank	14.8	--	24.4
Neal Pond Brook, 0.15 mile below mouth, left bank	14.4	--	24.1
Neal Pond Brook, 0.55 mile below mouth	14.0	--	24.0
Neal Pond Brook, 1.05 miles below mouth	13.5	--	23.8
Rocks Village, Mass., 1.4 miles above highway bridge, right bank	13.2	--	23.6
Rocks Village, Mass., 0.7 mile above highway bridge	12.5	--	23.3
Rocks Village, Mass., 0.35 mile above highway bridge, right bank	12.15	--	23.2
Rocks Village, Mass., 0.3 mile above highway bridge, right bank	12.1	Mar.21 4am	23.1
Rocks Village, Mass., 0.1 mile above highway bridge, right bank	11.9	Mar.21	23.0
Rocks Village, Mass., highway bridge, upstream, left bank	11.8	Mar.21	22.1
Rocks Village, Mass., highway bridge, downstream, both banks (average)	11.8	Mar.21	21.6
Rocks Village, Mass., 0.8 mile below highway bridge	11.0	Mar.21	20.5
Cobblers Brook, Mass., 0.1 mile below, left bank	10.0	Mar.21	19.8
Cobblers Brook, 0.55 mile below mouth	9.55	Mar.21	19.1
Artichoke River, mouth, right bank	7.8	Mar.21	17.7
Pow Wow River, 0.5 mile above mouth, left bank	6.9	Mar.21	16.4
Pow Wow River, 0.3 mile above mouth, left bank	6.7	Mar.21	15.9
Pow Wow River, mouth, left bank	6.4	Mar.21	16.2
Pow Wow River, 0.4 mile below mouth	6.0	Mar.21	15.8
Amesbury, Mass., Deer Island chain bridge, upstream	5.15	Mar.21	13.3

cf Altitude of crest of dam, 39.2 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Merrimack River Basin--Continued			
Merrimack River--Continued:			
Amesbury, Mass., Deer Island chain bridge, downstream	5.15	Mar.21	11.8
Amesbury, Mass., Deer Island draw bridge, upstream	5.1	Mar.21	13.2
Amesbury, Mass., Deer Island draw bridge, downstream	5.1	Mar.21	12.6
Newburyport, Mass., Newburyport highway bridge	2.85	Mar.21	9.0
Newfound River:			
Newfound Lake, outlet, both banks (average)	3.1	--	593.5
Public Service Co. of New Hampshire dam, headwater, both banks (average)	3.0	--	591.7
Public Service Co. of New Hampshire dam, tailwater right bank	3.0	--	587.9
Highway bridge, both banks (average)	2.65	--	576.9
Public Service Co. of New Hampshire dam, left bank	2.0	--	552.8
Concrete highway bridge, left bank	1.95	--	545.8
Wooden Heel Factory dam, left bank	1.85	--	542.9
Dam (old), right bank	1.75	--	497.6
Highway bridge, 0.05 mile upstream from, right bank	1.55	--	493.2
Dodge Davis Mfg. Co. dam, headwater	1.45	--	490.1
Dodge Davis Mfg. Co. dam, tailwater	1.45	--	482.7
Dam, right bank	1.25	--	468.6
Bristol, N. H., highway bridge, both banks (average)	1.0	--	460.1
Bristol, N. H., 0.15 mile upstream from highway bridge, left bank	0.6	--	457.5
Bristol, N. H., highway bridge, both banks (average)	0.45	--	457.2
Bristol, N. H., highway bridge on road to Hill, left bank	0.2	--	455.0
Bristol, N. H., Cawley Dam, headwater, right bank	0.2	--	cg453.3
Bristol, N. H., Public Service Co. of New Hampshire dam	0.1	--	430.0
Bristol, N. H., Depot Street highway bridge, left bank	0.1	--	408.1
Bristol, N. H., Confluence of Pemigewasset and Newfound Rivers, right bank	0	--	363.9
Contoocook River:			
Peterboro, N. H., bridge 0.35 mile above mouth of Nubanusit Brook, left bank	58.25	--	727.1
Peterboro, N. H., 0.1 mile above mouth of Nubanusit Brook, left bank	58.0	--	725.1
Peterboro, N. H., 0.05 mile below mouth of Nubanusit Brook, left bank	57.85	--	724.1
Peterboro, N. H., Transcript Dam and bridge, headwater, left bank	57.75	--	ch723.9
Peterboro, N. H., Boston & Maine R.R. bridge, left bank	57.65	--	720.9
Peterboro, N. H., Boston & Maine R.R. bridge, right bank	57.6	--	717.3
Peterboro, N. H., 0.35 mile below Boston & Maine R.R. bridge, right bank	57.25	--	714.1
North Village, N. H., 0.25 mile above dam, left bank	56.3	--	ci710.9
North Village, N. H., 0.05 mile below dam, bridge	56.0	--	706.2
Boglie Brook, 0.55 mile above mouth, right bank	55.15	--	703.5
Boglie Brook, 1.45 miles below mouth	53.15	--	697.8
Ferguson Brook, 0.4 mile above mouth, left bank	51.55	--	693.7
Ferguson Brook, 0.05 mile below mouth, left bank	51.05	--	692.8
Kimball Brook, 0.35 mile below mouth, left bank	50.2	--	690.6
Moose Brook, 0.05 mile below mouth, left bank	48.55	--	686.3
Elmwood, N. H., Boston & Maine R.R. bridge	48.25	--	685.5
Powder Mill Dam, 0.6 mile above, left bank	47.35	--	682.3
Powder Mill Dam, headwater	46.75	--	cj680.4
Bennington, N. H., Monadnock Power Dam, headwater	45.95	--	ck670.4
Bennington, N. H., highway bridge, 0.1 mile below Monadnock Power Dam, right bank	45.85	--	661.5
Bennington, N. H., Pierce power dam, headwater	45.75	--	cm656.4
Bennington, N. H., 0.05 mile above Monadnock Paper Co. dam, right bank	45.5	--	cn636.0
Bennington, N. H., 0.15 mile below Monadnock Paper Co. dam, right bank	45.3	--	613.1
Bennington, N. H., 0.2 mile below Monadnock Paper Co. dam, right bank	45.25	--	610.7
Monadnock Paper Co. dam, 0.7 mile below, left bank	44.75	--	607.5
Great Brook, 1.0 mile above mouth, left bank	43.75	--	606.9
Great Brook, 0.2 mile above mouth, right bank	42.95	--	606.4
Great Brook, 0.2 mile below mouth, left bank	42.55	--	606.1
Great Brook, 0.4 mile below mouth, right bank	42.35	--	606.1

cg Altitude of crest of dam, 446.6 feet.
ch Altitude of crest of dam, 714.9 feet; with flashboards, 715.9 feet.
ci Altitude of crest of dam, 702.6 feet.
cj Altitude of crest of dam, 675.4 feet; with flashboards, 677.0 feet.
ck Altitude of crest of dam, 665.8 feet; with flashboards, 667.8 feet.
cm Altitude of crest of dam, 651.4 feet.
cn Altitude of crest of dam, 627.6 feet; with flashobards, 629.6 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Merrimack River Basin--Continued			
Contoocook River--Continued:			
Great Brook, highway bridge, 2.6 miles below mouth	40.15	--	603.9
Highway bridge, 0.1 mile above, right bank	37.2	--	600.8
Beards Brook, 1.4 miles above mouth, right bank	35.75	--	596.9
Beards Brook, 0.85 mile above mouth, right bank	35.2	--	596.6
Beards Brook, mouth, left bank	34.35	--	597.4
Hillsboro, N. H., 0.5 mile above Gordon Woolen Co. dam, right bank	33.4	--	596.6
Hillsboro, N. H., 0.4 mile above Gordon Woolen Co. dam, right bank	33.3	--	593.6
Hillsboro, N. H., Gordon Woolen Co. dam, right bank	32.9	--	co593.2
Hillsboro, N. H., Gordon Woolen Co. dam, tailwater, right bank	32.9	--	584.3
Hillsboro Mfg. Co. dam, headwater, right bank	32.65	--	cp584.1
Hillsboro Mfg. Co. dam, tailwater, right bank	32.65	--	572.6
Hillsboro Mfg. Co. dam, 0.05 mile below, left bank	32.6	--	566.3
Hillsboro Mfg. Co. dam, 0.3 mile below, right bank	32.35	--	560.6
New Hampshire Power Co. dam, 1.3 miles above, highway bridge, upstream, right bank	30.05	--	559.8
New Hampshire Power Co. dam, 1.3 miles above, highway bridge, downstream, right bank	30.05	--	558.3
New Hampshire Power Co. dam, headwater, right bank	28.75	--	cq558.1
New Hampshire Power Co. dam, 0.1 mile below, right bank	28.65	--	535.8
New Hampshire Power Co. dam, 0.3 mile below, right bank	28.45	--	524.2
New Hampshire Power Co. dam, 0.9 mile below, right bank	27.85	--	489.0
Contoocook Valley Paper Co. dam, 1 mile above, right bank	27.45	--	475.2
West Henniker, N. H., 0.25 mile above Contoocook Valley Paper Co. dam, right bank	26.7	--	440.2
West Henniker, N. H., Contoocook Valley Paper Co. dam, headwater, right bank	26.45	--	cr438.4
West Henniker, N. H., double-span highway bridge, right bank	26.4	--	437.9
West Henniker, N. H., single-span highway bridge	26.3	--	434.0
West Henniker, N. H., 0.1 mile below single-span highway bridge, left bank	26.2	--	429.7
West Henniker, N. H., 0.2 mile below single-span highway bridge, left bank	26.1	--	429.5
West Henniker, N. H., 0.3 mile below single-span highway bridge, left bank	26.0	--	429.2
Boston & Maine R.R. bridge, 0.2 mile above, left bank	25.75	--	429.0
Boston & Maine R.R. bridge, 0.05 mile below, left bank	25.5	--	428.4
Henniker, N. H., highway bridge	24.8	--	426.3
Henniker, N. H., 0.05 mile below highway bridge, right bank	24.75	--	417.8
Henniker, N. H., K & C Dam, headwater, right bank	24.6	--	cs415.4
Henniker, N. H., K & C Dam, tailwater, right bank	24.6	--	411.0
Henniker, N. H., Morton Mfg. Co. dam, headwater, water gate	24.25	--	409.7
Henniker, N. H., Morton Mfg. Co. dam, headwater, left bank	24.25	--	408.3
Henniker, N. H., 0.05 mile below Morton Mfg. Co. dam, tailwater, right bank	24.2 24.2	-- --	405.8 405.8
Morton Mfg. Co. dam, 0.25 mile below, left bank	24.0	--	404.6
Chase Brook, 0.55 mile above mouth, right bank	23.05	--	404.3
Chase Brook, 0.25 mile above mouth, right bank	22.75	--	400.4
Chase Brook, 0.25 mile below mouth, right bank	22.25	--	400.2
Amey Brook, 0.55 mile below mouth, right bank	21.3	--	400.2
Boston & Maine R.R. bridge, 0.6 mile above, right bank	21.0	--	399.8
Boston & Maine R.R. bridge, right bank	20.45	--	399.4
Boston & Maine R.R. bridge, 0.05 mile below	20.4	--	399.4
Boston & Maine R R. bridge, 0.15 mile below, right bank	20.3	--	398.4
Boston & Maine R.R. bridge, 1 mile below, left bank	19.45	--	394.2
Covered highway bridge	18.6	--	393.8
Covered highway bridge, 0.05 mile below, right bank	18.55	--	388.8
West Hopkinton, N. H., dam, headwater, water gate	17.9	--	385.0
West Hopkinton, N. H., 0.05 mile below dam, right bank	17.85	--	377.9
Covered highway bridge, upstream, right bank	17.65	--	377.8
Covered highway bridge, downstream, right bank	17.65	--	377.3
West Hopkinton, N. H., 0.1 mile below covered highway bridge, right bank	17.55	--	374.9
Elm Brook, mouth	17.05	--	374.0

co Altitude of crest of dam, 582.2 feet; with flashboards, 584.2 feet.
cp Altitude of crest of dam, 568.6 feet.
cq Altitude of crest of dam, 549.0 feet; with flashboards, 551.0 feet.
cr Altitude of crest of dam, 427.7 feet.
cs Altitude of crest of dam, 409.4 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Merrimack River Basin--Continued			
Contoocook River--Continued:			
Elm Brook, 0.65 mile below mouth, left bank	16.4	--	373.4
Hardy Spring Brook, 1.6 miles above mouth, right bank	14.6	--	372.4
Hardy Spring Brook, 0.3 mile above mouth, left bank	13.3	--	370.4
Contoocook, N. H., 0.1 mile above dam, left bank	12.75	--	370.1
Contoocook, N. H., 0.05 mile below dam, both banks (average)	12.6	--	369.9
Contoocook, N. H., highway bridge, left bank	12.55	--	369.4
Contoocook, N. H., Boston & Maine R.R. bridge (destroyed) right bank	12.5	--	368.8
Warner River, mouth, right bank	11.6	--	368.7
Warner River, 0.8 mile below mouth, right bank	10.8	--	368.1
Tyler, N. H., highway bridge	10.05	--	367.2
Blackwater River, mouth	8.85	--	366.1
Deer Meadow Brook, mouth	8.55	--	366.0
Boston & Maine R.R. bridge, upstream, left bank	7.15	--	364.95
Boston & Maine R.R. bridge, downstream, right bank	7.15	--	362.3
Dolf Brook, 0.7 mile below mouth, left bank	5.45	--	362.4
Riverhill, N. H., 0.1 mile above Boston & Maine R.R. bridge, right bank	4.25	--	359.7
Riverhill, N. H., highway bridge, upstream, right bank	3.95	--	359.7
Riverhill, N. H., highway bridge, downstream, left bank	3.95	--	358.2
Riverhill, N. H., 0.65 mile below highway bridge, right bank	3.3	--	358.6
Riverhill, N. H., 0.85 mile below highway bridge, right bank	3.1	--	356.8
Dam, 0.15 mile above, right bank	2.5	--	355.6
Dam, 0.05 mile above, right bank	2.4	--	352.5
Penacook, N. H., 0.3 mile above highway bridge, right bank	1.35	--	324.8
Penacook, N. H., highway bridge, right bank	1.05	--	311.3
Penacook, N. H., Boscawen Mfg. Co. dam, left bank	0.95	--	300.5
Penacook, N. H., 0.2 mile below Boscawen Mfg. Co. dam, right bank	0.75	--	295.4
Penacook, N. H., U.S. Geological Survey gage, right bank	0.7	Mar.20 6am	294.0
Penacook, N. H., 0.1 mile above steel highway bridge, left bank	0.55	Mar.20	292.5
Penacook, N. H., dam, both banks (average)	0.45	Mar.20	283.4
Penacook, N. H., Harris-Emory Co. dam, left bank	0.2	Mar.20	275.0
Penacook, N. H., 0.05 mile below Harris-Emory Co. dam, left bank	0.15	Mar.20	267.4
Penacook, N. H., mouth of Contoocook River	0	Mar.20	266.5
Blackwater River:			
Highway bridge (destroyed), 25 feet upstream, right bank	9.5	--	543.7
Highway bridge, downstream, right bank	9.5	--	539.1
Burbank Mill Dam, headwater, right bank	9.4	--	539.2
Burbank Mill Dam, tailwater, right bank	9.4	--	537.1
Swetts Mills, N. H., highway bridge (destroyed) upstream, left bank	8.6	--	536.2
Swetts Mills, N. H., highway bridge, downstream, right bank	8.6	--	535.7
Swetts Mills bridge, 0.4 mile downstream, right bank	8.2	--	474.4
Swetts Mills bridge, 0.7 mile downstream, right bank	7.9	--	472.6
Dingit Corner, N. H., highway bridge (destroyed) above, upstream, left bank	6.6	--	458.1
Dingit Corner, highway bridge above, downstream, right bank	6.6	--	454.6
Dingit Corner, N. H., 0.05 mile below highway bridge, left bank	6.55	--	453.6
Dingit Corner, N. H., 0.4 mile below highway bridge, left bank	6.2	--	443.9
Snyders Mill, N. H., highway bridge, upstream, right bank	4.65	--	381.8
Snyders Mill, N. H., highway bridge, downstream, right bank	4.65	--	374.5
Snyders Mill, N. H., 0.05 mile below highway bridge, left bank	4.6	--	374.0
Snyders Mill, N. H., 0.4 mile below highway bridge, left bank	4.25	--	372.6
Snyders Mill, N. H., 1.45 miles below highway bridge, left bank	3.2	--	370.6
Highway bridge (destroyed) 1.05 miles above, left bank	2.4	--	370.1
Highway bridge (destroyed) both banks (average)	1.35	--	369.1
Highway bridge, left bank	0.45	--	367.9
Confluence of Blackwater and Contoocook Rivers	0	--	366.1
Suncook River:			
Suncook Ponds, dam at outlet, left bank	29.7	--	555.4
Suncook Ponds, 0.1 mile below dam at outlet, left bank	29.6	--	542.7
Suncook Ponds, 0.15 mile below dam at outlet, left bank	29.55	--	540.5
Suncook Ponds, 0.25 mile below dam at outlet, left bank	29.45	--	536.7

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Merrimack River Basin--Continued			
Suncook River--Continued:			
Webster Stream, mouth, left bank	28.65	--	516.4
Center Barnstead, N. H., 0.05 mile below sawmill dam, left bank	27.85	--	ct515.0
Center Barnstead, N. H., 0.05 mile below sawmill dam, left bank	27.75	--	514.5
Center Barnstead, N. H., 0.05 mile below mouth of Perry Brook, left bank	27.7	--	506.8
Center Barnstead, N. H., highway bridge, left bank	27.65	--	506.8
Center Barnstead, N. H., 0.05 mile below highway bridge, left bank	27.6	--	502.9
Big River, 0.25 mile below mouth, left bank	27.1	--	502.9
Crooked Run, 0.1 mile below mouth, left bank	26.4	--	502.2
Barnstead, N. H., 0.3 mile above dam, left bank	25.3	--	502.0
Barnstead, N. H., dam, left bank	25.0	--	cu501.9
Barnstead, N. H., 0.1 mile below dam, left bank	24.9	--	498.0
Wheeler Brook, 0.1 mile above mouth, left bank	24.8	--	497.5
Wheeler Brook, highway bridge 0.3 mile below mouth, left bank	24.4	--	497.4
Highway bridge, 0.15 mile below, left bank	24.25	--	492.2
Kelley Brook, mouth, left bank	24.0	--	492.2
White's Dam, 0.4 mile above, left bank	23.0	--	489.9
White's Dam (submerged), left bank	22.6	--	cv489.1
Pittsfield, N. H., highway bridge, left bank	22.0	--	485.5
Pittsfield, N. H., 0.1 mile below highway bridge, left bank	21.9	--	480.4
Pittsfield, N. H., 0.05 mile above concrete dam, left bank	21.4	--	cw480.05
Pittsfield, N. H., 0.05 mile below concrete dam, left bank	21.3	--	466.7
Pittsfield, N. H., wooden dam, left bank	21.15	--	cx457.3
Pittsfield, N. H., 0.05 mile below wooden dam	21.1	--	453.0
Pittsfield, N. H., 0.45 mile below wooden dam, left bank	20.7	--	451.7
White's Pond Brook, 0.15 mile below mouth, left bank	20.05	--	442.2
Webster Mills, N. H., 0.8 mile above highway bridge, left bank	18.85	--	418.6
Webster Mills, N. H., 0.1 mile above highway bridge, left bank	18.15	--	401.8
Webster Mills, N. H., highway bridge, left bank	18.05	--	399.6
Webster Mills, N. H., 0.1 mile below highway bridge, left bank	17.95	--	390.4
Webster Mills, N. H., 0.5 mile below highway bridge, left bank	17.55	--	370.5
Sanborn Brook, 0.25 mile above mouth, left bank	16.8	--	354.4
North Chichester, N. H., 0.05 mile above highway bridge and U.S. Geological Survey gage, left bank	15.7	--	345.35
North Chichester, N. H., U.S. Geological Survey gage just above highway bridge, right bank	15.65	Mar.19 noon	
North Chichester, N. H., 0.05 mile below U.S. Geological Survey gage, left bank	15.6	--	344.7
Epsom Station, N. H., 1.2 miles above highway bridge near, left bank	14.0	--	341.0
Epsom Station, N. H., 0.75 mile above highway bridge near, right bank	13.55	--	340.7
Epsom Station, N. H., highway bridge near, both banks (average)	12.8	--	340.5
Epsom Station, N. H., 0.15 mile below highway bridge near, right bank	12.65	--	339.9
Little Suncook River, 0.1 mile below mouth, left bank	12.4	--	337.3
Bickford & Huckins upper dam, 0.5 mile above, left bank	11.8	--	cy331.2
Bickford & Huckins lower dam, right bank	11.7	--	cz331.4
Mason Brook, mouth, right bank	11.45	--	324.6
Mason Brook, 0.6 mile below mouth, right bank	10.85	--	314.6
Short Falls, N. H., dam, left bank	9.1	--	de310.2
Short Falls, N. H., 0.1 mile below dam, left bank	9.0	--	307.5
Deer Brook, 0.5 mile above mouth, left bank	8.4	--	307.4
Deer Brook, 0.1 mile above mouth, left bank	8.0	--	305.1
Bear Brook, highway bridge 0.1 mile below mouth, left bank	6.2	--	303.7
Highway bridge, 0.4 mile below, left bank	5.8	--	302.0
Allenstown, N. H., 0.1 mile above dam, left bank	5.25	--	300.4
Allenstown, N. H., dam, left bank	5.15	--	df299.8

ct Altitude of crest of dam, 511.3 feet.
cu Altitude of crest of dam, 494.2 feet.
cv Altitude of crest of dam, 485.4 feet.
cw Altitude of crest of dam, 474.6 feet.
cx Altitude of crest of dam, 453.0 feet.
cy Altitude of crest of dam, 329.4 feet.
cz Altitude of crest of dam, 328.3 feet.
de Altitude of crest of dam, 295.4 feet.
df Altitude of crest of dam, 289.7 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Merrimack River Basin--Continued			
Suncook River--Continued:			
Allenstown, N. H., 0.05 mile below dam, right bank	5.1	--	293.7
Allenstown, N. H., 0.55 mile below dam, left bank	4.6	--	294.0
Hartford Brook, 0.2 mile above mouth, right bank	2.7	--	293.6
Hartford Brook, 0.1 mile below mouth, right bank	2.4	--	292.5
Boat Meadow Brook, 0.35 mile below mouth, right bank	1.95	--	292.8
Boat Meadow Brook, 0.6 mile below mouth, right bank	1.7	--	290.6
Suncook, N. H., 0.25 mile above sawmill dam, right bank	1.4	--	290.2
Suncook, N. H., sawmill dam, right bank	1.15	--	dg288.0
Suncook, N. H., 0.2 mile below sawmill dam, left bank	.95	--	285.2
Suncook, N. H., 0.05 mile below Webster Mills dam, left bank	.8	--	dh265.5
Suncook, N. H., 0.1 mile below Webster Mills dam, left bank	.75	--	264.2
Suncook, N. H., 0.15 mile below Webster Mills dam, right bank	.7	--	259.3
Suncook, N. H., 0.05 mile below Pembroke Dam, left bank	.5	--	di234.2
Suncook, N. H., China Mill dam	.45	--	dj233.9
Suncook, N. H., 0.05 mile below China Mill dam, right bank	.4	--	212.8
Suncook River, mouth	0	--	210.2
Souhegan River:			
Ward Pond, outlet, right bank	33.45	--	1,097.5
Ward Pond, 0.05 mile below outlet, right bank	33.4	--	1,097.7
Ward Pond, 0.10 mile below outlet, left bank	33.35	--	1,095.8
Watatic Pond, inlet	33.2	--	1,093.5
Watatic Pond, outlet	33.05	--	1,093.5
Watatic Pond, 0.25 mile below outlet, both banks (average)	32.8	--	1,032.1
Watatic Pond, 0.65 mile below outlet, left bank	32.4	--	1,066.6
Watatic Pond, 0.7 mile below outlet, left bank	32.35	--	1,061.6
Dam, 0.4 mile above, left bank	31.85	--	1,047.3
Dam, 0.35 mile above, right bank	31.8	--	1,042.0
Dam, 0.3 mile above, left bank	31.75	--	1,036.0
Dam, headwater, left bank	31.45	--	dk 1,031.4
Dam, 0.05 mile below, right bank	31.4	--	1,024.0
Dam, 0.10 mile below, left bank	31.35	--	1,018.8
Wooden bridge, 0.35 mile above Massachusetts-New Hampshire State line, upstream, left bank	30.55	--	988.0
Wooden bridge, downstream, right bank	30.55	--	987.3
Gibson's Four Corners, 75 feet above bridge near, right bank	28.75	--	937.9
Gibson's Four Corners, 100 feet below bridge near, right bank	28.7	--	937.3
Gibson's Four Corners, 0.7 mile below bridge near, left bank	27.05	--	934.2
Wooden bridge, 50 feet downstream, left bank	27.0	--	934.0
"Waterloom Dam", 180 feet above, left bank	26.9	--	dm933.8
"Waterloom Dam", 200 feet below, left bank	26.8	--	914.9
High Bridge, N. H., 200 feet above bridge, right bank	26.35	--	898.9
High Bridge, N. H., 200 feet above stone dam, right bank	26.3	--	dn890.3
High Bridge, N. H., 75 feet below stone dam, right bank	26.25	--	880.2
High Bridge, N. H., 75 feet below Greenville Road bridge, left bank	26.25	--	872.2
High Bridge, N. H., 0.05 mile below Greenville Road bridge, left bank	26.2	--	862.3
Furnace Brook, mouth, left bank	25.8	--	845.1
Greenville, N. H., 0.6 mile upstream from dam above Main Street, left bank	25.1	--	836.0
Greenville, N. H., 200 feet upstream from dam above Main Street, right bank	24.55	--	do830.2
Greenville, N. H., below dam, 200 feet above Main Street bridge, right bank	24.5	--	815.5
Greenville, N. H., 80 feet below Main Street bridge, left bank	24.45	--	812.3
Greenville, N. H., 100 feet downstream from dam below Main Street, right bank	24.4	--	dp800.2
Greenville, N. H., 150 feet above Otis Dam, left bank	24.4	--	dq793.8

dg Altitude of crest of dam, 278.5 feet.
dh Altitude of crest of dam, 273.0 feet.
di Altitude of crest of dam, 244.2 feet.
dj Altitude of crest of dam, 226.6 feet.
dk Altitude of crest of dam, 1,027.1 feet.
dm Altitude of crest of dam, 928.1 feet.
dn Altitude of crest of dam, 882.4 feet.
do Altitude of crest of dam, 825.4 feet.
dp Altitude of crest of dam, 804.6 feet.
dq Altitude of crest of dam, 784.0 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Merrimack River Basin--Continued			
Souhegan River--Continued:			
Greenville, N. H., 200 feet below Otis Dam, right bank	24.35	--	775.2
Greenville, N. H., Taft Dam, headwater, left bank	24.3	--	dr768.4
Greenville, N. H., 175 feet below Taft Dam, left bank	24.3	--	758.4
Greenville, N. H., 0.25 mile below Taft Dam, right bank	24.05	--	747.3
Concrete bridge and dam, 150 feet upstream, right bank (dam partly destroyed)	23.65	--	ds739.4
Concrete bridge and dam, 100 feet downstream, left bank	23.6	--	733.1
Boston & Maine R.R. bridge, 500 feet above, left bank	23.35	--	731.2
Boston & Maine R.R. bridge, 100 feet below, right bank	23.25	--	729.2
"High Falls Dam", 100 feet above, right bank	23.05	--	dt728.2
"High Falls Dam", 100 feet below, left bank	23.05	--	711.0
Stone arch bridge on Highway 31, 100 feet above, right bank	22.0	--	621.6
Stone arch bridge on Highway 31, 100 feet below, right bank	21.95	--	618.1
Stone arch bridge, 1.2 mile below, left bank	20.75	--	550.2
Blood Brook, 0.6 mile above mouth, left bank	19.75	--	485.2
Wooden bridge (partly destroyed), 80 feet above, right bank	18.95	--	458.1
Wooden bridge, 140 feet below, right bank	18.9	--	452.8
Concrete arch bridge on Highway 31, 200 feet above, left bank	17.7	--	423.0
Concrete arch bridge on Highway 31, 80 feet below, right bank	17.65	--	417.2
Wilton, N. H., 0.3 mile above mouth of Stony Brook, left bank	17.0	--	369.1
Wilton, N. H., 270 feet above Abbott Dam, right bank	16.95	--	du367.7
Wilton, N. H., 150 feet below Abbott Dam, left bank	16.9	--	361.0
Wilton, N. H., 250 feet above concrete arch bridge, left bank	16.75	--	353.4
Wilton, N. H., 20 feet above upper Boston & Maine R.R. bridge, right bank	16.65	--	355.7
Wilton, N. H., mouth of Stony Brook, left bank	16.65	--	352.7
Wilton, N. H., 100 feet below upper Boston & Maine R.R. bridge, right bank	16.65	--	349.2
Wilton, N. H., 100 feet above lower Boston & Maine R.R. bridge, left bank	16.6	--	349.6
Wilton, N. H., 50 feet below lower Boston & Maine R.R. bridge, right bank	16.6	--	346.9
Wilton, N. H., 75 feet above Abbott Machine Co. dam (partly destroyed), left bank	16.45	--	dv342.3
Wilton, N. H., 150 feet below Abbott Machine Co. dam, right bank	16.4	--	340.5
Wilton, N. H., 50 feet above Pine Valley Mill dam, right bank	16.0	--	332.1
Wilton, N. H., 200 feet below Pine Valley Mill dam, right bank	15.95	--	329.6
Boston & Maine R.R. bridge, 50 feet above, right bank	15.5	--	306.2
Boston & Maine R.R. bridge, 200 feet below, left bank	15.45	--	304.2
Stone arch highway bridge, 30 feet above, right bank	15.4	--	304.5
Stone arch highway bridge, 200 feet below, both banks (average)	15.4	--	300.5
Stone arch highway bridge, 0.05 mile below, left bank	15.35	--	303.5
Highway bridge, 20 feet above, left bank	14.85	--	281.0
Highway bridge, 180 feet below, left bank	14.8	--	280.0
Highway bridge, 0.1 mile below, right bank	14.75	--	275.8
Purgatory Brook, mouth, right bank	13.25	--	255.4
Hartshorn Brook, mouth, right bank	13.0	--	252.9
Tucker Brook, mouth, right bank	12.65	--	249.1
Milford, N. H., stone arch highway bridge, 0.1 mile below mouth of Great Brook, upstream, left bank	11.25	--	249.1
Milford, N. H., 50 feet below stone arch highway bridge, right bank	11.25	--	249.7
Milford, N. H., 40 feet above Goldsmith Linen Mill dam, right bank	11.2	--	dw248.8
Milford, N. H., 250 feet below Goldsmith Linen Mill dam, right bank	11.15	--	243.4
Milford, N. H., 120 feet above suspension foot bridge, right bank	11.1	--	240.1
Milford, N. H., 100 feet above Milford Light Co. dam, left bank	11.05	--	dx239.8
Milford, N. H., 150 feet below Milford Light Co. dam, right bank	11.0	--	232.6

dr Altitude of crest of dam, 764.2 feet.
ds Altitude of crest of dam, 736.7 feet.
dt Altitude of crest of dam, 718.4 feet; of tops of flashboards, 721.3 feet.
du Altitude of crest of dam, 357.5 feet.
dv Altitude of crest of dam, 331.0 feet.
dw Altitude of crest of dam, 238.6 feet.
dx Altitude of crest of dam, 230.1 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Merrimack River Basin--Continued			
Souhegan River--Continued:			
Abandoned railroad embankment, 0.7 mile above highway bridge, left bank	9.45	--	224.1
Highway bridge, 200 feet above, right bank	8.75	--	221.1
Highway bridge, downstream, left bank	8.75	--	220.9
Beaver Brook, 0.2 mile below mouth, left bank	8.35	--	220.3
Highway bridge, 0.1 mile above, right bank	7.3	--	220.0
Highway bridge, 200 feet below, left bank	7.2	--	218.4
Highway bridge, 0.2 mile below, left bank	7.0	--	216.75
Fields Bridge (covered),0.8 mile above, left bank	6.45	--	217.4
Fields Bridge, 130 feet above, right bank	5.65	--	214.7
Fields Bridge, 200 feet below, left bank	5.6	--	216.0
Fields Bridge, 0.7 mile below, left bank	4.95	--	213.6
Fields Bridge, 1.2 miles below, left bank	4.45	--	202.5
Fields Bridge, 1.5 miles below, right bank	4.15	--	192.2
Turkey Hill Bridge, 1.25 miles above, left bank	3.75	--	190.4
Turkey Hill Bridge, upstream, left bank	2.5	--	189.7
Turkey Hill Bridge, 125 feet below, right bank	2.5	--	189.3
Turkey Hill Bridge, 0.75 mile below, left bank	1.75	--	178.3
Turkey Hill Bridge, 0.80 mile below, right bank	1.7	--	178.9
Turkey Hill Bridge, 0.85 mile below, left bank	1.65	--	180.2
U.S. Geological Survey gage, 1.25 miles above confluence with Merrimack River, left bank	1.25	--	176.8
Merrimack River, 1.2 miles above confluence with, right bank	1.2	--	172.9
Merrimack River, 1.15 miles above confluence with, right bank	1.15	--	157.6
Merrimack River, 1.0 mile above confluence with, both banks (average)	1.0	--	152.2
Merrimack River, 200 feet above dam, 0.4 mile above confluence with, right bank	0.4	--	dy133.2
Merrimack, N. H., highway bridge, upstream, left bank	0.35	--	133.2
Merrimack, N. H., 150 feet below highway bridge, right bank	0.3	--	133.3
Merrimack, N. H., 150 feet above Boston & Maine R.R. bridge, right bank	0.05	--	133.6
Confluence of Souhegan and Merrimack Rivers	0	--	133.6
Whitman River:			
South Ashburnham, Mass., Whitney Chair Co. dam, headwater	6.6	Mar.18	dz999.0
South Ashburnham, Mass., dam (destroyed) in center of town, headwater	5.95	do.	855.0
South Ashburnham, Mass., dam in center of town, tailwater	5.95	do.	852.9
South Ashburnham, Mass., White Mfg. Co. dam at Gross Pond, headwater	5.6	do.	ef842.0
Westminster, Mass., Nashua River Reservoir Association dam, headwater	4.5	do.	eg829.0
Westminster, Mass., dam 400 feet above highway bridge (destroyed), headwater	3.95	do.	761.5
Westminster, Mass., dam 400 feet above highway bridge, tailwater	3.95	do.	758.6
Westminster, Mass., Crocker-Burbank dam, headwater	2.35	do.	eh753.6
Westminster, Mass., Highway 2, bridge	1.2	2:30pm Mar.18	671.6
Fitchburg, Mass., Snow's Mill Pond dam	.35	do.	ei664.4
Fitchburg, Mass., Crocker-Burbank mill dam No. 7, mouth of Whitman River, headwater	0	do.	ej604.4
Fitchburg, Mass., Crocker-Burbank mill dam No. 7, mouth of Whitman River, tailwater	0	do.	591.1
North Nashua River:			
West Fitchburg, Mass., Crocker-Burbank mill dam No. 6, headwater	17.2	do.	ek566.6
West Fitchburg, Mass., Crocker-Burbank mill dam No. 6, tailwater	17.2	do.	557.3
West Fitchburg, Mass., Crocker-Burbank mill dam No. 5, headwater	16.95	4:30pm Mar.18	em543.3
Fitchburg, Mass., Fitchburg Paper Co. mill dam No. 4, headwater	16.5	do.	522.2
Fitchburg, Mass., Fitchburg Paper Co. mill dam No. 1, headwater	16.4	do.	en521.0

dy Altitude of crest of dam, 122.8 feet.
dz Altitude of crest of dam, 995.4 feet.
ef Altitude of crest of dam, 837.8 feet.
eg Altitude of crest of dam, 826.6 feet.
eh Altitude of crest of dam, 751.6 feet.
ei Altitude of crest of dam, 661.3 feet.
ej Altitude of crest of dam, 587.1 feet.
ek Altitude of crest of dam, 562.2 feet.
em Altitude of crest of dam, 540.5 feet.
en Altitude of crest of dam, 511.9 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Merrimack River Basin--Continued			
North Nashua River--Continued:			
Fitchburg, Mass., Fitchburg Paper Co. mill dam No. 1, tailwater	16.4	Mar.18	514.5
Fitchburg, Mass., Boston & Maine R.R. bridge, upstream	15.95	do.	511.8
Fitchburg, Mass., Boston & Maine R.R. bridge, downstream	15.95	do.	510.8
Fitchburg, Mass., near Confort Slipper Co.	15.8	do.	504.3
Fitchburg, Mass., near Daniels Street Bridge	15.5	do.	497.4
Fitchburg, Mass., Kimball Street Bridge and dam	15.45	do.	494.8
Fitchburg, Mass., junction of Kimball and River Streets	15.35	do.	491.2
Fitchburg, Mass., Star Worsted Co, dam, headwater	15.3	do.	eo484.9
Fitchburg, Mass., Sheldon Street Bridge (destroyed)	15.15	do.	478.7
Fitchburg, Mass., River Street Bridge	14.8	do.	469.7
Fitchburg, Mass., Circle Street Bridge	14.7	do.	462.4
Fitchburg, Mass., Rollstone Street Bridge	14.55	do.	459.2
Fitchburg, Mass., Cushing Dam, headwater	14.15	do.	ep442.6
Fitchburg, Mass., Boston & Maine R.R. depot	13.8	do.	434.7
Fitchburg, Mass., Water Street Bridge, upstream	13.7	do.	433.0
Fitchburg, Mass., 500 feet below Water Street Bridge	13.6	do.	423.8
Fitchburg, Mass., Fifth Street Bridge	13.2	Mar.18 5pm	404.4
Fitchburg, Mass., Boston & Maine R.R. bridge, 1,000 feet below Fifth Street Bridge	13.0	Mar.18	401.2
Fitchburg, Mass., American Woolen Co. dam, headwater	12.55	do.	eq397.5
Fitchburg, Mass., dike off Water Street, headwater	12.5	do.	er380.7
Fitchburg, Mass., dike off Water Street, tailwater	12.5	do.	378.7
Fitchburg, Mass., Shirreffs Worsted Co. dams, Nos. 1, 2, and 3	12.35	do.	371.1
Fitchburg, Mass., Shirreffs Worsted Co. mill	12.35	do.	363.6
Fitchburg, Mass., Falulah Street Bridge	11.75	do.	348.2
Baker Brook, 0.3 mile above mouth, left bank	12.0	do.	347.7
Leominster, Mass., Merriam Hall Factory dam, headwater	10.15	do.	es329.4
Leominster, Mass., Merriam Hall Factory dam, tailwater, both banks (average)	10.15	do.	328.0
Leominster, Mass., Hamilton Street Bridge, upstream	10.1	do.	326.4
Leominster, Mass., Hamilton Street Bridge, downstream	10.1	do.	324.3
Leominster, Mass., Main Street, Sear Bridge	9.8	do.	323.3
Leominster, Mass., Wheelwright Paper Co. dam, headwater	9.75	do.	et321.1
Leominster, Mass., Wheelwright Paper Co. dam, tailwater	9.75	do.	314.5
Leominster, Mass., wooden dam, 0.3 mile below Wheelwright Paper Co. dam, headwater, right bank	9.45	do.	eu309.2
Leominster, Mass., wooden dam, tailwater	---	do.	305.2
Leominster, Mass., Mechanic Street Bridge, upstream, left bank	8.05	do.	295.6
Leominster, Mass., Mechanic Street Bridge, downstream	8.05	do.	292.6
Leominster, Mass., U.S. Geological Survey gage just above Worcester Consolidated Street Railway dam, headwater, right bank	6.5	Mar.18 8pm	ev290.6
Leominster, Mass., Worcester Consolidated Street Railway dam, tailwater	6.5	Mar.19	282.2
Leominster, Mass., Ponikin Mill dam (destroyed), headwater, right bank	3.3	---	257.9
Leominster, Mass., Ponikin Mill dam, tailwater, left bank	3.3	---	255.7
Leominster, Mass., Ponikin Mill Bridge, upstream, right bank	3.1	---	252.6
Leominster, Mass., Ponikin Mill Bridge, downstream, left bank	3.1	---	250.0
Lancaster, Mass., concrete bridge, Highway 117, upstream, right bank	2.0	---	246.3
Lancaster, Mass., concrete bridge, Highway 117, downstream, left bank	2.3	---	243.4
Lancaster, Mass., Main Street, Vose's Bridge, upstream	.4	---	241.4
Lancaster, Mass., Main Street, Vose's Bridge, downstream, both banks (average)	.4	---	236.9
Lancaster, Mass., confluence of North Nashua and South Branch of Nashua River	0	---	236.0
Nashua River:			
Lancaster, Mass., Junction Bridge, upstream, right bank	33.4	Mar.19 4pm	236.0
Lancaster, Mass., Junction Bridge, downstream, both banks (average)	33.4	Mar.19	234.8
Lancaster, Mass., bridge on Highway 117, upstream and downstream, both banks	32.2	do.	230.6

eo Altitude of crest of dam, 477.8 feet.
ep Altitude of crest of dam, 435.7 feet; with flashboards, 436.9 feet.
eq Altitude of crest of dam, 392.5 feet.
er Altitude of crest of dike, 378.4 feet.
es Altitude of crest of dam, 318.6 feet.
et Altitude of crest of dam, 312.7 feet.
eu Altitude of crest of dam, 303.7 feet.
ev Altitude of crest of dam, 280.8 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Merrimack River Basin--Continued			
Nashua River--Continued:			
Lancaster, Mass., Boston & Maine R.R. bridge, upstream, left bank	29.25	Mar.19	228.7
Lancaster, Mass., Boston & Maine R.R. bridge, downstream, right bank	29.25	do.	227.6
Harvard, Mass., highway bridge at Still River Station, upstream, right bank	29.1	do.	227.1
Harvard, Mass., highway bridge at Still River Station, downstream, right bank	29.1	do.	226.5
Ayer, Mass., Engineers Bridge near Fort Devens, upstream, right bank	27.0	do.	222.5
Ayer, Mass., 300 feet below Engineers Bridge, right bank	26.95	do.	221.8
Ayer, Mass., abandoned street-railway bridge, upstream, right bank	24.55	Mar.19 4pm	222.6
Ayer, Mass., highway bridge, upstream, left bank	24.5	--	222.4
Ayer, Mass., Ayer Ice Co. dam, headwater	24.45	--	ew222.9
Ayer, Mass., 150 feet below Ayer Ice Co. dam, left bank	24.4	--	222.0
Ayer, Mass., Boston & Maine R.R. bridge, upstream, right bank	24.0	--	221.4
Ayer, Mass., Boston & Maine R.R. bridge, downstream, left bank	24.0	--	220.0
Ayer, Mass., highway bridge, 0.2 mile above mouth of Squannacook River, right bank	22.0	--	216.4
Ayer, Mass., Boston & Maine R.R. bridge, just below mouth of Squannacook River, upstream, right bank	21.7	Mar.19 6pm	216.5
Ayer, Mass., Boston & Maine R.R. bridge, just below mouth of Squannacook River, downstream, right bank	21.7	--	214.5
Ayer, Mass., highway bridge 1.05 miles below mouth of Squannacook River, upstream, right bank	20.7	Mar.19	210.5
Ayer, Mass., highway bridge 1.05 miles below mouth of Squannacook River, downstream, right bank	20.7	do.	208.7
Groton, Mass., highway bridge 0.3 mile above mouth of Robinson Brook, both banks (average)	18.2	do.	209.3
Groton, Mass., 100 feet above Paper Mill Village bridge, right bank	17.1	Mar.19 4pm	208.7
Groton, Mass., 200 feet below Paper Mill Village bridge, left bank	17.05	Mar.19	204.5
East Pepperell, Mass., Nashua River Paper Co. dam, headwater, left bank	13.65	Mar.19 6pm	ex204.7
East Pepperell, Mass., concrete bridge below dam	13.65	Mar.19	188.2
East Pepperell, Mass., U.S. Geological Survey gage, 0.1 mile below dam, right bank	13.55	Mar.20 2-6pm	188.1
East Pepperell, Mass., 0.15 mile below Nashua River Paper Co. dam, left bank	13.5	Mar.19	187.7
East Pepperell, Mass., covered highway bridge, upstream, right bank	13.2	do.	186.8
East Pepperell, Mass., covered highway bridge, downstream, left bank	13.2	do.	186.1
Hollis Depot, N. H., near, 0.5 mile above Runnels Falls Dam, right bank	9.7	do.	179.6
Runnels highway bridge, 0.05 mile above, right bank	9.3	do.	177.7
Runnels Falls Dam, 0.05 mile below, both banks (average)	9.25	do.	ey172.1
Runnels Falls Dam, 0.55 mile below, left bank	8.65	do.	167.5
Runnels Falls Dam, 1 mile below, left bank	8.2	do.	166.1
Mine Falls Dam, 1.55 miles above, left bank	6.7	do.	165.6
Mine Falls Dam, 0.1 mile above, right bank	5.3	do.	ez161.9
Dam, 0.1 mile below, tailwater, right bank	5.05	do.	134.9
Dam, 1.35 miles below, left bank	3.8	do.	132.5
Nashua, N. H., 0.9 mile above Nashua Mfg. Co. foot bridge, left bank	2.6	do.	132.3
Nashua, N. H., 0.8 mile above Nashua Mfg. Co. foot bridge, left bank	2.5	do.	131.6
Nashua, N. H., 0.6 mile above Nashua Mfg. Co. foot bridge, right bank	2.3	do.	131.9
Nashua, N. H., 0.35 mile above Nashua Mfg. Co. foot bridge, right bank	2.05	do.	130.8
Nashua, N. H., Nashua Mfg. Co. foot bridge, left bank	1.7	do.	130.2
Nashua, N. H., 0.15 mile below foot bridge	1.55	do.	130.3
Nashua, N. H., 0.10 mile above Main Street highway bridge, both banks (average)	1.5	do.	130.4
Nashua, N. H., 0.05 mile above Main Street highway bridge, both banks (average)	1.45	do.	130.2
Nashua, N. H., Main Street highway bridge, both banks (average)	1.4	do.	129.0
Nashua, N. H., Jackson Mills dam, headwater, right bank	1.3	do.	fg129.1

ew Altitude of crest of dam, 214.3 feet; with flashboards, 216.3 feet.
ex Altitude of crest of dam, 196.8 feet; with flashboards, 199.8 feet.
ey Altitude of crest of dam, 167.9 feet.
ez Altitude of crest of dam, 154.9 feet.
fg Altitude of crest of dam, 115.7 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Merrimack River Basin--Continued			
Nashua River--Continued:			
Nashua, N. H., 0.05 mile below Jacksons Mill dam, left bank	1.25	Mar.19	128.2
Nashua, N. H., Boston & Maine R.R. bridge, left bank	1.05	do.	127.9
Nashua, N. H., 0.15 mile below Boston & Maine R.R. bridge, both banks (average)	0.9	do.	128.0
Nashua, N. H., 0.20 mile below Boston & Maine R.R. bridge, left bank	0.85	do.	128.1
Nashua, N. H., highway bridge, right bank	0.75	do.	128.3
Nashua, N. H., 0.3 mile below highway bridge, left bank	0.4	do.	126.7
Nashua, N. H., 0.05 mile above Boston & Maine R.R. bridge, right bank	0.3	do.	127.2
Nashua, N. H., Boston & Maine R.R. bridge	0.25	do.	127.6
Nashua, N. H., Confluence of Nashua River and Merrimack River	0	do.	127.5
South Branch of Nashua River:			
Clinton, Mass., Wachusett Reservoir dam, headwater	5.25	Mar.19 2pm	fh391.0
Clinton, Mass., Boylston Street Bridge	4.75	Mar.19 2:20pm	285.0
Clinton, Mass., Boylston Street Dam, headwater	4.65	Mar.19 2:30pm	fi284.0
Clinton, Mass., foot bridge below Boylston Street Dam	4.6	Mar.19 2:30pm	265.5
Clinton, Mass., New York, New Haven & Hartford R.R. Co. bridge on Lancaster Mills siding	4.2	Mar.19	260.7
Clinton, Mass., railroad trestle siding nearest Water Street	3.85	Mar.19	256.9
Clinton, Mass., Water Street Bridge	3.6	Mar.19 3pm	255.8
Clinton, Mass., High Street Bridge near sewage plant	2.2	Mar.19 3:30pm	243.5
Lancaster, Mass., Mill Street Bridge	1.7	Mar.19 4pm	240.8
Lancaster, Mass., Five Corners intersection of Highway 110 and Bolton Road	.95	Mar.19	236.1
Lancaster, Mass., bridge above confluence with Nashua River	.6	Mar.19	235.6
Lancaster, Mass., confluence of South Branch of Nashua River and North Nashua River	0	Mar.19	236.0
Assabet River:			
Westboro, Mass., Mill Road bridge	42.65	Mar.13	299.2
Westboro, Mass., Fisher Street highway bridge	42.4	do.	293.4
Westboro, Mass., Boston & Albany R.R. bridge	42.25	do.	286.9
Westboro, Mass., Maynard Road bridge	42.15	do.	284.8
Boston-Worcester Turnpike, bridge	41.35	do.	276.1
Westboro Reform School, Davis Street highway bridge near	40.3	do.	276.7
Highway bridge just downstream from Davis Street bridge	40.3	do.	277.2
Roads End highway bridge	39.45	do.	274.0
Brigham Street highway bridge	39.05	do.	272.4
Northboro, Mass., Main Street bridge and dam, headwater	38.2	do.	fj266.6
Northboro, Mass., dam, tailwater	38.2	do.	262.2
Northboro, Mass., Clinton Aqueduct and dam just below, headwater	37.4	do.	fk250.4
Northboro, Mass., dam just below aqueduct, tailwater	37.4	do.	245.7
Marlboro and Northboro Boundary Road bridge	36.25	do.	221.8
Bridge Road bridge (washed out)	34.55	do.	216.1
Chapin Road bridge	32.7	do.	214.7
Hudson, Mass., footbridge in Aspley Park	31.95	do.	212.8
Hudson, Mass., Washington Street dam just above Washington Street bridge	31.35	do.	fm211.6
Hudson, Mass., Houghton Street bridge	31.2	do.	206.4
Hudson, Mass., Broad Street bridge	31.0	do.	205.0
Hudson, Mass., Forest Street bridge	30.8	do.	203.2
Hudson, Mass., Hudson lighting plant	30.35	do.	202.8
Boston & Maine R.R. bridge (Marlboro Branch)	30.1	do.	202.6
Main Street bridge	30.1	do.	202.7
Boston & Maine R.R. bridge (Central Massachusetts Division)	30.0	do.	200.8
Glendale Road bridge	29.6	do.	199.7
Gleasondale, Mass., Gleasondale dam above Gleasondale Woolen Co., headwater	28.45	do.	fn194.5

fh Altitude of crest of dam, 389.0 feet.
fi Altitude of crest of dam, 281.4 feet.
fj Altitude of crest of dam, 262.9 feet.
fk Altitude of crest of dam, 246.6 feet.
fm Altitude of crest of dam, 205.7 feet.
fn Altitude of crest of dam, 190.3 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Merrimack River Basin--Continued			
Assabet River--Continued:			
Gleasondale, Mass., Gleasondale dam above Gleasondale Woolen Co., tailwater	28.45	Mar.13	187.4
Gleasondale, Mass., bridge below dam in mill yard of Gleasondale Woolen Co.	28.4	do.	186.9
Gleasondale, Mass., two bridges on Hudson Road below dam and mill bridge	28.35	do.	184.9
Gleasondale, Mass., Boston & Maine R.R. bridge (Marlboro Branch)	27.8	do.	183.6
Boston & Maine R.R. bridge (Marlboro Branch)	26.65	do.	182.1
Lake Boon Road bridge	26.3	do.	182.1
Maynard, Mass., Gately Road bridge at Maynard-Stow town line	24.45	do.	180.4
Maynard, Mass., American Woolen Co. dam (on diversion channel)	23.85	do.	fo179.0
Maynard, Mass., Great Road bridge (on diversion channel)	23.75	do.	177.2
Maynard, Mass., Mill Street bridge (partly destroyed)	23.55	do.	175.1
Maynard, Mass., Florida Street bridge	23.05	do.	162.0
Maynard, Mass., Main Street bridge	22.95	do.	161.7
Maynard, Mass., Walnut Street bridge	22.8	do.	158.6
Maynard, Mass., Waltham Street bridge	22.55	do.	150.1
High Street bridge near Power Mill Road and Powder Mill Road dam	21.5	do.	fp146.5
Powder Mill Road bridge	21.3	do.	135.8
West Concord, Mass., Main Street bridge (Powder Mill bridge)	21.0	do.	132.6
West Concord, Mass., Damondale Dam off Main Street, headwater	19.65	do.	fq131.1
West Concord, Mass., Damondale Dam, tailwater	19.65	do.	129.0
West Concord, Mass., Main Street bridge near Damondale Cold Storage Plant	19.6	do.	126.9
West Concord, Mass., Pine Street bridge (moved from foundation)	18.7	do.	126.3
West Concord, Mass., New York, New Haven & Hartford R.R. Co. bridge	18.45	do.	126.1
West Concord, Mass., Main Street bridge near Boston Harness Shop	18.35	do.	123.3
West Concord, Mass., Boston & Maine R.R. bridge (Fitchburg Division)	18.25	do.	123.5
West Concord, Mass., Elm Street bridge	17.6	do.	123.1
Concord, Mass., confluence of Assabet and Sudbury Rivers	15.4	--	120.2
Concord River:			
Concord, Mass., Lowell Street bridge	15.25	--	120.1
Concord, Mass., old North Bridge	14.8	Mar.20-21	119.9
Concord, Mass., Monument Street bridge, upstream	14.7	do.	119.9
Concord, Mass., Monument Street bridge, downstream	14.7	do.	119.5
Carlisle Road bridge on Highway 2, right bank	10.9	do.	119.2
Nashua Road bridge (Chelmsford Bridge) on Highway 4, right bank	8.85	do.	118.8
River Street bridge, right bank	7.15	do.	118.6
Billerica pumping station on Highway 3	7.05	do.	117.7
Bridge on Boston road (Highway 3)	5.9	do.	118.2
Bridge Street bridge (abandoned)	5.7	do.	118.1
Fordway Bridge on Pollard Street, upstream	5.15	do.	117.1
Faulkner Street bridge and dam, headwater	4.65	do.	fr114.0
Faulkner Street dam, tailwater	4.65	do.	106.2
Lowell, Mass., Boston & Maine R.R. bridge (Southern Division)	2.1	do.	105.4
Lowell, Mass., Boston & Maine R.R. bridge	1.7	do.	104.5
Lowell, Mass., Lawrence Street bridge, upstream	1.45	Mar.21	104.2
Lowell, Mass., Wamesit Power Co. dam (Waterhead Dam), headwater	1.3	do.	fs102.2
Lowell, Mass., footbridge at Bay State Mills	1.1	do.	84.5
Lowell, Mass., River Meadow Brook 400 feet above its flood junction with Concord River	0.95	Mar.20	78.2
Lowell, Mass., Rogers Street bridge, downstream, right bank	0.8	Mar.20 4pm	78.1
Lowell, Mass., Church Street bridge, upstream	0.4	Mar.20 11pm	76.5
Lowell, Mass., Church Street bridge, downstream	0.4	Mar.20	76.3
Lowell, Mass., Middlesex Dam	0.3	do.	ft76.3
Lowell, Mass., East Merrimack Street opposite Howe Street	0.2	Mar.20 11pm	76.2
Lowell, Mass., East Merrimack Street bridge, right bank	0.2	Mar.20	76.2

fo Altitude of crest of dam, 175.8 feet.
fp Altitude of crest of dam, 141.8 feet.
fq Altitude of crest of dam, 127.3 feet.
fr Altitude of crest of dam, 109.4 feet.
fs Altitude of crest of dam, 98.8 feet.
ft Altitude of crest of dam, 65.5 feet, of two of permanent flashboards, 67.8 feet.

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Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Merrimack River Basin--Continued			
Concord River--Continued:			
Lowell, Mass., angle in retaining wall downstream from Merrimack Street bridge, left bank	0.1	Mar.20	76.0
Lowell, Mass., confluence of Concord and Merrimack Rivers	0	do.	75.9
Sudbury River:			
Cordaville, Mass., Highway 85, bridge	26.45	--	232.3
Pleasant Street bridge, right bank	24.4	--	197.0
Ashland, Mass., Lombard Governor Co. dam off Myrtle Street (2 spillways)	23.8	--	fu192.7
Ashland, Mass., Westerly bridge on Highway 135, left bank	23.1	--	174.0
Ashland, Mass., Easterly bridge on Highway 135	22.8	--	172.4
Above dam between Metropolitan water-supply basins Nos. 2 and 1	21.0	Mar.13	fv171.6
Dam at outlet of Metropolitan water-supply basin No. 1, just above Winter Street	20.15	do.	164.7
Framingham Center, Mass., Union Avenue bridge	19.3	Mar.20	155.5
Framingham Center, Mass., Highway 9 bridge	18.85	Mar.19	154.0
Saxonville, Mass., dam at outlet of Sudbury Pond, just above Central Street bridge	15.5	Mar.15	fw148.2
Saxonville, Mass., Concord Street bridge	15.05	--	125.3
On brook from Folsom Pond, 0.5 mile east of river	10.25	Mar.21	121.3
Highway 20 bridge	10.0	do.	120.9
Stone Road bridge, Wayland Inn	8.95	do.	120.9
Concord-Lincoln Town line, Highway 117 bridge (Lees Bridge)	4.6	do.	120.7
Route 2 bridge	1.75	do.	120.6
Concord, Mass., Highway 62 bridge (Main Street bridge)	1.0	Mar.20	120.6
Concord, Mass., Highway 2A bridge (Elm Street bridge)	.9	Mar.21	120.5
Concord, Mass., Nashawtuc Road bridge, downstream left bank	.55	Mar.20	120.5
Confluence of Sudbury and Assabet Rivers	0	do.	120.2
Ipswich River Basin			
Ipswich River:			
North Reading-Reading town line, Main Street bridge	27.45	--	70.3
North Reading, Mass., Park Street bridge	25.4	--	63.6
North Reading Center, Mass., Washington Street bridge	25.25	--	63.2
Middleton, Mass., Boston Street bridge	22.9	--	52.0
Middleton-Danvers town line, South Main Street bridge	20.45	--	46.6
Middleton, Mass., Maple Street bridge	18.65	--	45.3
Middleton, Mass., Peabody Street bridge	17.05	--	43.6
Middleton, Mass., East Street bridge	16.5	--	40.5
Topsfield, Mass., Rowley Street bridge	15.25	--	39.3
Topsfield, Mass., Salem Road bridge	14.15	--	38.6
Topsfield, Mass., Newburyport Turnpike bridge	14.0	--	38.3
Topsfield, Mass., High Street bridge	13.3	--	35.9
Topsfield-Hamilton town line, Ashbury Street bridge	9.35	--	35.5
Ipswich, Mass., near Willowdale Dam, headwater	9.0	--	fx30.8
Ipswich, Mass., U.S. Geological Survey gage, 200 feet below dam	9.0	Mar.15 2pm	28.33
Ipswich-Hamilton town line, Highland Street bridge	6.55	--	19.4
Ipswich, Mass., Highway 1A bridge	4.35	--	9.1
Tidewater	3.7	--	--
Mouth, opposite Ipswich Light	0	--	--
Mystic River Basin			
Aberjona River:			
Reading, Mass., Intervale and Lowell Streets culvert	6.7	Mar.13	89.2
Reading, Mass., Boston & Maine R.R. culvert	6.45	do.	86.6
Reading, Mass., Summer Avenue and Willow Street culvert	6.25	do.	81.8
Woburn, Mass., Mishawum Pond dam, headwater	5.4	do.	fy54.7
Woburn, Mass., Salem Street bridge	4.45	do.	44.8
Woburn, Mass., Gravel Bank Road bridge	3.9	do.	42.0
Woburn, Mass., Washington Street bridge	3.85	do.	41.8
Woburn, Mass., Montvale Street bridge	3.5	do.	39.0
Woburn, Mass., Boston & Maine R.R. bridge	3.4	do.	35.6
Winchester, Mass., footbridge east of Washington Street and south of Woburn line	3.0	do.	31.5
Winchester, Mass., footbridge north of Washington Street bridge, upstream	2.9	do.	26.4
Winchester, Mass., dam north of Washington Street bridge, headwater	2.8	do.	fz25.9

fu Altitude of crest of spillway No.1, 191.9 feet; of crest of spillway No. 2, 191.4 feet.
fv Altitude of crest of dam, 169.9 feet.
fw Altitude of crest of dam, 144.9 feet.
fx Altitude of crest of dam, 27.8 feet.
fy Altitude of crest of dam, 53.8 feet.
fz Altitude of crest of dam, 23.3 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Mystic River Basin--Continued			
Aberjona River--Continued:			
Winchester, Mass., dam north of Washington Street bridge, tailwater	2.8	Mar.13	25.6
Winchester, Mass., Washington Street bridge	2.75	do.	25.3
Winchester, Mass., footbridge and dam west of Washington Street bridge, headwater	2.65	do.	ga24.4
Winchester, Mass., tailwater	2.65	do.	24.1
Winchester, Mass., footbridge north of Cross Street	2.35	do.	24.2
Winchester, Mass., Cross Street bridge	2.25	do.	23.9
Winchester, Mass., dam at Boston & Maine R.R. bridge south of Cross Street, headwater	1.95	do.	gb23.2
Winchester, Mass., tailwater	1.95	do.	22.5
Winchester, Mass., Swanton Street bridge	1.6	do.	22.3
Winchester, Mass., dam (partly destroyed) south of Swanton Street, headwater	1.55	do.	gc20.8
Winchester, Mass., tailwater	1.55	do.	19.4
Winchester, Mass., Boston & Maine R.R. bridge, upstream	1.25	do.	19.7
Winchester, Mass., Boston & Maine R.R. bridge, down-downstream	1.25	do.	18.9
Winchester, Mass., Vernon Street bridge	1.15	do.	18.4
Winchester, Mass., Converse Bridge and dam at Main Street, headwater	1.0	do.	gd17.6
Winchester, Mass., Waterfield Street bridge	.9	do.	14.8
Winchester, Mass., footbridge south of Waterfield Street	.7	do.	13.9
Winchester, Mass., footbridge north of Bacon Street	.6	do.	13.6
Winchester, Mass., Bacon Street bridge	.4	do.	12.7
Winchester, Mass., Boston & Maine R.R. bridge south of Bacon Street, Wedgemere station	.35	do.	12.6
Winchester, Mass., Mystic Valley Parkway bridge	.1	do.	11.0
Winchester, Mass., mouth of Aberjona River	0	do.	11.0
Mystic River:			
Medford, Mass., Mystic Lakes dam, outlet of lake, headwater	7.55	do.	ge10.6
Medford, Mass., Mystic Lakes dam, tailwater	7.55	do.	5.9
Medford, Mass., High Street bridge	6.7	do.	5.7
Medford, Mass., Harvard Avenue bridge at Arlington line	6.15	do.	5.6
Medford, Mass., Boston Avenue bridge, about 0.2 mile below mouth of Alewife Brook, right bank	5.85	do.	5.7
Medford, Mass., Boston & Maine R.R. bridge (southern division)	5.75	do.	5.9
Medford, Mass., Auburn Street bridge	5.7	do.	5.5
Medford, Mass., Winthrop Street bridge	5.1	do.	5.5
Medford, Mass., Bridge on Mystic Valley parkway at Meetinghouse Brook	5.05	do.	5.5
Medford, Mass., Mystic Valley Parkway Bridge east of Armory	4.8	do.	5.4
Medford, Mass., Craddock Bridge on Main Street in Medford Square at Locks (tidewater below bridge)	4.75	do.	5.6
Chelsea, Mass., Chelsea Bridge, mouth	0	--	--
Charles River Basin			
Charles River:			
Hopkinton, Mass., Echo Lake Dam, Echo Lake	71.9	Mar.19	gf354.3
Hopkinton, Mass., Echo Lake Dam, tailwater	71.9	do.	346
Milford, Mass., Cedar Street Bridge, upstream	71.2	do.	322.2
Milford, Mass., Cedar Street Bridge, downstream	69.9	do.	307.6
Milford, Mass., New York, New Haven & Hartford R.R. Co. bridge	69.8	do.	304.8
Milford, Mass., Milford water works basin dam, headwater	69.6	do.	gh298.9
Milford, Mass., farm bridge below dam	69.5	do.	291.1
Milford, Mass., above Dilla Street bridge	68.8	do.	273.8
Milford, Mass., below Dilla Street bridge	68.8	do.	273.4
Milford, Mass., Main Street bridge	67.7	do.	272.4
Milford, Mass., Pond Street bridge	67.5	do.	253.6
Milford, Mass., Central Street bridge	67.2	do.	248.5
Milford, Mass., North Howard Street bridge	66.3	do.	243.1
Milford, Mass., South Howard Street bridge	65.8	do.	239.9
Milford, Mass., Mellon Street bridge	65.2	do.	236.8
Bellingham-Mendon town line, Hartford Avenue bridge	64.3	do.	233.4
Bellingham, Mass., box dam above Depot Street bridge, headwater	62.9	do.	gi224.1

ga Altitude of crest of dam, 20.6 feet.
gb Altitude of crest of dam, 19.0 feet.
gc Altitude of crest of dam, 17.9 feet.
gd Altitude of crest of dam, 15.9 feet.
ge Altitude of crest of spillway, 8.6 feet.
gf Altitude of crest of dam, 353.6 feet.
gh Altitude of crest of dam, 296.1 feet.
gi Altitude of crest of dam, 221.8 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Charles River Basin--Continued			
Charles River--Continued:			
Bellingham, Mass., box dam above Depot Street bridge, tailwater	62.9	Mar.19	216
Bellingham, Mass., Depot Street bridge	62.6	do.	216.9
Bellingham, Mass., North Main Street bridge	62.2	do.	214.4
Bellingham, Mass., High Street bridge	60.6	do.	207.3
Bellingham, Mass., dam above Maple Street bridge, headwater	59.1	do.	gj203.7
Bellingham, Mass., Maple Street bridge below dam	59.0	do.	199.2
Bellingham, Mass., Taft Mfg. Co. dam, headwater	58.1	do.	gk188.7
Bellingham, Mass., Pearl Street bridge, tailwater of dam	58.0	do.	181.4
Medway-Franklin town line, Franklin Street bridge	57.1	do.	175.4
West Medway Dam, headwater	56.3	do.	gm172.9
West Medway Dam, tailwater	56.3	do.	168.8
Medway-Franklin town line, Shaw Street bridge	56.1	do.	167.6
Medway, Mass., Fabyan Woolen Co. dam, headwater	55.0	do.	gn162.4
Medway, Mass., Sanford Street bridge	54.9	do.	152.3
Medway, Mass., Populatic Dam, headwater	54.3	do.	go138.6
Medway, Mass., Populatic Road bridge, below dam	54.25	do.	137.2
Millis, Mass., Myrtle Street bridge	52.35	do.	132.7
Millis-Norfolk town line, Pleasant Street bridge	52.1	do.	127.7
Millis, Mass., Baltimore Street bridge	51.0	do.	125.7
Millis-Medfield town line, Forest Street bridge	47.95	do.	121.9
Millis-Medfield town line, Dwight Street bridge	47.95	do.	121.0
Millis-Medfield town line, Main Street bridge	47.35	do.	120.9
Millis-Medfield town line, Bridge Street bridge	46.55	do.	120.3
Sherborn-Medfield town line, Death Bridge	44.7	do.	119.2
Sherborn-Dover town line, Farm Street bridge	42.3	do.	117.8
South Natick Dam, headwater	38.9	do.	gp113.2
South Natick, Mass., Pleasant Street bridge	38.8	do.	108.7
Dover-Needham town line, Charles River Street bridge	36.1	do.	106.3
Dover, Mass., near mouth of Trout Brook	35.1	do.	105.6
Dover-Needham town line, Central Avenue bridge	33.7	do.	105.0
Dover-Needham town line, South Street bridge	32.8	do.	103.8
Dover-Needham town line, stone dam, headwater, below South Street bridge	32.75	do.	gq103.2
Dover-Needham town line, stone dam, tailwater	32.75	do.	96
Dover-Needham town line, Chestnut Street bridge	31.15	do.	94.8
Dedham-Needham town line, Dedham Avenue bridge	29.3	do.	93.3
Dedham-Needham town line, stone arch bridge	28.6	do.	92.4
Dedham, Mass., Bridge Street bridge	25.4	do.	92.0
Dedham, Mass., Ames Street bridge	25.0	do.	91.9
Dedham, Mass., Mother Brook, U.S. Geological Survey gage, 0.3 mile below point of diversion	25.0	Mar.19 4am	91.34
West Roxbury-Dedham town line, Spring Street bridge	23.15	Mar.19	92.1
Newton-Needham town line, Kendrick Street bridge	20.4	do.	91.8
Newton-Needham town line, Highland Avenue bridge	19.5	do.	91.4
Newton-Needham town line, Central Avenue bridge	18.7	do.	89.2
Newton-Needham town line, New England Rayon & Silk Co. dam, headwater	18.6	do.	gr88.5
Newton-Needham town line, New England Rayon & Silk Co. dam, tailwater	18.6	do.	75
Newton-Needham town line, Glen Echo Bridge	18.5	do.	73.4
Needham-Wellesley town line, dam above Worcester Turnpike bridge, headwater	18.3	do.	gs73.4
Needham-Wellesley town line, dam above Worcester Turnpike bridge, tailwater	18.3	do.	65.0
Needham-Wellesley town line, Worcester Turnpike bridge, downstream	18.3	do.	65.0
Needham-Wellesley town line, Cochituate Aqueduct bridge	16.9	do.	62.9
Newton, Mass., Cordingley Dam, below Wales Street bridge, headwater	16.7	do.	gt61.2
Newton, Mass., Cordingley Dam, below Wales Street bridge, tailwater	16.7	do.	54.0
Newton, Mass., wooden dam, near Rayon Silk Mill, headwater	16.4	do.	gu51.0
Newton Lower Falls Dam, Washington Street bridge, upstream	16.3	do.	gv46.2
Newton-Wellesley town line, Washington Street bridge, downstream	16.3	do.	41.9

gj Altitude of crest of dam, 200.9 feet.
gk Altitude of crest of dam, 187.2 feet.
gm Altitude of crest of dam, 169.7 feet.
gn Altitude of crest of dam, 159.3 feet.
go Altitude of crest of dam, 133.7 feet.
gp Altitude of crest of dam, 110.5 feet.
gq Altitude of crest of dam, 101.3 feet.
gr Altitude of crest of dam, 84.0 feet.
gs Altitude of crest of dam, 70.4 feet.
gt Altitude of crest of dam, 58.3 feet.
gu Altitude of crest of dam, 48.2 feet.
gv Altitude of crest of dam, 42.2 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Charles River Basin--Continued			
Charles River--Continued:			
Newton-Weston town line, Park Road bridge	15.4	Mar.19	38.6
Newton-Weston town line, Eliot Bridge just above Riverside station, downstream	14.5	do.	38.2
Newton-Weston town line, Boston and Albany R.R. bridge near Riverside station, upstream	14.4	do.	37.9
Newton-Weston town line, Terminal Bridge on Riverside Road	14.3	do.	38.1
Newton-Weston town line, Norumbega Bridge, upstream	14.0	do.	37.5
Waltham-Weston town line, mouth of Stoney Brook	13.3	do.	37.5
Waltham, Mass., Prospect Street bridge, upstream	11.7	do.	37.5
Waltham, Mass., dam, Moody Street bridge, headwater	11.2	do.	gw37.8
Waltham, Mass., dam, Moody Street bridge, tailwater	11.2	do.	26.0
Waltham, Mass., U.S. Geological Survey gage	11.1	Mar.19 4-6am	24.81
Waltham, Mass., Elm Street bridge, upstream	11.0	Mar.19	23.9
Waltham, Mass., Newton Street bridge at Clematis Brook, downstream	10.8	do.	23.4
Waltham, Mass., Waltham Bleachery and Dye Works dam,	10.4	do.	gx22.7
Waltham, Mass., Farwell Street bridge, downstream	10.0	do.	19.3
Watertown-Newton town line, Bemis Rolling Stone dam, headwater	9.45	do.	gy18.3
Watertown, Mass., Bridge Street bridge	9.4	do.	14.6
Watertown, Mass., Lewando's Dam, headwater	8.7	do.	gz11.2
Watertown, Mass., Galen Street bridge	8.3	do.	4.4
Brighton, Mass., North Beacon Street bridge	6.8	do.	3.9
Arsenal Street bridge, upstream	6.1	do.	3.7
Boston, Mass., Charles River dam, upstream (tidewater below)	0	do.	3.7
Neponset River Basin			
Neponset River:			
Neponset Reservoir, dam at outlet	26.5	Mar.14-20	ha268.4
Foxboro Insane Asylum, New York, New Haven & Hartford R.R. Co. bridge near	26.45	do.	261.6
New York, New Haven & Hartford R.R. Co. bridge about 500 feet east of North Street, right bank	26.2	do.	261.9
North Street, culvert, about 200 feet north of New York, New Haven & Hartford R.R. Co. bridge	26.05	do.	261.9
New York, New Haven & Hartford R.R. Co. bridge about 250 feet west of North Street, left bank	26.0	do.	251.8
New York, New Haven & Hartford R.R. Co. bridge about 300 feet southwest of Highway 1, left bank	25.1	do.	232.8
Culvert on Highway 1 about 400 feet north of New York, New Haven & Hartford Co. bridge	24.9	do.	233.1
South Walpole, Mass., footbridge and dam about 700 feet south of South Walpole Square, left bank	24.85	do.	231.9
South Walpole, Mass., culvert on Washington Street about 300 feet south of South Walpole Square	24.7	do.	219.1
South Walpole, Mass., sluiceway under Summer Street and dam about 200 feet east of New York, New Haven & Hartford R.R. Co. bridge	24.55	do.	218.5
South Walpole, Mass., Bird Machine Co. dam (spillway controlled by gates) on southwest side of Neponset Street	24.3	do.	197.8
South Walpole, Mass., culvert on Neponset Street, about 1,400 feet northwest of South Walpole Square	24.15	do.	192.7
East Walpole, Mass., Plympton Dam, about 1,000 feet north of Plymton Street	19.35	do.	hb121.2
East Walpole, Mass., Bird & Sons dam, left bank	18.5	do.	hc100.6
Bird & Sons plant. bridge, left bank	17.8	do.	61.8
Morse Street bridge	17.6	do.	59.1
Norwood, Mass., New York, New Haven & Hartford R.R. Co. bridge	17.2	do.	54.8
Norwood, Mass., Pleasant Street bridge, upstream, left bank	17.1	do.	54.4
Norwood, Mass., Highway 1 bridge, upstream, left bank	16.7	do.	49.0
Neponset Street bridge	14.5	do.	46.0
Norwood-Dedham town line, 0.55 mile below mouth of Purgatory Brook, Dedham Road bridge	12.20	do.	45.3
New York, New Haven & Hartford R.R. Co. bridge	12.05	do.	45.3
Canton-Dedham town line, Green Lodge Street bridge	11.1	do.	44.8
Readville, Mass., East Milton Street bridge (Paul's Bridge), left bank	8.75	do.	44.4
Readville, Mass., culvert on Brush Hill road near East Milton Street bridge	8.75	do.	43.6

gw Altitude of crest of dam, 35.5 feet.
gx Altitude of crest of dam, 20.6 feet.
gy Altitude of crest of dam, 15.7 feet.
gz Altitude of crest of dam, 8.4 feet.
ha Altitude of crest of dam, 261.8 feet; of top of Flashboards, 265.5 feet.
hb Altitude of crest of spillway, 110.9 feet; of top of flashboards, 118.3 feet.
hc Altitude of crest of spillway, 94.7 feet; maximum altitude of flashboards, 101.1 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Neponset River Basin--Continued			
Neponset River--Continued:			
Hyde Park, Mass., Greenwood Avenue footbridge	8.0	Mar.14-20	43.6
Hyde Park, Mass., Dana Avenue bridge below mouth of Mother Brook, left bank	7.45	do.	42.8
Hyde Park, Mass., New York, New Haven & Hartford R.R. Co. bridge, upstream, left bank	7.35	do.	42.4
Hyde Park, Mass., Fairmount Avenue bridge, left bank	7.2	do.	42.3
Hyde Park, Mass., New York, New Haven & Hartford R.R. Co. bridge	6.8	do.	41.5
Mattapan, Mass., Blue Hill Avenue bridge (Mattapan Bridge)	5.45	do.	32.8
Milton, Mass., Central Avenue bridge	4.25	do.	16.8
Milton, Mass., Adams Street bridge	4.0	--	9.5
Milton, Mass., Granite Avenue bridge (in tidewater)	2.45	--	7.0
Dorchester, Mass., Neponset bridge between Quincy and Dorchester	1.4	--	7.1
Commercial Point, Dorchester Bay, mouth	0	--	--
Providence River Basin			
Kettle Brook:			
Paxton, Mass., Culvert on Pleasant Street near Reservoir Road	†57.45	Mar.19	1,098.4
Leicester, Mass., dam at Kettle Brook Reservoir No. 3, headwater	†55.4	do.	hd 1,042.1
Leicester, Mass., dam at Kettle Brook Reservoir No. 2, headwater	†54.9	do.	he990.9
Leicester, Mass., dam at Kettle Brook Reservoir No. 1, headwater	†53.4	do.	hf847.8
Leicester, Mass., Waites Pond, dam off Chapel Street, headwater	†52.9	do.	hg824.9
Leicester, Mass., Chapel Street bridge (washed out)	†52.55	do.	781.4
Leicester, Mass., Brick City dam (partly washed out) headwater	†52.4	do.	hi781.4
Leicester, Mass., Auburn Street bridge (washed out)	†51.95	do.	728.2
Leicester, Mass., McCarthy Avenue Culvert	†51.25	do.	678.1
Worcester, Mass., G. Duffy Mills dam, headwater	†51.05	do.	hj664.1
Worcester, Mass., Harris Woolen Co. dam, headwater	†50.85	do.	hk628.3
Worcester, Mass., Pfaffman Co. dam in section known as Cherry Valley (embankment washed out) headwater	†50.75	do	hm611.0
Auburn, Mass., Oxford Street dam, headwater	†49.15	do.	hn517.8
Blackstone River:			
Worcester, Mass., dam at Leesville Pond outlet near Webster Street bridge, headwater	46.95	do.	ho489.5
Worcester, Mass., Webster Street bridge below outlet of Leesville Pond	46.95	do.	485.2
Worcester, Mass., U.S. Geological Survey gage below Webster Street bridge, right bank	46.9	Mar.18-19 midnight	481.4
Worcester, Mass., mouth of Tatnuck Brook at downstream end of Curtis Pond	45.95	Mar.19	475.7
Worcester, Mass., Freemont Street bridge	45.65	do.	470.2
Worcester, Mass., Southbridge Street bridge	44.7	do.	454.4
Worcester, Mass., Middle River Road bridge (dynamited)	44.5	do.	449.9
Worcester, Mass., American Steel & Wire Co. dam at mouth of Marshall Brook (partly washed out) headwater	44.35	do.	hp449.2
Worcester, Mass., Milbury Street bridge and dam near New York, New Haven & Hartford R.R. Co. crossing, headwater	43.55	do.	hq447.0
Worcester, Mass., Milbury Street bridge near American Steel & Wire Co. (South Works)	42.9	do.	425.9
Millbury, Mass., Highway 20 bridge, southeast cut-off, just off New York, New Haven & Hartford R.R. Co. crossing	41.75	do.	412.8
Millbury, Mass., Greenwood Street bridge	40.9	do.	408.5
Millbury, Mass., Cemetery Road bridge (dynamited to save mill)	39.9	do.	401.1
Millbury, Mass., West Elm Street bridge	39.5	do.	395.4
Millbury, Mass., South Main Street bridge (Nortex dam above bridge washed out)	39.3	do.	382.1

† Distance above mouth of Blackstone River.
hd Altitude of crest of spillway, 1,041.1 feet.
he Altitude of crest of spillway, 989.5 feet.
hf Altitude of crest of spillway, 846.2 feet.
hg Altitude of crest of spillway, 819.9 feet.
hi Altitude of crest of dam, 776.6 feet.
hj Altitude of crest of dam, 661.3 feet.
hk Altitude of crest of dam, 625.1 feet.
hm Altitude of crest of dam, 607.8 feet.
hn Altitude of crest of dam, 515.1 feet.
ho Altitude of crest of dam, 486.5 feet.
hp Altitude of crest of weir, 444.2 feet.
hq Altitude of crest of weir, 437.8 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Providence River Basin--Continued			
Blackstone River--Continued:			
Millbury, Mass., Schuster dam above Elm Street bridge, headwater	38.7	Mar.19	hr367.4
Millbury, Mass., Elm Street bridge	38.65	do.	362.1
Millbury, Mass., Riverlin Street bridge	38.5	do.	356.5
Millbury, Mass., New England Power Co. dam, headwater	38.35	do.	hs352.4
Millbury, Mass., bridge on dirt road to Grafton just east of Highway 122A (approaches washed out)	37.7	do.	340.4
Sutton, Mass., Pleasant Valley dam above Pleasant Valley Road bridge, headwater	37.25	do.	ht337.4
Sutton, Mass., Pleasant Valley Road bridge	37.2	do.	327.7
Wilkinsonville, Mass., Anco Mills dam (partly washed out), headwater	36.55	do.	hu328.3
Wilkinsonville, Mass., Depot Street bridge, tailwater	36.55	do.	327.7
Grafton, Mass., Saundersville Mill dam near New York, New Haven & Hartford R.R. Co. tracks, headwater	35.95	do.	hv315.0
Grafton, Mass., Pleasant Street bridge (over north channel)	35.45	do.	297.1
Grafton, Mass., Pleasant Street bridge (bridge over south channel nearest New York, New Haven & Hartford R.R. Co. crossing	35.35	do.	296.1
Fisherville, Mass., Fisher Mfg. Co. dam below Fisherville Pond, headwater	34.55	do.	hw294.3
Fisherville, Mass., Highway 122A bridge near Fisher Mfg. Co.	34.45	do.	283.6
Farnumsville, Mass., Wuskanut Pond dam above Depot Street bridge, headwater	34.05	Mar.19 11am	hx281.9
Farnumsville, Mass., Depot Street bridge	34.0	Mar.19	277.9
Northbridge, Mass., Providence Causeway near Paul Whitin Mfg. Co.	32.15	Mar.19 noon	273.9
Northbridge, Mass., Paul Whitin dam above Sutton Road bridge, headwater	32.05	Mar.19	hy273.5
Northbridge, Mass., Sutton Road bridge off Highway 122 (Rockdale Section)	31.95	do.	270.2
Northbridge, Mass., Providence Road bridge about 0.4 mile south of center of Rockdale	31.50	do.	266.3
Riverdale, Mass., Kupfer Paper Co. dam below Riverdale Street bridge, headwater	30.45	do.	hz263.0
Riverdale, Mass., near, East Church Street bridge	29.45	do.	253.0
North Uxbridge, Mass., near, Rice City dam at outlet of Rice City Pond, headwater	26.7	do.	ia243.5
North Uxbridge, Mass., bridges on East Hartford Street below Rice City dam	26.7	do.	234.6
Uxbridge Center, Mass., 0.5 mile east of, Stanley Woolen Co. dam (washed out) and Mendon Street bridges (partly washed out)	24.9	do.	227.7
Uxbridge Center, Mass., about 1.5 miles south of, Skull Rock Bridge, right bank	22.95	Mar.19 1pm	219.3
Millville, Mass., Central Street bridges about 300 feet southwest from Highway 122	19.7	Mar.19 2pm	208.0
Blackstone, Mass., Blackstone Mfg. Co. mill dam, headwater	18.0	Mar.19	ib198.2
Blackstone, Mass., Blackstone Mfg. Co. mills about 0.25 mile south of Highway 122	17.0	do.	171.3
Blackstone, Mass., Saranac Dam above Canal Street bridge, headwater	16.8	do.	ic168.6
Blackstone, Mass., St. Paul Street bridge	16.55	do.	165.0
Massachusetts-Rhode Island State line	16.4	--	--
Mouth, 0.3 mile above Providence-Pawtucket City line	0	--	--
Thames River Basin id			
Willimantic and Shetucket Rivers:			
Stafford Springs, Conn., 150 feet above Rhode Island Worsted Co. dam on Square Pond Brook	57.2		501.2
Stafford Springs, Conn., at Rhode Island Worsted Co. dam on Square Pond Brook	57.2		501.1
Stafford Springs, Conn., 150 feet below Rhode Island Worsted Co. dam on square Pond Brook	57.2		491.7

hr Altitude of crest of dam, 362.1 feet.
hs Altitude of crest of dam, 347.6 feet.
ht Altitude of crest of dam, 332.6 feet.
hu Altitude of crest of dam, 314.6 feet.
hv Altitude of crest of dam, 309.9 feet.
hw Altitude of crest of dam, 288.5 feet.
hx Altitude of crest of dam, 279.0 feet.
hy Altitude of crest of dam, 267.5 feet.
hz Altitude of crest of dam, 257.2 feet.
ia Altitude of crest of dam, 236.0 feet.
ib Altitude of crest of dam, 191.5 feet.
ic Altitude of crest of dam, 160.0 feet.
id The "miles above mouth" data give for all streams in the Thames River Basin the river distance above the mouth of the Thames River.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
<u>Thames River Basin</u>--Continued			
Willimantic and Shetucket Rivers--Continued:			
Stafford Springs, Conn., 175 feet above Stafford Worsted Co. dam on Square Pond Brook	56.7	--	481.7
Stafford Springs, Conn., at Stafford Worsted Co. dam on Square Pond Brook	56.7	--	481.4
Stafford Springs, Conn., 75 feet bslow Stafford Worsted Co. dam on Square Pond Brook	56.7	--	473.5
Stafford Springs, Conn., 50 feet above T. F. Mullen Co. dam	55.8	--	466.5
Stafford Springs, Conn., at T. F. Mullen Co. dam	55.8	--	466.4
Stafford Springs, Conn., 100 feet below T. F. Mullen Co. dam	55.8	--	465.4
Stafford Springs, Conn., forebay of Connecticut Light & Power Co. dam	55.2	--	447.8
Stafford Springs, Conn., 50 feet below Connecticut Light & Power Co. dam	55.2	--	441.0
Mansfield Depot, Conn., forebay of McCollum Dam	44.0	--	291.8
Mansfield Depot, Conn., 150 feet below McCollum Dam	44.0	--	289.4
Eagleville, Conn., forebay of Eagleville Mills Co. dam	41.7	--	281.7
Eagleville, Conn., 180 feet below Eagleville Mills Co. dam	41.7	--	271.8
Willimantic, Conn., forebay of Connecticut Light & Power Co. dam No. 1	34.4	--	241.9
Willimantic, Conn., 75 feet below Connecticut Light & Power Co. dam No. 1	34.4	--	234.1
Willimantic, Conn., forebay of Connecticut Light & Power Co. dam No. 2	34.3	--	231.6
Willimantic, Conn., 600 feet below Connecticut Light & Power Co. dam No. 2	34.2	--	223.6
Willimantic, Conn., forebay of American Thread Co. dam No. 1	33.9	--	215.6
Willimantic, Conn., forebay of American Thread Co. dam No. 2	33.8	--	202.5
Willimantic, Conn., 150 feet above American Thread Co. No. 3	33.6	--	190.0
Willimantic, Conn., forebay of American Thread Co. dam No. 3	33.6	Mar.12 6-8pm	189.8
Willimantic, Conn., 220 feet above American Thread Co. dam No. 4	33.4	--	166.7
Willimantic, Conn., forebay of American Thread Co. dam No. 4	33.4	--	165.7
Willimantic, Conn., 100 feet below American Thread Co. dam No. 4	33.4	--	160.9
Scotland Station, Conn., 710 feet above Connecticut Light & Power Co. dam	27.4	--	130.2
Scotland Station, Conn., at Connecticut Light & Power Co. dam	27.2	--	133.9
Scotland Station, Conn., 350 feet below Connecticut Light & Power Co. dam	27.2	--	112.3
Baltic, Conn., 175 feet above Baltic Mills dam	23.2	--	102.2
Baltic, Conn., at Baltic Mills dam	23.2	Mar.12	104.4
Baltic, Conn., 500 feet below Baltic Mills dam	23.1	--	84.0
Occum, Conn., 675 feet above City of Norwich dam	21.0	--	72.1
Occum, Conn., at City of Norwich dam	20.9	Mar.12	75.7
Occum, Conn., 240 feet below City of Norwich dam	20.9	--	65.1
Taftville, Conn., 685 feet above Ponemah Mills dam	19.1	--	56.8
Taftville, Conn., at Ponemah Mills dam	19.0	Mar.12 8pm	59.1
Taftville, Conn., 400 feet below Ponemah Mills dam	18.9	--	44.3
Norwich, Conn., forebay of Norwich Water Power Co. dam	16.5	Mar.12 8pm	32.0
Norwich, Conn., 275 feet below Norwich Water Power Co. dam	16.4	--	23.2
Still and Natchaug Rivers:			
Kenyonville, Conn., Crystal Pond	55.2	--	644.2
Kenyonville, Conn., 100 feet below Crystal Pond	55.2	--	638.5
Kenyonville, Conn., forebay of Kenyon Dam	54.0	--	616.4
Kenyonville, Conn., 25 feet below Kenyon Dam	54.0	--	610.4
Kenyonville, Conn., forebay of J. M. Tatem dam	53.6	--	611.6
Kenyonville, Conn., 300 feet below J. M. Tatem dam	53.5	--	599.5
Eastford, Conn., forebay of upper J. M. Tatem dam	52.0	--	544.1
Eastford, Conn., 100 feet below upper J. M. Tatem dam	51.9	--	541.0
Eastford, Conn., forebay of lower J. M. Tatem dam	51.7	--	527.4
Eastford, Conn., 175 feet below lower J. M. Tatem dam	51.7	--	518.3
Eastford, Conn., forebay of M. J. Keith & Co. dam	50.4	--	512.8
Eastford, Conn., 300 feet below M. J. Keith & Co. dam	50.4	--	507.6
Phoenixville, Conn., forebay of Latham Dam	49.8	--	469.3
Phoenixville, Conn., 100 feet below Latham Dam	49.8	--	465.2
Phoenixville, Conn., forebay of Wheaton Dam	49.4	--	453.6
Phoenixville, Conn., 60 feet below Wheaton Dam	49.4	--	447.7
North Windham, Conn., forebay of David Clark dam	41.4	--	271.0
North Windham, Conn., 150 feet below David Clark dam	41.4	--	269.4
North Windham, Conn., forebay of Gardner Hall, Jr.,dam	39.6	--	238.7
North Windham, Conn., 100 feet below Gardner Hall, Jr., dam	39.6	--	231.4

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Thames River Basin--Continued			
Still and Natchaug Rivers--Continued:			
North Windham, Conn., forebay of G. J. Kirby dam	39.2	--	225.3
North Windham, Conn., 150 feet below G. J. Kirby dam	39.2	--	223.7
Mansfield Hollow, Conn., forebay of G. J. Kirby dam	38.0	--	208.1
Mansfield Hollow, Conn., 165 feet below G. J. Kirby dam	38.0	--	196.0
Mansfield, Conn., forebay of City of Willimantic dam	36.5	Mar.18 9pm	186.7
Mansfield, Conn., 100 feet below City of Willimantic dam	36.4	--	176.9
Quinebaug River:			
East Brimfield, Mass., at Snell Manufacturing Co. dam	80.6	--	637.2
East Brimfield, Mass., 275 feet below Snell Manufacturing Co. dam	80.6	--	631.7
Fiskdale, Mass., above upper Sturbridge Finishing Co. dam	78.4	--	625.1
Fiskdale, Mass., below upper Sturbridge Finishing Co. dam	78.3	--	602.8
Fiskdale, Mass., above lower Sturbridge Finishing Co. dam	78.0	--	602.2
Fiskdale, Mass., below lower Sturbridge Finishing Co. dam	78.0	--	592.6
Fiskdale, Mass., above Snell Manufacturing Co. dam	77.6	--	585.6
Fiskdale, Mass., below Snell Manufacturing Co. dam	77.6	--	581.5
Fiskdale, Mass., at Charles Ballard dam	76.6	--	571.6
Fiskdale, Mass., 100 feet below Charles Ballard dam	76.6	--	569.2
Westville, Mass., forebay of Hamilton Woolen Co. dam	73.7	--	559.8
Westville, Mass., below Hamilton Woolen Co. dam	73.7	--	555.1
Southbridge, Mass., above Litchfield Shuttle Co. dam	72.7	--	534.1
Southbridge, Mass., at Litchfield Shuttle Co. dam	72.6	--	534.0
Southbridge, Mass., below Litchfield Shuttle Co. dam	72.6	--	526.0
Southbridge, Mass., forebay of Ames Worsted Co. dam	71.3	--	522.2
Southbridge, Mass., below Ames Worsted Co. dam	71.3	--	505.9
Southbridge, Mass., forebay of Russell Harrington Cutlery Co. dam	71.0	--	481.5
Southbridge, Mass., below Russell Harrington Cutlery Co. dam	70.9	--	469.5
Southbridge, Mass., forebay of Hamilton Woolen Co. dam	70.4	--	453.4
Southbridge, Mass., below Hamilton Woolen Co. dam	70.3	--	440.9
Southbridge, Mass., forebay of American Optical Co. dam	69.5	--	423.8
Southbridge, Mass., below American Optical Co. dam	69.5	--	413.5
Southbridge, Mass., forebay of Southbridge Finishing Co. dam	68.8	--	405.5
Southbridge, Mass., below Southbridge Finishing Co. dam	68.8	--	397.2
West Dudley, Mass., forebay of West Dudley Paper Co. dam	66.6	--	380.6
West Dudley, Mass., below West Dudley Paper Co. dam	66.6	--	377.7
Quinebaug, Conn., forebay of Intervale Mills dam	64.6	Mar.18 8:30pm	368.4
Quinebaug, Conn., below Intervale Mills dam	64.6	--	356.2
Fabyan, Conn., above Fabyan Woolen Co. dam	63.0	--	343.7
Fabyan, Conn., below Fabyan Woolen Co. dam	63.0	--	343.2
West Thompson, Conn., 150 feet below Connecticut Light & Power Co. dam	57.0	--	307.7
West Thompson, Conn., at Connecticut Light & Power Co. dam	57.0	--	306.3
West Thompson, Conn., 200 feet above Connecticut Light & Power Co. dam	56.9	--	304.5
Putnam, Conn., forebay of Edward Bloom Co. dam	55.0	Mar.19 2:25pm	296.7
Putnam, Conn., at Nightingale-Morse Mills Inc. dam	54.8	--	280.9
Putnam, Conn., 300 feet below dam	54.8	--	267.3
Putnam, Conn., forebay of Putnam Woolen Co. dam	54.4	--	261.0
Putnam, Conn., at bridge on Highway 101	54.3	--	245.3
Goodyear, Conn., 200 feet above Goodyear Cotton Mills Inc. dam	47.4	--	214.1
Goodyear, Conn., at Goodyear Cotton Mills Inc. dam	47.4	Mar.19 7pm	213.7
Goodyear, Conn., 940 feet below Goodyear Cotton Mills Inc. dam	47.2	--	210.0
Danielson, Conn., 200 feet above Wauregan-Quinebaug Mills Inc. dam	42.4	--	196.5
Danielson, Conn., at Wauregan-Quinebaug Mills Inc. dam	42.4	--	196.2
Danielson, Conn., 250 feet below Wauregan-Quinebaug Mills Inc. dam	42.3	--	189.8
Danielson, Conn., forebay of Dyer Dam of Connecticut Light & Power Co.	40.6	Mar.19,10 am to 5pm	171.0
Danielson, Conn., below Dyer Dam of Connecticut Light & Power Co.	40.6	--	163.6
Wauregan, Conn., forebay of Wauregan-Quinebaug Mills Inc. dam	38.4	Mar.19 4:30pm	149.7
Wauregan, Conn., below Wauregan-Quinebaug Mills Inc. dam	38.3	--	145.1
Jewett City, Conn., forebay of Aspinook Dam	25.4	Mar.19 7-10pm	103.3

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Thames River Basin--Continued			
Quinebaug River--Continued:			
Jewett City, Conn., 315 feet below Aspinook Dam	25.3	--	92.4
Tunnel plant of Connecticut Light & Power Co., forebay	18.1	Mar.19 9-11pm	49.6
French River:			
Leicester, Mass., above Sargeant Pond dam	82.1	--	905.6
Leicester, Mass., 250 feet below Sargeant Pond dam	82.0	--	898.1
Leicester, Mass., above Leicester Woolen Mills dam	81.8	--	890.6
Leicester, Mass., 50 feet below Leicester Woolen Mills dam	81.8	--	880.5
Leicester, Mass., above Duncan Dam	81.4	--	846.2
Leicester, Mass., 150 feet below Duncan Dam	81.4	--	835.3
Greenville, Mass., 600 feet above J. D. Clark Co. dam No. 1	79.1	--	763.5
Greenville, Mass., at J. D. Clark Co. dam No. 1	79.1	--	762.3
Greenville, Mass., above M. G. Clark Co. dam	79.0	--	747.9
Greenville, Mass., 100 feet below M. G. Clark Co. dam	79.0	--	735.6
Rochdale, Mass., 80 feet above J. D. Clark Co. dam No. 2	78.9	--	732.4
Rochdale, Mass., at J. D. Clark Co. dam No. 2	78.9	--	731.6
Rochdale, Mass., 100 feet below J. D. Clark Co. dam No. 2	78.9	--	721.6
Rochdale, Mass., at J. D. Clark Co. dam No. 3	78.8	--	719.6
Rochdale, Mass., 50 feet below J. D. Clark Co. dam No. 3	78.8	--	711.0
Rochdale, Mass., E. G. Carlton & Sons dam	78.1	--	702.6
Rochdale, Mass., 25 feet below E. G. Carlton & Sons dam	78.1	--	695.4
Rochdale, Mass., 340 feet above Leicester Knitting Co. dam	77.8	--	689.4
Rochdale, Mass., at Leicester Knitting Co. dam	77.7	--	688.3
Rochdale, Mass., 40 feet below Leicester Knitting Co. dam	77.7	--	677.1
Larnedville, Mass., 600 feet above Comins Co. dam	77.4	--	650.5
Larnedville, Mass., at Comins Co. dam	77.3	--	648.6
Larnedville, Mass., 50 feet below Comins Co. dam	77.3	--	637.7
Larnedville, Mass., 480 feet above Thayer Woolen Co. dam No. 1	76.0	--	609.6
Larnedville, Mass., at Thayer Woolen Co. dam No. 1	75.9	--	612.0
North Oxford, Mass., above David N. Taft Manufacturing Co. dam	75.5	--	588.7
North Oxford, Mass., 240 feet below David N. Taft Manufacturing Co. dam	75.5	--	575.7
North Oxford, Mass., at Thayer Woolen Co. dam No. 2	75.2	--	572.6
North Oxford, Mass., above Edwin Bartlett Co. dam No. 1	74.8	--	548.2
North Oxford, Mass., below Edwin Bartlett Co. dam No. 1	74.8	--	535.0
North Oxford, Mass., 470 feet above Krintzman Dusting Mill dam	74.6	Mar.18 4-5:30pm	531.2
North Oxford, Mass., at Krintzman Dusting Mill dam	74.5	--	530.0
North Oxford, Mass., 100 feet below Krintzman Dusting Mill dam	74.5	--	521.4
North Oxford, Mass., 575 feet above upper Ivanhoe Woolen Co. dam	74.5	Mar.18 5:30-9pm	515.0
North Oxford, Mass., at upper Ivanhoe Woolen Co. dam	74.4	--	514.1
North Oxford, Mass., 100 feet below upper Ivanhoe Woolen Co. dam	74.4	--	499.6
North Oxford, Mass., above lower Ivanhoe Woolen Co. dam	74.1	--	498.8
North Oxford, Mass., below lower Ivanhoe Woolen Co. dam	74.1	--	486.8
Oxford, Mass., above A. Howarth Co. dam	71.5	--	474.9
Oxford, Mass., below A. Howarth Co. dam	71.4	--	466.8
Webster, Mass., 475 feet above S. Slater & Sons dam	66.6	--	457.6
Webster, Mass., at S. Slater & Sons dam	66.5	Mar.19 9am	452.7
Webster, Mass., below S. Slater & Sons dam	66.5	--	439.8
Webster, Mass., American Woolen Co. dam No. 1	65.8	--	433.9
Webster, Mass., 375 feet above American Woolen Co. dam No. 2	64.6	--	417.0
Webster, Mass., at American Woolen Co. dam No. 2	64.5	--	415.0
Webster, Mass., 140 feet below American Woolen Co. dam No. 2	64.5	--	413.8
Perryville, Mass., 575 feet above American Woolen Co. dam No. 3	63.4	--	404.1
Perryville, Mass., at American Woolen Co. dam No. 3	63.3	--	403.9
Perryville, Mass., 125 feet below American Woolen Co. dam No. 3	63.3	--	401.9
Wilsonville, Conn., 400 feet above Lawrence Keegan Co. dam	62.4	Mar.19 9-11am	388.7
Wilsonville, Conn., at Lawrence Keegan Co. dam	62.4	--	385.8
Wilsonville, Conn., 300 feet below Lawrence Keegan Co. dam	62.3	--	377.4
North Grosvenordale, Conn., forebay of Grosvenordale Co. dam No. 1	60.7	Mar.19 11:45am	373.3
North Grosvenordale, Conn., 400 feet below Grosvenordale Co. dam No. 1	60.6	--	363.2
Grosvenordale, Conn., 250 feet above Grosvenordale Co. dam No. 2	59.3	--	349.1
Grosvenordale, Conn., at Grosvenordale Co. dam No. 2	59.3	--	344.2

Table 15.--Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Thames River Basin--Continued			
French River--Continued:			
Grosvenordale, Conn., 500 feet below Grosvenordale Co. dam No. 2	59.2	--	340.2
Grosvenordale, Conn., 400 feet above Grosvenordale Co. dam No. 3	59.0	--	335.6
Grosvenordale, Conn., at Grosvenordale Co. dam No. 3	58.9	--	334.3
Grosvenordale, Conn., 300 feet below Grosvenordale Co. dam No. 3	58.9	--	328.0
Mechanicsville, Conn., 370 feet above Connecticut Light & Power Co. dam	56.6	--	307.0
Mechanicsville, Conn., at Connecticut Light & Power Co. dam	56.7	--	308.6
Mechanicsville, Conn., 350 feet below Connecticut Light & Power Co. dam	56.7	--	301.0
Yantic River:			
Colchester, Conn., forebay of City of Norwich Water Department dam	27.6	--	332.3
Colchester, Conn., 600 feet below City of Norwich Water Department dam	27.5	--	302.6
Lebanon, Conn., above James McGrath dam	24.6	--	262.8
Lebanon, Conn., below James McGrath dam	24.6	--	252.5
Bozrahville, Conn., Bozrah Electric Co. dam	24.0	--	229.6
Fitchville, Conn., 300 feet above Palmer Bros. Co. dam	21.1	--	156.1
Fitchville, Conn., at Palmer Bros. Co. dam	21.0	--	155.2
Fitchville, Conn., 100 feet below Palmer Bros. Co. dam	21.0	--	140.0
Yantic, Conn., forebay of American Woolen Co. dam	19.4	--	113.8
Yantic, Conn., 200 feet below American Woolen Co. dam	19.4	--	111.8
Norwich Town, Conn., at Saxton Woolen Corp. dam	18.0	--	100.3
Norwich Town, Conn., 50 feet below Saxton Woolen Corp. dam	18.0	--	97.4
Norwich Town, Conn., forebay of Glen Woolen Mills dam	17.2	--	89.0
Norwich Town, Conn., 220 feet below Glen Woolen Mills dam	17.2	--	85.4
Norwich, Conn., forebay of Falls Co. dam No. 2	15.8	--	72.6
Norwich, Conn., 275 feet below Falls Co. dam No. 2	15.7	--	63.9
Norwich, Conn., forebay of Falls Co. dam No. 1	15.6	--	63.7
Norwich, Conn., 1,100 feet below Falls Co. dam No. 1, tidewater	15.3	--	7.3
Connecticut River Basin			
Connecticut River:			
Outlet of First Connecticut Lake, New England Power Co. dam	382.2	--	(ie)
Pittsburg, N. H., F. W. Baldwin dam, headwater	370.85	--	(if) 1,304.7
Indian Stream, mouth	367.75	--	1,160.3
Canaan, Vt., Public Service Co. of New Hampshire dam (Canaan plant), headwater (flashboards gone)	361.2	Mar.18 7am	(ig) 1,057.6
Canaan, Vt., Public Service Co. of New Hampshire dam, tailwater	361.2	--	1,030.2
Colebrook, N. H., 605 feet downstream from highway bridge	351.4	--	1,009.6
Columbia highway bridge, 610 feet above	347.1	--	1,001.0
Public Service Co. of New Hampshire dam (Lyman Falls plant), headwater	340.0	--	ih952.5
Public Service Co. of New Hampshire dam (Lyman Falls plant), tailwater	340.0	--	926.5
North Stratford, N. H., highway bridge 0.1 mile above mouth of Nulhegan River	337.25	--	896.3
North Stratford, N. H., U.S. Geological Survey gage, 0.1 mile below mouth of Nulhegan River	337.05	Mar.19 2-10pm	894.6
Pauls Stream, mouth	332.55	--	873
Bog Brook, 0.7 mile above mouth	327.6	--	865.5
Northumberland, N. H., Wyoming Valley Paper Mill, Inc. dam just downstream from highway bridge, headwater	314.1	--	ij861.8
Lancaster, N. H., highway bridge	305.2	--	853.2
South Lancaster, N. H., highway bridge	299.55	--	849.4
South Lunenberg, Vt., 1,065 feet below Boston & Maine R.R. bridge	296.85	--	847.1
Gilman, Vt., Gilman Paper Co. dam, headwater	294.25	--	ik840.4
Gilman, Vt., Gilman Paper Co. dam, tailwater	294.25	--	825.7
Dalton, N. H., U. S. Geological Survey gage at upstream side of Dalton-Gilman highway bridge	294.05	Mar.20 1-4am	825.6
Waterford, Vt., highway bridge (destroyed)	283.6	--	674.2

ie Altitude of crest of dam, 1,635.9 feet; of top of flashboards, 1,642.9 feet.
if Altitude of crest of dam, 1,299.0 feet; of top of flashboards, 1,300.5 feet.
ig Altitude of crest of dam, 1,051.3 feet.
ih Altitude of crest of dam, 947.0 feet; of top of flashboards, 950.0 feet.
ij Altitude of crest of dam, 844.4 feet; of top of flashboards, 845.9 feet.
ik Altitude of crest of dam, 828.2 feet; of top of flashboards, 833.4 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Connecticut River Basin--Continued			
Connecticut River--Continued:			
New England Power Co. dam (Comerford station), headwater	275.25	Mar.20 3:30am	1m647.6
New England Power Co. dam (Comerford station), tailwater	275.25	--	479.5
Stevens River, 1,470 feet north of mouth	271.85	--	466.7
New England Power Co. dam (McIndoes Falls plant), headwater	268.55	Mar.20 6-10am	1n455.4
McIndoes Falls Dam, tailwater	268.55	--	443.5
East Ryegate, Vt., Ryegate Paper Co. dam, headwater	264.65	--	1o438.3
East Ryegate, Vt., Ryegate Paper Co. dam, tailwater	264.65	--	437.7
Woodsville, N. H., mouth of Ammonoosuc River	260.3	--	428.3
Highway bridge between Woodsville, N. H., and Wells River, Vt., downstream	260.1	--	418.2
Newbury, Vt., highway bridge, upstream	249.95	--	415.5
South Newbury, Vt., covered highway bridge, 0.5 mile downstream from mouth of Oliverian Brook	247.35	--	414.5
South Newbury, Vt., U.S. Geological Survey gage below covered bridge, right bank	247.35	Mar.19 8pm to Mar.20 8am	413.5
Bradford, Vt., railroad station about 0.2 mile upstream from mouth of Waits River, right bank	241.35	--	413.6
Piermont, Vt., highway bridge 1.1 miles below mouth of Waits River	240.05	--	412.3
Orford-Fairlee covered highway bridge	232.45	--	406.9
North Thetford, Vt., highway bridge	226.35	--	402.0
East Thetford, Vt., highway bridge	224.15	--	399.4
Ompompanoosuc River, 1,692 feet above mouth	219.35	--	394.8
Hanover-Norwich highway bridge, right bank	214.05	--	389.1
International Paper Co. dam (Wilder plant), headwater	212.25	--	1p380.0
International Paper Co. dam (Wilder plant), tailwater	212.25	--	358.8
White River Junction, Vt., mouth of White River	210.05	--	355.8
White River Junction, Vt., U.S. Weather Bureau chain gage at upstream side of Boston & Maine R.R. bridge	209.95	Mar.19 3-4am	355.0
White River Junction, Vt., U.S. Geological Survey gage just below Boston & Maine R.R. bridge	209.95	do.	354.2
North Hartland, Vt., mouth of Ottauquechee River	205.15	--	342.3
Windsor, Vt., highway bridge (Cornish bridge)	195.4	--	327.0
Ascutney, Vt., highway bridge	190.45	--	323.9
Sugar River, mouth	190.35	--	322.7
Gully Brook, mouth	186.05	--	319.4
Black River, Cheshire toll bridge, 0.2 mile above mouth	178.35	--	308.5
Black River, 0.5 mile below mouth	177.65	--	308.8
Williams River, 0.4 mile above mouth	171.95	--	303.9
Williams River, 0.5 mile below mouth	171.05	--	303.4
Bellows Falls, Vt., 700 feet above New England Power Co. dam (Bellows Falls plant)	169.25	--	303.5
Bellows Falls, Vt., New England Power Co. dam (Bellows Falls plant), headwater	169.15	--	1q302.9
Bellows Falls, Vt., 500 feet below Bellows Falls Dam, tailwater	169.05	--	302.4
Bellows Falls, Vt., Boston & Maine R.R. bridge, upstream (water was 10.5 feet above top of bridge arch)	168.85	--	298.9
Bellows Falls, Vt., junction of New England Power Co. (Bellows Falls plant) tailrace and river	168.55	--	262.3
Bellows Falls, Vt., mouth of Saxtons River	168.1	--	262.4
Cold River, mouth	167.5	--	261.2
Walpole, N. H., 0.1 mile above highway bridge	164.8	--	259.0
Walpole, N. H., highway bridge	164.7	--	258.8
Walpole, N. H., 0.1 mile below highway bridge	164.6	--	258.5
Aldrich Brook, 0.2 mile above mouth	159.35	--	255.2
Aldrich Brook, about 0.1 mile above mouth	159.25	--	255.4
East Putney Station, Vt., about 0.1 mile above mouth of Partridge Brook	155.75	--	252.5
East Putney Station, Vt., about 0.1 mile below mouth of Partridge Brook	155.55	--	251.8
Putney Station, Vt., 0.2 mile below mouth of Sacketts Brook	152.45	--	249.4
Highway bridge, 200 feet above (bridge destroyed, water confined to bridge opening)	146.05	--	242.0
Highway bridge, just downstream from	146.05	--	239.8
West River, 1.2 miles above mouth	145.95	--	238.0
West River, 0.5 mile above mouth	145.25	--	238.6
Brattleboro, Vt., 500 feet above mouth of West River	144.85	--	237.4
Brattleboro, Vt., mouth of West River	144.75	--	237.7

1m Altitude of crest of dam, 642.0 and 640.1 feet; of top of flashboards, 648.0 feet.
1n Altitude of crest of dam, 437.0 feet.
1o Altitude of crest of dam, 421.6 feet.
1p Altitude of crest of dam, 366.5 feet; of top of flashboards, 369.0 feet.
1q Altitude of crest of dam, 278.4 feet; of crest of roller gate section, 273.4 feet; of top of flashboards, 291.4 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Connecticut River Basin--Continued			
Connecticut River--Continued:			
Brattleboro, Vt., 0.5 mile downstream from mouth of West River	144.25	--	236.4
Brattleboro, Vt., highway bridge (water not confined to bridge openings)	143.85	--	236.0
Boston & Maine R.R. bridge	142.65	--	234.2
Boston & Maine R.R. bridge, 0.1 mile below	142.55	--	233.6
Boston & Maine R.R. bridge, 0.2 mile below, right bank	142.45	--	233.5
New England Power Co. dam (Vernon plant), 0.1 mile above	137.65	--	231.6
Vernon, Vt., above New England Power Co. dam (Vernon plant), headwater	137.55	Mar.19 8am to Mar.20 2am	ir231.4
Vernon, Vt., New England Power Co. dam (Vernon plant), tailwater	137.55	--	223.9
Vernon, Vt., 0.1 mile below New England Power Co. dam (Vernon plant)	137.45	--	223.4
Ashuelot River, 0.4 mile above mouth	136.05	--	221.7
Ashuelot River, 0.1 mile above mouth	135.75	--	221.4
Ashuelot River, mouth	135.65	--	220.4
Ashuelot River, 0.1 mile below mouth	135.55	--	220.3
Ashuelot River, 0.5 mile below mouth	135.15	--	221.0
Boston & Maine R.R. bridge, 550 feet above	132.95	--	218.1
Boston & Maine R.R. bridge, 250 feet above	132.95	--	217.8
Boston & Maine R.R. bridge (flood confined to bridge opening)	132.85	--	217.8
Boston & Maine R.R. bridge, 500 feet below	132.75	--	217.2
Massachusetts-New Hampshire State line, right bank	132.05	--	218.0
Schell Memorial Highway bridge, both banks (average)	131.15	Mar.20 2-3am	217.4
Central Vermont R.R. bridge, 100 feet above, left bank	130.55	--	217.5
Central Vermont R.R. bridge	130.55	--	216.5
Bennet Meadow highway bridge	128.95	Mar.20 2-3am	215.7
Munns Ferry, 4.5 miles above French King Bridge, right bank	126.25	--	214.4
French King Bridge, 4.4 miles above	126.15	--	215.5
Gill Bend, 3 miles above French King Bridge	124.75	--	212.1
Old ferry 1.2 miles above French King Bridge	122.95	Mar.20 2-3am	211.7
French King Bridge, 2,905 feet above	122.35	--	208.0
French King Bridge, 2,412 feet above	122.25	--	208.9
French King Bridge, 2,056 feet above	122.15	--	211.3
French King Bridge, 1,450 feet above	122.05	--	209.0
French King Bridge, 1,019 feet above	121.95	--	207.3
French King Bridge, 520 feet above	121.85	--	202.8
French King Bridge, downstream, left bank	121.75	Mar.20 2-3am	201.4
Millers River, mouth, left bank	121.65	--	200.4
Turners Falls Dam, 0.3 mile above, left bank	118.0	--	186.3
Highway bridge 1,000 feet above Turners Falls Dam, upstream, right bank	117.9	Mar.19 8pm to Mar.20 6am	186.9
Turners Falls Dam, northeast end of, headwater, right bank	117.75	--	is185.2
Turners Falls Dam, 0.1 mile below, right bank	117.6	--	170.2
White Bridge, east end, left bank	117.25	Mar.20 3am	153.5
White Bridge, 2.5 miles below, left bank	116.7	do.	154.8
Montague City, Mass., covered bridge (destroyed), both banks (average)	115.05	Mar.20 2-3am	149.9
Deerfield River, 600 feet below mouth, U.S. Geological Survey gage, left bank	114.65	Mar.19,10 am to 8pm	149.1
Deerfield River, 0.9 mile below mouth	113.75	--	148.1
Deerfield River, 1.8 miles below mouth, Boston & Maine R.R. bridge	112.95	--	145.8
Boston & Maine R.R. bridge, 0.3 mile below, right bank	112.65	Mar.20 2-3am	145.6
Boston & Maine R.R. bridge, 0.6 mile below, right bank	112.35	do.	145.4
Sawmill Brook, mouth	110.45	--	143.1
Cranberry Pond Brook, near mouth, left bank	109.05	do.	142.2
Cranberry Pond Brook, 0.5 mile below mouth, left bank	108.55	--	141.2
Cranberry Pond Brook, 0.7 mile below	108.35	--	140.4
Sunderland Center, Mass., highway about 2 miles north of, left bank	106.75	--	139.8
Sunderland highway bridge, 0.75 mile north of, left bank	106.6	--	137.9
Sunderland highway bridge, 0.3 mile north of, right bank	106.15	Mar.20 2-3am	138.1
Sunderland highway bridge (destroyed), both banks (average)	105.85	Mar.20	137.8

ir Altitude of crest of dam, 211.4 feet; of top of flashboards, 219.4 feet.
is Altitude of crest of dam, 171.5 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Connecticut River Basin--Continued			
Connecticut River--Continued:			
Sunderland highway bridge, 0.9 mile south of, right bank	104.95	--	136.6
Sunderland highway bridge, 1.3 miles south of, right bank	104.55	--	136.2
Sunderland, Mass., 2 miles south of, east of highway, left bank	103.95	Mar.20 2-3am	135.8
Sunderland bridge, road 2.5 miles south of, right bank	103.25	--	135.2
Franklin-Hampshire County line, left bank	102.65	--	135.2
Franklin-Hampshire County line, 1.45 miles south of, right bank	101.2	--	134.1
Hatfield Center, Mass., about 1.2 miles north of, right bank	99.15	--	132.2
Hatfield Center, Mass., right bank	97.95	Mar.20 2-3am	131.0
Hadley Center, Mass., about 2 miles north of, left bank	97.95	--	131.1
Boston & Maine R.R. bridge, 4.6 miles above	97.65	--	130.7
Northampton, Mass., Boston & Maine R.R. bridge, downstream, right bank	93.05	Mar.20 3am	129.9
Fort River, covered bridge at mouth, left bank	90.35	--	129.1
Hockanum Ferry, left bank	89.25	Mar.20 3-4am	129.2
Mount Tom Junction, right bank	88.05	Mar.20 2-3am	128.9
Hockanum Ferry, 1.6 miles below, left bank	87.65	--	127.9
Smith Ferry, Holyoke Canoe Clubhouse, right bank	85.75	--	125.6
Smith Ferry, 0.5 mile southwest of, right bank	85.25	--	125.2
South Hadley Falls, Mass., Holyoke Dam, headwater, left bank	81.85	Mar.19 8pm to Mar.20 8am	114.6
Holyoke, Mass., Holyoke Dam, headwater, right bank	81.85	do.	it114.1
South Hadley Falls, Mass., north end of highway bridge, 1,800 feet below Holyoke Dam, left bank	81.55	Mar.20 3-4am	78.3
Holyoke, Mass., Willimansett Bridge, Boston & Maine Railroad, right bank	79.95	do.	73.6
Boston & Maine R.R. bridge, 0.4 mile below	79.55	--	72.4
Chicopee, Mass., 378 Chicopee Street, left bank	77.65	--	71.1
Chicopee, Mass., Kirby Junior High School	76.95	do.	70.5
Chicopee, Mass., mouth of Chicopee River	75.75	--	69.8
West Springfield, Mass., Riverdale Street and Wayside Avenue, right bank	--	--	69.4
Chicopee, Mass., east end of Connecticut River highway bridge, left bank	75.45	do.	69.5
West Springfield, Mass., Springfield Country Club at Riverdale Street, right bank	74.35	do.	68.7
West Springfield, Mass., in vicinity of trolley crossing on Riverdale Street, right bank	74.05	--	68.6
West Springfield, Mass., 0.5 mile above North End bridge, right bank	73.25	do.	67.7
Springfield, Mass., intersection of Birnie Avenue and Arch Street, left bank	--	do.	67.9
Springfield, Mass., North End bridge, upstream, right bank	72.75	--	67.2
Springfield, Mass., east end of Boston & Albany R.R. bridge	72.05	do.	65.9
Springfield, Mass., Memorial Highway bridge	71.75	--	iu65.9
Springfield, Mass., Westfield River, upper mouth	71.25	--	65.5
Springfield, Mass., Main Street at Columbus Avenue, left bank	70.75	do.	65.5
Westfield River, lower mouth (from profile)	70.55	--	65
Springfield, Mass., east end of South End (Agawam) bridge, both banks (average)	70.45	do.	64.6
Agawam, Mass., residence at 921 River Road, right bank	69.45	do.	63.6
Agawam, Mass., Aitken's greenhouse on River Road, right bank	68.4	--	63.0
Longmeadow, Mass., Barney Road, left bank	67.4	--	62.6
Massachusetts-Connecticut State line, right bank	66.55	--	61.9
Massachusetts-Connecticut State line, left bank (from profile)	66.15	--	61.5
Enfield Dam, 1.9 miles above (1927, H.W. = 55.4 feet)	65.45	--	iv60.5
Enfield Dam, 1.6 miles above	65.15	--	60.1
Thompsonville highway bridge	64.45	--	iw58.3
Thompsonville highway bridge, 0.1 mile below, left bank	64.35	--	58.3
Thompsonville highway bridge, 0.1 mile below, right bank	64.35	--	59.0
Enfield Dam, 0.1 mile above	63.65	--	55.2
Enfield Dam, U.S. Geological Survey gage above	63.55	Mar.20 2-10am	55.1
Enfield Dam, headwater	63.55	--	ix55.1

it Altitude of crest of dam, 97.5 feet.
iu High water of 1927 reached an altitude of 59.7 feet at this point.
iv High water of 1927 reached an altitude of 55.4 feet at this point.
iw High water of 1927 reached an altitude of 53.3 feet at this point.
ix Altitude of crest of dam, 38.9 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Connecticut River Basin--Continued			
Connecticut River--Continued:			
Enfield Dam, tailwater	63.35	--	52.2
Kings Island Dam site, 1.7 miles above	62.75	--	52.3
Kings Island Dam site, 1.3 miles above	62.35	--	48.8
Kings Island Dam site, 1.2 miles above	62.25	--	45.3
Kings Island Dam site, 0.8 mile above	61.85	--	45.0
Kings Island Dam site, 0.7 mile above	61.75	--	43.3
Kings Island Dam site, 0.3 mile above	61.35	--	43.3
Kings Island Dam site, 0.2 mile above	61.25	--	42.8
Kings Island Dam site about 2.4 miles below Enfield Dam	61.05	--	42.8
Kings Island Dam site, 300 feet below	60.95	--	42.6
Kings Island Dam site, 660 feet below	60.85	--	42.5
Kings Island Dam site, 0.3 mile below	60.75	--	42.5
New York, New Haven & Hartford R.R. bridge, 200 feet above	60.35	--	42.5
New York, New Haven & Hartford R.R. bridge	60.35	--	42.6
New York, New Haven & Hartford R.R. bridge, 200 feet below	60.35	--	42.0
Warehouse Point dam site 0.1 mile below New York, New Haven & Hartford R.R. bridge	60.25	--	41.1
Warehouse Point Dam site, 330 feet below	59.95	--	41.1
Warehouse Point Dam site, 660 feet below	59.85	--	40.8
Warehouse Point Dam site, 1,000 feet below	59.75	--	40.1
Warehouse Point Dam site, 0.95 mile below	59.3	--	40.2
Warehouse Point Dam site, 1 mile below	59.25	--	40.5
Lower locks, gage reading	58.35	Mar.21 1-3am	39.8
Scantic River, 0.5 mile above	55.35	--	38.3
Scantic River, mouth	54.85	--	36.3
Scantic River, 0.6 mile below mouth	54.25	--	38.2
Scantic River, 1.1 miles below mouth	53.95	--	38.9
Farmington River, 0.8 mile above mouth	53.45	--	38.5
Farmington River, 0.5 mile below mouth	52.15	--	38.1
Farmington River, 2.1 miles below mouth	50.55	--	37.7
Hartford, Conn., New York, New Haven & Hartford R.R. bridge	48.05	--	37.5
Hartford, Conn., bronze disk	47.55	--	37.5
Hartford, Conn., U.S. Weather Bureau gage on downstream side of Memorial Bridge	47.45	Mar.21 9am	37.0
Hartford, Conn., U.S. Weather Bureau mark on old State Street railroad station, right bank	47.4	--	36.9
Hartford, Conn., State Street dock, right bank	47.2	--	36.7
Hartford, Conn., Colt's Patent Fire Arms Manufacturing Co., right bank	46.7	--	36.9
East Hartford, Conn., East Hartford Grain Store building, left bank	46.5	--	36.3
South Meadows power plant, Hartford Electric Light Co., right bank	46.1	Mar.21 8-10am	35.9
Wethersfield, Conn., New York, New Haven & Hartford R.R. signpost at Hartford Avenue crossing, right bank	44.5	--	35.7
Wethersfield, Conn., on Hartford Electric Light Co. pole No. 1202, right bank	44.0	--	35.7
Wethersfield, Conn., on Connecticut Co. pole No. S-368, right bank	43.6	--	35.2
Glastonbury, Conn., Williams Silver Co., left bank	42.2	--	35.3
Glastonbury, Conn., on property of Mrs. B. W. Ranney, Jr., left bank	42.0	--	35.2
Glastonbury, Conn., Ferry Road, left bank	37.25	--	34.2
Rocky Hill, Conn., New York, New Haven & Hartford R.R. station, right bank	37.2	--	34.8
Rocky Hill, Conn., Connecticut Foundry, right bank	37.1	--	34.9
Rocky Hill, Conn., Hartford Rayon Co., right bank	35.9	--	34.5
Portland, Conn., H. O. Brooks blacksmith shop, left bank	32.2	--	32.9
Portland, Conn., Highway 15, left bank	32.2	--	32.8
Cromwell, Conn., J. & E. Stevens Co., right bank	31.8	--	32.3
New York, New Haven & Hartford R.R. bridge, 1.8 miles above	31.25	--	32.3
Cromwell, Conn., railroad station, right bank	31.1	--	31.4
Mattabasset River, half a mile above, right bank	30.35	--	30.6
New York, New Haven & Hartford R.R. bridge near mouth of Mattabasset River, 0.5 mile above	29.85	--	30.6
Middletown, Conn., New York, New Haven & Hartford R.R. bridge near mouth of Mattabasset River	29.45	Mar.21 11:30am to 1:30pm	30.6
Middletown, Conn., 0.2 mile below New York, New Haven & Hartford R.R. bridge	29.25	--	30.1
Middletown, Conn., Connecticut Power Co. substation at Water Street, right bank	29.05	--	30.0
Middletown, Conn., concrete platform 0.7 mile below New York, New Haven & Hartford R.R. bridge, right bank	28.75	--	30.0
Middletown, Conn., drill mark on foundation 0.75 mile below New York, New Haven & Hartford R.R. bridge, right bank	28.7	--	29.0
New York, New Haven & Hartford R.R. bridge, 1.25 miles below white line on trestle, right bank	28.2	--	28.9

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Connecticut River Basin--Continued			
Connecticut River--Continued:			
Town Farm Building, southeast corner of, 1.65 miles below New York, New Haven & Hartford R.R. bridge, right bank	27.8	--	28.7
Culvert 1.9 miles below New York, New Haven & Hartford R.R. bridge, right bank	27.55	--	28.6
New York, New Haven & Hartford R.R. bridge, 2 miles below	27.45	--	28.5
New York, New Haven & Hartford R.R. bridge, 2.05 miles below, right bank	27.4	--	28.5
New York, New Haven & Hartford R.R. bridge, 2.2 miles below, right bank	27.25	--	28.3
New York, New Haven & Hartford R.R. bridge, 2.3 miles below	27.15	--	29.2
New York, New Haven & Hartford R.R. bridge, 2.35 miles below, right bank	27.1	--	28.2
New York, New Haven & Hartford R.R. bridge, 2.7 miles below, drill mark in boulder, right bank	26.75	--	27.6
Bodkin Rock, opposite, 2.7 miles below New York, New Haven & Hartford R.R. bridge	26.75	--	28.2
Feldspar Quarry, Conn., 2.9 miles below New York, New Haven & Hartford R.R. bridge	26.55	--	27.7
New York, New Haven & Hartford R.R. bridge, 3.1 miles below	26.35	--	27.4
New York, New Haven & Hartford R.R. bridge, 3.2 miles below	26.25	--	26.5
U. S. Coast & Geodetic Survey bench mark in black oak 3.5 miles below New York, New Haven & Hartford R.R. bridge, right bank	25.95	--	26.5
New York, New Haven & Hartford R.R. bridge, 3.75 miles below, nail in 12-inch walnut tree, right bank	25.7	--	26.0
Hubbard Brook, 3.3 miles above mouth	25.55	--	25.9
Hubbard Brook, drilled "H" in bridge 2.95 miles above mouth, right bank	25.2	--	25.6
Hubbard Brook, nail in telephone pole 2.9 miles above mouth, right bank	25.15	--	25.5
Middletown, Conn., Laurel Station, 2.7 miles above mouth of Hubbard Brook	24.95	--	25.6
Middle Haddam, Conn., 2.0 miles above Hubbard Brook, left bank	24.25	--	24.6
Hubbard Brook, mouth, right bank	22.25	--	24.0
Higganum, Conn., 1.2 miles below mouth of Hubbard Brook	21.05	--	23.8
Higganum, Conn., 1.5 miles below mouth of Hubbard Brook	20.75	--	23.6
Higganum, Conn., 1.7 miles below mouth of Hubbard Brook	20.55	--	23.5
Haddam-Arnold Station, 4.4 miles below mouth of Hubbard Brook	17.85	--	20.6
Hubbard Brook, 5 miles below mouth	17.25	--	20.6
Tylerville, Conn., 6.2 miles below mouth of Hubbard Brook, right bank	16.05	--	18.1
Hubbard Brook, 7.0 miles below mouth, right bank	15.25	--	17.2
East Haddam, Conn., 200 feet above highway bridge	15.05	--	17.8
East Haddam, Conn., highway bridge	15.05	--	17.5
East Haddam, Conn., 325 feet below highway bridge	14.95	--	16.7
Deep River, 0.1 mile above mouth, mark on granite ledge at passenger station	10.95	--	14.3
Deep River, mouth, right bank	10.85	--	14.3
Essex, Conn., steamboat wharf, right bank	6.25	--	10.6
Deep River, 4.9 miles below mouth	5.95	--	9.9
Deep River, 5 miles below mouth	5.85	--	10.1
Lyme-Saybrook highway bridge, 100 feet above, painted mark on boat shed	3.15	--	8.9
Lyme-Saybrook highway bridge	2.75	--	7.2
Saybrook highway bridge, 0.6 mile below chisel mark in power house	2.15	--	6.2
Linde Point Light	0	--	5.4
East Branch of Passumpsic and Passumpsic Rivers:			
East Haven, Vt., highway bridge	34.5	--	1,014.3
Highway bridge	32.0	--	952.6
East Burke, Vt., dam on E. A. Darling estate, headwater	26.9	--	iy818.6
West Branch of Passumpsic River, highway bridge 0.25 mile below mouth	22.4	--	707.7
Lyndonville, Vt., highway bridge 0.75 mile below mouth of Millers River	20.3	--	700.1
Lyndonville Electric Co. dam 0.75 mile below Lyndon, Vt.	17.65	--	iz
Lyndonville Electric Co. dam 1.8 miles below Lyndon, Vt., headwater	16.6	--	ja671.9

iy Altitude of crest of dam, 815.6 feet.
iz Altitude of crest of dam, 686.9 feet.
ja Altitude of crest of dam, 666.7 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Connecticut River Basin--Continued			
East Branch of Passumpsic and Passumpsic Rivers--Continued:			
Lyndonville Electric Co. dam, tailwater	16.6	--	615.6
Twin State Gas & Electric Co. dam	15.1	--	(jb)
St. Johnsbury Center, Vt., highway bridge	11.9	--	590.4
St. Johnsbury Center, Vt., highway bridge 0.85 mile above mouth of Moose River	10.15	--	583.9
St. Johnsbury, Vt., Twin State Gas & Electric Co. dam (plant No. 1½), headwater (30 feet of water went out before peak of flood)	9.7	--	jc577.8
St. Johnsbury Center, Vt., Twin State Gas & Electric Co. dam (plant No. 2), 0.8 mile above Sleepers River, headwater	8.9	--	jd559.3
St. Johnsbury Center, Vt., Twin State Gas & Electric Co. dam, tailwater	8.9	--	553.3
Twin State Gas & Electric Co. dam (plant No. 3), 0.7 mile below Sleepers River, headwater	7.2	--	je540.8
Passumpsic, Vt., Twin State Gas & Electric Co. dam (plant No. 4), headwater	5.1	--	jf526.3
Passumpsic, Vt., U. S. Geological Survey gage, 1.1 miles below dam	4.0	Mar.18 midnight to 4pm	506.9
Canadian Pacific Ry. bridge 0.6 mile below mouth of Water Andrick Brook	2.8	--	504.3
East Barnet, Vt., Canadian Pacific Ry. bridge 0.6 mile above mouth	.6	--	499.3
East Barnet, Vt., Roy Brothers Manufacturing Co. dam headwater	.5	--	jg495.5
Confluence of Passumpsic and Connecticut Rivers	0	--	--
Moose River:			
North Concord School, Vt., highway bridge about 0.3 mile above	13.6	--	1,006.6
North Concord, Vt., highway bridge about 1.25 miles below	11.45	--	973.9
Concord, Vt., Ernest Lee dam, headwater	9.4	--	jh882.4
Concord, Vt., L. F. Smith Granite Co. dam	9.3	--	(ji)
Knapp Brook, highway bridge 1.35 miles above mouth	6.65	--	808.8
East St. Johnsbury, Vt., dam (broken), headwater	4.7	--	jk792.7
St. Johnsbury, Vt., J. W. Davies & Co. and Manton-Gaylin Manufacturing Co. dam (inoperative)	0.8	--	(jm)
St. Johnsbury, Vt., American Fork & Hoe Co. (inoperative)	0.7	--	(jn)
St. Johnsbury, Vt., U. S. Geological Survey gage	0.5	Mar.19-20 midnight	--
St. Johnsbury, Vt., highway bridge	0.2	--	564.5
St. Johnsbury, Vt., confluence of Moose & Passumpsic Rivers	0	--	--
Ammonoosuc River:			
Fabyans, N. H., vicinity of highway bridge	46.5	--	1,569.7
Twin Mountain, N. H., highway bridge 1.9 miles below mouth of Zealand River	40.8	--	1,361.0
Bethlehem Junction, N. H., highway bridge	34.9	--	1,180.9
Public Service Co. of New Hampshire dam, headwater	33.1	--	(jo) 1,142.7
Public Service Co. of New Hampshire dam, tailwater	33.1	--	1,105.2
Wing Road, N. H., highway bridge	30.4	--	1,009.2
Littleton, N. H., Littleton Water & Light Co. dam, headwater	24.9	--	jp859.4
Littleton, N. H., Littleton Water & Light Co. dam, tailwater	24.9	--	jq847.0
Littleton, N. H., Littleton Water & Light Co. dam (broken)	23.45	--	(jr)
Littleton, N. H., Pike & Gale and H. M. Farr Co. dam (destroyed)	23.05	--	(js)
Littleton, N. H., Saranac Glove Co. dam, headwater	22.6	--	jt774.0

jb Altitude of crest of dam, 604.2 feet; of top of flashboards, 605.0 feet.
jc Altitude of crest of dam, 573.0 feet; of top of flashboards, 574.8 feet.
jd Altitude of crest of dam, 554.2 feet; of top of flashboards, 554.9 feet.
je Altitude of crest of dam, 533.0 feet; of top of flashboards, 539.9 feet.
jf Altitude of crest of dam, 520.2 feet; of top of flashboards, 521.2 feet.
jg Altitude of crest of dam, 487.3 feet.
jh Altitude of crest of dam, 877.6 feet. Head on dam determined to be 4.8 feet and 3.45 feet on left and right ends, respectively.
ji Altitude of crest of dam, 847.2 feet.
jk Altitude of crest of dam, 786.6 feet.
jm Altitude of crest of dam, 606.1 feet.
jn Altitude of crest of dam, 591.2 feet.
jo Altitude of crest of dam, 1,134.6 feet.
jp Altitude of crest of dam, 854.1 feet.
jq Altitude of crest of dam, 830.2 feet.
jr Altitude of crest of dam, 808.0 feet.
js Altitude of crest of dam, 784.6 feet.
jt Altitude of crest of dam, 767.3 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Connecticut River Basin--Continued			
Ammonoosuc River--Continued:			
Littleton, N. H., 0.1 mile below highway bridge	22.4	--	752.9
Gale River, highway bridge (downstream side) above mouth	17.7	--	660.8
Salmon Hole Brook, 0.2 mile below mouth, highway bridge (downstream side)	14.4	--	599.5
Lisbon, N. H., Public Service Co. of New Hampshire dam 0.75 mile below mouth of Peal Lake Brook, headwater	11.6	--	ju573.1
Lisbon, N. H., Public Service Co. of New Hampshire dam, tailwater	11.6	--	562.1
Lisbon Light & Power Co. dam (destroyed)	9.9	--	(jv)
Boston & Maine R.R. bridge	7.0	--	515.1
Bath, N. H., Cushman & Rankin Co. dam, headwater	4.8	--	jw503.7
Wild Ammonoosuc River, 0.1 mile below mouth	3.3	--	480.7
Wild Ammonoosuc River, U.S. Geological Survey gage, 0.4 mile downstream from mouth, left bank	3.0	Mar.18 5-10pm	--
Woodsville, N. H., Woodsville Fire District dam	0.1	--	(jx)
Confluence with Connecticut River	0	--	428.3
Wells River:			
Groton Pond above outlet	16.6	--	1,080
Green Mountain Power Corp. dam at outlet of Rickers Pond	15.56	--	(jy)
Green Mountain Power Corp. plant No. 13 dam	13.42	--	(jz)
Upper of two highway bridges 0.08 mile apart	13.1	--	846.8
South Ryegate, Vt., Montpelier & Wells River R.R. bridge	8.05	--	727.1
Boltonville, Vt., Montpelier & Wells River R.R. bridge 0.6 mile above mouth of Ticklenaked Brook	6.2	--	666.6
Boltonville, Vt., Green Mountain Power Corp. plant No. 11 dam, headwater	5.2	--	ka658.3
Wells River, Vt., Adams Paper Co. dam, headwater	.9	--	kb464.9
Wells River, Vt., second highway bridge above mouth	.4	--	425.7
Confluence with Connecticut River	0	--	--
Waits River:			
M. J. Whitcomb dam	20.15	--	(kc)
Charles Peake dam	18.7	--	(kd)
West Topsham, Vt., highway bridge	17.5	--	1,260.3
West Topsham, Vt., Bowen & Hunter dam (washed out)	17.0	--	(ke)
Waits River, Vt., highway bridge	13.1	--	894.0
East Corinth, Vt., highway bridge at mouth of Tabor Brook	8.9	--	658.0
South Branch of Waits River, highway bridge 0.2 mile above mouth	6.8	--	609.2
Cassville, Vt., highway bridge, right bank	4.1	--	518.1
Bradford, Vt., Central Vermont Public Service Corp. dam, headwater	1.0	Mar.20	kf465.6
Bradford, Vt., Central Vermont Public Service Corp. dam, tailwater (backwater from Connecticut River)	1.0	--	413.7
Confluence with Connecticut River	0	--	--
Tabor Brook:			
East Topsham, Vt., J. D. Miller dam	5.2	--	(kg)
R. B. Hood dam, headwater	3.4	--	kh815.3
East Corinth, Vt., The Jackman Co. dam (washed out)	1.0	--	(ki)
East Corinth, Vt., L. L. Worthley dam	.55	--	(kj)
East Corinth, Vt., highway bridge above C. M. Page dam	.45	--	km679.5
Confluence with Waits River (8.95 miles above Connecticut River)	0	--	--
White River:			
Hancock, Vt., highway bridge 0.6 mile below mouth of Hancock Branch, right bank	48.4	--	886.2
Rochester, Vt., highway bridge	44.75	--	830.6
Emerson, Vt., highway bridge	41.4	--	792.5

ju Altitude of crest of dam, 566.3 feet.
jv Altitude of crest of dam, 546.6 feet.
jw Altitude of crest of dam, 495.4 feet.
jx Altitude of crest of dam, 416.6 feet.
jy Altitude of crest of dam, 1,056.1 feet.
jz Altitude of crest of dam, 876.6 feet; of top of flashboards, 878.8 feet.
ka Altitude of crest of dam, 654.5 feet.
kb Altitude of crest of dam, 459.2 feet; of top of flashboards, 460.5 feet.
kc Altitude of crest of dam, 1,598.1 feet.
kd Altitude of crest of dam, 1,408.1 feet.
ke Altitude of crest of dam, 1,214.0 feet.
kf Altitude of crest of dam, 460.3 feet.
kg Altitude of crest of dam, 951.1 feet.
kh Altitude of crest of dam, 812.6 feet.
ki Altitude of crest of dam, 712.6 feet; of top of flashboards, 713.1 feet.
kj Altitude of crest of dam, 694.0 feet.
km Altitude of crest of dam, 676.5 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Connecticut River Basin--Continued			
White River--Continued			
Stockbridge, Vt., highway bridge 0.6 mile above mouth of Tweed River, downstream side, left bank	36.1	--	736.2
Riverside, Vt., highway bridge 0.9 mile above mouth of Stony Brook	33.4	--	690.6
Gaysville, Vt., highway bridge, right bank	31.3	--	635.4
Locust Brook, U. S. Geological Survey gage 0.3 mile above mouth	27.2	Mar.18 4-6,9-11 pm	--
Central Vermont Public Service Corp. dam, headwater	24.2	--	kn533.2
North Royalton, Vt., highway bridge 0.15 mile below mouth of Second Branch of White River	21.7	--	498.2
South Royalton, Vt., highway bridge 0.1 mile below mouth of First Branch of White River	18.2	--	470.8
Sharon, Vt., highway bridge 0.05 mile below mouth of Fay Brook	13.4	--	440.7
Central Vermont R.R. bridge	11.1	--	430.5
West Hartford, Vt., U. S. Geological Survey gage 0.25 mile below mouth of Podunk Brook	7.45	Mar.18 10pm	--
West Hartford, Vt., highway bridge	7.35	--	393.5
Central Vermont R.R. bridge	4.8	--	380.6
Hartford, Vt., Hartford Woolen Co. dam, headwater	1.6	--	ko357.7
White River Junction, Vt., Boston & Maine R.R. bridge	0.1	--	355.8
Confluence with Connecticut River	0	--	355.8
Third Branch of White River:			
Brackett Brook, highway bridge 0.25 mile above mouth	17.25	--	793.5
Riford Brook, highway bridge 0.1 mile below mouth	13.1	--	709.8
Randolph, Vt., highway bridge 0.55 mile below mouth of Thayer Brook	10.2	--	642.3
Camp Brook, 0.2 mile below mouth	2.6	--	582.6
Bethel, Vt., Central Vermont R.R. bridge	0.5	--	562.9
Bethel, Vt., mouth, confluence with White River 25.35 miles above Connecticut River	0	--	--
Second Branch of White River:			
East Randolph, Vt., highway bridge 0.2 mile above mouth of Osgood Brook, right bank	11.1	--	598.3
East Randolph, Vt., Central Vermont Public Service Corp. dam	11.0	--	(kp)
Peak Brook, 0.8 mile above mouth, right bank	7.3	--	553.7
East Bethel, Vt., Mark W. Hyde dam, headwater	4.2	--	kq537.9
Broken dam just below highway bridge	2.2	--	510.7
Central Vermont R.R. bridge	0.05	--	500.6
Mouth, confluence with White River 21.8 miles above Connecticut River	0	--	--
First Branch of White River:			
Mark H. Whitney Co. dam about 1.6 miles below Chelsea	14.0	--	(kr)
H. B. Grant dam about 1.4 miles below Bicknell Brook, headwater	10.4	--	ks635.2
North Tunbridge, Vt., O. Orton dam	8.55	--	(kt)
Tunbridge, Vt., Farnham Brothers dam	7.15	--	(ku)
Tunbridge, Vt., Haywood & Noble dam	7.00	--	(kv)
Tunbridge, Vt., lower highway bridge	6.9	--	558.7
Highway bridge, 0.1 mile above	5.3	--	526.8
South Tunbridge, Vt., cut in elm tree	3.3	--	516.6
South Tunbridge, Vt., E. Blake dam	3.3	--	(kw)
Edlin Royalton Co., Inc. dam, headwater	.85	--	kx494.6
Edlin Royalton Co., Inc. dam, headwater	.75	--	ky485.4
Edlin Royalton Co., Inc. dam, tailwater	.7	--	475.3
Mouth, confluence with White River 18.25 miles above Connecticut River	0	--	--
Ottauquechee River:			
West Bridgewater, Vt., Charles Briggs dam	28.4	--	(kz)
Riverside School, highway bridge about 1 mile below	25.3	--	916.0
Bridgewater Corners, Vt., highway bridge 0.25 mile below mouth of North Branch of Ottauquechee River	22.9	--	846.8

kn Altitude of crest of dam, about 523 feet.
ko Altitude of crest of dam, 345.3 feet.
kp Altitude of crest of dam, 592.9 feet.
kq Altitude of crest of dam, 531.4 feet.
kr Altitude of crest of dam, 763 feet.
ks Altitude of crest of dam, 631 feet; of top of flashboards, 632 feet.
kt Altitude of crest of dam, 588 feet.
ku Altitude of crest of dam, 564.3 feet; of top of flashboards, 565.9 feet.
kv Altitude of crest of dam, 554.2 feet; of top of flashboards, 557.7 feet.
kw Altitude of crest of dam, 507.8 feet.
kx Altitude of crest of dam, 487.1 feet; of top of flashboards, 488.3 feet.
ky Altitude of crest of dam, 480.2 feet.
kz Altitude of crest of dam, 1,040.0 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Connecticut River Basin--Continued			
Ottauquechee River--Continued:			
Bridgewater, Vt., Bridgewater Woolen Co. dam	21.25	--	(ma)
Curtis Hollow Brook, highway bridge 1.7 miles below	19.05	--	764.7
Woodstock, Vt., Woodstock Mills, Inc. dam	15.0	--	(mb)
Woodstock, Vt., highway bridge 0.2 mile above mouth of Kedron Brook (South Branch)	14.4	--	678.4
Taftsville, Vt., Woodstock Electric Co. dam, headwater	10.8	--	mc644.4
Quechee, Vt., Harris Emery Co. dam, headwater	6.65	--	md570.8
Deweys Mills, Vt., A. G. Dewey Co. dam, headwater	5.65	--	me529.8
North Hartland, Vt., New England Power Construction Co. dam (left end out)	1.35	--	(mf)
North Hartland, Vt., U. S. Geological Survey gage above highway bridge	1.1	Mar.18 4pm	mg15.6
North Hartland, Vt., New England Power Construction Co. dam	0.25	--	(mh)
Confluence with Connecticut River	0	--	--
Sugar River:			
Sunapee Dam Co. dam (fourth dam below Sunapee Lake) headwater	24.3	--	(mi) 1,067.3
New Hampshire Power Co. dam (first dam above Wendell), headwater	22.6	--	mj981.2
Dorr Woolen Co. dam, 0.8 mile below Wendell Brook, headwater	20.2	--	mk877.8
Dorr Woolen Co. dam, 0.8 mile below Wendell Brook, tailwater	20.2	--	863.7
Newport, N. H., Gordon Woolen Co. dam, headwater	18.3	--	mn842.3
Newport, N. H., International Shoe Co. dam, headwater	18.2	--	mo825.5
Newport, N. H., bridge of Boston & Maine R.R.	18.0	--	816.9
Newport, N. H., Brampton Woolen Co. dam, headwater	17.8	--	mp807.0
Newport, N. H., Brampton Woolen Co. dam, tailwater	17.8	--	800.5
South Branch of Sugar River, highway bridge 0.4 mile below mouth	17.2	--	789.7
Nutting Co., Inc. and Sibley Scythe Co. dam 0.3 mile above Dodge Creek, headwater	14.3	--	mq770.0
Nutting Co., Inc. and Sibley Scythe Co. dam, tailwater	14.3	--	766.3
Northville, N. H., bridge of Boston & Maine R.R. at mouth of Dodge Creek	14.25	--	765.3
Northville, N. H., bridge of Boston & Maine R.R. 0.15 mile below Dodge Creek	14.2	--	752.5
Kimball Brook, highway bridge 0.5 mile below	13.3	--	718.9
Bridge of Boston & Maine R.R. 0.5 mile above Chandler station	11.6	--	664.5
Bridge of Boston & Maine R.R. 0.6 mile below Chandler station	10.5	--	617.0
Bridge of Boston & Maine R.R.	6.4	--	532.0
Claremont, N. H., Monadnock Mills Co. dam 1.8 miles above, headwater	5.5	--	mr529.0
Monadnock Mills Co. dam, tailwater	5.5	--	518.0
Claremont, N. H., Claremont Paper Co. dam 1.2 miles above, headwater	4.9	--	ms460.8
Claremont Paper Co. dam, tailwater	4.9	--	432.2
West Claremont, N. H., U. S. Geological Survey gage	2.5	Mar.19 4-6am	mt10.9
West Claremont, N. H., Coy Paper Co. dam, headwater	1.6	--	mu359.9
Coy Paper Co. dam, tailwater	1.6	--	348.8
Highway bridge 0.5 mile above mouth	.5	--	322.6
Confluence with Connecticut River	0	--	--
Saxtons River:			
South Branch of Saxtons River, highway bridge 0.4 mile below mouth	12.3	--	793.3

ma Altitude of crest of dam, 816.6 feet.
mb Altitude of crest of dam, 697.2 feet.
mc Altitude of crest of dam, 638.9 feet.
md Altitude of crest of dam, 562.1 feet.
me Altitude of crest of dam, 522.6 feet.
mf Altitude of crest of dam, 398.2 feet.
mg Gage height (altitude of zero of gage not determined).
mh Altitude of crest of dam, 348.5 feet.
mi Altitude of crest of dam, 1,064.8 feet.
mj Altitude of crest of dam, 978.9 feet.
mk Altitude of crest of dam, 874.1 feet.
mn Altitude of crest of dam, 838.3 feet.
mo Altitude of crest of dam, 820.9 feet.
mp Altitude of crest of dam, 802.0 feet.
mq Altitude of crest of dam, 763.7 feet.
mr Altitude of crest of dam, 519.8 feet.
ms Altitude of crest of dam, 449.9 feet.
mt Gage height (altitude of zero of gage not determined). A gage height of 11.80 feet occurred at 4 p.m. Mar. 12 owing to an ice jam.
mu Altitude of crest of dam, 350.4 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Connecticut River Basin--Continued			
Saxtons River--Continued:			
South Branch of Saxtons River, highway bridge 1 mile below mouth	11.7	--	752.3
South Branch of Saxtons River, highway bridge 2.3 miles below mouth	10.4	--	689.5
Bull Creek, highway bridge 1.5 miles above mouth	9.6	--	651.6
Cambridgeport, Vt., highway bridge 0.6 mile above mouth of Bull Creek	8.7	--	598.0
Bull Creek, highway bridge 0.8 mile below mouth	7.3	--	546.3
Saxtons River, Vt., 0.2 mile above Thompson & Thompson dam	5.65	--	482.5
Saxtons River, Vt., Thompson & Thompson dam, headwater	5.45	--	483.0
Saxtons River, Vt., Thompson & Thompson dam	5.4	--	(mv)
Saxtons River, Vt., highway bridge above W. J. Frey, Inc. dam, headwater	5.3	--	mw469.9
Saxtons River, Vt., W. J. Frey, Inc. dam, tailwater	5.3	--	452.4
Saxtons River, Vt., 0.1 mile above Saxtons River Woolen Co. dam	5.0	--	451.8
Saxtons River, Vt., Saxtons River Woolen Co. dam, headwater	4.9	--	mx448.8
Saxtons River, Vt., highway bridge below Saxtons River Woolen Co. dam	4.8	--	435.4
Bundy Brook, highway bridge 0.4 mile below mouth	2.4	--	368.0
Gageville, Vt., Sidney Gage & Co., Inc. dam, headwater	1.75	--	my351.5
Gageville, Vt., Sidney Gage & Co., Inc. dam, tailwater	1.7	--	335.9
Gageville, Vt., Fall Mountain Electric Co. dam (abandoned)	1.15	--	(mz)
Gageville, Vt., 0.2 mile above highway bridge	0.85	--	260.7
Blake & Higgins Co., Inc. dam, headwater	0.3	--	na260.9
Confluence with Connecticut River	0	--	--
West River:			
The Island, Vt., highway bridge near town center	40.2	--	1,177.1
The Island, Vt., highway bridge about 2 miles south of town	38.3	--	1,149.5
Londonderry, Vt., highway bridge above Williams Bros. dam	37.0	--	(nb) 1,145.0
Londonderry, Vt., Horace Alexander dam, headwater	35.5	--	(nc) 1,099.0
Londonderry, Vt., highway bridge below dam	35.4	--	1,089.2
South Londonderry, Vt., at broken dam above highway bridge	33.8	--	1,040.5
South Londonderry, Vt., at broken dam above highway bridge	33.8	--	1,035.6
South Londonderry, Vt., highway bridge below dam	33.7	--	1,034.9
South Londonderry, Vt., Frank Hewlett dam, headwater	33.2	--	(nd) 1,029.3
South Londonderry, Vt., Frank Hewlett dam, tailwater	33.2	--	1,023.4
Winhall station, Vt., West River R.R. bridge below	29.7	--	878.1
East Jamaica, Vt., highway bridge 3.2 miles above	25.0	--	663.8
East Jamaica, Vt., highway bridge	22.1	--	552.9
East Jamaica, Vt., highway bridge 4.2 miles below	18.0	--	462.0
East Jamaica, Vt., highway bridge 7.4 miles below	14.9	--	426.0
Newfane, Vt., U. S. Geological Survey gaging station bench mark	12.2	Mar.18 4pm	405.0
Marlboro Branch, about 2 miles above mouth	10.7	--	385.9
Twin State Gas & Electric Co. dam, headwater	7.0	--	ne348.8
Twin State Gas & Electric Co. dam, tailwater	6.9	--	327.2
West Dummerston, Vt., West River R.R. bridge	5.5	--	299.4
West Dummerston, Vt., highway bridge 1.7 miles below	3.9	--	291.2
Brattleboro, Vt., confluence with Connecticut River	0	--	237.7
Ashuelot River:			
Ashuelot Pond at outlet	55.7	--	1,445.2
Marlow, N. H., Village Pond above highway bridge and dam	51.4	--	1,161.9
Marlow, N. H., Watson & Williams Manufacturing Co. dam	51.35	--	(nf)
Marlow, N. H., Watson & Williams Manufacturing Co. dam, tailwater	51.3	--	1,156.0
Downing Dam	48.1	--	(ng)

mv Altitude of crest of dam, 475.1 feet.
mw Altitude of crest of dam, 463.9 feet.
mx Altitude of crest of dam, 441.4 feet.
my Altitude of crest of dam, 345.2 feet.
mz Altitude of crest of dam, 318.7 feet.
na Altitude of crest of dam, 252.2 feet.
nb Altitude of crest of dam, 1,138.9 feet.
nc Altitude of crest of dam, 1,093.3 feet.
nd Altitude of crest of dam, 1,023.6 feet.
ne Altitude of crest of dam, 334.7 feet.
nf Altitude of crest of dam, 1,156.6 feet.
ng Altitude of crest of dam, 1,081.2 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Connecticut River Basin--Continued			
Ashuelot River--Continued:			
Gordon Dam, headwater	44.7	--	nh874.9
Gordon Dam, tailwater (mark doubtful)	44.6	--	866.3
Gordon Dam, tailwater (mark doubtful)	44.6	--	861.7
Gilsum, N. H., 0.7 mile below, U. S. Geological Survey gage	42.8	Mar.18 10pm to Mar.19 2am	ni12.8
Goose Pond Brook, highway bridge 2.95 miles above	34.1	--	491.6
Keene, N. H., Faulkner & Colony Manufacturing Co. dam	28.1	--	nj477.2
Keene, N. H., Faulkner & Colony Manufacturing Co. dam	28.0	--	477.5
Keene, N. H., highway bridge 0.9 mile above mouth of Otter Brook	27.5	--	473.2
Swanzey station, N. H., highway bridge 0.4 mile below mouth of South Branch of Ashuelot River	23.1	--	469.5
West Swanzey, N. H., highway bridge and M. A. Dickinson dam	19.1	--	462.7
West Swanzey, N. H., highway bridge and M. A. Dickinson dam	19.1	--	nk461.3
Westport, N. H., highway bridge	16.5	--	459.6
Highway bridge	14.9	--	454.2
Forest Lake, N. H., highway bridge	11.1	--	450.3
Winchester, N. H., highway bridge	9.0	--	447.7
Winchester, N. H., private bridge	8.65	--	447.2
Winchester, N. H., New England Box Co. dam	8.5	--	(nm)
Winchester, N. H., highway bridge (log jam, point doubtful)	8.3	--	445.2
Highway bridge and Public Service Co. of New Hampshire dam, headwater	5.3	--	no433.4
Public Service Co. of New Hampshire dam, headwater	4.6	--	np410.0
Public Service Co. of New Hampshire dam, headwater	4.0	--	nq389.6
Public Service Co. of New Hampshire dam, tailwater	4.0	--	383.6
Ashuelot Paper Co. dam, headwater	3.3	--	nr344.2
Hinsdale, N. H., The Canal Co. dam, headwater	2.5	--	264.3
Hinsdale, N. H., The Canal Co. dam	2.5	--	ns260.8
Hinsdale, N. H., above highway bridge	1.75	--	233.8
Hinsdale, N. H., Hinsdale Paper Co. and Fisk Paper Co. dam	1.5	--	(nt)
Hinsdale, N. H., point on river bank	1.45	--	224.4
Hinsdale, N. H., point on river bank	1.35	--	223.3
Hinsdale, N. H., highway bridge below U. S. Geological Survey gage	1.25	Mar.19 4am to 6pm	221.5
Confluence with Connecticut River	0	--	220.4
Millers River:			
Winchendon, Mass., highway bridge 3.2 miles above Whitney Pond	39.7	Mar.19 1:45am	1,028.9
Winchendon, Mass., highway bridge 2.1 miles above Whitney Pond	38.6	Mar.19 1:45am	1,009.4
Winchendon, Mass., North Ashburnham road bridge 1.7 miles above Whitney Pond	38.1	Mar.19 2am	1,001.8
Winchendon, Mass., Winchendon water works station 0.5 mile above Whitney Pond	37.0	do.	986.3
Winchendon, Mass., Whitney Pond above Glen Allen Street bridge	36.2	Mar.19	981.5
Winchendon, Mass., Whitney Pond at Boston & Albany R.R. bridge and dam, headwater	35.6	do.	977.4
Winchendon, Mass., Whitney Pond dam	35.6	--	(nu)
Winchendon, Mass., Spring Street bridge, left bank	35.3	Mar.19	957.9
Winchendon, Mass., Goodspeed Dam and High Street bridge (dam and bridge destroyed)	35.2	do.	954.4
Winchendon, Mass., Tannery Dam, headwater (north section of dam washed out)	34.9	do.	nv943.6
Winchendon, Mass., Winchendon Electric & Power Co. dam, headwater (south abutment washed out)	34.6	do.	nw926.7
Waterville, Mass., intersection of Main and Benjamin Sts.	34.1	do.	896.9
Sip Pond Brook, U. S. Geological Survey gage 0.35 mile below mouth	32.4	Mar.19 4am	844.96

nh Altitude of crest of dam, 869.2 feet.
ni Gage height (zero of gage not determined).
nj Altitude of crest of dam, 472.0 feet.
nk Altitude of crest of dam, 456.2 feet.
nm Altitude of crest of dam, 431.9 feet.
no Altitude of crest of dam, 424.1 feet.
np Altitude of crest of dam, 404.3 feet.
nq Altitude of crest of dam, 383.6 feet.
nr Altitude of crest of dam, 335.4 feet.
ns Altitude of crest of dam, 257.6 feet.
nt Altitude of crest of dam, 226.8 feet.
nu Altitude of top of flashboards, 972.8 feet.
nv Altitude of crest of dam, 940.1 feet; of crest of spillway, 936.8 feet.
nw Altitude of crest of dam, 929.5 feet; of crest of spillway, 923.5 feet.

Table 15.--Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Connecticut River Basin--Continued			
Millers River--Continued:			
Sibley Road, wood bridge (bridge destroyed, water 5.7 feet above road crown)	31.4	Mar.19	837.1
New Boston Road, wood bridge (water 4.3 feet over road crown)	29.5	do.	831.8
Otter River, mouth (from profile)	28.7	do.	832.0
South Royalston, Mass., concrete bridge on South Royalston road 0.2 mile east of railroad station (approaches to bridge partly washed out)	26.0	Mar.19 1:15pm	825.6
South Royalston, Mass., American Woolen Co. dam above King Street bridge, headwater	25.7	Mar.19 1:15pm	nx817.4
South Royalston, Mass., King Street bridge (destroyed)	25.6	Mar.19 1:15pm	814.4
King Street bridge 0.4 mile below	25.2	--	776
Athol-Phillipston town line, Boston & Maine R.R. bridge (partly destroyed)	25.0	Mar.19 1:20pm	770.9
Buckman Brook, 0.25 mile below, Boston & Maine R.R. bridge (destroyed)	23.4	Mar.19 1:30pm	705.0
Buckman Brook, 0.55 mile below, highway bridge (partly destroyed)	23.1	do.	699.2
Corps of Engineers, U. S. Army, proposed South Royalston Dam No. 13 (from profile)	23.0	--	697
Athol, Mass., Stone Dam, headwater, left bank (dam partly destroyed)	19.9	Mar.19 2pm	ny577.4
Athol, Mass., highway bridge on Chestnut Hill Road 1.1 miles above mouth of Tully River, right bank	19.9	do.	563.2
Athol, Mass., 0.8 mile above mouth of Tully River	19.6	do.	551.6
Athol, Mass., L. C. Starrett Tool Co. dam 0.7 mile above mouth of Tully River, headwater	19.5	do.	nz551.4
Athol, Mass., Crescent Street bridge 0.7 mile above mouth of Tully River	19.5	do.	551.8
Athol, Mass., Exchange Street bridge 0.5 mile above mouth of Tully River	19.3	do.	525.5
Athol, Mass., mouth of Tully River (from profile)	18.8	--	524
Athol, Mass., Main Street bridge 0.4 mile below mouth of Tully River	18.4	do.	522.3
Athol, Mass., 0.5 mile below mouth of Tully River	18.3	--	520.4
Boston & Maine R.R. bridge (destroyed)	17.4	do.	519.9
Covered wood highway bridge (partly destroyed)	17.1	do.	518.4
Concrete highway bridge	17.0	do.	518.7
Orange, Mass., Rodney Hunt plant about 200 feet above South Main Street bridge, left bank	13.2	Mar.19 2:30pm	515.2
Orange, Mass., New Home Sewing Machine Co. dam at South Main Street, headwater	13.2	do.	oa514.9
Orange, Mass., New Home Sewing Machine Co. dam, tailwater (from profile)	13.2	--	504
West Orange, Mass., Hultshire highway bridge at mouth of Orcutt Brook	11.1	do.	502.2
Wendell Depot, Mass., concrete highway bridge on Wendell Road, right bank	10.2	Mar.19 4pm	496.1
Wendell Depot, Mass., Wendell Dam, headwater	10.1	do.	ob495.5
Wendell Depot, Mass., Wendell Dam, tailwater (from profile)	10.1	--	478
Wendell Depot, Mass., upstream side of covered highway bridge, right bank (bridge partly destroyed)	8.8	Mar.19	475.7
Wendell Depot, Mass., above dam 1.2 milea below Osgood Brook	8.8	do.	475.7
Erving, Mass., Erving Dam, headwater (from profile)	8.1	--	oc459.8
Erving, Mass., Erving Dam, tailwater (from profile)	8.1	--	450
Erving, Mass., U. S. Geological Survey gage, right bank	8.0	Mar.19 5pm	449.1
Wickett Brook, 2.5 miles above, Boston & Maine R.R. bridge, right bank	7.0	Mar.19	437.6
Wickett Brook, 2.2 miles above, right bank	6.7	do.	433.9
Wickett Brook, Farley Dam 1 mile above, headwater	5.5	Mar.19 about 8pm	od398.6
Farley Dam, tailwater (from profile)	5.5	--	385
Farley, Mass., garage behind post office	--	Mar.19 about 8pm	398.6
Millers Falls, Mass., Millers Falls Paper Co. upper dam, headwater	2.1	Mar.19 11pm	oe283.0
Millers Falls, Mass., Millers Falls Paper Co. upper dam, tailwater (from profile)	2.1	--	260

nx Altitude of crest of dam, 816.9 feet; of crest of spillway, 810.5 feet.
ny Altitude of crest of dam. 570.5 feet.
nz Altitude of crest of dam, 541.0 feet.
oa Altitude of crest of spillway, 501.4 feet.
ob Altitude of crest of spillway, 488.2 feet.
oc Altitude of crest of dam, 452.5 feet.
od Altitude of crest of dam, 392.0 feet.
oe Altitude of crest of dam, 275.6 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Connecticut River Basin--Continued			
Millers River--Continued:			
Millers Falls, Mass., Millers Falls Paper Co. lower dam, headwater	1.9	Mar.19 11pm	of253.3
Millers Falls, Mass., Millers Falls Paper Co. lower dam, tailwater (from profile)	1.9	--	241
Millers Falls, Mass., Millers Falls Co. dam, headwater	1.1	Mar.19 11pm	og238.8
Millers Falls, Mass., Millers Falls Co. dam, tailwater (from profile)	1.1	--	221
Millers Falls, Mass., downstream side highway bridge just south of French King highway bridge	0.2	Mar.19 11pm	201.4
Confluence with Connecticut River	0	--	200.4
Deerfield River:			
Massachusetts-Vermont State line	41.8	--	1,109.4
Sherman Dam, south of State line	41.25	--	(oh) 1,110.2
Monroe Bridge, dam just above highway bridge	40.65	--	(oi) 1,028.4
New England Power Co. plant No. 5, tailrace	37.3	--	786.4
Smith Brook and Deerfield River, highway bridge near confluence	36.4	--	774.1
Hoosac Tunnel, near, right bank	34.1	--	715.8
Highway bridge, 0.45 mile below, right bank	33.3	--	699.7
Hoosac Tunnel-Zoar road, highway bridge, 0.65 mile above, right bank	31.7	--	659.1
Hoosac Tunnel-Zoar road, highway bridge, 20 feet above, right bank	31.05	--	640.8
Zoar, Mass., 30 feet below Boston & Maine R.R. underpass near mouth of Pelham Brook, left bank	30.1	--	616.5
Cold River, 100 feet below Boston & Maine R.R. bridge below mouth	28.7	--	589.3
Highway bridge, left bank	27.5	Mar.18	571.0
Chickley River, 0.2 mile above mouth, left bank	27.25	--	564.9
Charlemont, Mass., 0.2 mile above covered highway bridge, left bank	26.05	--	550.3
Charlemont, Mass., covered highway bridge, left bank	25.85	--	549.5
Charlemont, Mass., U. S. Geological Survey gage, left bank	24.4	Mar.12	oj536.4
Avery Brook, mouth, left bank	21.9	--	ok505.0
East Charlemont, Mass., Highway 2, opposite church, left bank	21.05	--	ok500.6
Scotts Bridge, 1.6 miles above, left bank	20.35	--	ok490.7
Scotts Bridge just above New England Power Co. dam No. 4, left bank	18.75	--	om476.8
North River, mouth, left bank	17.8	--	431.2
Shelburne Falls, Mass., street railway bridge, upstream, right bank	16.25	--	411.7
Shelburne Falls, Mass., highway bridge, right bank	16.2	--	410.9
Shelburne Falls, Mass., New England Power Co. dam No. 3, right bank	16.05	--	on406.2
Gardner Falls Dam, 100 feet above, left bank	14.95	--	op343.2
New England Power Co. dam No. 2	12.9	Mar.18	oq297.6
Dragon Brook, Boston & Maine R.R. bridge below mouth, left bank	10.8	--	202.0
Bardwell Ferry, Mass., highway bridge, left bank	10.3	--	200.8
Mill Village, Mass., West Deerfield highway bridge above, left bank	7.3	--	158.1
Old Robbins place, near, left bank	3.25	--	150.2
Greenfield, Mass., about 500 feet southwest of end of Merriden Street, left bank	2.2	--	150.6
Greenfield, Mass., Boston & Maine R.R. bridge at Cheapside	1.15	--	150.5
Confluence of Deerfield and Connecticut Rivers	0	--	148.9
Ware and Chicopee Rivers:			
Barre Falls highway bridge	48.8	Mar.19 early morning	785.4
Covered highway bridge 0.01 mile below mouth of Burnshirt River and 1.9 miles above Cold Brook	47.15	do.	662.2
Cold Brook, Mass., 0.45 mile above metropolitan water works dam	45.05	do.	or660.0

of Altitude of crest of dam, 243.8 feet.
og Altitude of crest of dam, 230.1 feet.
oh Altitude of top of dam, 1,120.5 feet; of crest of spillway, 1,103.7 feet.
oi Altitude of crest of dam, 1,022.9 feet.
oj Due to ice jam of Mar. 12.
ok Probably due to ice jam of Mar. 12
om Altitude of crest of dam, 465.9 feet.
on Altitude of crest of dam, 396.7 feet.
op Altitude of crest of dam, 332.2 feet.
oq Altitude of crest of dam, 284.6 feet.
or Altitude of crest of dam, 651.4 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Connecticut River Basin--Continued			
Ware and Chicopee Rivers--Continued:			
Cold Brook, Mass., Ware River intake works dam, headwater	44.6	Mar.19 early morning	655.7
Cold Brook, Mass., 1.45 miles below, Powder Mill dam, headwater	43.65	do.	os629.9
Powder Mill Dam, bridge 300 feet below	43.6	do.	620.0
Dennyville, Mass., Barre Wool Combing Co. dam, headwater	42.65	do.	ot611.8
Dennyville, Mass., highway bridge 300 feet below Barre Wool Combing Co. dam	42.6	do.	595.0
Barre Plains, Mass., highway bridge a quarter of a mile below	41.85	Mar.18 late afternoon	582.8
Wheelwright Mills dam 0.1 mile above Wheelwright station, headwater	39.2	do.	ou576.4
Old Furnace, Mass., highway bridge	37.6	do.	567.0
Smith's Crossing, highway bridge 0.15 mile below	35.8	do.	555.1
Gilbertville, Mass., Gilbert Manufacturing Co. dam, headwater	33.1	Mar.19 early morning	ov546.8
Gilbertville, Mass., highway bridge just below Gilbert Manufacturing Co. dam	33.05	do.	524.8
Ellis Brook, highway bridge 300 feet above mouth	31.1	do.	474.2
Ware, Mass., Otis Co. dam, headwater	29.0	do.	ow470.4
Ware, Mass., highway bridge 200 feet below Otis Co. dam	28.95	do.	442.1
Ware Woolen Co. dam, headwater	28.3	do.	ox422.7
Muddy Brook, mouth	27.8	do.	405.2
Muddy Brook, highway bridge 1.55 miles below mouth	26.25	do.	401.6
U. S. Geological Survey gage	25.35	Mar.19 6am	391.83
Gibbs Crossing, highway bridge	25.0	Mar.19 early morning	386.8
Wipples, Mass., highway bridge	21.0	do.	370.7
Thorndyke, Mass., S. C. S. Box Co. dam, headwater	19.9	do.	oy369.0
Thorndyke, Mass., Church Street Bridge	19.7	do.	355.1
Thorndyke, Mass., dam just above Main Street Bridge	19.15	do.	oz343.9
Thorndyke, Mass., Main Street Bridge	19.1	do.	336.8
Dutton Road Bridge half a mile above confluence of Ware and Swift Rivers	18.2	do.	314.4
Three Rivers, Mass., Bridge Street Bridge (Chicopee River)	17.1	do.	312.3
Three Rivers, Mass., Otis Co. power plant dam about 0.5 mile west of center of town	16.4	Mar.18 about midnight	pa308.4
Red Bridge, Mass., Ludlow Manufacturing Co. dam	14.3	Mar.19 about 1am	pb279.8
Red Bridge, Mass., highway bridge (destroyed) 0.25 mile downstream from Ludlow Manufacturing Co. dam	14.0	do.	237.7
Twelve Mile Brook, mouth	12.5	Mar.18 about midnight	228.6
North Wilbraham, Mass., dam above Miller Street Bridge near Collins station	11.55	Mar.19	pc227.6
Ludlow, Mass., 1 mile east of, Boston & Albany R.R. bridge	9.5	do.	211.8
Ludlow, Mass., Ludlow Manufacturing Co. dam near bridge, headwater	8.35	do.	pd211.0
Indian Orchard, Mass., 0.2 mile above Hodges Dam	7.25	do.	168.9
Indian Orchard, Mass., Hodges Dam	7.05	do.	pe164.4
Bircham Bend, Mass., United Electric Light Co. dam, headwater	5.2	--	pf131.6
Bircham Bend, Mass., United Electric Light Co. dam, tailwater	5.2	--	118.1
Chicopee Falls, Mass., 0.9 mile above Chicopee Manufacturing Co. dam	3.6	Mar.20	114.9

os Altitude of crest of dam, 624.6 feet.
ot Altitude of crest of dam, 605.1 feet.
ou Altitude of crest of dam, 571.0 feet.
ov Altitude of crest of dam, 539.6 feet.
ow Altitude of crest of dam, 463.8 feet.
ox Altitude of crest of dam, 415.6 feet.
oy Altitude of crest of dam, 36[illegible].3 feet.
oz Altitude of crest of dam, 338.6 feet.
pa Altitude of crest of dam, 299.2 feet.
pb Altitude of crest of dam, 272.4 feet.
pc Altitude of crest of dam, 219.1 feet.
pd Altitude of crest of dam, 203.5 feet.
pe Altitude of crest of dam, 159.0 feet.
pf Altitude of crest of dam, 121.7 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Connecticut River Basin--Continued			
Ware and Chicopee Rivers--Continued:			
Chicopee Falls, Mass., Chicopee Manufacturing Co. dam just above Bridge Street Bridge	2.7	Mar.20 2-3am	pg114.0
Chicopee Falls, Mass., Bridge Street Bridge	2.6	Mar.20 2-3am	99.6
Chicopee Falls, Mass., Fisk Rubber Co. plant 0.35 mile downstream from Bridge Street Bridge	2.25	Mar.20	88.4
Chicopee, Mass., Turners Falls Power & Electric Co. dam about 1,900 feet above Chicopee Memorial Bridge	1.15	do.	ph83.6
Chicopee, Mass., at foot of Grape Street, about 0.25 mile above Chicopee Memorial Bridge	1.0	do.	76.1
Chicopee, Mass., Ames Manufacturing Co. dam about 1,000 feet above Chicopee Memorial Bridge	0.95	do.	pi73.2
Chicopee, Mass., Memorial Bridge	0.75	Mar.20 3-4am	70.6
Chicopee, Mass., confluence of Chicopee and Connecticut Rivers (profile)	0	--	69.8
Swift River:			
Enfield, Mass., dam, headwater	12.35	Mar.19 5pm	406.8
Cabots Crossing 1.1 miles below Enfield Dam, bridge	11.25	--	398.0
Above Swift River diversion tunnel	8.75	Mar.19 8pm	395.2
Below Swift River diversion tunnel	8.65	--	391.2
West Ware, Mass., above old paper mill dam site	7.45	--	383.2
West Ware, Mass., U. S. Geological Survey gage	7.25	Mar.19 6pm	380.2
West Ware, Mass., Boston & Albany R.R. bridge below	5.75	--	374.4
Bondsville, Mass., first highway bridge above	5.5	--	373.8
Bondsville, Mass., Otis Co. upper dam, headwater	3.5	--	pj369.8
Bondsville, Mass., Otis Co. upper dam, tailwater	3.5	--	358.6
Bondsville, Mass., Depot Street Bridge	3.0	--	347.0
Bondsville, Mass., Otis Co. lower dam, headwater	2.8	--	pk345.4
Bondsville, Mass., Otis Co. lower dam, tailwater	2.8	--	341.8
Bondsville, Mass., Otis Co. Station D, tailrace	2.5	--	329.4
Barretts Junction, Mass., 0.7 mile above	1.9	--	325.0
Barretts Junction, Mass., 0.15 mile above	1.35	--	320.2
Barretts Junction, Mass.	1.2	--	318.0
Confluence of Swift and Ware Rivers near Three Rivers, Mass.	0	--	314.4
Quaboag River:			
Quaboag Pond, outlet	22.9	Mar.18	606.3
Wickaboag Pond, highway bridge near	17.5	do.	605.2
Warren, Mass., Main Street Bridge	15.05	do.	591.1
Warren, Mass., bridge and Fannie Jane Mill dam, headwater	14.7	do.	pm588.6
Boston & Albany R.R. bridge, 200 feet below	14.35	do.	579.1
West Warren, Mass., Dam No. 4 (Ohio Carpet Co.)	13.55	do.	pn568.1
West Warren, Mass., Dam No. 2	13.3	do.	po554.9
West Warren, Mass., Dam No. 1	13.0	do.	pq537.0
West Warren, Mass., Dam No. 3	12.75	do.	pr518.2
Crossman Dam	12.4	do.	ps502.5
Culvert on Highway 19	11.9	do.	495.1
West Brimfield, Mass., U. S. Geological Survey gage at highway bridge	9.0	Mar.18 6:30pm	386.0
Kings Brook, just north of mouth, culvert on Highway 19	8.1	Mar.18	374.8
Kings Brook, Washington Road bridge near mouth, upstream, right bank	7.85	do.	371.0
Palmer, Mass., Central Massachusetts Light & Power Co. dam	5.05	do.	pt341.9
Palmer, Mass., Monson-Palmer town line, highway bridge	4.5	do.	322.5
Palmer, Mass., Bridge Street Bridge	3.35	do.	317.4
Palmer, Mass., Highway 20 bridge about 1 mile northwest of	2.0	do.	313.7
Three Rivers, Mass., Palmer Road Bridge about 1 mile southwest of town	1.25	do.	311.8
Confluence of Quaboag and Ware Rivers	0	do.	312.3

pg Altitude of crest of dam, 106.8 feet.
ph Altitude of crest of dam, 76.4 feet.
pi Altitude of crest of dam, 67.9 feet.
pj Altitude of crest of dam, 363.7 feet.
pk Altitude of crest of dam, 340.1 feet.
pm Altitude of crest of dam, 585.2 feet.
pn Altitude of crest of dam, 564.5 feet.
po Altitude of crest of dam, 551.2 feet.
pq Altitude of crest of dam, 532.6 feet.
pr Altitude of crest of dam, 515.9 feet.
ps Altitude of crest of dam, 500.5 feet.
pt Altitude of crest of dam, 337.9 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Connecticut River Basin--Continued			
Westfield River:			
West Cummington, Mass., highway bridge 0.1 mile above mouth of Westfield Brook	49.8	Mar.18	1,208.3
West Cummington, Mass., mouth of Westfield Brook, left bank	49.7	do.	1,203.2
West Cummington, Mass., 0.1 mile below mouth of Westfield Brook, left bank	49.6	do.	1,192.0
Westfield Brook, 1.05 miles below mouth, left bank	48.65	do.	1,147.7
Bartlett Brook, 0.5 mile above mouth, left bank	48.5	do.	1,141.6
Bartlett Brook, 0.5 mile below mouth, left bank	47.5	do.	1,101.7
Mill Brook, 1.3 miles above mouth, just above concrete highway bridge, right bank	47.0	do.	1,074.1
Mill Brook, 0.4 mile above mouth, right bank	46.1	do.	1,047.3
Mill Brook, mouth, right bank	45.7	do.	1,034.0
Cummington Center, Mass., highway bridge west of, 1 mile below mouth of Mill Brook	44.7	do.	1,006.2
Cummington, Mass., just above highway bridge, 0.5 mile below mouth of Meadow Brook	44.0	do.	985.7
Cummington, Mass., 0.1 mile below highway bridge	43.9	do.	981.1
Meadow Brook, 1 mile below mouth	43.5	do.	972.0
Swift River, 1.3 miles above mouth	43.0	do.	954.3
Swift River, 0.6 mile above mouth	42.3	do.	938.5
Swift River, 0.5 mile above mouth	42.2	do.	935.3
Chesterfield, Mass., just above highway bridge 0.25 mile above mouth of West Branch	38.15	do.	759.6
Huntington, Mass., 2 miles above U. S. Geological Survey gage	29.8	do.	524.6
Huntington, Mass., 1.5 miles above U. S. Geological Survey gage	29.3	do.	521.0
Huntington, Mass., 1 mile above U. S. Geological Survey gage	28.8	do.	511.2
Huntington, Mass., 0.6 mile above U. S. Geological Survey gage	28.4	do.	503.3
Huntington, Mass., highway bridge 0.5 mile above U. S. Geological Survey gage	28.3	do.	500.3
Huntington, Mass., 0.07 mile above U. S. Geological Survey gage	27.87	do.	496.5
Huntington, Mass., U. S. Geological Survey gage 0.6 mile above mouth of Pond Brook	27.8	Mar.18 noon	495.9
Huntington, Mass., 0.03 mile below U. S. Geological Survey gage	27.77	Mar.18	494.5
Huntington, Mass., 0.08 mile below U. S. Geological Survey gage	27.72	do.	485.1
Huntington, Mass., 0.2 mile below U. S. Geological Survey gage	27.6	do.	477.5
Middle Branch of Westfield River, 0.7 mile below mouth, just below Norwich Bridge	24.8	do.	396.9
Middle Branch of Westfield River, 0.8 mile below mouth	24.7	do.	396.0
Middle Branch of Westfield River, 1.4 miles below mouth, dam	24.2	do.	385.2
Huntington, Mass., Boston & Albany R.R. bridge 0.1 mile above mouth of West Branch	23.4	do.	364.6
Russell, Mass., Chapin-Gould Paper Co. dam, headwater	22.3	do.	pu343.6
Russell, Mass., highway bridge above Westfield River Paper Co. dam	18.9	do.	pv280.1
Russell, Mass., 0.1 mile above Strathmore Paper Co. dam	17.3	do.	242.4
Russell, Mass., Strathmore Paper Co. dam, headwater	17.2	do.	pw240.6
Russell, Mass., Strathmore Paper Co. dam, tailwater	17.2	do.	201.2
Westfield, Mass., 0.35 mile below mouth of Moose Meadow Brook	13.3	do.	155.4
Westfield, Mass., dam between Elm Street and railroad bridge, headwater	11.55	do.	px142.4
Westfield, Mass., highway bridge at mouth of Powder Mill Brook	9.1	do.	131.5
Westfield, Mass., Boston & Albany R.R. bridge 0.9 mile above mouth of Black Brook	7.9	do.	127.8
Westfield, Mass., U. S. Geological Survey gage 0.8 mile above mouth of Black Brook	7.8	Mar.18 6pm	125.4
West Springfield-Westfield town line, left bank	7.6	Mar.18	124.7
West Springfield, Mass., Boston & Albany R.R. bridge	6.4	do.	120.7
West Springfield, Mass., Strathmore Paper Co. dam, headwater, 0.5 mile below mouth of Block Brook	4.05	do.	py101.6
West Springfield, Mass., 0.75 mile below Block Brook	3.85	--	73.0
West Springfield, Mass., 1.85 miles below Block Brook	2.75	--	67.2
West Springfield, Mass., Agawam Bridge, upstream	2.5	--	65.6
Confluence of Westfield and Connecticut Rivers, right bank	0	--	65.1

pu Altitude of crest of dam, 330.0 feet.
pv Altitude of crest of dam, 269.7 feet.
pw Altitude of crest of dam, 230.4 feet.
px Altitude of crest of dam, 132.1 feet.
py Altitude of crest of dam, 97.4 feet.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Connecticut River Basin--Continued			
West Branch of Westfield River:			
Becket, Mass., Boston & Albany R.R. bridge, upstream, right bank	16.5	Mar.18	1,189.4
Chester, Mass., Main Street bridge, downstream, right bank	7.4	do.	594.7
Chester, Mass., Boston & Albany R.R. bridge at mouth of Sanderson Brook	4.75	do.	504.8
Huntington, Mass., U. S. Geological Survey gage 0.35 mile below mouth of Roaring Brook, left bank	1.4	Mar.18 10am	401.4
Huntington, Mass., Boston & Albany R.R. bridge, upstream	.5	Mar.18	372.2
Huntington, Mass., New Basket Street, right bank	.37	do.	368.3
Huntington, Mass., 350 feet below Huntington Inn	.3	do.	364.3
Confluence with Westfield River	0	--	--
Farmington River:			
North Otis, Mass.	73.8	--	1,320.9
Otis, Mass.	67.8	--	1,144.9
New Boston, Mass.	61.9	--	774.0
New Boston, Mass.	61.1	Mar.18 9:30pm	741.0
New Boston, Mass.	59.3	--	677.5
Massachusetts-Connecticut State line, near	58.0	--	638.9
Riverton, Conn.	52.1	Mar.18 10:30am	502.8
Pleasant Valley, Conn.	47.8	--	416.6
New Hartford, Conn., below Greenwood Pond dam	45.3	Mar.18 before 8am	359.7
New Hartford, Conn., Greenwood Pond dam, tailrace	45.0	Mar.18 after 8am	382.5
Satan's Kingdom gorge, line on building	42.8	--	353.7
Collinsville, Conn., upper Collins Co. dam, forebay	38.2	--	295.0
Collinsville, Conn., upper Collins Co. dam, tailrace	38.1	--	282.9
Collinsville, Conn., lower Collins Co. dam, tailrace	37.2	Mar.18 10:30am to 3:30pm	269.0
Unionville, Conn., Union Electric Co. dam, forebay	34.6	--	236.5
Unionville, Conn., Union Electric Co. dam, tailrace	34.0	--	210.2
Unionville, Conn.	33.0	--	196.6
Farmington, Conn.	31.3	--	184.7
Farmington, Conn.	28.5	--	169.7
Avon, Conn.	25.4	--	165.5
Weatogue, Conn.	22.2	--	164.5
Simsbury, Conn.	17.8	--	156.9
Tariffville, Conn., Oxygen Co. dam, forebay, line on building	12.4	--	152.4
Tariffville, Conn., Oxygen Co. dam, tailrace	12.3	--	144.2
Tariffville, Conn., Hartford Electric Light Co. dam, forebay	11.9	--	142.9
Tariffville, Conn., Hartford Electric Light Co. dam, tailrace	11.9	Mar.19 3pm	108.0
North Bloomfield, Conn.	11.0	--	106.8
Rainbow Dam, forebay	7.8	--	100.6
Rainbow Dam, tailrace	7.8	Mar.19 3pm	48.4
Poquonock, Conn., on brick wall	6.1	--	43.3
Poquonock, Conn.	5.9	--	pz39.1
Windsor, Conn., underpass	1.9	--	pz38.8
Windsor, Conn., highway bridge	1.5	--	pz38.8
Confluence with Connecticut River	0	--	--
Housatonic River Basin qa			
Housatonic River:			
Hinsdale, Mass., Hinsdale Trading Corp. dam, forebay	143.6	--	1,426.4
Hinsdale, Mass., Crane Co. dam, forebay	142.6	--	1,340.4
Dalton, Mass., plate girder bridge at Dalton power house	141.2	--	1,178.0
Dalton, Mass., upper Byron Weston Co. dam, forebay	138.7	Mar.18 1pm	1,142.6
Dalton, Mass., lower Byron Weston Co. dam, forebay	138.6	--	1,123.0
Dalton, Mass., Sawyer-Regan Co. dam, forebay	138.5	--	1,099.0
Dalton, Mass., Crane Co.'s Old Berkshire Dam, forebay	138.2	--	1,075.0
Dalton, Mass., Crane Co.'s Pioneer Dam	137.7	--	1,049.5
Dalton, Mass., Crane Co. dam, forebay	137.4	--	1,034.5
Coltsville, Mass., Crene Co.'s Government Mills dam, forebay	136.7	--	1,015.6
Coltsville, Mass., U. S. Geological Survey gage	136.0	Mar.18 3-4pm	1,003.2

pz Backwater from Connecticut River.
qa The "miles above mouth" data give for all streams in the Housatonic River Basin the river distances above the mouth of the Housatonic River.

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
<u>Housatonic River Basin</u>--Continued			
Housatonic River--Continued:			
Coltsville, Mass., Boston & Albany R.R. bridge	135.0	--	990.6
Pittsfield, Mass., Dale Bros. dam, forebay	132.0	--	979.8
Pittsfield, Mass., confluence with West Branch of Housatonic River	131.5	--	967.9
Pittsfield, Mass., Cutting Bridge	131.0	--	966.5
New Lenox Station, Mass., highway bridge	127.4	--	959.6
Lenox Station, Mass., bridge near railroad station	123.2	--	951.5
Lenox Furnace, Mass., on Valley Mills of Smith Paper Co.	122.8	--	948.5
Lenox Furnace, Mass., New York, New Haven & Hartford R.R. bridge No. 110.69	122.7	--	945.5
Lenox Furnace, Mass., Smith Paper Co.'s Niagara Mill dam, forebay	122.0	--	942.5
Lenox Furnace, Mass., near railroad bridge	122.0	--	942.5
Lee, Mass., New York, New Haven & Hartford R.R. bridge No. 110.28	121.3	--	918.1
Lee, Mass., highway bridge	121.3	--	918.1
Lee, Mass., Smith Paper Co.'s Columbia Mill dam, forebay	120.7	--	913.3
Lee, Mass., New York, New Haven & Hartford R.R. bridge No. 109.24	120.3	--	898.1
Lee, Mass., Smith Paper Co.'s Eagle dam, forebay	120.1	--	897.8
Lee, Mass., highway bridge	119.9	--	887.2
Lee, Mass., Eaton-Dikeman Co. dam, forebay	119.7	--	884.9
Lee, Mass., New York, New Haven & Hartford R.R. bridge near railroad station	119.6	--	879.9
Lee, Mass., concrete highway bridge half a mile south of Lee	119.5	--	878.7
Lee, Mass., abutments of abandoned bridge	119.3	--	878.3
East Lee, Mass., concrete highway bridge at Pleasant Street	118.5	--	878.3
South Lee, Mass., New York, New Haven & Hartford R.R. bridge	115.5	--	847.7
South Lee, Mass., covered wooden bridge	115.0	--	847.1
South Lee, Mass., Hurlbut Paper Co. dam, forebay	114.4	Mar.18 2:30pm	844.1
South Lee, Mass., highway bridge	114.4	--	834.6
South Lee, Mass., suspension foot bridge	113.3	--	829.0
Stockbridge, Mass., concrete bridge near railroad station	112.7	--	825.9
Stockbridge, Mass., new highway bridge	111.6	--	822.9
Stockbridge, Mass., Butler's Bridge	110.1	--	821.0
Glendale, Mass., highway bridge	109.5	--	816.9
Glendale, Mass., Monument Mills dam No. 1, forebay	109.3	--	816.6
Glendale, Mass., New York, New Haven & Hartford R.R. bridge No. 99.93	108.2	--	778.4
Glendale, Mass., Monument Mills dam No. 2, forebay	108.0	--	773.3
Housatonic, Mass., Monument Mills dam No. 3, forebay	107.0	--	754.2
Housatonic, Mass., concrete bridge at Pleasant Street	106.7	--	725.2
Housatonic, Mass., New York, New Haven & Hartford R.R. bridge	105.7	--	723.5
Van Deusenville, Mass., Rising Paper Co. dam, forebay	105.7	Mar.19 pm	723.5
Van Deusenville, Mass., U. S. Geological Survey gage	104.8	Mar.19 4pm to midnight	693.6
Van Deusenville, Mass., highway bridge	104.8	--	693.2
Great Barrington, Mass., highway bridge	102.2	--	688.1
Great Barrington, Mass., Southern Berkshire Power & Electric Co. dam, forebay	102.0	Mar.19 4-8pm	688.1
Great Barrington, Mass., highway bridge	101.7	--	678.1
Great Barrington, Mass., near pole No. 1178	101.3	--	672.8
Great Barrington, Mass., Brookside bridge	100.0	--	671.1
Great Barrington, Mass., bridge over Green River at mouth	98.9	--	667.9
Sheffield, Mass., opposite pole No. 2624	96.9	--	667.0
Sheffield, Mass. highway bridge	96.0	--	666.3
Sheffield, Mass. upper covered bridge	94.1	--	659.9
Sheffield, Mass., highway bridge over Schnob Brook	92.8	--	657.2
Sheffield, Mass., lower covered bridge	91.9	--	655.4
Ashley Falls, Mass., highway bridge	84.8	--	650.5
Canaan, Conn., New York, New Haven & Hartford R.R. bridge	82.5	--	651.0
Canaan, Conn., Connecticut Power Co. dam, forebay	81.5	--	648.2
Salisbury, Conn., Dutchess Bridge	79.7	--	646.7
Falls Village, Conn., Connecticut Power Co. dam, forebay	76.2	Mar.20 2am	637.1
Falls Village, Conn., power house of Connecticut Power Co.	75.8	--	543.0
Limerock, Conn., deck truss highway bridge	74.2	--	540.2
Limerock, Conn., abandoned bridge	74.1	--	540.2
West Cornwall, Conn., bridge over brook at mouth	72.1	--	533.8
West Cornwall, Conn., covered bridge	69.6	--	508.5
West Cornwall, Conn., tree, 1 3/4 miles below covered bridge	67.8	--	480.9

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
Housatonic River Basin--Continued			
Housatonic River--Continued:			
Cornwall Bridge, Conn., Cornwall Bridge	65.9	--	443.1
Swifts Bridge, Conn., abutment of washed-out bridge	64.5	--	419.4
North Kent, Conn., upper bridge (washed out)	60.6	--	394.5
Kent Bridge, Conn., new dam site	58.4	--	376.3
Kent, Conn., Kent Bridge	57.0	--	366.7
Kent, Conn., Connecticut Light & Power Co. pole No. A6180	54.8	--	363.8
Bull's Bridge, Conn., Connecticut Light & Power Co. dam, forebay	52.6	--	359.2
Bull's Bridge, Conn., Bull's Bridge	52.5	--	332.5
Gaylordsville, Conn., Connecticut Light & Power Co. power house	51.0	--	254.3
Gaylordsville, Conn., abutments of highway bridge (washed out)	50.0	--	242.8
Gaylordsville, Conn., tree 2 miles below washed-out bridge	48.0	--	237.0
Boardmans Bridge, Conn., Boardmans dam site	46.5	--	221.8
Boardmans Bridge, Conn., near Boardmans Bridge, Southern New England Telephone Co. pole No. 4154	45.3	--	215.1
New Milford, Conn., Connecticut Light & Power Co.'s Rocky River plant	44.2	Mar.12 noon	211.1
New Milford, Conn., tree at mouth of Aspetuck River	43.6	--	207.3
New Milford, Conn., New Milford highway bridge	43.0	--	210.0
New Milford, Conn., Robertson Bleach & Dye Works dam, forebay	42.3	--	202.5
New Milford, Conn., New York, New Haven & Hartford R.R. bridge No. 43.45	42.0	--	197.8
Still River, Conn., Connecticut Light & Power Co. dam, forebay	40.7	--	193.7
Bridgewater, Conn., dam site E	37.7	--	162.8
Bridgewater, Conn., highway bridge over Babbits Brook	34.2	--	145.2
Brookfield, Conn., Connecticut Light & Power Co. gage 500 feet above Pond Brook	33.0	--	136.7
Southbury, Conn., highway bridge at mouth of Shepaug River	32.1	--	125.6
Southbury, Conn., Shepaug dam site	29.9	--	114.9
Sandy Hook, Conn., New York, New Haven & Hartford R.R. bridge No. 81.44	27.4	--	113.8
Bennett's Bridge, Conn., at mouth of Pomperaug River	26.4	--	118.0
Oxford, Conn., 2 miles above Stevenson Dam	21.4	--	107.2
Stevenson, Conn., highway bridge over Stevenson Dam	19.4	Mar.12 9am	107.6
Squantuck, Conn., culvert at mouth of Fourmile Brook	17.3	--	33.9
Derby, Conn., culvert at mouth of Cove Brook	15.5	--	33.5
Derby, Conn., Connecticut Light & Power Co. dam, forebay	13.6	Mar.12 10am	33.0
Derby, Conn., Connecticut Light & Power Co. dam	13.6	--	21.1
Derby, Conn., Shelton-Derby highway bridge	12.8	--	18.7
Shelton, Conn., coal yards	12.1	--	18.0
Milford Point, mouth	0	--	--
Naugatuck River:			
Wrightville, Conn., Stillwater Dam, forebay	55.1	--	738.6
West Torrington, Conn., highway bridge over Nicklemine Brook	54.1	--	717.1
West Torrington, Conn., small concrete dam, forebay	54.1	--	654.4
West Torrington, Conn., highway bridge at mouth of Nicklemine Brook	53.9	--	632.9
Torrington, Conn., Union Hardware Co. dam, forebay	53.5	--	627.7
Torrington, Conn., highway bridge at Wolcott Avenue	52.8	--	599.0
Torrington, Conn., Coe Brass Co. dam, forebay	52.3	--	596.8
Torrington, Conn., highway bridge at Church Street	52.1	--	583.3
Torrington, Conn., private bridge of American Brass Co.	51.9	--	568.9
Torrington, Conn., highway bridge at Main Street	51.6	--	548.1
Torrington, Conn., mouth of East Branch of Naugatuck River	51.1	--	534.3
Torrington, Conn., highway bridge at East Albert Street	51.0	--	534.0
Torrington, Conn., highway bridge at Palmer Street	50.6	--	526.1
Torrington, Conn., steel-truss highway bridge	49.7	--	511.5
East Litchfield, Conn., highway bridge	48.7	--	502.1
East Litchfield, Conn.	47.6	--	487.6
Campville station, Conn., highway bridge	46.3	--	457.5
Litchfield, Conn., new highway bridge	44.6	--	428.6
Thomaston, Conn., New York, New Haven & Hartford R.R. bridge No. 38.21	43.0	--	401.0
Thomaston, Conn., highway bridge above mouth of Leadmine Brook	42.9	Mar.12 7am	401.0
Thomaston, Conn., Plume & Atwood Manufacturing Co. dam, forebay	41.1	--	368.8
Thomaston, Conn., Oris Manufacturing Co. dam, forebay	39.6	--	351.6
Thomaston, Conn., old iron bridge	39.4	--	342.8
Watertown, Conn., New York, New Haven & Hartford R.R. bridge No. 32.89	37.6	--	320.3
Watertown, Conn., highway bridge at Minchcliff Avenue	36.1	--	307.3

Table 15.-Flood crest stages--Continued

Stream and location	Miles above mouth	Date and time	Altitude in feet
<u>Housatonic River Basin</u>--Continued			
Naugatuck River--Continued:			
Watertown, Conn., New York, New Haven & Hartford R.R. bridge on main line	35.4	--	297.5
Waterville, Conn., Chase Metal Works Inc., dam, forebay	35.0	--	293.3
Waterville, Conn., highway bridge at Huntington Avenue	34.1	--	281.3
Waterbury, Conn., New York, New Haven & Hartford R.R. bridge No. 0.33	32.6	--	274.4
Waterbury, Conn., highway bridge at West Main Street	31.3	--	263.1
Waterbury, Conn., highway bridge at Freight Street	31.3	--	259.3
Waterbury, Conn., highway bridge at Bank Street	30.7	--	257.4
Waterbury, Conn., private bridge of American Brass Co.	30.5	--	253.9
Waterbury, Conn., Eagle Bridge	29.9	--	248.5
Waterbury, Conn., highway bridge at South Leonard Street	29.3	--	247.2
Waterbury, Conn., Platt Bros. Co. dam, forebay	28.3	--	225.8
Union City, Conn., highway bridge	26.8	--	200.2
Naugatuck, Conn., Goodyear Rubber Manufacturing Co. dam, forebay	26.1	--	194.5
Naugatuck, Conn., below Goodyear Rubber Manufacturing Co. dam	26.1	--	193.0
Naugatuck, Conn., Naugatuck Memorial Bridge	26.0	--	189.1
Naugatuck, Conn., Naugatuck Chemical Co. dam, forebay	25.5	--	182.8
Naugatuck, Conn., bridge at Naugatuck Chemical Co. dam	25.2	Mar.12 8:30am	179.2
Naugatuck, Conn., mouth of Beacon Hill Brook	24.3	--	167.4
Beacon Falls, Conn., Beacon Falls Rubber Co. dam, forebay	22.7	--	148.0
Beacon Falls, Conn., 1,000 feet above mouth of Hockanum Brook	22.1	--	131.5
Pines Bridge, Conn., highway bridge	20.9	--	113.1
Seymour, Conn., Rimmon Water Co. dam, forebay	18.9	--	101.7
Seymour, Conn., old covered bridge at Bank Street	18.5	--	83.5
Seymour, Conn., New Haven Copper Co. dam, forebay	18.2	--	80.5
Seymour, Conn., highway bridge at Broad Street	18.1	--	61.0
Seymour, Conn., Kinney Town dam, forebay	16.1	--	60.5
Seymour, Conn., below Kinney Town dam	16.1	--	51.0
Derby, Conn., concrete-arch highway bridge	12.6	--	20.6
Derby, Conn., New York, New Haven & Hartford R.R. bridge	12.3	--	20.6
East Branch Naugatuck River:			
Torrington, Conn., private highway bridge	53.5	--	658.5
Torrington, Conn., private bridge of Warrington Woolen Mills	52.8	--	630.2
Torrington, Conn., highway bridge at North Main Street	52.3	--	588.3
Torrington, Conn., highway bridge at Wall Street	52.0	--	556.3
Torrington, Conn., highway bridge at East Main Street	51.6	--	544.0
Torrington, Conn., highway bridge at Franklin Street	51.5	--	539.2
Torrington, Conn., confluence with Naugatuck River	51.1	--	534.3

RECORDS OF PREVIOUS FLOODS

Knowledge of the floods of the past provides an effective basis upon which to formulate plans for protection against future floods and for control of the flood waters. Discriminating consideration of the magnitude and frequency of great floods is essential to the best economic solution of flood problems; consequently, the longer the record of flood experience the more enlightened and adequate the solution may be.

Systematic observations of the stages and discharges of rivers in the United States cover short periods of time and may be said to be comparatively in their infancy. The records diminish greatly in number as they extend into the past, and those exceeding 50 years in length are few. Information regarding many floods is published currently in the water-supply papers of the Geological Survey. Water-Supply Paper 771, "Floods in the United States - magnitude and frequency", contains an extensive compilation, largely from the water-supply papers, of records of floods on many of the rivers of the country for which, in general, the periods of systematic observation exceed 25 or 30 years.

Information regarding some notable floods of the past, principally floods that occurred prior to the comparatively recent period of systematic observations, is presented below for the group of river basins covered in this volume. This information has been assembled as an incident to the preparation of the report on the floods of March 1936 and consists primarily of a summary, in either textual or tabular form, of notes and other data concerning outstanding floods for which there are authentic or reasonably trustworthy records. Variations in the nature and origin of the information obtained from different sources have necessitated the variation in the form of presentation for different basins.

The reports of the Corps of Engineers, U. S. Army, on the development and utilization of many of the rivers of the country, published under the provisions of House Document 308, 69th Congress, 1st session, are sources of information regarding historical floods. Official State reports of agencies and departments that are concerned with the use of water often contain data and information about past floods. Water-Supply Paper 636-C, "The New England flood of March 1927", contains information regarding previous floods in New England. Specific references are given in the following text as to the sources of information regarding early floods.

Information of past floods in detail adequate for significant comparison diminishes very greatly as the floods antedate the periods of

A. RECORD OF HIGH-WATER MARKS FOR KENNEBEC RIVER ON A BUILDING IN HALLOWELL, MAINE.

B. DRYING OUT MORE THAN \$6,000,000 WORTH OF INSURANCE POLICIES AFTER THE FLOOD OF MARCH 1936 IN SPRINGFIELD, MASS., ON CONNECTICUT RIVER.

systematic observation, which as stated above began generally within the last 50 years. It is natural, however, that records pertaining to the more outstanding early floods should be preserved through the years and compared with those of later floods.

Although available flood records are invaluable, it is to be emphasized that the experience disclosed even by 100-year or 200-year records may have serious limitations in establishing a reliable long-time experience with respect to the magnitude and frequency of rare floods. A broad knowledge of practical hydrology and meteorology is essential to the most effective interpretation of the records in respect to the occurrence of rare floods.

The records of previous floods are generally compiled only for the major rivers, and therefore little definite information regarding the floods on the smaller tributaries and the small coastal streams is ordinarily available. The times of occurrence of the floods on such smaller streams, however, undoubtedly correspond more or less closely to the times of occurrence of the floods on the neighboring larger streams.

Penobscot River Basin

The flood of March 1936 was not a record-breaking flood in the Penobscot River Basin in Maine. Higher stages and higher flows occurred over most of the basin about May 1, 1923, during a flood that is generally believed to be the greatest on record for the Penobscot River. Property losses during the flood of 1923 consisted largely of damages to dams, especially to the dam at Bangor. Table 16 gives comparative data for the floods of 1923 and 1936 at various places in the Penobscot River Basin.

Table 16.- Maximum altitude, in feet, and discharge, in second-feet, at indicated places in the Penobscot River Basin during the floods of 1923 and 1936

Location	1923		1936	
	Altitude	Discharge	Altitude	Discharge
East Branch of Penobscot River at Grindstone	311.3	35,100	308.8	26,900
Mattawamkeag River near Mattawamkeag	205.4	43,900	201.6	31,300
Penobscot River at North Lincoln ferry	183.3	-	178.6	-
Penobscot River at West Lincoln	150.4	153,000	147.2	125,000
Penobscot River at Costigan	123.9	-	121.7	-
Penobscot River above Milford Dam	110.2	-	107.1	-
Penobscot River above Bangor Dam*	29.7	154,000	26.5	130,000

*Crest of dam lengthened about 1924.

According to records maintained since 1875 the flood of April 10, 1901, ranks third in size for the Penobscot River at the Bangor Dam, the maximum discharge on that date being 115,000 second-feet.

The following notes on earlier floods were obtained from available records and sources believed to be authentic. For floods prior to the beginning of systematic and continuous records in 1895, the information has generally been obtained from State and town histories, old newspapers, and other sources.

1846, March 29.- The flood resulting from the storm of March 25 to 28 was very destructive on the Penobscot River, owing to the breaking up of ice of great thickness and the formation of ice jams. The ice jam at Bangor was called the greatest in 100 years. During this flood three lives were reported lost, 44 sawmills and many dams were damaged, the toll bridge at Bangor was crushed, and many streets and buildings in that city were flooded.

1853, November 13.- The Penobscot River was the highest for 20 years. The dam on Kenduskeag River in Kenduskeag village was carried away, and one life was reported lost.

1866.- During the "heavy freshet" in the spring of this year Hiram F. Mills, a well-known hydraulic engineer, reported the flow of the Penobscot River at Treat's Falls, above Bangor, as 96,000 second-feet.*

1869, October.- The Piscataquis River was the highest since 1857. There was much damage to crops, and many logs were lost. The Penobscot River rose 9 feet at Old Town but the conditions were not serious on that river.

1870, February.- The Kenduskeag River rose 8 feet over the highway near Sixmile Falls. No serious damage occurred on the Penobscot River.

1895, April.- The Piscataquis River rose 8 feet above normal. No serious damage occurred on the Penobscot River.

1901, Apr. 10.- This flood was the greatest on record for the Penobscot River up to this time, with a maximum discharge at Bangor of 115,000 second-feet. A large highway bridge was carried away at Old Town, and highway and railroad bridges between Bangor and Brewer were damaged.

1909, Sept. 29.- This flood followed a long period of drought and was caused by a 4-day rain, the greatest observed total being 7.45 inches. The maximum discharge of the Penobscot River at West Enfield was

* Wells, W., The water powers of Maine, p. 106, 1869.

96,700 second-feet. On the Piscataquis River there were washouts and log jams, and a few bridges were carried away.

1923, May 1.- This flood, the largest of record in the Penobscot River Basin, was caused by a 3-day rain on a snow-covered drainage basin. The greatest recorded precipitation was 5.3 inches. The damage was confined mostly to dams. Streets were flooded in Costigan, Old Town, and Bangor.

Kennebec River Basin

Continuous and systematic records of discharge of the Kennebec River at Waterville, Maine, were commenced by the Hollingsworth & Whitney Co. in 1892. Since that time the discharge of the Kennebec River at Waterville has exceeded 100,000 second-feet five times on the dates shown in the following list.

	Second-feet
1895, Apr. 15	103,000
1896, Mar. 2	113,000
1901, Dec. 16	157,000
1923, May 1	135,000
1936, Mar. 19	154,000

The altitudes, in feet above mean sea level, reached during various floods on the Kennebec River at the gristmill at Norridgewock, Maine, as determined from marks on a foundation post under the mill, are given below.

	Altitude		Altitude
1855, Oct. 14	168.6	1901, Dec. 15	170.0
1863, Nov. 16	163.4	1917, June 18	162.9
1869, Oct.	169.1	1923, Apr. 30	168.0
1882, May 21	169.7	1936, Mar. 19	171.7

These stages were affected by the dam at Skowhegan. When the new dam was built, in 1920, the ledge was blasted out, and two 30-foot Taintor gates were installed with their sills 2 feet lower than the sills in the old dam. When these gates are opened the new dam has more discharge capacity than the old one.

The approximate altitudes reached during previous floods on the Kennebec River at the "freshet oak" in Winslow and at the Lockwood power house in Waterville are given in table 17.

Table 17.- Altitude, in feet, of previous floods on the Kennebec River at Winslow, Maine, and Waterville, Maine

Date	Winslow Altitude above Hollingsworth & Whitney Co. datum	Waterville Altitude above mean sea level
1832, May 22	104.8	-
1854, Oct.	102.8	-
1869, Oct.	102.7	-
1887, Apr. 30	102.2	-
1901, Dec. 16	105.1	56.2
1923, May 1	-	53.3
1936, Mar. 19	-	57.3

The altitudes, in feet above mean sea level, reached during previous floods on the Kennebec River at Hallowell, as determined from marks on the corner of the building at 136 Water Street, shown on plate 14, are given in the following list.

	Altitude
1826, Mar. 26	22.2
1870, Feb. 20	24.1
1896, Mar. 2	26.0
1936, Mar. 14	29.6

The following notes on earlier floods were obtained from available records and sources believed to be authentic. The information has generally been obtained from State and town histories, old newspapers, and other credible sources.

1770, January; 1775, October; 1785, October; 1794; 1795, February; 1807, February; 1814, May; and 1820, October.- These floods are referred to in the literature, although very little factual information was given. During these floods or freshets there was more or less damage to bridges, mills, and other structures near the rivers.

1826, March 26.- The most serious damages from this flood were in the tidewater section of the Kennebec River below Augusta, where ice jams at Browns Island and Swan Island caused the flooding of many buildings in Hallowell and Gardiner. The river stage at Hallowell, according to marks now maintained there, was about 7 feet below that reached by the flood of March 1936.

1832, May 22.- This flood, called the greatest freshet known on the Kennebec River since the settlement of the country, came after a late cold spring. At the "freshet oak" in Winslow the level reached by this flood was not exceeded until December 16, 1901, when the river rose 0.3 foot higher. During the flood a span of the Waterville bridge and the Reddington sawmill passed harmlessly under the Augusta bridge.

1839, January; 1843, April; and 1845, October.- At these times very high water occurred on the Kennebec River, and some of the streets in Hallowell and Gardiner were flooded.

1846, April.- During this flood the bridge at Norridgewock and part of the dam at Augusta went out. At Gardiner the river reached a height about 2 feet above that of 1826.

1855, October 14.- Much damage occurred on the Sandy River at Farmington and on the Kennebec River at North Anson and at Skowhegan and to the dam at Augusta.

1869, October 3-4.- This was a fall freshet caused by rain varying in amount from 3 inches in the lower part of the Kennebec River Basin to a greater amount in the headwaters. Much damage occurred along the Sandy River, and many bridges were lost, including the toll bridge over the Kennebec River at Waterville. The Kennebec River at Winslow rose to a level 2.1 feet below that of the flood of 1832 and at the gristmill in Norridgewock reached a level 0.6 foot above that of the flood of October 1855.

1870, February 20.- This flood was most serious in the tidal section of the Kennebec River below the Augusta dam, which was damaged. Many bridges went out in the upper river, and the losses were heavy throughout the basin. According to the Portland Daily Argus of February 18 to 20, 1870, highway bridges on the Kennebec River at Norridgewock and at Madison, three spans of the railroad bridge at Augusta, and bridges over the Sandy and Carrabassett Rivers were carried away. The Kennebec River at Gardiner rose 2 feet higher than in 1869.

1895, April.- This flood occurred after the ice had left the rivers and apparently caused no great damage.

1896, March 2.- This flood was most serious in the tidal section of the Kennebec River below the Augusta dam. Ice jams at Swan Island and at other points above that island caused the Kennebec River at Hallowell to rise to the highest stage known up to that time, according to records extending back to 1826. The maximum discharge of the Kennebec River at Waterville was 113,000 second-feet. The Gardiner-Randolph bridge over the Kennebec River was carried out by this flood.

1901, December 16.- This flood was caused by a combination of about 3 inches of rain between December 13 and 15, high temperatures, and the melting of snow. In the vicinity of Waterville the flood on the Kennebec River was called the highest since 1832. According to the Kennebec

Journal of December 17, 1901, there was 13 feet 1 inch of water passing over the Augusta dam, and the only flood that came anywhere near this one was the freshet of 1869, when 13 feet of water passed over the Augusta dam. At Madison the Kennebec River rose to a level 3 feet above that reached in 1869. According to marks made at the gristmill at Norridgewock, the Kennebec River was 0.9 foot higher than in 1869. The flow from the drainage area above Moosehead Lake during this flood was practically all retained by the dam at the outlet of the lake.

Androscoggin River Basin

In March 1936 the peak flow of the Androscoggin River from Rumford, Maine, downstream exceeded all past records. Table 18 shows the maximum flows for the major floods on the Androscoggin River at Rumford since the beginning of systematic records in 1892.

Table 18.- Average and peak discharges, in second-feet, for previous floods on the Androscoggin River at Rumford, Maine

Date	Average discharge for maximum day	Peak discharge
1893, May 18	38,100	-
1895, Apr. 15	55,200	-
1896, Mar. 2	39,000	-
1901, Apr. 22	32,700	-
1917, June 18	30,300	-
1923, Apr. 30	33,800	-
1927, Nov. 5	39,100	46,700
1936, Mar. 19	68,300	74,000

The following notes on earlier floods were obtained from available records and from other sources believed to be authentic. For floods prior to the beginning of more systematic and continuous records in 1892, the information has generally been obtained from State and town histories, old newspapers, and other sources.

1723, February.- This is the earliest freshet on the Androscoggin River to which any reference has been found. At this time the ice went out of the lower 30 miles of the river with probably no damage.

1770, January; 1780, winter; and 1784, fall.- References have been found to freshets that occurred on the Androscoggin River at these times, but no factual details were given.

1785, October 22.- Lapham's History of Bethel, Maine, states that the Androscoggin River at Bethel rose to the highest stage ever known, 25 feet above the normal. Investigations during 1936 indicate that this statement is probably correct and that the stage reached at Bethel was

1.5 feet higher than that of March 1936. Log jams may have affected the stage of the flood of 1785. Wheeler's History of Brunswick, Maine, published in 1878, states that the loss at Brunswick included one sawmill, two gristmills, one fulling mill, and three houses.

1814, May.- According to the Portland Eastern Argus of May 20, 1814, and Wheeler's History of Brunswick, much damage was caused by this flood, including the loss of 21 sawmills, many other buildings, and the toll bridge at Brunswick, where there was a rise of 28 feet in the stage of the Androscoggin River.

1820, October.- In the summer of 1820 the Androscoggin River was lower than it had been for many years. On October 16 and 17 heavy rains produced a freshet during which two men were drowned and much damage was caused to the lower dam and to the highway bridge at Brunswick.

1826, September.- Following a dry season heavy rains caused a freshet which swept away many bridges on the Androscoggin River, mostly in the upper reaches of the river.

1827, April; 1839, February; and 1843, May.- Freshets occurred at these times during which many bridges were carried away and much lumber was lost.

1846, March.- During this flood much damage was caused by an ice jam on the Androscoggin River below Livermore Falls, Maine, which raised the water 24 feet in about 24 minutes, according to the Augusta Farmer of April 1846. When the jam broke 27 buildings were carried away. Many bridges in the Androscoggin River Basin went out, including three in the town of Turner, and one each in the towns of Buckfield, Paris, Mechanic Falls, Durham, and Lisbon, all in Maine. The greatest damage occurred at Livermore Falls.

1854, May.- Although there was little damage, this was said to be the greatest freshet since 1814 on the Androscoggin River at Brunswick.

1869, October 4.- This flood, known as the "pumpkin freshet", was called the worst since 1826 on the Androscoggin River at Gorham, N. H., where two men were killed when a mill was swept away. It was caused by rain varying from 3 inches in the lower part of the Androscoggin River Basin to 6 inches in the headwaters. At the Columbia Mill, in Lewiston, Maine, the stage of the river was 3 feet below that which occurred in 1896. Damages were heavy, and many bridges were lost, including those at Dixfield and Leeds.

1870, February.- This ice freshet was caused by a 24-hour rainfall augmented by the melting of 24 inches of snow. Not much damage occurred in the Androscoggin River Basin.

1895, April 15.- The average flow of the Androscoggin River at Rumford for the maximum day of the flood was 55,200 second-feet. Charles A. Mixer, hydraulic engineer, Rumford Falls Power Co., described this flood as the highest in 30 years. The bridge at Canton Point was carried away.

1896, March.- The most destructive flood on the Androscoggin River previous to that of March 1936 occurred during the first week in March 1896. This flood was caused by a combination of rain and melting snow. The lower portion of the drainage basin was covered by about 1 foot of snow, and 6.2 inches of rain fell in 3 days at Lewiston. The flow of the Androscoggin River at Lewiston was estimated as 65,000 second-feet, the highest since the beginning of the records in 1850. Both the north and the south highway bridges at Lewiston were carried out, the railroad bridge was destroyed, and three persons were drowned at Brunswick.

1901, December.- The storm that produced the highest flow on record in the Kennebec River December 16, 1901, did not cause a serious flood on the Androscoggin River. The flow of the Androscoggin at Rumford was 27,800 second-feet.

1909, September.- The 4-day storm that followed a drought period and caused very high water in the Penobscot River Basin September 29, 1909, did not create serious flood conditions in the Androscoggin River Basin.

1927, November 5.- The great storm of November 2 to 5, 1927, caused very high water in the Androscoggin River. The greatest rainfall measured in the drainage basin was 6.21 inches at Gorham, N. H. The rainfall was somewhat less at points above Gorham, and much less in the lower portion of the drainage area, the total measured at Rumford and Lewiston being 3.81 and 1.44 inches respectively. Most of the damage occurred in Gorham and Berlin, N. H. The peak discharges of the Androscoggin River at Rumford and Lewiston were 46,700 and 53,100 second-feet respectively.

Saco River Basin

According to information obtained from old residents and from such records as are available, the flood of March 19-22, 1936, was the greatest flood ever known in the lower Saco River in Maine, both in stages of the river and in volume of flow. The following list shows altitudes, in feet above mean sea level, of high-water marks of floods of the Saco River as kept in Sand's blacksmith shop in West Buxton, Maine:

	Altitude
1843, May	162.8
1870, Apr.	162.8
1895, Apr. 17	162.8
1896, Mar. 2	166.2
1936, Mar.	168.2

The following notes on early floods were obtained from available records and sources believed to be authentic. The information has generally been taken from State and town histories, old newspapers, and other sources for floods prior to the beginning of more systematic and continuous records in about 1900.

1785, October.- This freshet on the Saco River was caused by a 3-day rainfall in southwestern Maine and in southeastern New Hampshire, the rainfall being as much as 9 inches in some places. Both spans of the bridge between Saco and Biddeford, Maine, were carried away, also many bridges, houses, and mills in the upper reaches of the river. Williamson's History of Maine contains the following statement with reference to this flood:

> It was in this section of the district that the uncommon freshet in October did such immense damage. Two days and nights it rained without cessation, as powerfully as was ever known. The water in the river, rising to a fearful height, swept away bridges and mills and otherwise made such destruction that seven towns the next year had their taxes, to the amount of 530 pounds, abated by the General Court.

1814, May.- This flood was called the greatest in 30 years. The Portland Eastern Argus of May 24 to 26, 1814, stated that "Bridges at Hiram, Limington, Standish, and three in Buxton have been destroyed. At Bonny Eagle Falls one sawmill; Moderation Falls two sawmills and one gristmill; Bar Mills one sawmill, two houses; Salmon Falls two sawmills, one gristmill; Union Falls five sawmills, one gristmill; Saco two sawmills, have been swept away, with three bridges."

1826, August.- Torrential rains in the White Mountain area caused the Saco River at Conway, N. H., to rise 24 feet in 7 hours by exact measurement, according to H. W. Ripley in Crawford's History of the White Mountains. During the night of August 28 the famous Willey disaster occurred, when an avalanche of earth and stone killed an entire family. The reference mark of the flood of 1826 on a brass tablet placed in 1926 on a 6-foot elm at Fryeburg, Maine, indicates a stage of the Saco River at Fryeburg 9.6 feet higher in August 1826 than that of March 1936. No records were found of an unusual flood in the lower reaches of the Saco River in 1826.

1827, May.- Bridges lost during this flood included two at Fryeburg, one at Buxton, one at Bar Mills, and one at Saco, all in Maine. Much damage was done to mills, and the streets of Saco were flooded.

1869, October 3-4.- This freshet resulted from a general storm extending over all New England. The rainfall ranged from 3 inches in the lower Saco River Basin to 6 inches and more in the upper portions of the basin. There was much damage to highways and buildings, and many logs were lost. The dam recently constructed at Union Falls went out.

1870, April 17-22.- The river stage at Saco, Maine, was 8.3 feet above the crest of the Bradbury Dam.

1895, April 17.- The Saco River reached a stage 10.5 feet above the crest of the dam at Union Falls. Damages in the Saco River Basin were not serious. At North Conway, N. H., it was called the worst flood since 1869.

1896, March 2.- The discharge of the Saco River at Biddeford was approximately 40,000 second-feet, caused by rain and melting snow. High water and ice took out many bridges and caused heavy damages to the lumber industry. This was the second largest flood on record at Biddeford. The Saco River reached a stage of 9.75 feet above the crest of Bradbury Dam in Saco.

1901, April 8.- There was no damage of any consequence from this flood. The Saco River reached a stage of 8.0 feet above the crest of Bradbury Dam in Saco.

1909, September.- This flood inflicted only slight damage in the Saco River Basin.

1923, May 2.- There was only slight damage from this flood in the Saco River Basin. The maximum discharge of the Saco River at Cornish was 23,000 second-feet.

1927, November 3-4.- The Saco River Basin suffered only slight damage from this flood. The maximum discharge of the Saco River at Cornish was only 10,800 second-feet.

Merrimack River Basin

The following information relating to previous floods in the Merrimack River Basin is the result of research by the U. S. Geological Survey and the Boston office of the Corps of Engineers, U. S. Army. Several individuals have also contributed portions of the information.

Pemigewasset River, vicinity of Plymouth, N. H.

On March 24, 1826, an unusual storm with torrential rains caused a freshet in northern New England, which extended into New York and Canada.

Samuel Currier, born in 1790, was living at the time of this flood at what is now known as the old Currier estate, about 1½ miles below the village of Plymouth. He drilled a hole in the rock ledge on the right bank of the Pemigewasset River and placed in it a 1 x 14-inch iron bolt to mark the peak stage. This bolt is still in place about 1.75 miles downstream from the Geological Survey river-measurement station at Plymouth, and has been found to have an altitude of 477.90 feet above mean sea level. It was described by Samuel Currier to his son, Daniel H. Currier, who in turn passed the information on to his son, Dean S. Currier. James B. Clifford and Dean S. Currier identified the bolt. George Clark and Henry Johnson, both of Plymouth, N. H., confirm its history.

Members of the Currier family, much interested in the floods of the Pemigewasset River, have maintained marks of the crest stages of other major floods since 1826. These marks are 0.5 mile downstream from the 1826 flood mark. Their altitudes, in feet above mean sea level, are given below:

Date of flood	Mark	Altitude
1869, Oct. 4	Railroad spike in butternut tree	480.30
1895, Oct. 14	Mark, 6 inches above 1869 flood mark on butternut tree	480.80
1927, Nov. 4	Railroad spike on 48" elm tree	484.19
1936, Mar. 19	Railroad spike on 48" elm tree	485.40

At the old Currier estate and at the Geological Survey gaging station at Plymouth, the flood of March 1936 was respectively 1.2 feet and 1.6 feet higher than the flood of November 1927.

Merrimack River at Manchester, N. H.

The following record of flood heights, in feet, of the Merrimack River has been obtained from flood marks in one of the mills of the Amoskeag Co. at Manchester, N. H.

	Flood height
1895, April	37.5
1896, March	38.8
1927, November	36.0
1936, March	52.3

Merrimack River at Nashua, N. H.

The crest of the flood of March 1896 was marked on a factory stairway in Hudson, N. H., by Mr. Cummings, of the Cummings Bros.' carriage factory. The crest of the flood in March 1936 was 10.1 feet higher than the mark of 1896. Mr. Cummings, who was 84 years of age at the time of the flood of March 1936, states that the flood of March 1896 was the highest that any of the older residents of Nashua could recall prior to that of March 1936.

Merrimack River at Lowell, Mass.

Records of stages of the Merrimack River at Lowell, Mass., kept by the water-power companies since 1846 show that the city of Lowell has experienced a considerable number of large floods, the six greatest floods of record having occurred in April 1852, April 1870, April 1895, March 1896, November 1927, and March 1936. The following table shows heads on the Pawtucket Dam as obtained from hydrographs of these floods shown in figure 7, which was prepared from information obtained from the Proprietors of Locks and Canals on Merrimack River at Lowell, Mass.:

	Feet		Feet
1852, Apr. 23	13.6	1896, Mar. 3	12.8
1870, Apr. 21	12.7	1927, Nov. 6	10.6
1895, Apr. 16	11.5	1936, Mar. 20	20.0

In 1785 there was a flood of substantially the same magnitude as in 1852. Notes by the late James B. Francis, engineer in charge of the water power at Lowell from 1845 to 1885, made immediately after the flood of 1852, read as follows:

> It rained at Lowell from Sunday, April 18, at about noon to Wednesday night, almost continuously. Mr. Daniel Brooks, the gate keeper at the guard gates, Northern Canal, states that the great rock near the middle of the dam was just covered when the water at his gage stood at 10 feet 4 inches. I have seen only one person (Capt. Elisha Ford) who says he ever saw that rock covered before. Mr. Ford says it has not been covered before since October 1785, when he was about 7 years old. That freshet I have always understood to be the highest ever known, and that none of the old people living at that time recollected anything like it. It is therefore almost certain that the water at the head of Pawtucket Falls has not been so high for 120 years as in this freshet.

Mr. Francis in his notes rated the flood of 1852 as the highest known flood on the Merrimack River at Lowell in 120 years; accordingly, the flood flood of 1936 is the highest known at this place in 200 years.

Merrimack River at Lawrence, Mass.

The Essex Co. has kept records of stage above the dam at Lawrence, Mass., since 1846. The following table shows the date, gage height, in feet, and head on the dam, in feet, for the major floods since that date:

	Gage height	Head on dam
1852, Apr. 23	44.12	10.00
1870, Apr. 21	43.48	9.36
1896, Mar. 3	43.90	9.78
1927, Nov. 6	43.46	9.34
1936, Mar. 14	43.00	8.88
1936, Mar. 20-21	48.00	13.88

In using these records for comparisons it should be kept in mind that the crest of the dam may not always be swept entirely clear of flashboards during the major floods.

Thames River Basin

There was an outstanding flood in the Thames River Basin in March 1876. Volume 16 of the Federal Census of 1880 states that on March 25-26, 1876, a general storm occurred in Connecticut, Rhode Island, and Massachusetts, and that in the vicinity of Providence, R. I., 4.06 inches of rain fell on March 25, and the total rainfall in 6 days was 7.66 inches. In that flood the head on the dam on the Shetucket River at Greenville, Conn., was reported as 12 to 14 feet. The census report states that the spillway of this dam was 326 feet long and that in 1881 work was started on a new dam (presumably the present one) about 1,200 feet below the old one, with the same crest elevation and a length of 400 feet.

The crest length of the present dam was measured in 1936 as 401 feet. The head on this dam was 11.1 feet on March 12, 1936, and probably resulted from the normal run-off from the drainage basin being augmented by the failure of dams upstream. It is probable that the maximum head on the dam at the time of the maximum normal run-off from the drainage basin on March 19, 1936, was about 10.5 feet. From this information it appears that the discharge at Greenville in March 1876 was as much or more than that of March 1936.

The census report for 1880 and the Hartford Courant of March 27, 1876, concur in stating that in the flood of 1876 the Shetucket River ran with a depth of 10 feet over the dam at Taftville, Conn., and that the length of the spillway was 400 feet. This dam was damaged in the flood of 1936.

The Willimantic news section of the Hartford Times of February 15, 1886 states: "The heavy rain Friday caused a rise of several feet in the Willimantic and Natchaug Rivers, only less by 6 inches than the great flood of March 26, 1876."

Connecticut River Basin

There is probably no region in New England where longer, more complete, or more authentic records of previous floods are available than in the Connecticut River Basin, especially in the lower portion of the basin, which was settled by white men over 300 years ago. Unusual events, such as great floods or freshets, were described, often in considerable detail, in church records, local histories, and newspapers. Permanent marks made by interested parties have furnished durable records of the heights reached by some notable early floods. From those sources has been drawn the information relative to the occurrence of floods prior to the beginning of systematic records.

A summary of information regarding stages of previous floods in the lower Connecticut River Basin has been assembled in table 19 "Crest stages of floods on the Connecticut River at Holyoke and Springfield, Mass., and at Hartford, Conn." This information has been collected by the U. S. Geological Survey and the Hartford office of the U. S. Weather Bureau from various sources, which include the Report of the Chief of Engineers, U. S. Army, for 1878; U. S. Geological Survey Bulletin 140; U. S. Geological Survey Water-Supply Papers 35, 47, 65, 82, 97, 124, 162, 165, 201 and 636-C; Reports of the Connecticut River Bridge District Commission; U. S. Weather Bureau Daily River Stages; and letters, diaries, historical manuscripts and newspapers, particularly the Connecticut Courant and the Hartford Courant, of which files of issues since 1764 are available. In addition to the information shown in the table, references were found that great floods occurred at Hartford, Conn., in 1780 and 1785 and moderate floods on or about the following dates:

1765, Mar. 11	1823, Mar. 1	1834, Feb. 23
1794, Jan. 23	1825, Mar. 1	1835, Mar. 14
1795, Jan. 31	1826, Feb. 27	1837, Mar. 22
1817, Mar. 25	1827, Mar. 10	1838, Mar. 17
1819, Mar. 15	1829, Mar. 13	1840, Feb. 23
1820, Mar. 26	1830, Feb. 2	1842, Feb. 3
1821, Mar. 13	1831, Mar. 6	1847, Dec. 3
1822, Feb. 21	1832, Mar. 6	1848, Nov. 16
1822, Mar. 3	1833, Mar. 20	1849, Mar. 19

High-water marks cut on a vertical timber of a tobacco shed in the Connecticut River Valley about 5 miles upstream from the U. S. Weather

Table 19.-Crest stages of floods of the Connecticut River at Holyoke and Springfield, Mass., and at Hartford, Conn.

Year	Holyoke, Mass.		Springfield, Mass.		Hartford, Conn.	
	Date	Stage (feet)a	Date	Stage (feet)b	Date	Stage (feet)c
1639	-	-	-	-	March 18	(d)
1642	-	-	-	-	May-June	(d)
1683	-	-	-	-	July-August	26.0
1692	-	-	-	-	February-March	26.2
1767	-	-	-	-	January 12	(d)
1793	-	-	-	-	February 21	(d)
1798	-	-	-	-	March 25	(d)
1801	-	-	March 20	21.7	March 20	27.5
1807	-	-	-	-	February 1	(d)
1818	-	-	-	-	March 3	(d)
1818	-	-	-	-	May 6	(de)
1824	-	-	-	-	February 12	(df)
1824	-	-	-	-	December 30	(dg)
1827	-	-	-	-	March 30	(dh)
1828	-	-	-	-	February 11	22.8
1836	-	-	-	-	April 4	(di)
1838	-	-	-	-	January 28	23.0
1839	-	-	-	-	January 29	j24.2
1841	-	-	-	-	January 9	26.3
1843	-	-	January 8 (9)	20.3	-	-
1843	-	-	-	-	March 29	27.2
1843	-	-	April 18	20.7	-	-
1844	-	-	-	-	December 25	19.5
1845	-	-	-	-	February 25	19.0
1845	-	-	-	-	April	19.0
1846	-	-	-	-	March 16	18.8
1847	-	-	-	-	April 25	21.2
1847	-	-	-	-	December 14	17.0
1848	-	-	-	-	January 17	16.0
1849	-	-	-	-	November 11	17.5
1850	May 1	9.5	-	-	May 1	21.3
1850	May 8	(k)	-	-	May 8	22.0
1851	-	-	-	-	January 1	14.5
1852	-	-	April 24	19.5	April 24	23.1
1853	-	-	-	-	May 29	16.0
1853	-	-	-	-	November 15	20.5
1854	May 1	10.5	May 1	22.3	May 1	29.8
1855	-	-	-	-	April 22	21.5
1856	-	-	-	-	April 12	18.0
1856	-	-	-	-	August 9	18.1
1856	-	-	August 21	18.8	August 22	23.3
1857	-	-	February 21	13.5	February 21	19.5
1857	-	-	-	-	October 28	18.2
1858	-	-	-	-	March	12.2
1859	-	-	March 20	20.5	March 20	26.4
1860	-	-	-	-	March 3	16.0
1861	-	-	April 15	16.0	April 17	21.5
1862	April 20	12.5	April 20	22.2	April 21	28.7
1863	-	-	-	-	April 20	22.2
1864	-	-	April 29	10.3	April 29	17.2
1865	-	-	March 18	18.8	March 20	24.8
1865	-	-	-	-	May 14	18.0
1866	-	-	-	-	February 26	20.8
1867	-	-	February 17	13.0	February 17	17.2
1867	-	-	April 17	13.4	April 18	20.0
1867	-	-	-	-	August 18	16.2
1868	-	-	-	-	March 19	21.5
1868	-	-	-	-	May 23	20.0
1869	April 22	11.2	April 21	21.0	April 23	26.7
1869	October 5	12.7	October 4	21.5	October 6	26.3
1870	January 4	7.5	-	-	January 4	19.2
1870	February 20	8.3	-	-	February 20	21.3
1870	April 20	9.5	April 20	19.0	April 21	25.3
1871	-	-	-	-	March 15	16.5
1871	-	-	May 6	13.0	May 7	18.7
1872	-	-	April 12	14.2	April 13	21.0

a Above zero of gage, altitude 97.98 feet above mean sea level.
b Above zero of gage, altitude 37.76 feet above mean sea level.
c Above zero of gage, altitude 0.55 foot below mean sea level.
d Great flood.
e As high as March 3, 1818.
f Highest since 1818.
g 17 to 19 feet above summer level.
h Highest since 1807, 20 feet above ordinary low water.
i Nearly 20 feet.
j Highest since 1801.
k Several inches higher than May 1, 1850.

Table 19.-Crest stages of floods of the Connecticut River at Holyoke and Springfield, Mass., and at Hartford, Conn.--Continued

Year	Holyoke, Mass.		Springfield, Mass.		Hartford, Conn.	
	Date	Stage (feet)a	Date	Stage (feet)b	Date	Stage (feet)c
1873	-	-	April 12	15.0	April 13	21.2
1873	October 22	5.2	-	-	October 22	15.6
1874	January 9	8.0	January 9	17.5	January 9	23.9
1874	May 23	4.8	-	-	May 23	16.3
1875	April 5	4.5	April 5	15.0	April 6	18.7
1875	April 18	6.0	-	-	April 18	18.4
1876	April 16	9.2	April 16	17.0	April 16	22.0
1877	March 29	8.8	March 29	16.5	March 29	22.9
1878	April 14	7.0	-	-	-	-
1878	April 30	6.5	-	-	April 30	18.5
1878	December 11	9.2	December 11	18.5	December 13	24.5
1879	May 1	8.5	May 1	15.8	May 1	21.5
1880	April 6	5.7	April 6	10.8	April 7	15.4
1881	-	-	April 26	11.5	April 26	16.5
1881	December 31	7.3	-	-	-	-
1882	-	-	March 3	10.8	-	-
1882	May 30	5.2	-	-	May 31	14.8
1882	September 24	8.1	-	-	-	-
1883	April 15	7.6	April 14	14.6	April 15	20.5
1884	March 28	7.6	March 28	16.0	March 28	21.6
1884	April 20	7.1	-	-	April 20	19.9
1885	April 24	6.5	April 24	13.3	April 24	18.0
1885	November 10	7.3	-	-	November 8	16.8
1886	January 6	6.4	-	-	January 7	18.4
1886	April 2	8.4	April 2	16.0	-	-
1886	May 4	2.2	-	-	May 4	21.8
1887	April 12	8.7	April 12	17.0	April 13	22.5
1888	-	-	-	-	April 8	19.4
1888	May 1	9.6	May 1	17.5	-	-
1888	December 18	7.0	-	-	-	-
1889	April 21	4.8	-	-	-	-
1889	November 29	5.1	November 29	11.3	November 30	15.6
1890	May 3	5.3	-	-	May 9	15.2
1890	September 18	6.1	-	-	-	-
1890	-	-	October 21	11.7	-	-
1890	-	-	-	-	October 26	16.0
1891	January 25	4.2	-	-	January 24	17.5
1891	April 19	7.1	April 17	14.2	April 17	19.8
1892	January 15	6.9	January 16	13.8	January 16	18.3
1892	April 5	5.7	-	-	April 4	16.0
1893	May 5	8.4	May 5	18.2	May 6	24.0
1894	April 25	5.0	April 26	10.4	April 25	13.8
1895	April 16	9.6	April 17	20.2	April 16	25.7
1896	March 2	9.5	March 3	20.2	March 3	26.5
1897	April 10	5.0	-	-	April 10	17.4
1897	June 11	7.5	June 12	15.2	June 12	20.6
1897	July 16	6.0	-	-	July 16	20.8
1897	December 16	7.3	-	-	December 17	20.4
1898	-	-	March 15	15.5	March 16	20.0
1898	March 21	7.5	-	-	March 22	21.2
1899	April 26	7.8	April 27	16.2	April 27	22.0
1900	February 13	9.4	February 14	17.0	February 15	23.4
1900	April 21	10.8	April 21	17.1	April 22	22.8
1901	April 8	11.4	April 9	19.8	April 9	26.4
1901	December 16	8.5	-	-	December 17	20.0
1902	March 4	10.8	March 4	19.3	March 4	25.5
1902	October 30	7.3	-	-	-	-
1903	March 24	10.6	March 25	17.4	March 25	23.3
1903	June 22	7.6	-	-	-	-
1904	March 27	10.0	March 28	15.3	March 28	19.5
1904	-	-	-	-	April 30	21.4
1905	April 1	10.6	April 1	18.4	April 2	24.0
1906	April 17	9.3	April 17	15.1	April 18	20.1
1906	May 29	8.0	-	-	May 30	18.5
1907	March 31	7.5	-	-	April 1	16.0
1907	April 28	7.7	-	-	April 29	15.7
1907	November 8	9.0	November 8	15.5	November 9	20.3
1908	February 17	7.5	-	-	February 18	18.5
1908	March 30	7.6	March 30	13.1	March 31	18.2
1908	May 2	7.3	-	-	May 3	17.5

a Above zero of gage, altitude 97.98 feet above mean sea level.
b Above zero of gage, altitude 37.76 feet above mean sea level.
c Above zero of gage, altitude 0.55 foot below mean sea level.

Table 19.-Crest stages of floods of the Connecticut River at Holyoke and Springfield, Mass., and at Hartford, Conn.--Continued

Year	Holyoke, Mass.		Springfield, Mass.		Hartford, Conn.	
	Date	Stage (feet)a	Date	Stage (feet)b	Date	Stage (feet)c
1909	April 16	10.6	April 16	18.7	April 17	24.7
1910	January 23	7.5	January 23	15.0	January 23	20.2
1910	March 2	7.5	-	-	March 3	18.6
1910	March 27	7.5	-	-	-	-
1911	April 16	7.2	April 17	11.9	April 17	15.5
1911	-	-	-	-	October 20	16.0
1912	April 9	9.3	April 9	16.1	April 10	21.2
1913	March 29	12.0	March 29	20.2	March 29	26.3
1914	April 22	9.9	April 22	17.0	April 23	21.9
1915	February 26	8.8	February 26	15.6	February 27	20.6
1915	April 13	7.2	-	-	April 14	15.8
1915	July 9	7.5	-	-	July 10	16.4
1915	August 5	7.0	-	-	August 6	16.5
1916	February 27	6.0	-	-	February 28	17.7
1916	April 3	8.9	April 3	15.6	April 3	20.8
1917	March 30	7.4	March 29	13.5	March 30	18.3
1918	April 4	7.9	April 4	14.0	April 4	18.8
1919	March 29	9.2	March 30	15.0	March 30	19.8
1919	May 23	7.9	-	-	May 24	19.1
1920	March 28	9.8	March 29	17.3	March 30	22.5
1920	April 25	8.6	-	-	April 25	20.2
1920	December 16	8.1	-	-	December 17	18.8
1921	March 11	8.9	March 11	15.5	March 12	19.9
1921	May 2	7.6	-	-	May 2	16.8
1922	April 13	11.4	April 13	19.4	April 14	24.5
1923	April 7	9.4	April 7	16.8	April 8	22.0
1923	May 1	8.4	-	-	May 2	20.4
1923	December 2	7.1	-	-	December 8	15.9
1924	April 8	7.8	April 8	14.5	April 8	20.7
1925	February 14	6.4	-	-	February 14	16.2
1925	March 31	9.5	March 31	16.0	March 31	20.5
1926	April 27	9.1	April 27	16.0	April 27	20.8
1927	March 20	8.0	March 21	13.3	March 20	19.0
1927	November 5	14.8	November 6	22.4	November 6	29.0
1927	December 10	8.2	-	-	December 10	17.9
1928	April 9	8.7	April 9	13.5	April 10	18.6
1929	March 25	8.2	March 25	14.0	March 25	18.9
1929	April 28	7.0	April 30	12.7	May 1	17.7
1930	April 9	5.8	April 10	10.4	April 10	14.2
1931	April 12	8.5	April 12	13.1	April 13	17.9
1931	June 11	7.4	June 11	12.8	June 11	17.6
1932	April 14	9.5	April 14	15.3	April 14	20.5
1932	November 21	7.9	November 21	13.2	November 21	18.0
1933	April 20	12.4	April 20	19.9	April 21	26.0
1934	April 14	10.3	April 14	17.7	April 14	23.1
1935	January 11	9.0	January 11	15.5	January 12	20.7
1936	March 19-20	16.8	March 20	28.6	March 21	37.6

a Above zero of gage, altitude 97.98 feet above mean sea level.
b Above zero of gage, altitude 37.76 feet above mean sea level.
c Above zero of gage, altitude 0.55 foot below mean sea level.

146875—37——30

Bureau gage on the Connecticut River at Hartford, Conn., three-quarters of a mile back from the east bank of the river, half a mile north of the crossroads at the village of South Windsor, Hartford County, and 150 feet northwest of the culvert where Newberry Brook crosses U. S. Highway 5 indicate that the floods of November 1927 and May 1854 were 8.4 feet and 8.9 feet respectively lower than the flood of March 1936. It should be remembered, however, that this record of the flood of 1854 involves uncertainties of probable minor amount owing to frost action and the possible settlement of the foundations of a timber shed during a period of 80 years.

At Middletown, Conn., high-water marks of various floods of the Connecticut River have been chiseled on the exterior of a brick wall of a building at the southeast corner of Court and Water Streets, a quarter of a mile below the railroad bridge and about 150 feet back from the west bank of the river. The altitudes, in feet above mean sea level, of these flood marks of the Connecticut River at Middletown, as shown in table 20, were determined by the Connecticut State Planning Board. The table also shows the flood heights, in feet and inches, at Middletown "from 6 inches above the zero of the gage board at the Portland quarries, which it is believed is extreme low water at Middletown as near as can be ascertained", as given in the Report of the Secretary of War, 1868-69, vol. 2, p. 761.

Table 20.- Altitude of flood crests of the Connecticut River at Middletown, Conn.

Date	Court and Water Streets Altitude above mean sea level	Portland quarries Altitude above low water
1801	23 feet 8½ inches	-
1814	-	22.6 feet
1843	22 feet 11 inches	-
1848	-	22.0 feet
1852, April	19 feet 5 inches	-
1853, November	17 feet 2 inches	-
1854, May	25 feet 8½ inches	24.6 feet
1856, August	18 feet 1 inch	-
1859, March	21 feet 10 inches	-
1860	-	22.0 feet
1861	-	21.4 feet
1862, April	23 feet 9½ inches	-
1865, March	20 feet 0 inch	-
1927, November	-	21.6 feet
1936, March	-	29.9 feet

The meager records that are available for some outstanding early floods on the Farmington River are presented in table 21, the information on recent floods being included so that some correlation of the magnitudes of the earlier floods may be made.

Table 21.- Comparative data for previous floods on the Farmington River

Date	New Boston, Mass. (discharge, in second-feet per square mile)	Collinsville, Conn.	
		Upper dam (depth over dam, in feet)	Boiler house (altitude, in feet, above mean sea level)
1869, October	--	10	--
1878, December	--	--	283.80
1896, March	--	--	283.21
1900, February	--	--	282.36
1913, October	34.8	--	--
1921, March	27.4	--	--
1924, April	37.5	7.4	282.07
1927, November	85.9	9.0	283.01
1932, November	39.2	5.2	--
1936, March	98.7	9.0	282.91

The records at New Boston, Mass., were obtained at the river-measurement station of the U. S. Geological Survey. The drainage area at that place is 92.0 square miles.

The upper dam at Collinsville, Conn., is reported to have remained practically unchanged from prior to 1869 until 1935, when the length of the spillway was increased from 329.6 feet to 342.5 feet. There were no flashboards on the dam during any of the floods recorded. The record for 1869 is taken from Reports on the water power of the United States, in Tenth Census, 1880, vol. 16, p. 242. This flood was caused by a general storm throughout New England, in which 12.55 inches of rain was measured at Canton, Conn. The remaining records of depths over this dam were furnished by the Collins Co.

The altitudes in the fourth column were determined in 1936 by the Corps of Engineers, U. S. Army, from the high-water marks and dates of the floods as engraved on a plank on an interior wall of the Collins Co.'s boiler house, about a quarter of a mile downstream from the upper dam at Collinsville. It is stated that during the floods of December 1878, March 1896, and February 1900 the stage may have been affected by ice jams.

Referring to the Farmington River at Simsbury, Conn., the Hartford Courant of Tuesday, May 2, 1854, states: "The Farmington River rose very rapidly and at its greatest height on Sunday evening was about 1 foot higher than in the flood of 1801."

Additional information relative to previous floods on the Connecticut River may be found in the report of the Chief of Engineers, U. S. Army, for 1878 and in the other publications listed above.

Housatonic River Basin

There are few records of previous floods on the Housatonic River except those published in the water-supply papers of the U. S. Geological Survey since 1900.

The following are miscellaneous records of the depth of water over the dam on the Housatonic River at Derby, Conn., during some of the previous floods:

	Depth over dam, in feet
1869, October	13
1874	7.8
1882, September	6.6
1927, November	5.4
1932, November	3.6
1936, March	8.4

The records for 1869, 1874, and 1883 are taken from Reports on the water power of the United States, Tenth Census, 1880, vol. 16, pp. 310, 311. The report states in part: "In October 1869, while the dam was in process of construction, and indeed nearly complete, water poured 13 feet deep over the practically finished dam, and undermined and destroyed 160 feet of its length. No records could be found to show whether the 13-foot stage in 1869 occurred before the dam failed, or whether the crest of the dam had been completed. A description of the construction of the Derby dam in "The history of the old town of Derby--1880", states that a "bed and apron were put in place for about 100 feet in the middle of the river, the remainder of the dam entirely completed, and then the workmen returned to the middle gap in the river and had very nearly brought it to perfection, when a heavy flood came, tore out about 200 feet of the structure to its foundations, and rolled it down the stream". The dam when completed in 1870 had a spillway which was variously stated as 636 and 637 feet in length. There were no flashboards in use before 1883. A photograph dated Jan. 23, 1891, shows a torrent of water passing over and through the dam and notes that the end of the dam was destroyed the previous day. It is probable that when reconstructed the spillway was increased to its present length of 675 feet.

The records for 1927, 1932, and 1936 were furnished by the Connecticut Light & Power Co. Flashboards to a height of 1.5 feet remained in place during the flood of November 1932, and the depth of 3.6 feet is that over the top of the flashboards. The floods of November 1927 and March 1936 swept away the flashboards. The maximum discharge over the dam from the 1,581 square miles of drainage area during the flood of March 1936 was determined as 44 second-feet per square mile. Using a like coefficient of discharge and a spillway length of 636 feet, the maximum discharge over the dam during the flood of October 1869 was determined as in excess of 70 second-feet per square mile.

The following tabulation entitled "Height of water freshets [of Housatonic River] above high tide at Birmingham [now a part of the city of Derby and possibly recorded at a point not a great distance below the present Derby dam], by John Whitlock" is found in "The history of the old town of Derby - 1880".

Date	Height	Date	Height
1853, Nov. 13	17 feet 7 inches	1875, Feb. 4	8 feet 5½ inches
1854, Apr. 30	19 feet 8½ inches	1875, Feb. 25	11 feet 9 inches
1857, Feb. 9	22 feet 3 inches (ice freshet)	1875, Aug. 19	11 feet 6 inches
1863, March	14 feet	1876, Mar. 26	12 feet 8½ inches
1866, Feb. 12	13 feet 1½ inches	1876, Mar. 29	12 feet 2½ inches
1867, Feb. 10	14 feet 5/8 inch	1876, Apr. 4	10 feet 11½ inches
1868, Mar. 15	12 feet 2 1/8 inches	1877, Mar. 9	12 feet 5 inches
1869, Oct. 4	16 feet	1877, Mar. 28	10 feet 5 inches
1870, Feb. 19	13 feet 5¼ inches	1878, Feb. 23	10 feet 5 inches
1870, Apr. 19	11 feet 7½ inches	1878, Dec. 10,11	15 feet 9 inches
1874, Jan. 8	17 feet 4½ inches	1879, Feb. 12	10 feet 9 inches
1874, Feb. 25	11 feet 9½ inches		

The Derby history was published in 1880, and it is not known whether the observer continued the records after that time. The heights recorded for floods occurring during the winter and early spring in years prior to the completion of the Derby dam in 1870 may have been seriously affected by ice jams. After 1870, because of the dam, the ice jams are believed to have been less numerous and of minor effect.

The following accounts have been found of two previous floods of the Naugatuck River at Ansonia, Conn. The Naugatuck River is tributary to the Housatonic River at Derby, Conn.

"November 13, 1853, the water rose in the Naugatuck 17 feet 7 inches * * * and was one foot higher than in the great freshet of 1841." (History of the old town of Derby, 1880.)

May 1854, "The water has never been known to be as high. It is from 12 to 15 inches higher than on November 13, 1853." (Hartford Courant, May 3, 1854.)

Previous storms

A broad study of great floods necessarily involves an associated study of the storms that caused them, so far as the information will permit. It is found that more information is available regarding the rain storms and the spring break-ups that caused some of the earlier floods than about the floods themselves. Some information about the great storms before the beginning of systematic meteorologic records has occasionally been obtained from church records, local histories, and the newspapers, where some of the details, usually very meager, have been recorded.

The following list gives dates of some of the notable storms in New England in past years:

1639, Mar. 16	1814, May 13-19	1876, Mar. 25-26
1692, Feb. 23	1823, Mar. 5-6	1886, Feb. 11-14
1767, Jan. 12	1826, Mar. 24-25	1895, Oct. 12-14
1770, Jan. 7-8	1830, July 24-25	1897, July 12-14
1785, Oct. 20-22	1854, Apr. 27-May 1	1927, Nov. 3-4
1801, Mar. 18-22	1869, Oct. 3-4	

Descriptions and discussions of these storms may be found in U. S. Geological Survey Water-Supply Paper 636-C, pp. 84-86; Journal of the Boston Society of Civil Engineers, vol. 11, no. 8, October 1924, pp. 371-372; and in an unpublished "Table of freshets in the Connecticut River at Hartford, Conn.," by William W. Neifert, local forecaster, office of the U. S. Weather Bureau, Hartford, Conn., 1913. The storm of November 1927 is discussed in the Journal of the Boston Society of Civil Engineers, September 1930, pp. 293-464; U. S. Geological Survey Water-Supply Paper 636-C, pp. 47-60; and in the Journal of the New England Waterworks Association, vol. 42, Mar. 1928, pp. 91-103. The notable storm of September 1932, which was not associated with a flood, is discussed in the Journal of the New England Waterworks Association, vol. 47, June 1933, pp. 164-183. Probably the most exhaustive study of rain storms in the eastern United States is contained in Technical Reports, the Miami Conservancy District, Part V, entitled "Storm rainfall of eastern United States", a revised edition of which was published in 1936.

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