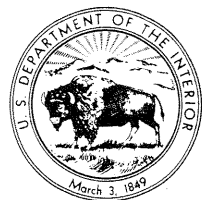


FLOODS IN NEW YORK, 1972,
WITH SPECIAL REFERENCE TO TROPICAL STORM AGNES

U.S. GEOLOGICAL SURVEY

Water-Resources Investigations 34-75

Prepared in cooperation with
New York State Department of Transportation



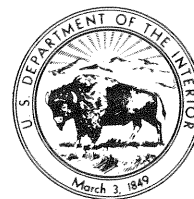
BIBLIOGRAPHIC DATA SHEET	1. Report No.	2.	3. Recipient's Accession No.
4. Title and Subtitle FLOODS IN NEW YORK, 1972, WITH SPECIAL REFERENCE TO TROPICAL STORM AGNES		5. Report Date January 1976	6. USGS/WRI-34-75
7. Author(s) F. Luman Robison		8. Performing Organization Rept. No.	
9. Performing Organization Name and Address U.S. Geological Survey, Water Resources Division Room 343 Post Office & Court House Albany, New York 12201		10. Project/Task/Work Unit No.	
		11. Contract/Grant No.	
12. Sponsoring Organization Name and Address U.S. Geological Survey, Water Resources Division Room 343 Post Office & Court House Albany, New York 12201		13. Type of Report & Period Covered Final	
		14.	
15. Supplementary Notes Prepared in cooperation with the New York State Department of Transportation			
16. Abstracts Intense rainfall associated with Tropical Storm Agnes in late June resulted in the worst flood damage in the history of New York State. Flooding that began in Westchester County on June 19 was followed by widespread flooding in the Southern Tier and Finger Lakes regions on June 23. Maximum known peak discharges were measured at three major rivers in the State. The Allegheny River crested at the highest discharge of record on June 23 (73,000 cubic feet per second or 2,070 cubic metres per second). The Chemung River at Chemung reached the highest discharge of record on June 24 (189,000 cubic feet per second or 5,350 cubic metres per second). The Genesee River raised the water at Mount Morris Dam to the highest level of record (755.8 feet or 230.4 metres). Flooding associated with Tropical Storm Agnes caused 24 deaths and evacuation of 100,000 residents. Damage to private property in the State has been estimated at more than \$400 million; to public property, \$221 million; and to agriculture \$84 million.			
17. Key Words and Document Analysis. 17a. Descriptors *Flood damage, *Flood data, *Peak discharge, *Precipitation, New York.			
17b. Identifiers/Open-Ended Terms *Tropical Storm Agnes, Southern Tier, Allegheny River, Chemung River, Finger Lakes, Genesee River, Long Island.			
17c. COSATI Field/Group			
18. Availability Statement No restriction on distribution.		19. Security Class (This Report) UNCLASSIFIED	21. No. of Pages 98
		20. Security Class (This Page) UNCLASSIFIED	22. Price

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January 1976

UNITED STATES DEPARTMENT OF THE INTERIOR

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CONTENTS

	Page
Conversion factors.....	vi
Abstract.....	1
Introduction.....	2
Acknowledgments.....	3
Westchester County Floods, June 18-19.....	4
Tropical Storm Agnes, June 20-25.....	10
Chronological descriptions of floods caused by Tropical	
Storm Agnes.....	14
Western and Central regions (areas of extreme flooding)....	14
Central region (outside the areas of extreme flooding).....	21
Eastern region.....	24
Southeastern region.....	26
Northern region.....	27
Summary of other floods.....	64
Chronological descriptions of other floods within regions.....	66
Western region.....	66
Central region.....	69
Eastern region.....	72
Southeastern region.....	77
Northern region.....	82
References.....	88

ILLUSTRATIONS

Page

Figures 1-5. Maps showing:

1. Precipitation in southeastern New York,
June 18-19..... 6
2. Location of flood-measurement sites in
Westchester County, June 1972..... 7
3. Precipitation in New York, June 20-25..... 28
4. Unofficial observations of rainfall in
Allegany and Steuben Counties, June 21-26.... 29
5. Location of flood-measurement sites in
central and western New York, June 1972..... 30

6-10. Profiles of:

6. Cohocton River from Bath to the mouth at
Painted Post, flood of June 1972..... 32
7. Canisteo River from Addison to the mouth,
flood of June 1972..... 33
8. Tioga River from New York-Pennsylvania line
to the mouth, flood of June 1972..... 34
9. Chemung River from Corning to Chemung, flood
of June 1972..... 35
10. Allegheny River from New York-Pennsylvania
line to Salamanca, flood of June 1972..... 36
11. Cross section of stream channel of
Chemung River near Big Flats, flood of
June 23..... 37
12. Map showing counties declared disaster
areas by President Nixon because of
damages inflicted by Tropical Storm
Agnes and frontal storms, June 18-25..... 38

ILLUSTRATIONS (Continued)

	Page
Figures 13-20. Photographs of:	
13. Chemung River at Corning.....	40
14. Walnut Street bridge at Elmira.....	41
15. Franklin Street and South Avenue at Elmira....	42
16. Chemung River at Elmira.....	43
17. Allegheny River at Westons Mills.....	44
18. Allegheny River at Allegany.....	45
19. Downtown Salamanca.....	46
20. Salamanca city hall and business area on south side of Allegheny River.....	47
21. Map showing water content of snow on the ground in northern New York, March 27-29.....	84
22. Graph showing mean daily air temperature and precipitation at Stillwater Reservoir, March 1-May 15.....	85
23. Map showing regions and sites in New York where damage from floods was reported in 1972, excepting the floods from Tropical Storm Agnes and frontal storms, June 18-25.....	86

TABLES

Table 1. Summary of peak stages and discharges in Westchester County, New York, for the flood of June 1972.....	8
2. Summary of selected peak stages and discharges in central and western New York for the flood of June 1972.....	48

CONVERSION FACTORS

English units used in this report can be converted to the International System of Units (SI) or metric by the factors listed below:

Multiply English units	by	To obtain SI units
<i>Length</i>		
inches (in.)	2.540	centimetres (cm)
inches (in.)	25.4	millimetres (mm)
feet (ft)	.3048	metres (m)
miles (mi)	1.609	kilometres (km)
<i>Area</i>		
square miles (mi ²)	2.590	square kilometres (km ²)
<i>Flow</i>		
cubic feet per second (ft ³ /s)	.02832	cubic metres per second (m ³ /s)
cubic feet per second per square mile [(ft ³ /s)/mi ²]	.01093	cubic metres per second per square kilometre [(m ³ /s)/km ²]
miles per hour (mi/h)	1.609	kilometres per hour (km/h)

FLOODS IN NEW YORK, 1972,
WITH SPECIAL REFERENCE TO TROPICAL STORM AGNES

By

F. Luman Robison

ABSTRACT

Intense rainfall associated with Tropical Storm Agnes in late June resulted in the worst flood damage in the history of New York State. Flooding that began in Westchester County on June 19 was followed by widespread flooding in the Southern Tier and Finger Lakes regions on June 23. More than 6 inches (150 millimetres) of precipitation was recorded on June 18 and 19 in parts of Westchester County. Peak discharges of streams at four of the six continuous-record gaging stations in the county were the highest since collection of records was started in 1943.

Precipitation from June 20 to 25 was more than 2 inches (50 millimetres) throughout the State except in the northeast corner and on Long Island. Precipitation recorded in Chautauqua County through the Finger Lakes to Broome County ranged from 5 to 8 inches (130 to 200 millimetres) and in Allegany and Steuben Counties from 10 to nearly 14 inches (250 to 360 millimetres).

Maximum known peak discharges were measured at three major rivers in the State. The Allegheny River crested at the highest discharge of record on June 23 (73,000 cubic feet per second or 2,070 cubic metres per second) and overtopped recently completed flood-control walls at Salamanca. The Chemung River at Chemung reached the highest discharge of record on June 24 (189,000 cubic feet per second or 5,350 cubic metres per second). The Genesee River raised the water at Mount Morris Dam to the highest level of record (755.8 feet or 230.4 metres).

Flooding associated with Tropical Storm Agnes caused 24 deaths and evacuation of 100,000 residents. Damage to private property in the State has been estimated at more than \$400 million; to public property, \$221 million; and to agriculture, \$84 million.

INTRODUCTION

Flooding and flood damage in New York during the calendar year 1972 are summarized in this report. The report was prepared at the request of the New York State Department of Transportation under provisions of an agreement between the department and the U.S. Geological Survey for a cooperative, statewide program to investigate the water resources of the State.

In addition to the material included in the report, 39 flood maps were prepared from high water marks observed in the field by Geological Survey personnel. Also two hydrologic atlases were published by the Geological Survey in 1973, one for the flood at Elmira and one for the flood at Corning. Complete references for the flood maps and the atlases are given under "References."

A report (Bailey, Patterson, and Paulhus, 1975) that summarizes the data for all the States affected by the Hurricane Agnes floods is Geological Survey Professional Paper 924.

Acknowledgments

Precipitation data used in the report were obtained from the National Weather Service. Maps showing precipitation for June 18-19 and June 20-25 storms were adapted from maps furnished by A. B. Pack, Climatologist with the National Weather Service. Additional observations of precipitation were collected by the U.S. Soil Conservation Service.

Stream discharge data included Geological Survey gaging-station records and discharge data determined by indirect measurements after the flood.

Reports of flooding were obtained from newspaper clippings and publications of the Environmental Data Service of the National Oceanic and Atmospheric Administration ("Climatological Data" and "Storm Data"). The news items are arranged in chronological order within geographical regions.

Photographs were furnished by the Chemung County Historical Society, Corning Glass Works, Olean Times-Herald, and Jim Weber of the Salamanca Republican-Press. (See figs. 13-20.)

WESTCHESTER COUNTY FLOODS, JUNE 18-19

One of the worst floods in the history of southeastern New York occurred on June 18-19, when the area extending from the Bronx through the southern one-third of Westchester County (fig. 1) received 4 to 6 in. (100 to 150 mm) of rainfall. At the White Plains airport, 5.7 in. (140 mm) of rainfall was recorded between midnight on June 18 and 8 a.m. on June 19. Many streets, highways, parking lots, and low-lying areas were flooded. About 300 automobiles in parking lots in the Greenburgh area were submerged in as much as 5 ft (1.5 m) of water. Many cars were stranded elsewhere, especially in southern Westchester County. Floodwater forced closure of the Saw Mill River, Taconic, and Bronx River Parkways. Commuter trains were halted by mudslides, washouts, or flooded tracks in the Westchester-Bronx commuting areas. Basements and ground floors of homes, schools, and business establishments were flooded with 2 to 4 ft (0.6 to 1.2 m) of water. A preliminary survey of Bronx, Putnam, Rockland, and Westchester Counties showed that 300 homes and 100 business establishments suffered substantial damage. The north shore of Long Island received heavy rain, but flood damage was minor.

Floodwater from the Bronx, Hutchinson, Mamaroneck, and Sheldrake Rivers, and Blind Brook damaged homes, parkways, and streets. Some persons were evacuated from their homes in parts of White Plains, New Rochelle, Rye, and Elmsford. Damage was estimated to total \$2 million in White Plains and \$1.8 million in Yonkers.

Peak discharges at four of the six continuous-record gaging stations in Westchester County were the highest since records began in 1943. Peak stages and discharges are listed in table 1, and the locations of the flood determination sites are shown in figure 2.

The storm of June 18-19, which yielded 2.5 to 3.5 in. (64 to 89 mm) of rainfall in Putnam, Rockland, and northern Westchester Counties, was preceded by 1.5 to 2.5 in. (38 to 64 mm) of rainfall on June 16-17.

Information that follows was extracted from cited sources.

WHITE PLAINS REPORTER-DISPATCH, June 19

One of the worst floods in Westchester history spread havoc throughout the county today. Submerged parkways, flooded cellars, lack of train service, and evacuation of homes and cars in several areas are evidence of the flood. Homes were evacuated--some by rowboat--in parts of White Plains, New Rochelle, Rye, and Elmsford. Practically all the county's streams have overflowed, and the Bronx, Sheldrake, Hutchinson, and Mamaroneck Rivers, and Blind Brook have caused extensive damage and disruption of roads and other facilities.

NEW YORK POST, June 19

Heavy rush-hour traffic jams were common throughout the metropolitan area today, as streets and roads were flooded by the heavy rainfall that ended at 8 a.m. Major highways leading into the city were flooded. Several persons stranded on tops of their cars were rescued by police.

MAMARONECK DAILY TIMES, June 20

Hundreds of residents, employees, and school children were evacuated by boat or truck Monday afternoon as Mamaroneck's two rivers left their banks, turned some of the main traffic arteries into rivers, and swamped residences and business establishments. Two village teenagers were rescued from the Mamaroneck River by police after their boat had capsized.

TARRYTOWN NEWS, June 20

Irvington began cleaning up today from the floodwaters that broke up roads and flooded scores of basements Monday.

YONKERS HERALD STATESMAN, June 22

Stating that more than \$2 million in damages had been recorded in Westchester, Putnam, and Rockland Counties and the Bronx from this week's floods, the Small Business Administration announced today that residents would be eligible for disaster loans.

EASTCHESTER OBSERVER, June 22

The most severe storm in many years flooded Bronxville and parts of Eastchester on Monday when the Bronx River overflowed its banks and swamped cars, basements, the Bronxville School, and local businesses.

RYE CHRONICLE, June 22

On Monday, June 19, the worst flood in Rye's history caused thousands of dollars of damage to homes, business establishments, and public buildings when Blind Brook overflowed its banks above the city and the muddy water ran rampantly from upper Purchase Street to Milton Harbor. The first floors of homes along Wappanocca Avenue and ground-level apartments were flooded. Rye policemen in rowboats evacuated some residents from their homes.

PORTCHESTER DAILY ITEM, June 22

Flood damage was considerable in Harrison, although no estimate has yet been announced. One town bridge over Blind Brook was undermined and may have to be replaced at a cost of \$200,000.

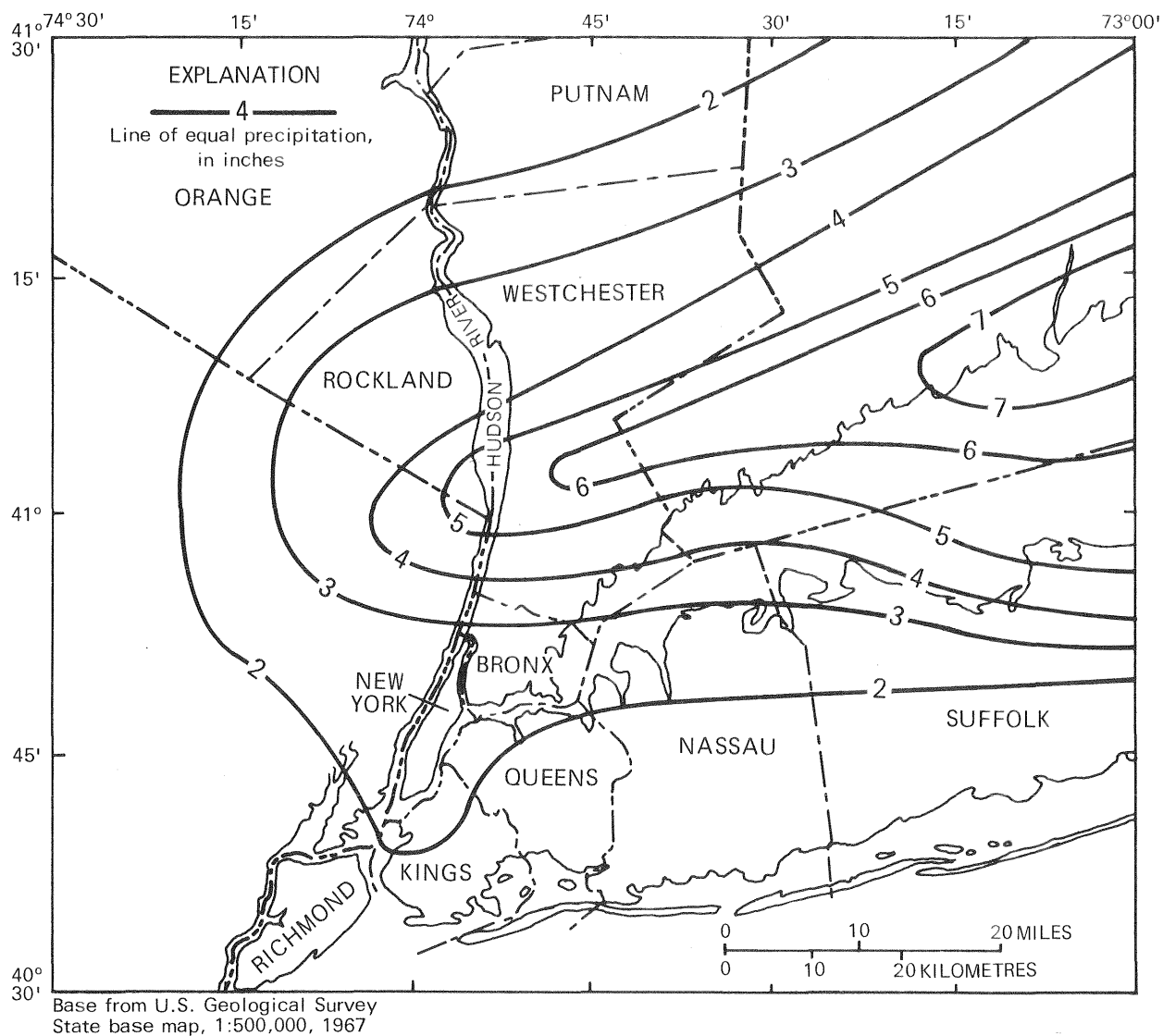
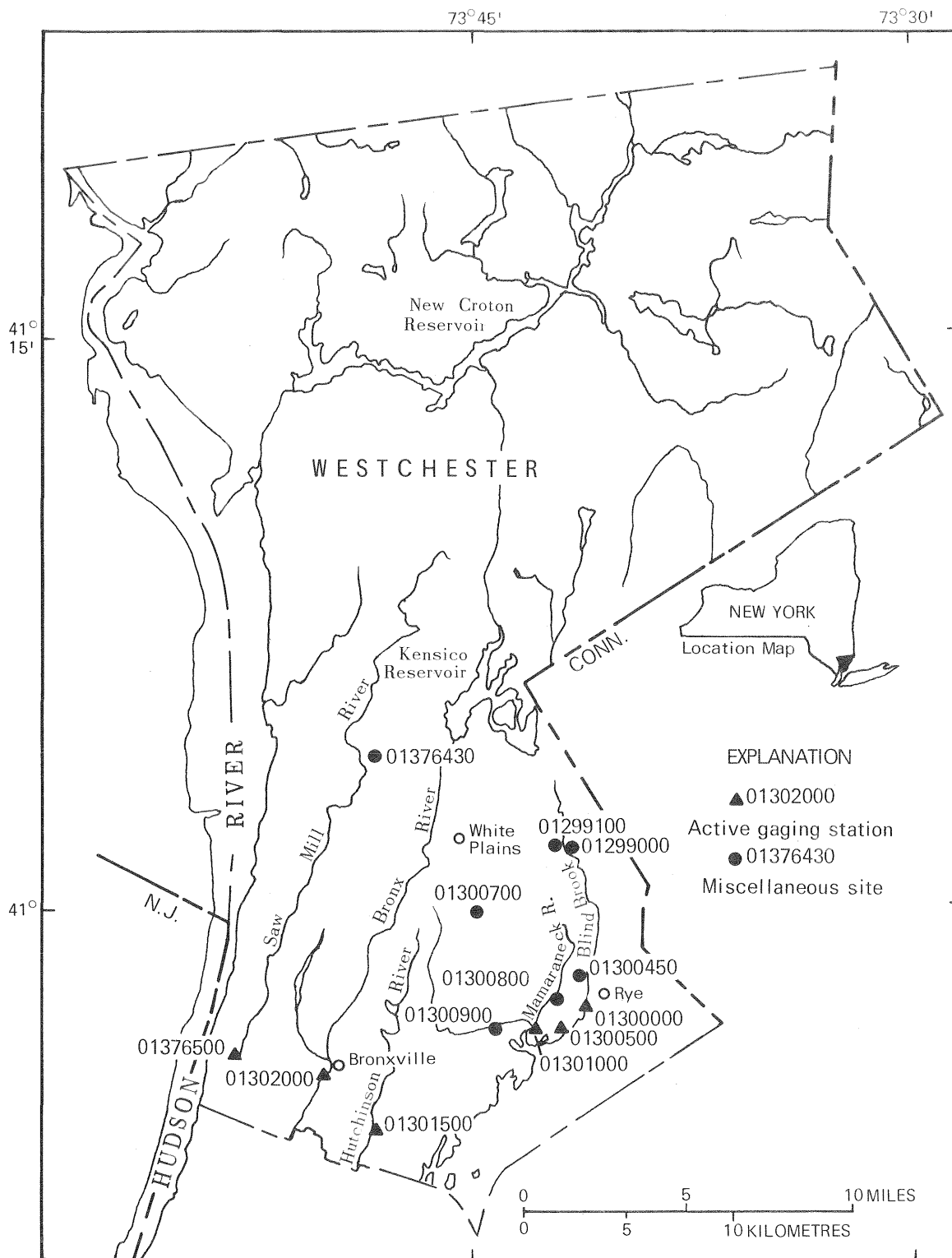


Figure 1.--Precipitation in southeastern New York, June 18-19.
(Adapted from map furnished by A. B. Pack, Climatologist,
National Weather Service, Ithaca, New York.)



Base from U.S. Geological Survey
State base map, 1:500,000, 1967

Figure 2.--Location of flood-measurement sites
in Westchester County, June 1972.

Table 1.--Summary of peak stages and discharges in Westchester County,
New York, for the flood of June 1972

Station number	Stream and place of determination	Drainage area (mi ²)	Period of known floods
LONG ISLAND SOUND BASIN			
01299000	Blind Brook near Purchase	1.79	--
01299100	Blind Brook Tributary at Purchase	1.04	--
01300000	Blind Brook at Rye	9.20	1944-71
01300450	Beaver Swamp Brook at North St., at Rye	1.64	--
01300500	Beaver Swamp Brook at Mamaroneck	4.71	1944-71
01300700	West Branch Mamaroneck River at White Plains	1.09	--
01300800	Mamaroneck River at Winfield Ave., at Mamaroneck	14.5	--
01300900	Sheldrake River at Mamaroneck	5.55	--
01301000	Mamaroneck River at Mamaroneck	23.4	1943-53 1954-71
01301500	Hutchinson River at Pelham	5.76	1943-71
01302000	Bronx River at Bronxville	26.5	1944-71
HUDSON RIVER BASIN			
01376430	Run Brook at Elmsford	.93	--
01376500	Saw Mill River at Yonkers	25.6	1944-71

a Outside the period of record.

Maximum flood previously known				Maximum during June 1972 flood				
Date	Gage height (feet)	Discharge		Day	Time	Gage height (feet)	Discharge	
		ft ³ /s	(ft ³ /s) /mi ²				ft ³ /s	(ft ³ /s) /mi ²
--	--	--	--	19	--	--	1,140	637
--	--	--	--	19	--	--	119	114
10-16-55	9.62	1,360	148	19	1300	12.44	2,320	252
--	--	--	--	19	--	--	135	82.3
3-12-62	3.09	167	35.5	19	2100	3.06	197	41.8
--	--	--	--	19	--	--	253	232
--	--	--	--	19	--	--	2,590	179
--	--	--	--	19	--	--	372	67.0
a9-21-38	11.5	--	--	19	1230	9.71	4,740	203
8-28-71	6.68	2,260	96.6					
8-28-71	5.18	526	91.3	19	1245	4.53	257	44.6
6-15-69	7.31	1,580	--	19	1400	9.63	2,500	94.3
--	--	--	--	19	--	--	331	356
10-16-55	5.34	890	34.8	20	0230	5.55	636	24.8

TROPICAL STORM AGNES, JUNE 20-25

The first indication of the most destructive, widespread flood of record in the Eastern United States was a tropical depression that developed off the coast of Mexico on June 15, 1972. When this depression intensified and its center crossed northwestern Florida on June 19, it became Hurricane Agnes.

As the storm passed through Georgia and South Carolina, its wind velocity decreased until a depression stage was again reached. This weak depression produced torrential rainfall in the Carolinas on June 20. As it continued to move northeasterly toward the ocean near Norfolk, Va., Agnes again became a tropical storm on June 21.

After picking up additional moisture from the ocean, the storm center veered to the west and passed over the Southern Tier of New York State, where it was absorbed by an extensive low-pressure system. For the next several days, this system dominated the weather and produced heavy rains over most of the northeast.

From early evening of June 20 through the night of June 24-25, totals of 10 to nearly 14 in. (250 to 356 mm) of precipitation were recorded in adjoining parts of Allegany and Steuben Counties of the Southwestern Tier. Unofficial totals of 16 in. (406 mm) were reported by residents in the Andover area of Allegany County. Figure 3 is a map showing amount and distribution of storm rainfall. Figure 4 is a map showing amounts and sites of unofficial observations of rainfall.

National Weather Service measurements of rainfall were: Wellsville, 13.9 in. (353 mm); Alfred, 13.2 in. (335 mm); Canisteo, 13.0 in. (330 mm); Bolivar, 11.7 in. (297 mm); Haskinsville, 11.8 in. (300 mm); Hornell, 11.2 in. (284 mm); Prattsburg, 10.5 in. (267 mm); and Whitesville, 9.8 in. (249 mm). In southwestern Ontario County, totals of 10.5 in. (267 mm) were measured south and west of Canandaigua Lake. Storm precipitation ranged from 6.0 to 8.0 in. (150 to 200 mm) in a belt from Chautauqua, Cattaraugus, and Wyoming Counties eastward across the Finger Lakes to Cayuga, Tompkins and Tioga Counties; from 2.0 to 3.0 in. (51 to 76 mm) along western Lake Ontario, in the St. Lawrence River valley, central Adirondacks, and much of the Hudson Valley; and decreased to less than 2.0 in. (51 mm) in northern border counties, on Long Island, and in a "rainshadow" area about 50 mi (80 km) northwest of the Catskills. The storm began with very heavy rainfalls of 4.0 to 6.5 in. (100 to 160 mm) in eastern Allegany and western Steuben Counties on the night of June 20-21 and 2.0 to 3.0 in. (51 to 76 mm) elsewhere in the southwest. Rainfall became widespread in the State by mid- or late morning of June 21. Steady precipitation continued through June 23 and was followed by intermittent and much lighter rainfall on June 24 and 25.

Extensive flood damage was concentrated in about 12 counties comprising the Southwestern Tier and Finger Lakes region. Lesser, but crippling, damage from flooding of property and crops occurred elsewhere in western, central, and southeastern regions of the State. Only the northeastern quarter, eastern border counties, and the immediate coast escaped with relatively minor damage.

Flash flooding developed on the morning of June 21 in the Bolivar, Scio, and Wellsville areas of Allegany County and the Hornell, Almond, and Canisteo areas of northwestern Steuben County. On June 23 and 24, peak discharges at many long-term gaging stations on the largest streams in the flood area far exceeded maximum flows previously recorded (table 2). Sites where peak stages and discharges were determined are shown in figure 5. In some smaller drainage basins, stages and discharges of the 1972 flood were less than their previous maximums.

The Allegheny River crested at the highest stage of record (67 years) at 24.01 ft (7.32 m), June 23 at Salamanca, compared with the previous peak of 16.24 ft (4.95 m) on September 29, 1967. Recently completed floodwalls at this site were overtopped. In its greatest flood of record (65 years), Chemung River at Chemung crested on June 23 at 31.62 ft (9.64 m). The previous record at this point was 23.97 ft (7.31 m) in May 1946. The Chenango and Susquehanna Rivers near Binghamton crested on June 23 at levels 2 to 4 ft (.6 to 1.2 m) above flood stage. The Genesee River raised the water level at Mount Morris dam to the highest stage of record. Flood gates on the dam were opened to keep the water 4.2 ft (1.3 m) below the spillway and, thus, to prevent the vast amount of debris collected in the reservoir from being washed downstream and piled against bridges or other obstructions. Some lowlands below the dam in Livingston and Monroe Counties were flooded.

As the rain continued to fall and the streams began to go over their banks, people in the threatened areas were requested to leave their homes and to seek shelter in schools, firehouses, or with friends or relatives on higher ground. Some of the first reported evacuations were in Canisteo, where all the families living near the Canisteo River dike were requested to evacuate to the Central School building. Eighty residents of a nursing home in Wellsville were moved to other facilities. Residents of 14 homes in Portageville were forced to evacuate. As the larger streams rose to flood levels and above, the number of evacuees increased rapidly. Some of the more seriously affected communities were Elmira, where the Chemung River flowed over the protective dikes and about half of the more than 40,000 population was forced to flee, and Corning, where virtually all its 17,000 inhabitants were evacuated. In the Olean area, as many as 10,000 persons were forced from their homes. At Salamanca, the Allegheny River overtopped the new 23-ft (7-m) flood walls and flooded areas of the city thought safe from the high water. Approximately 15,000 people were evacuated from Auburn under threat of a weakened dam on Owasco Lake Outlet. The number of persons evacuated during the flood in New York was estimated to be 100,000.

Twenty-four people died in the State--21 in the flood and 3 in a helicopter that crashed while on a flood survey flight. The Corning area alone had 17 fatalities. In spite of the vast amount of flooding and forced evacuations in Elmira, no lives were lost in this city.

The greatest loss of homes was in the Corning and Elmira areas. Buildings and equipment of many industries, stores, and commercial establishments were severely damaged.

Other cities and communities in the Southwestern Tier heavily damaged by the flood were, Salamanca, Allegany, Olean, Portville, Wellsville, Hornell, Painted Post, and Big Flats. Numerous smaller towns and rural villages were seriously damaged by overflowing smaller streams. Lesser, but crippling, floods affected Binghamton and wide areas of the Finger Lakes region. Streets, highways, and property were flooded in the communities of Mount Morris, Canandaigua, Naples, Penn Yan, Montour Falls, Geneva, and Ithaca.

The overflow of each of the larger Finger Lakes, as well as Oneida and Chautauqua Lakes, caused great damage to boats, marinas, and other shore properties as lake levels were still above flood stage in late July.

Stream profiles of the flood for the Cohocton, Canisteo, Tioga, Chemung and Allegheny Rivers were surveyed and were plotted by personnel of the Geological Survey (figs. 6-10). Figure 11 is a cross-section plot of the stream channel of the Chemung River near Big Flats showing the water surface level of the flood in relation to the normal channel.

Streams flowing into the Finger Lakes caused the water in Skaneateles, Owasco, Cayuga, Seneca, Keuka, and Canandaigua Lakes to reach record or near record levels. Cayuga Lake at Ithaca crested at 387.75 ft (118.2 m) on July 25, almost 3 ft (0.9 m) above flood stage and surpassing the previous record level of 386.4 ft (117.8 m) in April 1956. Canandaigua Lake crested at 691.08 ft (210.6 m) or a ft (0.3 m) higher than the previous record of 690.06 ft (210.3 m) on March 11, 1956. Significant overflow of Oneida Lake, northeast of Syracuse, occurred along the southeast shore between Brewerton and Bridgeport.

Damage to private property in the State has been estimated at more than \$400 million; to public property, \$221 million; and to agriculture, \$84 million. The Small Business Administration stated that 19,122 homes and 1,723 businesses were damaged or destroyed in the seven hardest-hit counties. President Nixon declared 26 counties disaster areas. (See fig. 12.)

To help alleviate the severe housing shortage caused by the storm, the U.S. Department of Housing and Urban Development purchased several hundred house trailers to be furnished rent free for a year to families who lost their homes.

The villages of Taberg and Blossvale in Oneida County were evacuated when their streets were flooded with more than 2 ft (0.6 m) of water.

About 60 families were evacuated from and near the village of Blenheim in the Schoharie Creek valley in Schoharie County.

At Great Sacandaga Lake the water level reached a record height for the 42-year history of the lake. Two floodgates were opened to prevent the water from reaching the spillway.

Although more than 10 in. (254 mm) of rainfall was measured by the National Weather Service gage at Slide Mountain, Ulster County, flooding in the Delaware River basin in New York and the Esopus Creek basin was comparatively light. The heavy rainfall was not reflected in peak discharges or in basin storage reservoirs, where peaks were much below previously recorded maximums.

The outstanding features of the floods caused by Tropical Storm Agnes were the number of lives lost, the vast areas of land and buildings damaged or destroyed, and the number of new records of stage and discharge established on the larger streams. Flooding was so severe throughout the area of intense rainfall that it may be several years before the total cost damage can be tabulated.

Chronological Descriptions of Floods Caused by Tropical Storm Agnes
Information that follows was extracted from cited sources.

Western and Central Regions
(areas of extreme flooding)

HORNELL TRIBUNE, June 21

Torrential rains spawned by Tropical Storm Agnes struck northern Steuben and eastern Allegany Counties early today, spilled more than 5 in. (127 mm) of rain on an already water-clogged area, and caused flash flooding and heavy damage. Hundreds of area residents were forced to flee their homes, which were flooded by nearby streams.

Two persons from Almond were missing after being swept away in the swirling floodwaters.

A 40-ft (12-m) wall of water was being held between two lanes of the Southern Tier Expressway under construction near Almond. Officials were concerned that one of the lanes might collapse and endanger the village.

Extensive flooding was reported on East Avenue in Arkport, as Lime Kiln Creek overflowed its banks.

Canisteo firemen reported that all homes bordering the Canisteo River dike were evacuated this morning and residents were given shelter in the Central School building and at the Canisteo Fire Department.

There was extensive flooding of homes and streets in the village of Alfred, but no evacuations were reported.

OLEAN TIMES-HERALD, June 21

Flash flooding caused by 2 to 6 in. (51 to 156 mm) of rain in the last 24 hours today closed roads, schools, and industries; washed out bridges; caused power interruptions; and forced evacuations in some areas. Areas hardest hit were those to the south and east of Olean. Evacuation of the Wellsville Nursing Home today seemed to be the most serious immediate effect of high water that virtually isolated the populous Bolivar-Scio-Wellsville triangle in southern Allegany County. Some 80 elderly, handicapped residents were removed from the home.

BATAVIA NEWS, June 22

The Genesee River overflowed its banks at Portageville late yesterday with water 4 ft (1.2 m) deep on Main Street of this small village just south of Letchworth Park. Residents of 14 homes were removed to the local fire hall.

ITHACA JOURNAL, June 22

A state of emergency was declared in Tioga County at 6 a.m. today. All roads were closed except for emergency and utility service vehicles. The sheriff's department reported that 15 bridges were known to have been washed away.

HORNELL TRIBUNE, June 22

Scores of area roads were closed and bridges were washed out as rain continued to pelt Steuben and Allegany Counties this morning. Hundreds of people have been forced to flee their homes and to take sanctuary in area schools. The driver of a car who drove off a bridge abutment of Vandermark Creek near Scio was lost in the swirling water early this morning. Three other passengers were rescued. A Savona man was swept away by flood waters from the Cohocton River while attempting to escape from an auto on Route 15 near Bath. Three passengers in the car were saved.

ROCHESTER DEMOCRAT AND CHRONICAL, June 22

The small community of Almond, about 4 mi (6.4 km) southwest of Hornell, was still shut off from the outside world today and could be reached only by amphibious vehicles. Between 300 and 400 residents were evacuated yesterday. They spent the night in the Almond Central School.

OLEAN TIMES-HERALD, June 22

The Pittsburgh Office of the National Weather Service warned today that the Olean area should prepare for the greatest flood of record, and that the current flood would exceed the record-breaking one of July 1942.

Some residents of Olean, on the south side of the Allegheny River were evacuated, some by boats. Portville Flats and areas of Westons Mills are flooded. The trestle of the former Shawmut Railroad across Olean Creek was under water about 10 a.m. today. Railroad cars from the Penn-Central were run on the bridge to keep it in place.

ELMIRA TELEGRAM, June 23

Although the city of Hornell got off comparatively easy, the village of North Hornell was hit hard at its northernmost extremity by Big Creek. The flooding in Hornell was from surface drainage rather than from Crosby Creek or the Canisteo River.

HORNELL TRIBUNE, June 23

Property damage in Allegany County is estimated to be millions of dollars, and several months will probably elapse before roads and bridges can be rebuilt. Hardest hit was Jones Memorial Hospital in Wellsville, when one wall of the hospital was undermined by the Genesee River and collapsed at 7:30 a.m. today. Patients, doctors, staff, and equipment were moved to the Congregational Church and the Elk's Club.

At 11:00 a.m. today Almond Lake officials reported that the water level behind the dam was falling but that water was still 68 ft (21 m) deep at the dam.

SYRACUSE HERALD-JOURNAL, June 23

Raging waters that swept into dozens of additional southwestern New York and Southern Tier communities today forced the evacuation of thousands of persons. People were taken from homes and business places in Elmira, Corning, Olean, and Salamanca, when the Chemung River spilled over in Elmira and Corning, and the Allegheny River into Olean and Salamanca.

Damage soared into the millions of dollars as homes, automobiles, and other materials were swept away; businesses and farmlands were flooded; and crops were lost. Telephone and power services were knocked out in many places, as were water- and sewage-treatment plants. In numerous communities, drinking water had to be boiled to make it safe.

In Elmira, perhaps half of the city's 40,000 residents were evacuated as the Chemung's raging waters spilled into downtown and southside streets. One of two houses that were swept down the river slammed into the Main Street bridge.

At Corning, water started pouring over the 23-ft (7-m)-high dikes about 3 a.m. and cascaded through the downtown area. Virtually all the 17,000 residents of the city were evacuated.

In the Olean area, local officials requested that 10,000 persons be evacuated. The nearby communities of Allegany, Portville, and Westons Mills were isolated. The north side of Olean is protected by a 24-ft (7-m) dike wall. Water was expected to crest today about a foot below the top of the dike.

In Salamanca, the Allegheny River, which was 6.2 ft (1.9 m) higher than in previous record floods, flowed over a recently built 23-ft (7-m) dike.

National Guard units were called to duty in Elmira, Corning, and Olean.

Wellsville remained under curfew last night, and food supplies were running low. One-third of the village was covered by water 8 ft (2.4 m) deep in places. At least 2,000 persons from the village and surrounding town had left their homes. Some looting was reported by police.

JAMESTOWN POST-JOURNAL, June 23

Chautauqua County escaped massive flooding but still suffered damage. Evacuations due to flooding in the county were restricted to the Stow area on Chautauqua Lake, a Westfield trailer park, and a small section of Portland.

BINGHAMTON SUN-BULLETIN, June 23

Local rivers swelled by 4 in. (102 mm) of rain in 18 hours were above flood level yesterday afternoon as Broome County residents prepared for the onslaught of 5 more in. (127 mm) of rain. The Susquehanna River at Vestal was 3 ft (0.9 m) above flood level at 8 p.m. and was expected to rise 4 or 5 ft (1.2 or 1.5 m) before cresting early today.

Although rivers and streams were above flood level, there were no mass evacuations in the county as of last night. Damages were expected to be in the millions of dollars, as many roads and bridges were affected by the flood.

ROCHESTER TIMES-UNION, June 23

The U.S. Army Corps of Engineers today ordered the evacuation of the village of Avon, halfway between Mount Morris and Rochester, and declared the area flood disaster the worst in a century. They said that water will reach the top of Mount Morris Dam between 6 and 10 a.m. tomorrow. Flood gates will be opened to avoid spillover. Major damage is forecast for the lower Genesee Valley, when water from the dam will reach Avon 18 hours after the gates are opened.

ITHACA JOURNAL, June 23

Floodwater continued to invade basements and lake cottages and to undermine roadways and bridges yesterday and today. All creeks in the county were reported either filled to capacity or flooding. Cayuga Lake, which reached a record high, is expected to rise even higher.

Three people were in a car headed south on Route 14 when a mud slide pushed the car into Catherine Creek. All three passengers were able to escape from the submerged car and eventually to swim to shore. The car was not found.

ITHACA JOURNAL, June 24

A state of emergency has been declared in Schuyler, Tioga, and Chemung Counties. Motorists other than those on emergency missions are subject to arrest.

Counties that have been declared disaster areas by President Nixon are: Allegany, Cattaraugus, Cayuga, Chemung, Livingston, Ontario, part of Rockland, Schuyler, Seneca, Steuben, Tompkins, Westchester, Wyoming, and Yates.

The rapidly rising Genesee River, which 4 days ago flooded wide areas of southwestern New York, began spilling over its banks today about a dozen miles south of Rochester. Most of the flooded area was low-lying farmland, but some water overflowed into Henrietta, Chili, Industry, Rush and Wheatland.

GENEVA TIMES, June 24

Ontario, Seneca, and Wayne Counties last night were declared in a state of emergency. Yates County had already been so declared.

BUFFALO EVENING NEWS, June 24

The worst appeared to be over for flood-stricken Southern-Tier communities, where rampaging waters have already killed several persons, forced the evacuation of thousands, and caused millions of dollars in property damage. Water was receding or holding steady in most areas.

In Wellsville, officials are assessing the damage to the new three-story wing of the Jones Memorial Hospital, part of which collapsed into the Genesee River yesterday.

BUFFALO COURIER EXPRESS, June 24

President Nixon has declared the flood-stricken Southern Tier area of Western New York a major disaster area. The President's action will permit Federal funds to be used for such things as clearance of debris, restoration of public facilities, health and sanitation protection measures, and long-term, low-interest loans to homeowners, farmers, and businessmen.

BINGHAMTON EVENING PRESS, June 25

All entrances and exits at Elmira are closed today. To help prevent possible looting of homes, stores, and businesses, no one can get in or out of the city without a police pass.

ITHACA JOURNAL, June 26

Approximately 100 truckloads of food, clothing, bedding, and other basic necessities left downtown Ithaca between 4 p.m. Saturday and 6:30 p.m. Sunday for flood victims in the Elmira and Chemung County areas. An unknown number of trucks from surrounding Tompkins County towns joined the convoys to the stricken areas.

SYRACUSE HERALD-JOURNAL, June 26

The Auburn city manager lifted the evacuation orders at 8:25 a.m. today allowing residents and businesses to return to normalcy. About 3:30 p.m. yesterday, two city engineers discovered that the dam holding back Owasco Lake was showing signs of weakening. After consulting with the Army Corps of Engineers, city officials asked some 16,000 residents to evacuate their homes. Affected were those living within half a mile (0.8 km) of the stream called Owasco Outlet.

KNICKERBOCKER NEWS-UNION STAR, June 26

The regional administrator of the Department of Housing and Urban Development reported that an early estimate of property damage from the flood was \$100 million. An estimate of houses damaged or destroyed showed: Elmira 5,700; Olean 3,400; Corning 2,300; Wellsville 2,300; Alfred 860; Hornell 700; Allegany 600; Almond 300; Salamanca 170; and Portville 300.

AUBURN CITIZEN-ADVERTISER, June 26

Residents of the Cayuga Lake area living near the shore were advised Sunday night to evacuate and to move to higher ground, as the feared collapse of Owasco Lake dam might cause a flood wave in the Seneca River that could back up and raise the level of Cayuga Lake. The advice was rescinded about 10 a.m. today.

BUFFALO EVENING NEWS, June 26

Rising waters of Chautauqua Lake swamped scores of boats over the weekend, and damage will total thousands of dollars. Dozens of boats were sunk or damaged, some of them costing as much as \$50,000.

ROCHESTER DEMOCRAT AND CHRONICLE, June 26

Two civilian employees of the U.S. Army Corps of Engineers and their pilot died when their helicopter struck a power line in Hornell, Steuben County, while they were making an aerial survey of flood-stricken areas.

GENESEO LIVINGSTON LEADER, June 28

Flood damage in the Genesee Valley from Canaseraga Creek and water released from Mount Morris Dam has been estimated to be nearly \$5 million. It represents loss of livestock, crops, buildings, roads, and other property.

SYRACUSE HERALD-JOURNAL, June 28

The Chemung County community of Big Flats was reopened at noon today by State officials, but on a restricted basis. Only residents were allowed to enter the village, and they were not permitted in the area near the leaking fuel tanks, where half a million gallons of high octane gasoline was stored.

BUFFALO COURIER EXPRESS, June 28

Village of Almond residents in Allegany County returned to their homes Tuesday, June 26, as most other residents within the flood-ravaged Southern Tier continued the arduous task of digging out the wreckage.

LYONS STAR, June 28

At least 3,500 acres flooded, of a total acreage of 5,000, with losses estimated at \$1½ million in southeastern Wayne County were the expected results of last week's storms and floods.

ROCHESTER DEMOCRAT AND CHRONICAL, July 3

Five hundred house trailers, for use by families driven out of their homes by the flood, are expected to be shipped into the Southern Tier today by the U.S. Department of Housing and Urban Development. The trailers may be used for as long as 1 year rent free.

WELLSVILLE REPORTER, July 5

Cost of flood damage to property owned by the village of Wellsville is now estimated to be more than \$5 million. This figure includes damage to bridges, highways, sewers, municipal buildings, and equipment and \$3½ million for the Jones Memorial Hospital.

KNICKERBOCKER NEWS-UNION STAR, July 18

More than 4 million irreplaceable documents threatened with flood ruin are being frozen, washed, and dried in Binghamton in the largest restoration attempt ever undertaken by a local concern. One hundred employees are trying to save intricate engineering drawings and valuable legal papers mired in the June 23 flood in the Elmira-Corning area.

OGDENSBURG ADVANCE NEWS, August 13

In New York State, where 24 counties were flooded, private property losses are estimated to be more than \$400 million, public property \$221 million, and agricultural losses \$84 million. The Small Business Administration said that 19,122 homes and 1,723 businesses were damaged or destroyed in the seven hardest-hit counties.

BUFFALO EVENING NEWS, August 31

The Kinzua Dam more than paid for itself in directly averting damages estimated at \$247,340,000 during the June flood. The total cost of building the dam was \$107 million.

Central Region
(outside the areas of extreme flooding)

SYRACUSE HERALD-JOURNAL, June 21

Today for the third time in less than 5 weeks, homes in the Meadowbrook section of Syracuse were flooded by Meadow Brook Creek.

ROME SENTINEL, June 22

Forty families were evacuated from their homes in the Oneida County community of Taberg last night, when rain-swollen Furnace Creek overflowed its banks and sent 3 to 4 ft (0.9 to 1.2 m) of water down Main Street for a distance of 1,000 ft (305 m). Gushing waters flowed into the cellars of 20 to 25 homes and a local hotel.

ROME SENTINEL, June 22

The rain-swollen Mohawk River surged near flood stage this afternoon, and some roads near Rome were under water. In Camden, 60 employees of a manufacturing plant were unable to work because the plant was flooded by about 2 ft (0.6 m) of water.

ONEIDA DISPATCH, June 22

Homes and business establishments in the flats section of Oneida were ordered evacuated by police and fire officials today, as water from Oneida Creek covered the area. The flooding followed heavy rains and the breaking of the dike in several places along the creek. Ten animals were evacuated by boat from an animal hospital in Oneida Castle.

SYRACUSE HERALD-JOURNAL, June 22

At least five roads in Onondaga County were closed today by flooding, and many more were barely passable. Many streets in Syracuse were also flooded. Area farmers face serious losses from flooding, which has destroyed or extensively damaged their crops and fields.

TULLY INDEPENDENT, June 22

Flooding from last Thursday's rain in the village of Otisco was the worst in the memory of some of the oldest residents. Streets and basements in Tully and Vesper and nearby roads were flooded or washed out.

BINGHAMTON EVENING PRESS, June 22

Big Choconut and Tracy Creeks damaged many residential properties along their banks at Vestal. Several families were ordered to evacuate their homes about 6 o'clock this morning, when Big Choconut Creek swept over its banks in three places. One house was lashed to a bulldozer by a cable to prevent it from washing downstream against a bridge.

UTICA DAILY PRESS, June 23

Most of the residents of Taberg and Blossvale were evacuated from their homes late last night, as Glenmore Dam threatened to crack open and spill into the already overflowing east branch of Florence Creek. Some Taberg residents had just returned to their homes after being evacuated Wednesday because of flooding by Furnace Creek. Two streets in Oriskany were closed. Some residents of the hamlet of Fish Creek Landing left their homes, when water flooded the highway and threatened a bridge over Fish Creek. Many cellars were flooded in the New York Mills-Yorkville-Whitesboro area.

ONEIDA DISPATCH, June 23

Residents of about 40 homes in the city's "flats" section and 6 homes in the Belmont Avenue area evacuated yesterday were still not allowed to return today. High water in Oneida Lake damaged some camps and smashed docks; boats were sunk or were washed away.

NORWICH SUN, June 23

The Chenango County highway commissioner this morning reported that a great many shoulders had been washed out on county roads and some bridges had been damaged.

CORTLAND STANDARD, June 23

Minor flooding of streets and yards was reported today in Cortland, Homer, and Marathon.

SYRACUSE POST-STANDARD, June 24

The Air National Guard and an Air Force unit were sent to Oneida Lake yesterday after almost 6 in. (152 mm) of rain caused flooding on the south shore near Cicero and forced many families to evacuate their homes. Muskrat Bay Road, Long Point Road, Polar Beach Road, and Beach Road were covered with as much as 4 ft (1.2 m) of water. About 100 Beach Road residents were evacuated yesterday morning.

OXFORD REVIEW-TIMES, June 28

Flood damage in the village of Oxford and vicinity was comparatively light. Overflow from Clark Creek in that village flooded a few streets and basements. Two bridges on side roads in Coventry were washed out. At Greene, some streets, basements, and a golf course were flooded. Whitney Point and Lisle, protected by the dams built after the 1935 flood, were not damaged by flooding.

UTICA DAILY PRESS, June 29

Flood damage from last weekend's major storm in the village of Sylvan Beach was estimated to total \$250,000. A few streets, basements, and yards were flooded, and boats and marinas were badly damaged.

SYRACUSE HERALD-JOURNAL, July 4

Property damage from current flooding in Onondaga County was close to \$6.8 million, according to initial estimates prepared by the county's Bureau of Emergency and Safety Services.

BALDWINSVILLE MESSENGER, July 5

The Seneca Beach Road and Morgan Road areas, in the town of Van Buren, and Hayes Road and Surbrook Road, in the town of Lysander, which are adjacent to the Seneca River, were hard-hit by the recent floods and are still under water today. Some homes are surrounded by water.

SYRACUSE HERALD-JOURNAL, July 5

Several county roads, such as Hayes Road near Baldwinsville and Pleasant Valley Road in Marcellus, are still under water. Many residents in these areas have been unable to return to their homes since the flooding began almost 2 weeks ago.

UTICA DAILY PRESS, July 5

Oneida, Madison, and Broome Counties have been added to the list of 18 counties to qualify as disaster areas. Cost of flood damage at Rome was estimated to be \$433,000; half of the amount is for damage to the Humiston Bridge on the Rome-town of Vienna boundary above Fish Creek.

NORTH SYRACUSE STAR, July 5

Damage totalling more than \$750,000 has been inflicted by the recent flooding on properties in the town of Clay. Flooding of 45 first-floors of houses and 60 cellars has been noted, and various cars, tractors, and other equipment have been submerged and ruined. Some boats have been sunk, and croplands have been extensively damaged.

CICERO RECORDER, July 5

This spring's floods have caused more than \$2 million in damage to public and private property in the town of Cicero according to estimates filed with the county's Bureau of Emergency Services.

UTICA DAILY PRESS, July 7

The first estimate of the damage from flooding by Tropical Storm Agnes in the city of Utica is \$375,000 according to the city's calculations. The bulk of the damage was to private property.

ONEIDA DISPATCH, July 8

The county Disaster Committee reported that more than \$5 million in damages occurred to farm and vegetable crops and farmland in Madison County during the heavy rains and floods last month.

Eastern Region

CATSKILL MAIL, June 23

Heavy rains spawned by Tropical Storm Agnes caused widespread flooding in Green County's mountaintop area yesterday. Many persons were evacuated from homes and camps when a dam at Camp Harriman threatened to give way. Flooding was reported in Hensonville, Windham, Ashland, and Palenville. Several roads were closed when bridges became impassable. Flood-control dams constructed at two sites since the 1960 flood are credited with the prevention of serious flooding in Windham.

GLOVERSVILLE-JOHNSTON LEADER-HERALD, June 23

High winds and rain from Tropical Storm Agnes last night and this morning caused considerable damage to camps, docks, and boats on Great Sacandaga Lake. One gate on the dam at Conklingville was opened to help lower the lake level.

TROY TIMES-RECORD, June 24

High water in the Hudson River in the Troy area necessitated the closing of the Federal Lock, halted New York State Barge Canal traffic temporarily, and forced the evacuation of six to eight families from their homes near the river at Waterford.

SCHENECTADY GAZETTE, June 24

About 60 families were evacuated from the village of Blenheim and north of that hamlet along Route 30 in early morning hours yesterday while water gushed $2\frac{1}{2}$ ft (0.8 m) over the spillway of Gilboa Dam. Water at Harriman Dam, near Tannersville in Greene County, spilled over both sides of the spillway and flooded streets in Prattsville.

ALBANY TIMES-UNION, June 27

Only 6 in. (150 mm) below the spillway of Conklingville Dam on Great Sacandaga Lake, June 25, floodwater reached a record height for the 42-year history of the big lake. One floodgate was opened in the middle of the week and the second on Saturday, June 24, to prevent the level from reaching the spillway. Some minor flooding was reported in Saratoga Springs.

CANAJOHARIE COURIER-STANDARD, June 28

Considerable crop damage resulted from last Friday's torrential downpour, which swept the middle Mohawk River valley. Usually placid streams overflowed their banks, flooded cellars, and eroded driveways. A flash flood originating from heavy rains in the Salt Springville area flooded the community of Sprout Brook. Water flowed in one side of the Grange Hall and out the other. Three ft (0.9 m) of water covered Route 163. Lowlands and the basements of homes along Otsquago Creek and a parking lot in the village of Fort Plain were flooded.

NEWBURGH NEWS, June 30

Four children were riding in a boat on the flood-swollen Esopus Creek near Saugerties yesterday morning when the boat's motor stopped. An 11-year old girl was thrown into the water, and her 13-year old brother jumped in after her. The fast-moving water carried them downstream, where the boy landed on a small sand bar and the girl managed to hang on to a small stump. In the meantime, the boat overturned and left the other two children in the water holding to the boat. Troopers dispatched to the scene rescued the two from the overturned boat but couldn't reach the other two. A helicopter was flown from Stewart Airport by two members of the State Police Aviation Detachment. While the helicopter hovered over the water, one of the men standing on the craft's pontoon grabbed both children and deposited them on a nearby railroad trestle.

Southeastern Region

MIDDLETOWN TIMES HERALD-RECORD, June 25

Water was receding Saturday from roads, basements, and farmland in the Middletown area, but a few roads were still impassable. Some of the farmland was still under 3 to 4 ft (0.9 to 1.2 m) of water. The residents of Myers Grove in the town of Deerpark, who were forced to evacuate, have returned to their homes.

MIDDLETOWN TIMES HERALD-RECORD, June 26

Five canoeists were rescued from the flood-swollen Delaware River during the past weekend after two canoes had been swamped by the rough water.

NYACK JOURNAL NEWS, June 26

Rockland and Westchester Counties have been declared major disaster areas as a result of damages caused by Tropical Storm Agnes. Many homeowners in these counties are eligible for special Federal aid. The areas hardest hit by flooding in Rockland County were along creeks in Palisades, Sparkill, West Nyack, Clarkstown, West Haverstraw, and Stony Point.

MIDDLETOWN TIMES HERALD-RECORD, June 27

Some farmers in the black-dirt area here claim to have lost as much as 70 percent of their spring lettuce crops because of flooding. The mucklands became flooded on Friday, June 23, and the situation has become progressively worse, as the Wallkill River and Pochuck Creek continued to overflow their banks. Cost of damage was estimated to be \$16.5 million.

Northern Region

OLD FORGE ADIRONDACK ECHO, June 23

The Rondaxe Lake road was heavily damaged by the storm last evening. Some sections of the road were completely washed out. A section of Route 28 between Old Forge and Inlet was closed because of washouts.

WATERTOWN DAILY TIMES, June 23

Three Lewis County roads were closed, and a bridge was damaged by washouts yesterday.

WATERTOWN DAILY TIMES, June 28

Cost of flood damage to crops and land adjacent to the Black River in Lewis County was estimated to be \$200,000.

LOWVILLE JOURNAL AND REPUBLICAN, June 28

Torrential rains and rapid runoff caused severe flooding in many parts of Lewis County in the early morning of Thursday, June 22. Flooding along the Black River caused the closing of several roads.

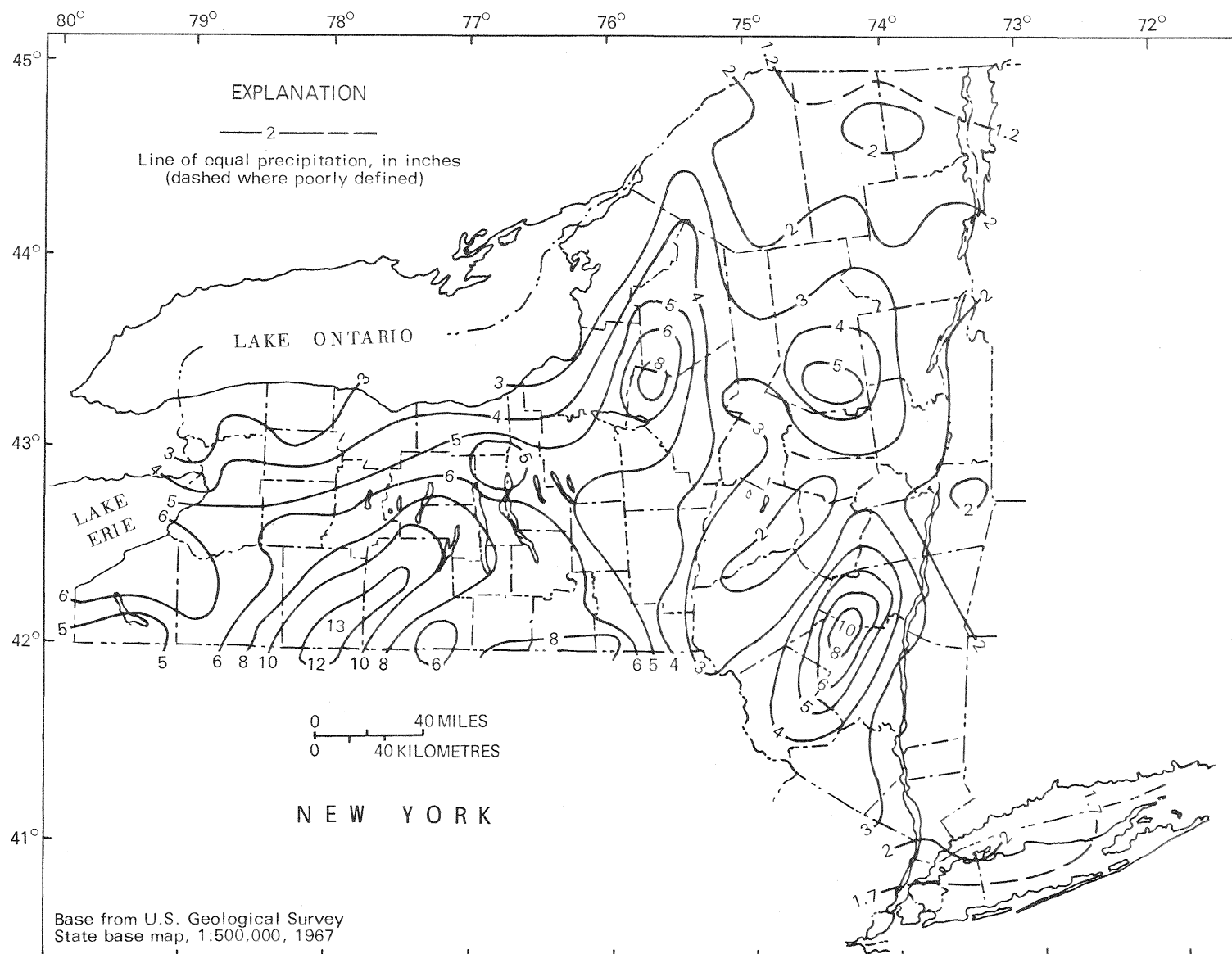


Figure 3.--Precipitation in New York, June 20-25. (Adapted from map furnished by A. B. Pack, Climatologist, National Weather Service, Ithaca, New York.)

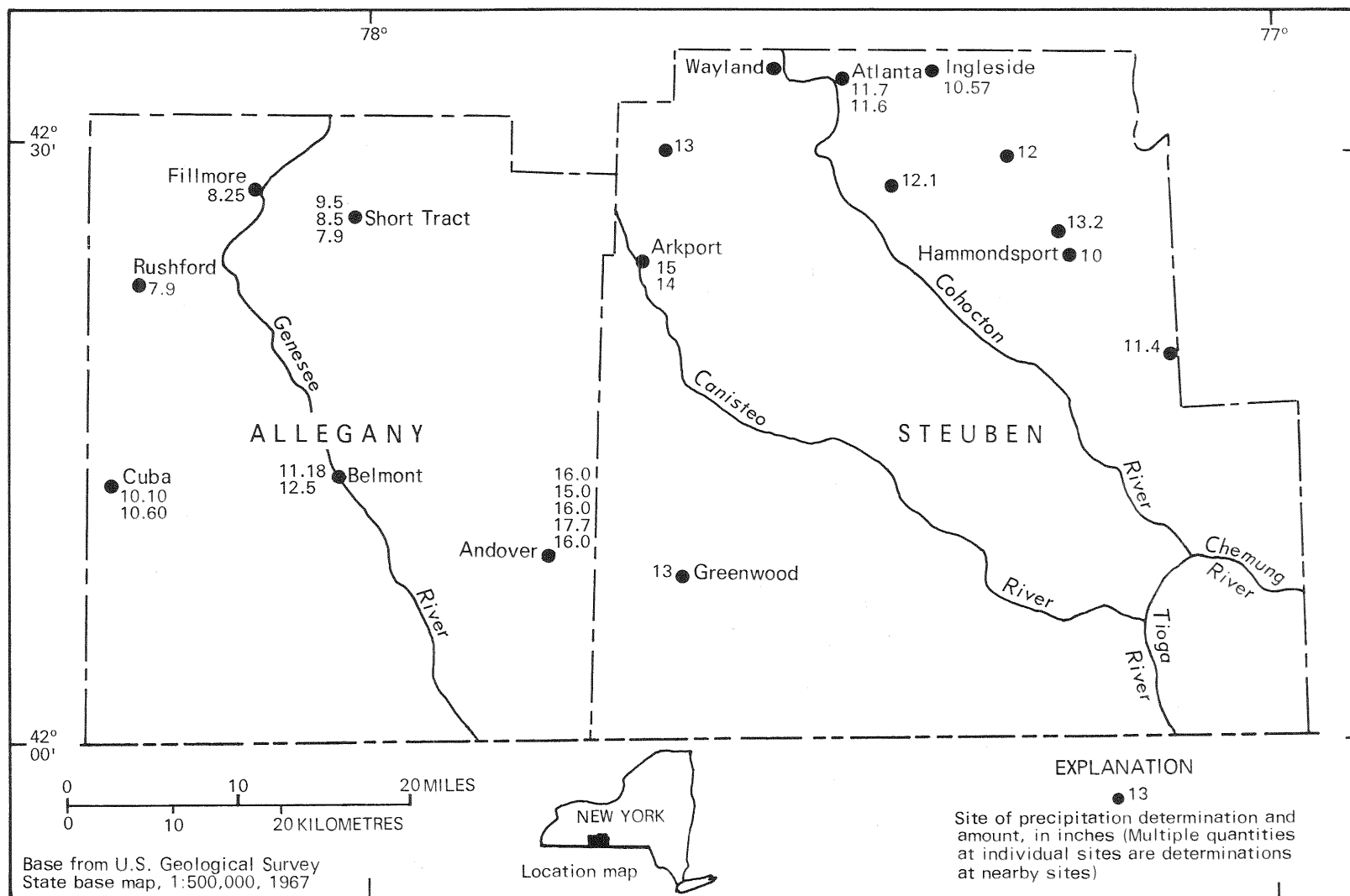


Figure 4.--Unofficial observations of rainfall in Allegany and Steuben Counties, June 21-26.
(Data furnished by the U.S. Soil Conservation Service.)

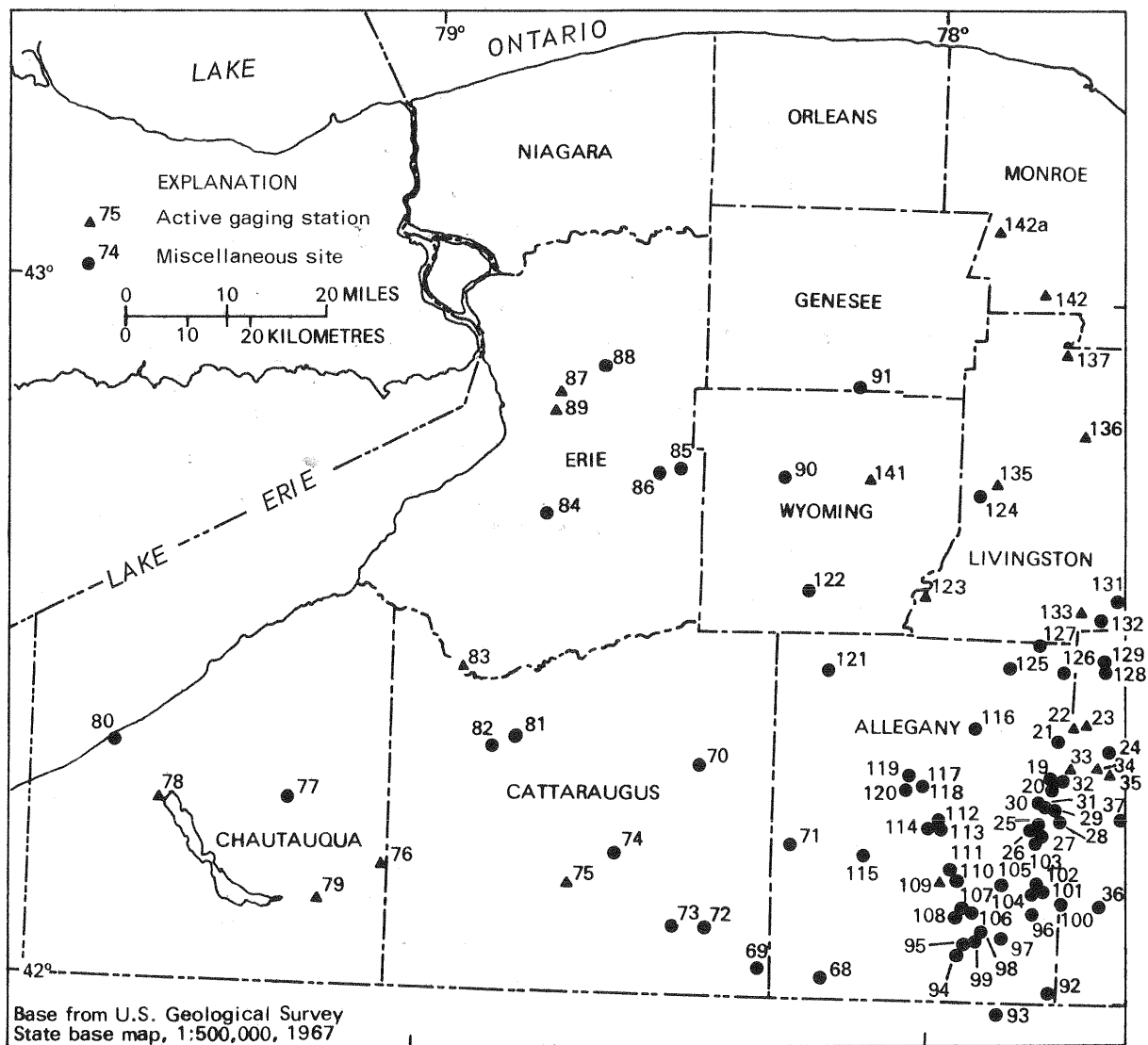
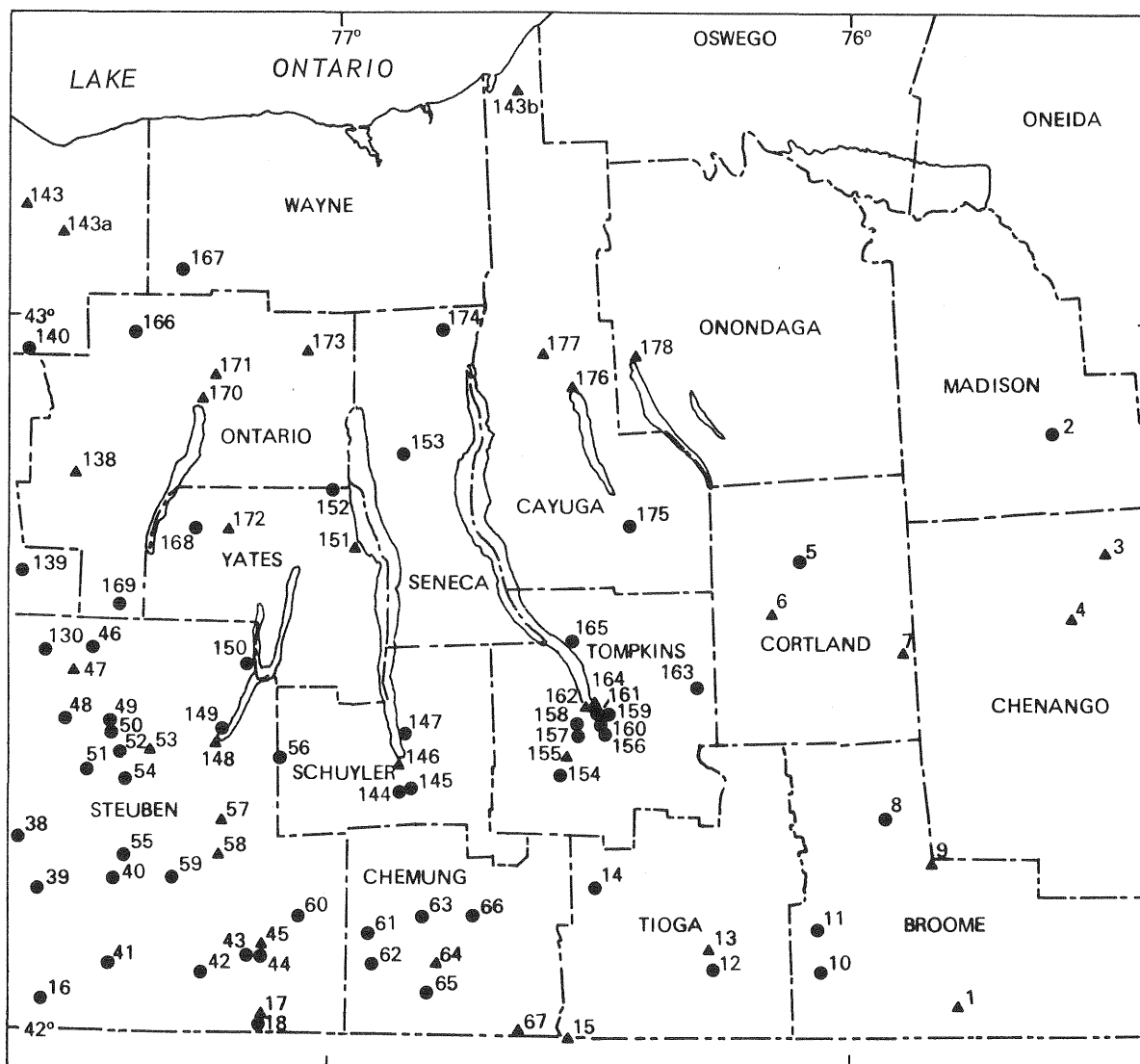


Figure 5.--Location of flood-measurement sites in central and western New York, June 1972.



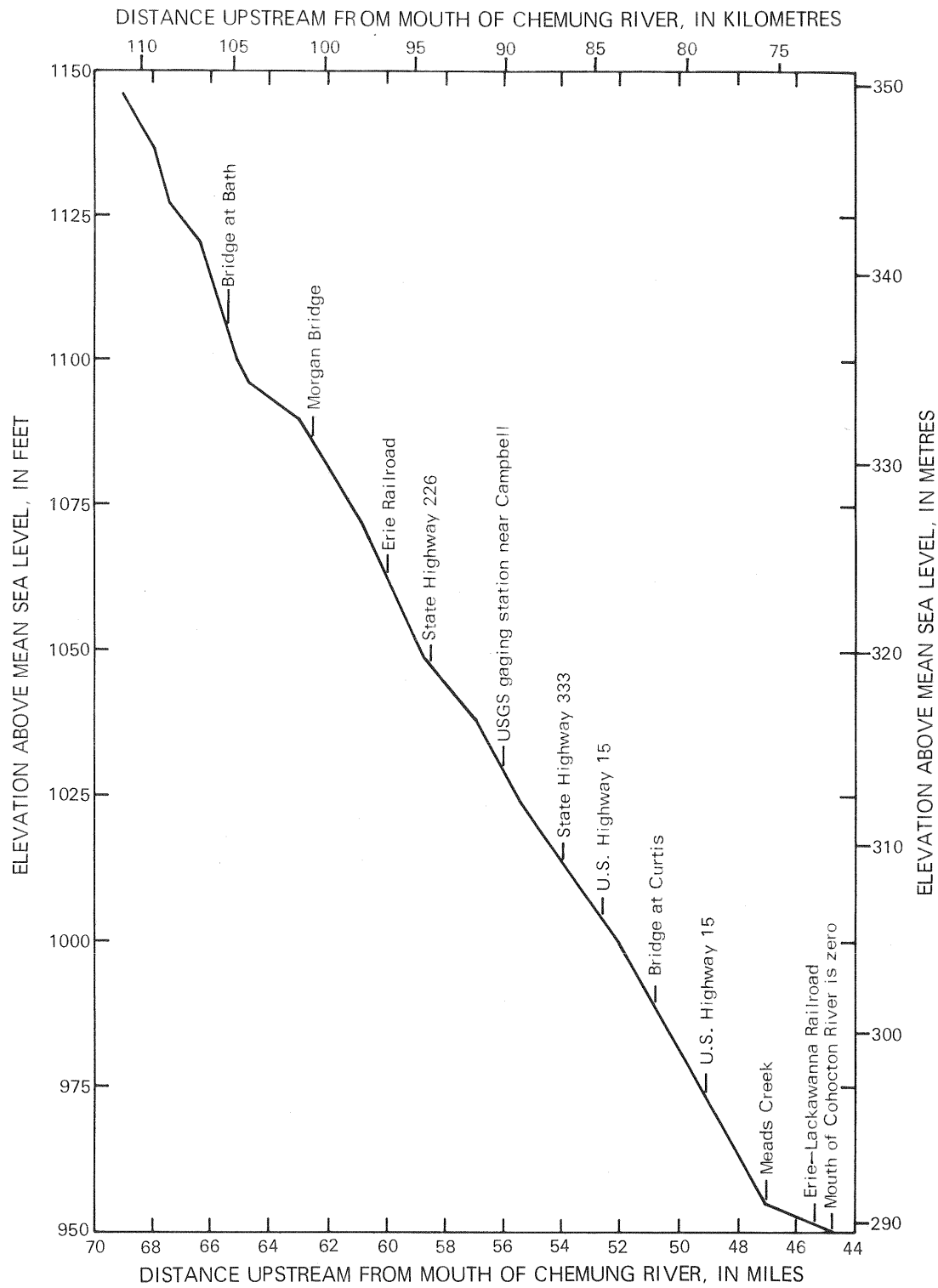


Figure 6.--Profile of Cohocton River from Bath to the mouth at Painted Post, flood of June 1972.

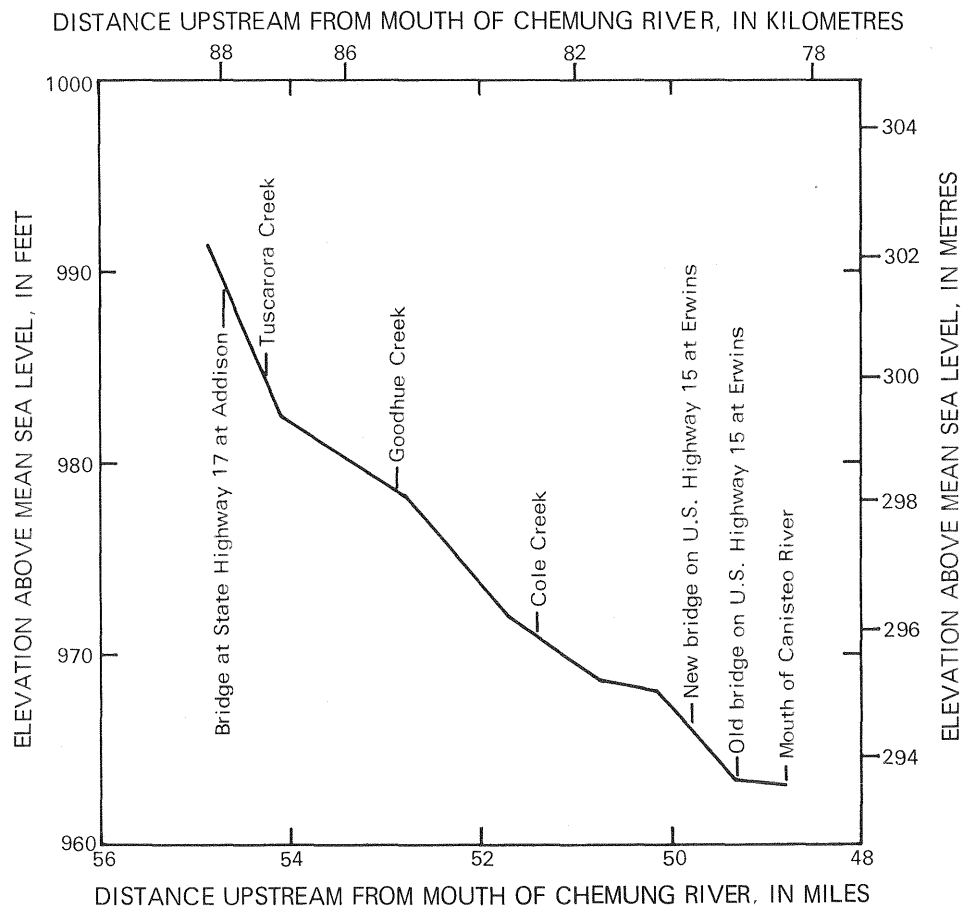


Figure 7.--Profile of Canisteo River from Addison to the mouth, flood of June 1972.

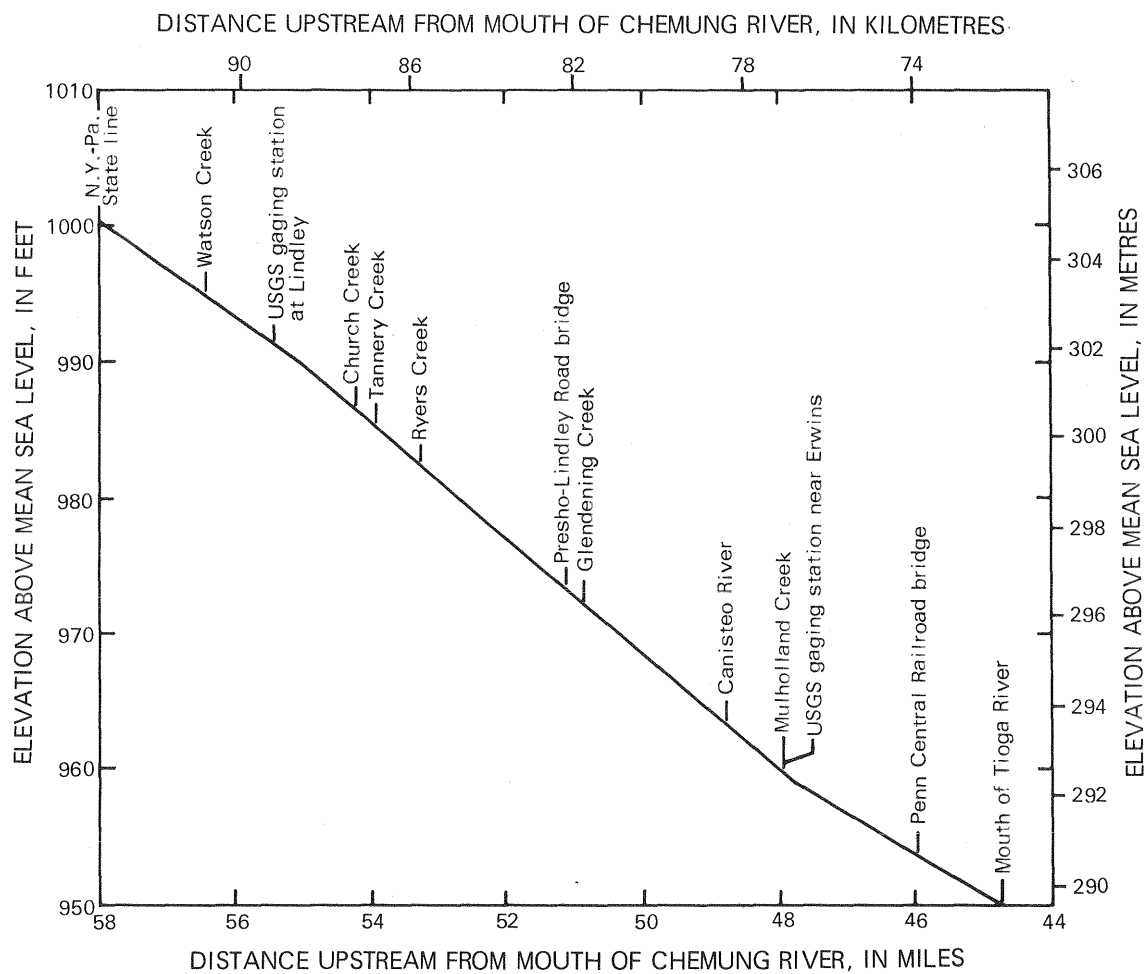


Figure 8.--Profile of Tioga River from New York-Pennsylvania line to the mouth, flood of June 1972.

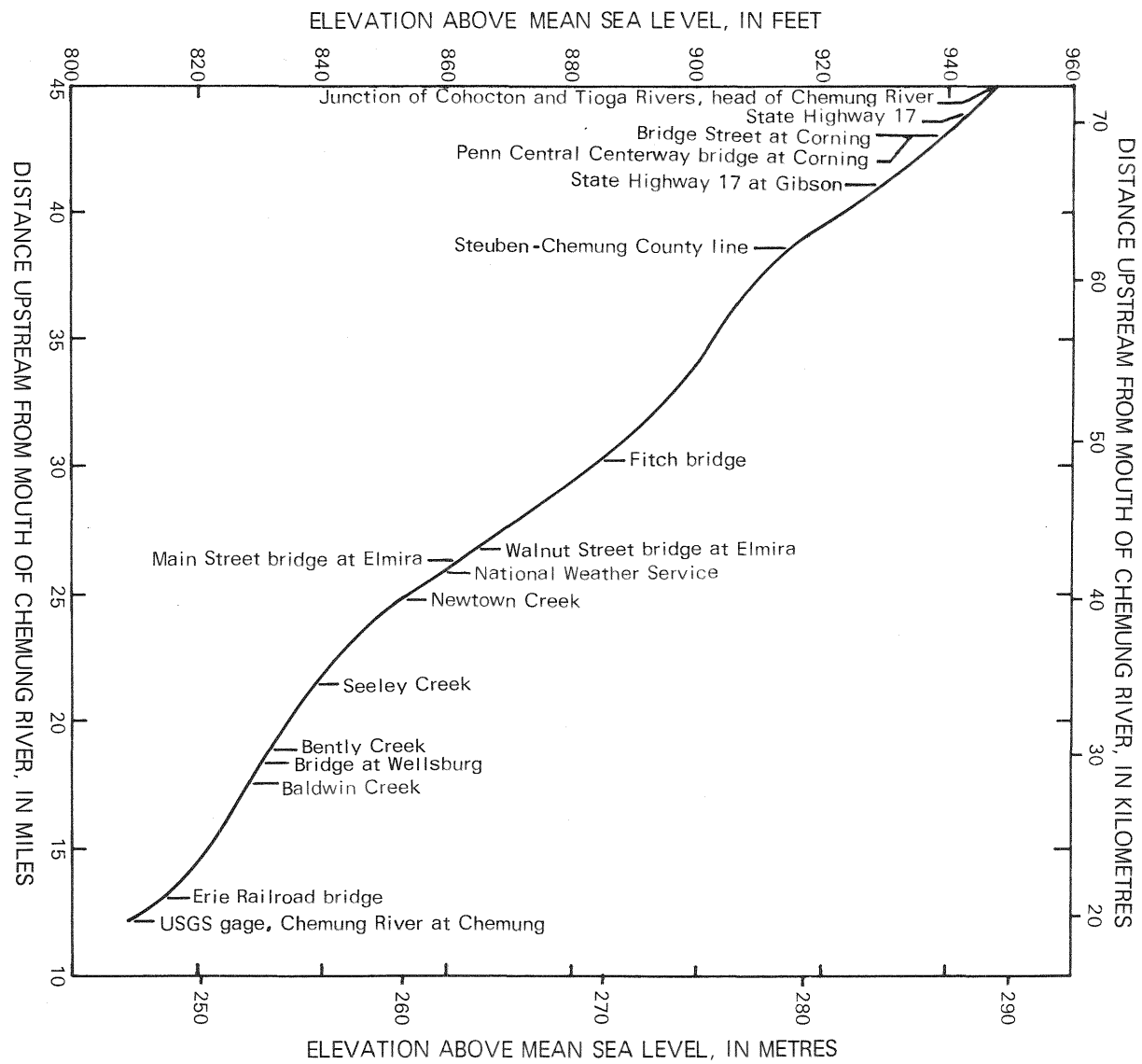


Figure 9.--Profile of Chemung River from Corning to Chemung, flood of June 1972.

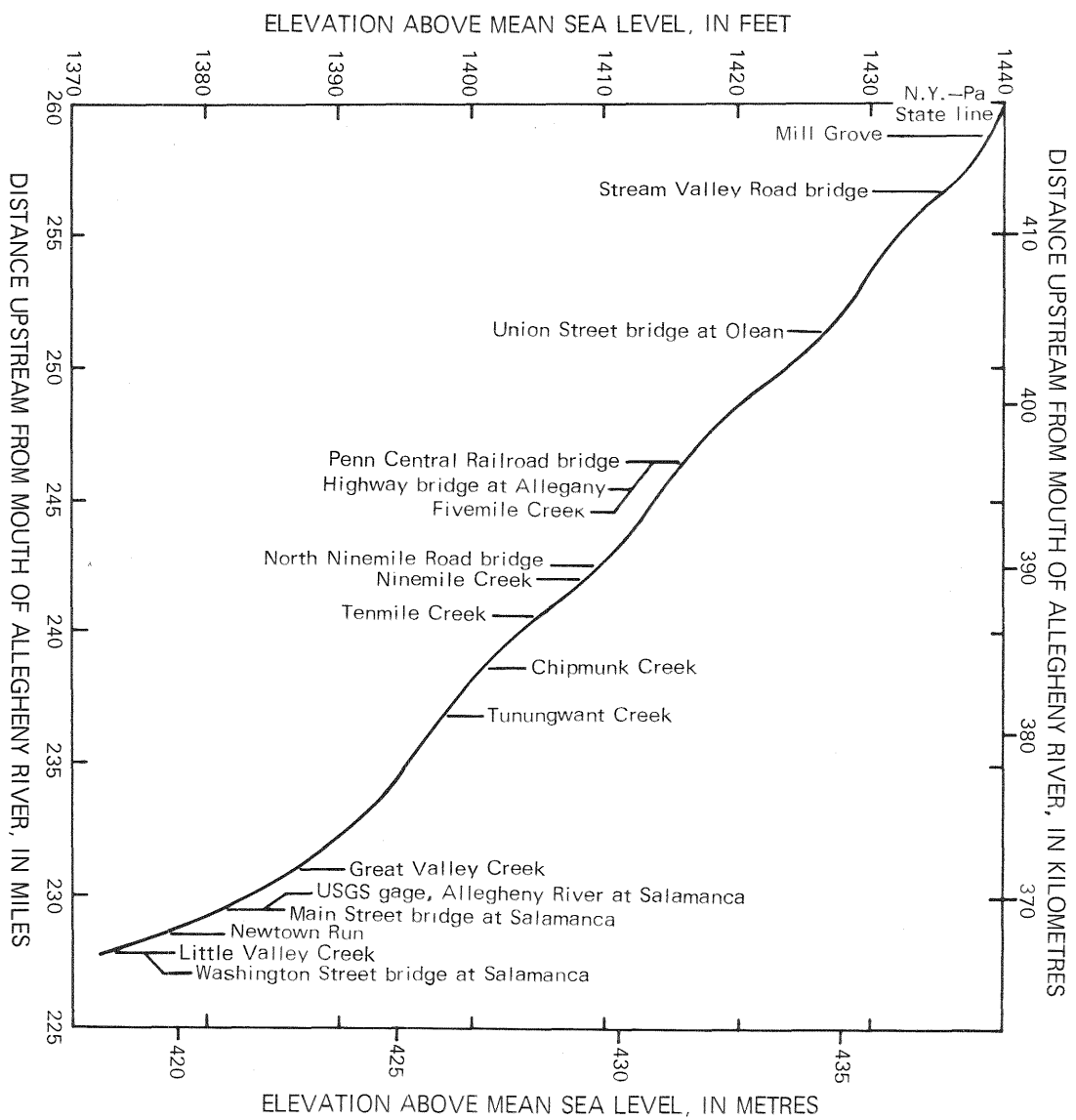


Figure 10.--Profile of Allegheny River from New York-Pennsylvania line to Salamanca, flood of June 1972.

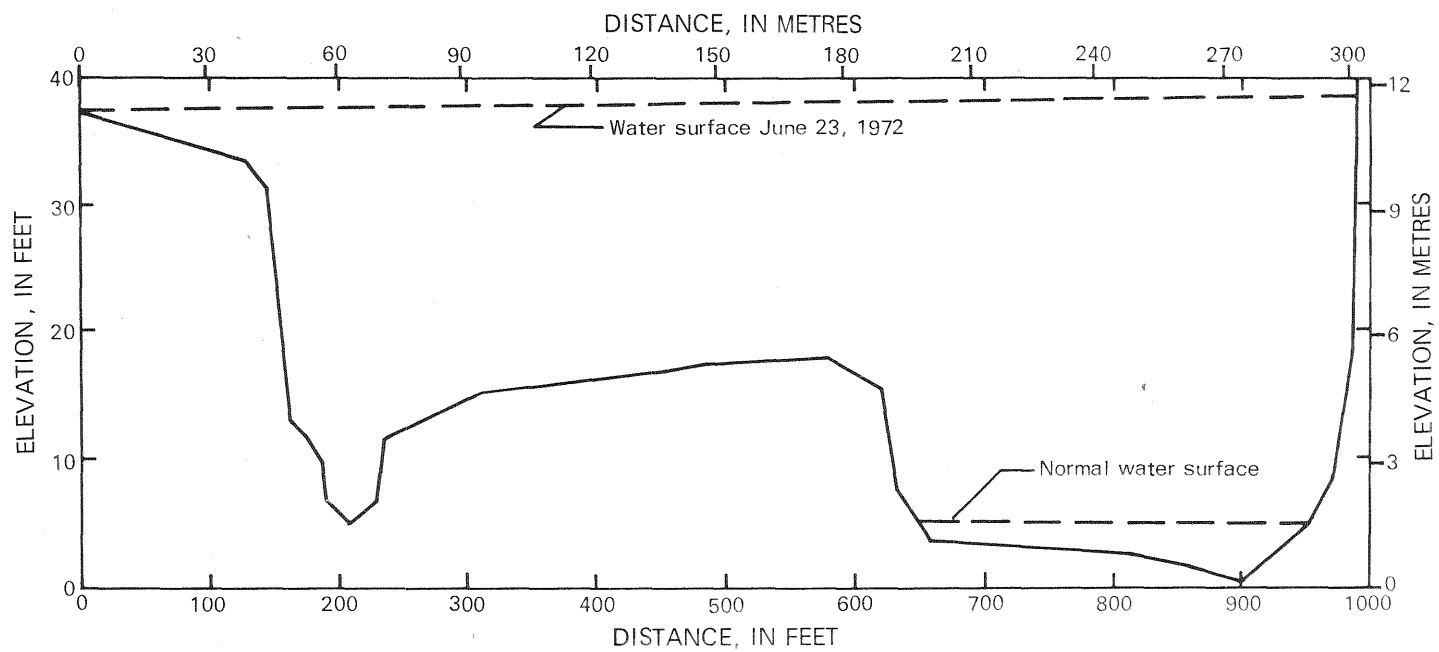


Figure 11.--Cross section of stream channel Chemung River near Big Flats, flood of June 23.

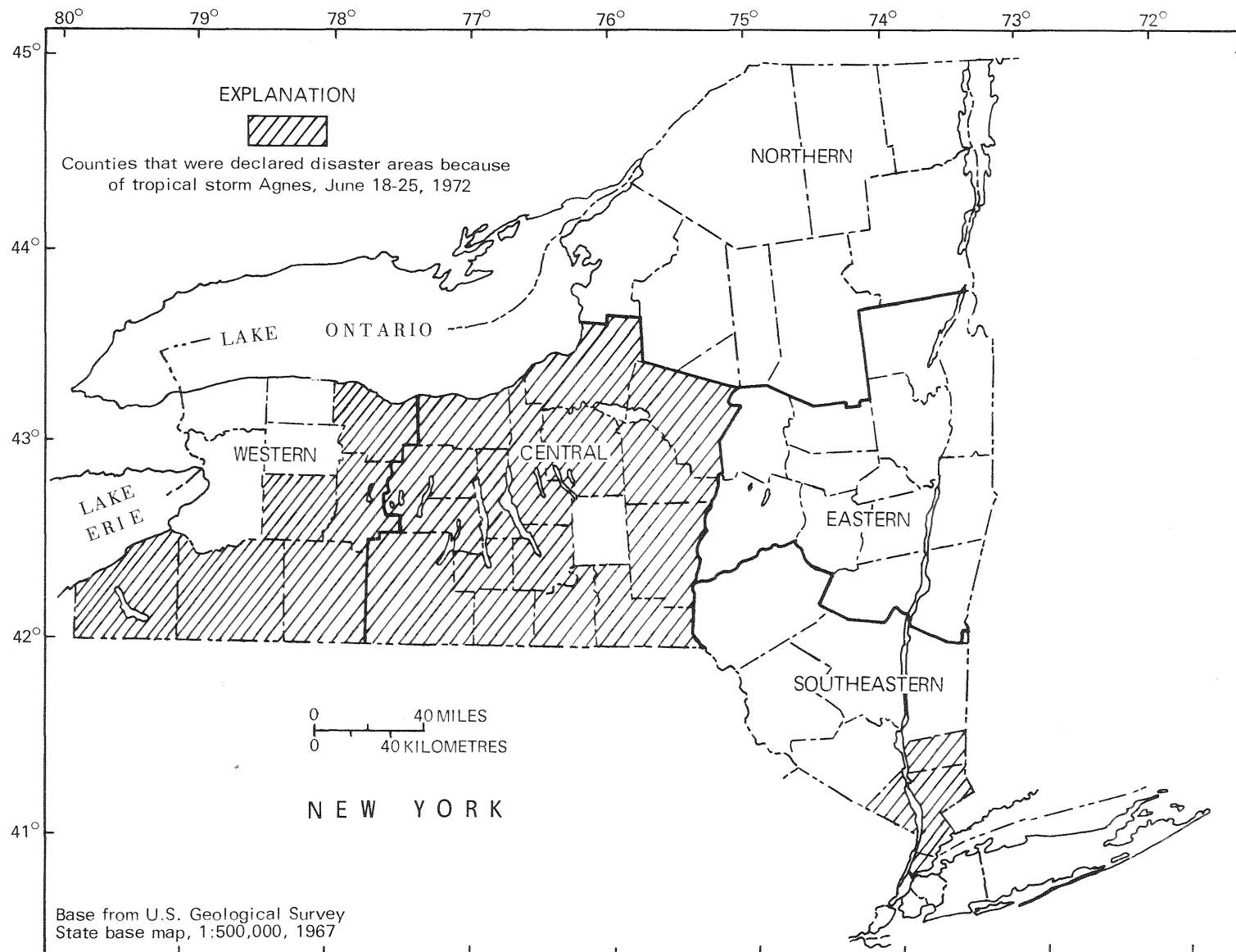


Figure 12.--Counties declared disaster areas by President Nixon because of damages inflicted by Tropical Storm Agnes and frontal storms, June 18-25.

Photographs of June 1972 flood
(figures 13-20)

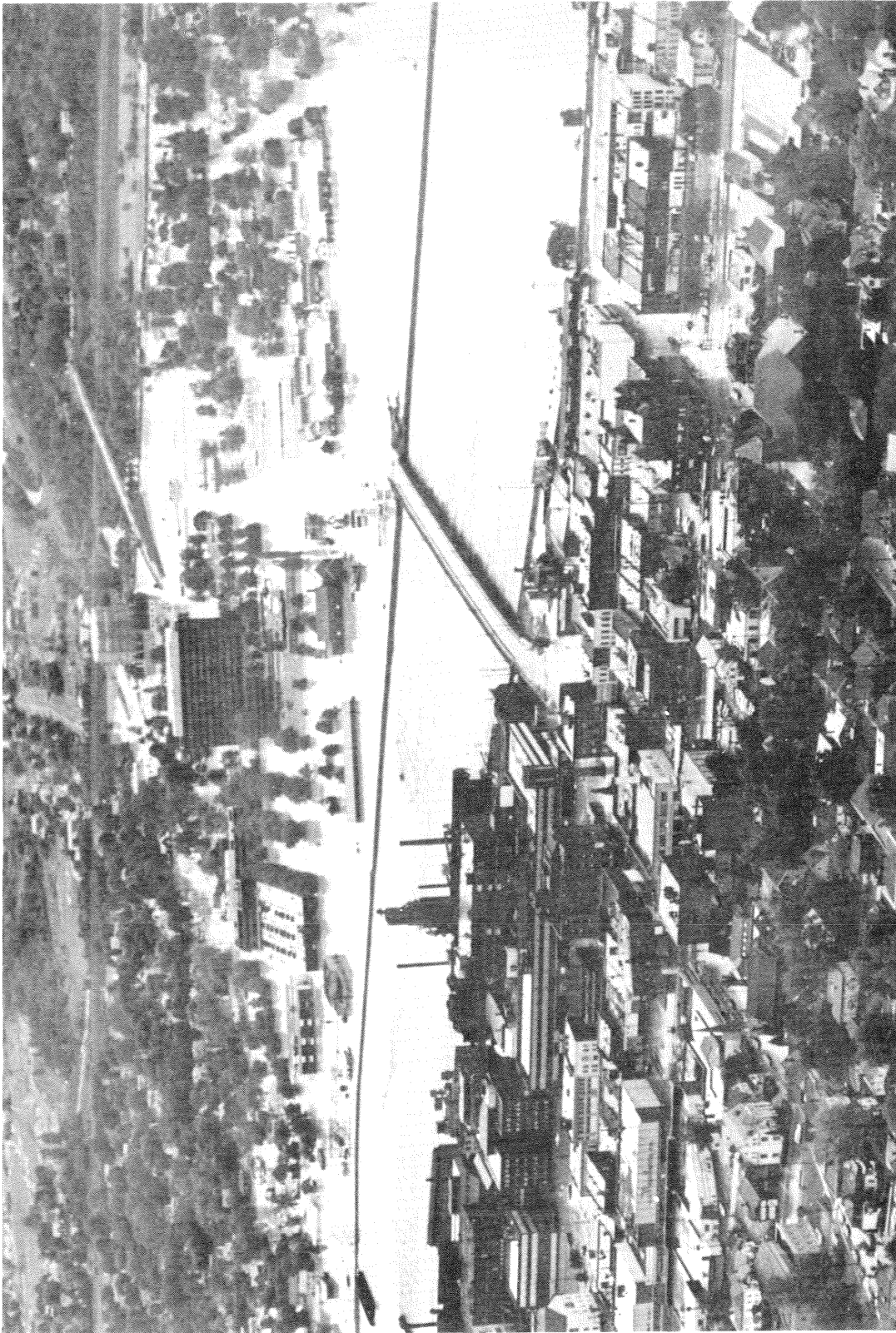


Figure 13.--Chemung River at Corning, June 1972.
(Photograph courtesy of Corning Glass works.)



Figure 14.--Walnut Street bridge at Elmira after southern spans were carried away by the flooding Chemung River, June 1972.
(Photograph courtesy of Chemung County Historical Society.)



Figure 15.--Franklin Street and South Avenue at Elmira, flooding from Chemung River, June 1972.
(Photograph courtesy of Chemung County Historical Society.)



Figure 16.--Chemung River at Elmira, June 23, 1972.
(Photograph courtesy of Chemung County Historical Society.)



Figure 17.--Allegheny River at Westons Mills east of Olean on State Highway 17, June 1972.
(Photograph courtesy of Olean Times-Herald.)



Figure 18. --Allegheny River at Allegheny, June 1972.
(Photograph courtesy of Olean Times-Herald.)



Figure 19.--Downtown Salamanca, Main Street bridge covered by water of the Allegheny River, June 1972.
(Aerial photograph by Jim Weber, courtesy of Salamanca Republican-Press.)



Figure 20.--Salamanca city hall and business area on south side
of Allegheny River, June 1972.
(Aerial photograph by Jim Weber, courtesy of Salamanca Republican-Press.)

Table 2.--Summary of selected peak stages and discharges in central and western New York for the flood of June 1972

(Abbreviations: Cr., Creek; no., number; nr, near; Sta., Station; Trib., Tributary)

Map number	Station number	Stream and place of determination	Drainage area (mi ²)	Period of known floods
SUSQUEHANNA RIVER BASIN				
1	01503000	Susquehanna River at Conklin	2,232	1912-71
2	01503980	Chenango River at Eaton	24.3	1964-65 1967-71
3	01505000	Chenango River at Sherburne	263	1938-71
4	01505500	Canasawacta Cr. nr South Plymouth	57.9	1945-71
5	01508500	Albright Cr. at East Homer	6.81	1938-68
6	01509000	Tioughnioga River at Cortland	292	1938-71
7	01510000	Otselic River at Cincinnatus	147	1938-64 1969-71
8	01511500	Tioughnioga River at Itaska	730	1929-67
9	01512500	Chenango River nr Chenango Forks	1,483	1912-71
10	01513500	Susquehanna River at Vestal	3,960	1938-71
11	01513790	Nanticoke Cr. at Union Center	89.7	1963-71
12	01513840	Pumpelly Cr. at Owego	8.6	1966-68
13	01514000	Owego Cr. nr Owego	185	1930-71
14	01514100	Catatonk Cr. at Spencer	26.5	1955
15	01515000	Susquehanna River at Waverly	4,773	1937-71
16	01518970	Troups Cr. nr Troupsburg	30.2	--
17	01520500	Tioga River at Lindley	771	1930-71
18	01520507	Tannery Cr. nr Lindley	9.13	--
19	01520970	Canisteo River Trib. nr Almond	0.17	--
20	01520973	Canisteo River Trib. no. 2 nr Almond	.31	--
21	01520991	Canisteo River at Bishopville	22.4	--
22	01521000	Arkport Reservoir	30.5	1951-71
23	01521500	Canisteo River at Arkport	30.6	1937-71

Maximum flood previously known				Maximum during June 1972 flood				
Date	Gage height (feet)	Discharge		Day	Time	Gage height (feet)	Discharge	
		ft ³ /s	(ft ³ /s) /mi ²				ft ³ /s	(ft ³ /s) /mi ²
3-18-36	20.14	61,600	27.5	23	2100	12.89	26,500	11.9
3-22-48	20.83	--	--					
3-6-64	8.12	2,570	105.8	--	--	7.92	1,100	45.3
3-5-64	9.80	9,200	35.0	22	0930	9.57	--	
				23	0430	9.57	7,500	28.5
2-25-61	5.94	6,980	118.5	22	0130	5.40	5,000	86.4
6-3-47	3.71	787	110.8	--	--	4.4	1,200	176
3-5-64	12.49	13,000	44.5	23	1645	10.47	7,730	26.5
12-30-42	10.67	8,390	57.1	23	0445	9.39	5,530	37.6
4-4-50	10.68	7,830	53.3					
7-8-35	16.61	61,100	83.7	--	--	8.38	11,500	a
7-8-35	20.3	96,000	64.7	23	2000	11.19	26,200	17.7
b3-18-36	30.50	107,000	27.0	--	--	22.35	50,400	12.7
b10-15-55	--	9,900	110.4	--	--	15.33	13,500	151
3-29-67	5.24	980	114.0	--	--	--	1,660	193
7-8-35	10.50	23,500	127.0	23	0230	10.15	10,600	57.3
3-5-64	11.14	15,300	82.7					
10-15-55	--	1,680	63.4	--	--	--	1,500	56.6
b3-18-36	21.4	128,000	26.8	23	2400	21.24	121,000	25.4
--	--	--	--	--	--	--	4,500	149
5-28-46	22.87	75,000	97.4	23	0300	26.27	128,000	166
--	--	--	--	--	--	--	2,730	299
--	--	--	--	--	--	--	56	329
--	--	--	--	--	--	--	43	139
--	--	--	--	--	--	--	3,400	152
3-8-56	c1,268.4	d2,730	--	23	0700	1,303.89	--	--
b7-8-35	--	4,820	158.0	23	0800	3.60	1,080	a

Table 2.--Summary of selected peak stages and discharges in central and western New York for the flood of June 1972 (Continued)

Map number	Station number	Stream and place of determination	Drainage area (mi ²)	Period of known floods
SUSQUEHANNA RIVER BASIN (Continued)				
24	01521610	Big Cr. nr North Hornell	16.8	1935
25	01522075	Canacadea Cr. at Alfred	1.28	--
26	01522076	Canacadea Cr. Trib. no. 2 nr Alfred	.52	--
27	01522078	Canacadea Cr. Trib. no. 1 at Alfred	1.02	--
28	01522083	East Branch Canacadea Cr. at Alfred Sta.	6.54	--
29	01522085	Canacadea Cr. at Alfred Sta.	14.8	--
30	01522430	McHenry Valley Cr. Trib. no. 2 nr Alfred	1.73	--
31	01522435	McHenry Valley Cr. Trib. no. 1 nr Alfred	.96	--
32	01522500	Karr Valley Cr. nr Almond	27.6	1937-68
33	01523000	Almond Lake nr Almond	55.8	1949-71
34	01523500	Canacadea Cr. nr Hornell	57.9	1940-42 1944-71
35	01524500	Canisteo River at Hornell	158	1942-71
36	01524610	Cole Valley Cr. at West Greenwood	3.14	--
37	01524990	Purdy Cr. nr Canisteo	21.2	1935
38	01525000	Bennett Cr. at Canisteo	95.3	1938-47
39	01525050	Colonel Bill's Cr. at South Canisteo	10.1	--
40	01525500	Canisteo River at West Cameron	342	1930-31 1937-70
41	01525750	Tuscarora Cr. Trib. nr Woodhull	9.4	1966-68
42	01526000	Tuscarora Cr. nr South Addison	114	1937-70
43	01526070	Canisteo River at Erwins	551	--
44	01526495	Mulholland Cr. nr Erwins	5.1	1966-68
45	01526500	Tioga River at Erwins	1,370	1918-71
46	01526980	Kirkwood Cr. nr Atlanta	4.6	1966-68
47	01527000	Cohocton River at Cohocton	52.2	1950-71
48	01527428	Neil Cr. (at the Rocks) nr Bloomerville	18.0	1935

Maximum flood previously known				Maximum during June 1972 flood				
Date	Gage height (feet)	Discharge		Day	Time	Gage height (feet)	Discharge	
		ft ³ /s	(ft ³ /s) /mi ²				ft ³ /s	(ft ³ /s) /mi ²
7-9-35	--	11,900	721.2	--	--	--	6,680	398
--	--	--	--	--	--	--	656	512
--	--	--	--	--	--	--	358	688
--	--	--	--	--	--	--	570	559
--	--	--	--	--	--	--	2,660	407
--	--	--	--	--	--	--	6,080	411
--	--	--	--	--	--	--	1,100	636
--	--	--	--	--	--	--	450	469
9-28-67	9.11	6,250	226.4	--	--	12.2	10,900	395
3-8-56	c1,286.0	d8,700	--	23	0400	c1,298.57	--	--
b7-8-35	--	21,000	35.6	23	0630	6.14	5,880	a
5-17-45	5.14	9,430	--	--	--	--	--	--
5-26-43	13.30	9,340	58.7	23	0330	13.45	9,560	60.5
--	--	--	--	--	--	--	680	217
7-9-35	--	8,990	424	--	--	--	6,940	327
5-27-46	8.90	10,000	104.4	--	--	--	19,500	205
--	--	--	--	--	--	--	2,820	279
b7-8-35	--	35,000	102.3	23	0300	23.48	43,000	126
3-12-67	3.94	686	73.0	--	--	--	1,440	153
5-27-46	8.44	--	--	--	--	10.4	18,700	164
3-30-51	8.79	14,000	122.8	--	--	--	--	--
--	--	--	--	--	--	--	46,100	83.7
11-28-66	3.20	96	18.8	--	--	--	590	116
5-28-46	23.54	94,000	68.6	23	0600	26.74	e190,000	139
7-13-67	2.84	50	10.9	--	--	--	810	176
4-1-60	6.23	883	16.6	23	1600	9.75	2,260	43.3
7-8-35	--	5,040	242.3	--	--	--	3,750	208

Table 2.--Summary of selected peak stages and discharges in central
and western New York for the flood of June 1972 (Continued)

Map num- ber	Station number	Stream and place of determination	Drainage area (mi ²)	Period of known floods
SUSQUEHANNA RIVER BASIN (Continued)				
49	01527485	Tenmile Cr. nr Avoca	17.9	--
50	01527500	Cohocton River at Avoca	157	1938-45
51	01527580	Goff Cr. Trib. nr Howard	4.86	--
52	01527620	Goff Cr. nr Avoca	23.8	--
53	01528000	Fivemile Cr. nr Kanona	66.8	1937-71
54	01528210	Campbell Cr. nr Kanona	35.8	1935
55	01528375	Stocking Cr. Trib. at North Cameron	2.64	--
56	01528950	Mud Cr. Trib. no. 2 nr Bradford	2.34	--
57	01529000	Mud Cr. nr Savona	76.6	1918-19 1937-71
58	01529500	Cohocton River nr Campbell	470	1918-71
59	01529530	South Branch Michigan Cr. nr Risingville	1.0	1953
60	01530200	Post Cr. at Corning	31.6	--
61	01530285	Sing Sing Cr. nr Big Flats	14.7	--
62	01530303	Chemung River nr Big Flats	2,150	1936
63	01530440	Newtown Cr. at Horseheads	56.4	--
64	01530500	Newtown Cr. at Elmira	77.5	1938-71
65	01530770	Seeley Cr. nr Elmira	95.6	--
66	01530910	Rorick Hollow Cr. nr Breesport	1.65	--
67	01531000	Chemung River at Chemung	2,506	1903-71
ALLEGHENY RIVER BASIN				
68	03010678	Little Genesee at Little Genesee	37.0	--
69	03010718	Dodge Cr. at Portville	45.7	--
70	03010762	Gates Cr. at Franklinville	19.3	1967
71	03010783	Johnson's Cr. at Cuba	2.1	1967
72	03010800	Olean Cr. nr Olean	198	1958-68

Maximum flood previously known				Maximum during June 1972 flood				
Date	Gage height (feet)	Discharge		Day	Time	Gage height (feet)	Discharge	
		ft ³ /s	(ft ³ /s) /mi ²				ft ³ /s	(ft ³ /s) /mi ²
--	--	--	--	--	--	--	2,240	125
3-17-42	8.88	3,880	24.7	--	--	--	13,300	84.7
--	--	--	--	--	--	--	660	136
--	--	--	--	--	--	--	3,550	149
3-7-56	4.59	2,680	39.4	23	0200	5.95	5,110	76.5
7-8-35	--	14,000	391.1	--	--	--	7,340	205
--	--	--	--	--	--	--	452	171
--	--	--	--	--	--	--	757	324
3-7-56	6.89	1,860	24.4	23	0615	8.66	6,100	79.6
7-8-35	11.6	41,100	87.1	23	0300	11.16	32,000	68.1
7-22-53	--	819	819	--	--	--	168	168
--	--	--	--	--	--	--	3,000	94.9
--	--	--	--	--	--	--	3,000	204
3-36	--	87,200	40.6	23	--	--	235,000	109
--	--	--	--	--	--	--	5,200	92.2
12-30-42	15.23	3,460	43.4	23	0515	19.28	4,000	51.6
10-16-55	17.06	3,350	42.0	--	--	--	18,900	198
--	--	--	--	--	--	--	333	201
5-28-46	23.97	132,000	52.2	23	1630	31.62	189,000	75.4
--	--	--	--	--	--	--	8,330	225
--	--	--	--	--	--	--	4,200	91.9
9-28-67	--	4,880	253	--	--	--	979	50.7
9-28-67	--	632	301	--	--	--	609	290
9-29-67	16.06	18,200	91.9	--	--	11.52	6,000	30.3

Table 2.--Summary of selected peak stages and discharges in central and western New York for the flood of June 1972 (Continued)

Map num- ber	Station number	Stream and place of determination	Drainage area (mi ²)	Period of known floods
ALLEGHENY RIVER BASIN (Continued)				
73	03010860	Fivemile Cr. at Allegany	34.1	1967
74	03010979	Wrights Cr. at Willoughby	30.2	1967
75	03011020	Allegheny River at Salamanca	1,608	1903-71
76	03013000	Conewango Cr. at Waterboro	290	1938-71
77	03013070	Mill Cr. at Sinclairville	17.6	1954
78	03013990	Chautauqua Lake at Mayville	186	1949-71
79	03014500	Chadakoin River at Falconer	194	1934-71
LAKE ERIE BASIN				
80	04213320	Chautauqua Cr. at Barcelona	36.0	--
81	04213490	South Branch Cattaraugus Cr. nr Otto	25.6	1963-71
82	04213492	South Branch Cattaraugus Cr. nr Cattaraugus	e70	--
83	04213500	Cattaraugus Cr. at Gowanda	432	1939-71
84	04214200	Eighteenmile Cr. at North Boston	37.2	1963-68
85	04214400	Buffalo Cr. nr Wales Hollow	80.1	1963-68
86	04214410	Hunter Cr. at Colegrove	14.0	1964-71
87	04214500	Buffalo Cr. at Gardenville	144	1938-71
88	04215000	Cayuga Cr. nr Lancaster	94.9	1938-68
89	04215500	Cazenovia Cr. at Ebenezer	134	1940-71
NIAGARA RIVER BASIN				
90	04216400	Tonawanda Creek nr Johnsonburg	23.6	1962-71
91	04216500	Little Tonawanda Cr. at Linden	22.1	1912-68

Maximum flood previously known				Maximum during June 1972 flood				
Date	Gage height (feet)	Discharge		Day	Time	Gage height (feet)	Discharge	
		ft ³ /s	(ft ³ /s) /mi ²				ft ³ /s	(ft ³ /s) /mi ²
9-28-67	--	3,840	113	--	--	--	--	--
9-28-67	--	9,300	307.9	--	--	--	2,000	66.2
9-29-67	16.24	41,700	25.9	23	1300	24.01	73,000	45.4
4-7-47	11.35	8,600	29.7	26	0845	10.15	3,970	13.7
3-8-56	11.58	6,750	23.3					
10-15-54	--	2,740	150.5	--	--	--	2,070	118
3-9-56	10.65	--	--	25	0200	10.15	--	--
4-5-47	4.56	2,050	10.6	24	1600	4.01	1,650	a
--	--	--	--	--	--	10.30	7,780	216
9-28-67	7.23	2,780	108.6	--	--	7.34	2,910	114
--	--	--	--	--	--	6.84	4,000	57.1
3-17-42	13.73	35,900	83.1	23	0445	12.18	25,300	58.6
3-7-56	14.14	34,600	80.1					
9-29-67	12.50	5,790	155.6	--	--	11.05	4,670	126
9-28-67	11.61	9,260	121.0	--	--	11.36	8,830	110
9-28-67	6.66	1,680	120	--	--	5.81	1,160	82.9
3-9-42	11.90	--	--	23	1030	9.09	12,000	83.3
3-1-55	9.43	13,000	90.3					
1-22-59	10.09	8,750	92.2	--	--	10.09	8,800	92.7
3-1-55	15.82	13,500	100.7	23	0700	13.52	12,300	91.8
11-26-64	7.49	1,370	58.1	--	--	11.05	--	--
3-7-56	16.04	2,700	122.2	--	--	11.52	1,800	81.4

Table 2.--Summary of selected peak stages and discharges in central and western New York for the flood of June 1972 (Continued)

Map num- ber	Station number	Stream and place of determination	Drainage area (mi ²)	Period of known floods
LAKE ONTARIO BASIN				
92	04220360	Springmill Cr. at Springmill	5.01	--
93	0422037A	Cryder Cr. at Genesee, Pa.	50.0	--
94	04220384	Orebed Cr. nr Stannards	4.07	--
95	04220412	Genesee River at Stannards	179	--
96	04220418	Fulmer Valley Cr. Trib. nr Andover	.72	--
97	04220420	Flumer Valley Cr. nr Halisport	11.8	--
98	04220422	Chenunda Cr. Trib. nr Stannards	.04	--
99	04220431	Chenunda Cr. at Stannards	30.6	--
100	04220450	Dyke Cr. nr West Greenwood	1.64	1964-71
101	04220455	Quig Hollow Brook nr Andover	4.2	1964-71
102	04220460	East Valley Cr. Trib. nr Andover	1.59	1964-68
103	04220465	Railroad Brook nr Alfred	1.05	1964-67 1971
104	04220472	Indian Cr. at Andover	1.07	--
105	04220478	Elm Valley Cr. nr Elm Valley	4.18	1964-68
106	04220492	Trapping Brook nr Wellsville	3.19	--
107	04220500	Dyke Cr. at Wellsville	71.4	1955-60 1964-69
108	04221000	Genesee River at Wellsville	288	1955-58
109	04221500	Genesee River at Scio	308	1916-71
110	04221510	Vandermark Cr. nr Scio	22.0	--
111	04221518	Snowball Hollow Cr. nr Scio	3.47	--
112	04221554	North Branch Phillips Cr. nr Withey	7.16	--
113	04221555	Phillips Cr. nr Withey	24.1	--
114	04221561	Feathers Cr. at Belmont	3.69	--
115	04221600	Van Campen Cr. at Friendship	45.8	1964-68
116	04221640	Black Cr. at Birdsall	--	--

Maximum flood previously known				Maximum during June 1972 flood				
Date	Gage height (feet)	Discharge		Day	Time	Gage height (feet)	Discharge	
		ft ³ /s	(ft ³ /s) /mi ²				ft ³ /s	(ft ³ /s) /mi ²
--	--	--	--	--	--	--	595	119
--	--	--	--	--	--	--	6,610	132
--	--	--	--	--	--	--	965	237
--	--	--	--	--	--	12.2	20,200	113
--	--	--	--	--	--	--	173	240
--	--	--	--	--	--	--	3,200	271
--	--	--	--	--	--	--	27	675
--	--	--	--	--	--	--	9,200	301
3-15-71	7.47	600	366	--	--	f8.5	f1,050	f640
1-30-69	3.40	237	55.9	--	--	5.11+	f1,100	262
2-13-66	3.38	--	--	--	--	3.04	700	440
3-15-71	2.05	--	--	--	--	3.84	--	--
--	--	--	--	--	--	f5.00	670	638
--	--	--	--	--	--	--	929	868
5-7-65	2.13	300	62.5	--	--	--	1,840	440
--	--	--	--	--	--	--	630	197
6-15-60	16.10	5,230	73.2	--	--	--	12,000	168
3-8-56	17.65	15,800	54.9	--	--	--	--	--
11-25-50	11.22	23,300	75.6	23	0300	14.12	41,000	133
--	--	--	--	--	--	--	8,670	394
--	--	--	--	--	--	--	580	167
--	--	--	--	--	--	--	1,730	242
--	--	--	--	--	--	--	5,910	245
--	--	--	--	--	--	--	931	252
9-28-67	13.10	13,400	293	--	--	10.92	9,400	205
--	--	--	--	--	--	--	1,860	--

Table 2.--Summary of selected peak stages and discharges in central and western New York for the flood of June 1972 (Continued)

Map number	Station number	Stream and place of determination	Drainage area (mi ²)	Period of known floods
LAKE ONTARIO BASIN (Continued)				
117	04221698	Angelica Cr. at Angelica	61.0	1942
118	04221700	Angelica Cr. nr Angelica	61.3	--
119	04221710	Baker Cr. nr Angelica	22.4	--
120	04221720	Angelica Cr. at Transit Bridge	86.5	1964-68
121	04222510	Sixtown Cr. nr Higgins	17.8	--
122	04222600	Wiscoy Cr. at Bliss	21.8	1962-65 1967-71
123	04223000	Genesee River at Portageville	981	1908-71
124	04224000	Mount Morris Lake nr Mount Morris	1,075	1952-71
125	04224550	Ewart Cr. at Swain	3.9	1964-65 1967-68
126	04224650	Canaseraga Cr. nr Canaseraga	58.2	1964-68
127	04224700	Sugar Cr. nr Ossian	9.83	1964-71
128	04224800	Stony Brook at South Dansville	2.23	1964-69
129	04224810	Sponable Cr. nr South Dansville	.7	1964-67
130	04224900	Mill Cr. at Patchinville	5.00	1964-71
131	04224965	Little Mill Cr. Reservoir--Relief Channel	7.54	--
132	04224970	Little Mill Cr. Trib. nr Dansville	1.42	--
133	04225000	Canaseraga Cr. nr Dansville	153	1910-12 1915-68
135	04227500	Genesee River nr Mount Morris	1,417	1903-06 1908-14 1915-71
136	04227980	Conesus Lake nr Lakeville	69.7	1963-71
137	04228500	Genesee River at Avon	1,667	1955-71
138	04228845	Honeoye Lake nr Honeoye	41.1	1963-71
139	04228900	Springwater Cr. at Springwater	10.1	1964-68
140	04229500	Honeoye Cr. at Honeoye Falls	195	1945-70
141	04230380	Oatka Cr. at Warsaw	41.9	1963-71
142	04230500	Oatka Cr. at Garbutt	204	1945-71

Maximum flood previously known				Maximum during June 1972 flood				
Date	Gage height (feet)	Discharge		Day	Time	Gage height (feet)	Discharge	
		ft ³ /s	(ft ³ /s) /mi ²				ft ³ /s	(ft ³ /s) /mi ²
7-18-42	--	14,000	230	--	--	--	--	--
--	--	--	--	--	--	--	6,120	99.8
--	--	--	--	--	--	--	3,050	136
9-28-67	10.28	9,560	110	--	--	--	8,400	97.1
--	--	--	--	--	--	--	2,460	138
3-5-64	3.38	--	--	--	--	4.06	1,850	84.9
5-17-16	12.81	44,400	45.2	23	0230	32.25	90,000	91.7
4-5-60	c719.40	d216,000	--	25	1700- 2200	755.8	--	--
3-5-64	3.80	--	--	--	--	3.75	700	179
9-28-67	11.10	5,480	94.2	--	--	--	12,400	213
3-5-64	6.45	--	--	--	--	6.85	1,380	140
1-30-68	2.64	--	--	--	--	--	490	220
9-28-67	2.04	--	--	--	--	--	121	173
3-5-64	3.79	--	--	--	--	3.01	1,350	270
--	--	--	--	--	--	--	835	111
--	--	--	--	--	--	--	113	79.5
8-23-40	9.93	9,110	59.5	23	0245	14.66	9,600	62.7
5-17-16	25.44	55,100	38.9	24	0415	24.50	17,800	12.6
4-25,29-69	23.80	--	--	24	1200	22.50	--	--
3-7-56	37.20	15,600	9.4	25	0700	40.64	16,500	9.90
4-15-71	4.72	--	--	23	2400	6.94	--	--
3-5-64	5.25	156	15.4	--	--	--	1,180	117
3-28-50	6.42	4,630	23.7	--	--	6.5	4,800	24.6
9-28-67	7.28	1,760	80	23	0245	9.75	4,010	95.7
3-31-60	8.64	6,920	33.9	24	1500	6.89	3,840	18.8

Table 2.--Summary of selected peak stages and discharges in central and western New York for the flood of June 1972 (Continued)

Map number	Station number	Stream and place of determination	Drainage area (mi ²)	Period of known floods
LAKE ONTARIO BASIN (Continued)				
142a	04231000	Black Cr. at Churchville	123	1945-71
143	04232000	Genesee River at Rochester	2,450	1904-71
143a	04232050	Allen Cr. nr Rochester	30.1	1959-71
143b	04232100	Sterling Cr. at Sterling	44.4	1957-71
144	04232192	Catherine Cr. Trib. no. 4 nr Montour Falls	1.00	--
145	04232198	Catherine Cr. at Montour Falls	38.2	--
146	04232400	Seneca Lake at Watkins Glen	714	1956-71
147	04232406	Hector Falls Cr. at Burdett	12.6	1935
148	04232450	Keuka Lake at Hammondsport	182	1960-71
149	0423245A	Keuka Lake Trib. no. 13 nr Hammondsport	.23	--
150	04232468	Keuka Lake Trib. no. 12 nr Pulteney	.85	--
151	04232482	Keuka Lake Outlet at Dresden	207	1965-71
152	04232490	Kashong Cr. nr Bellona	30.7	1966-71
153	04232630	Kendig Cr. nr Mac Dougall	13.8	1964-71
154	04232902	West Branch Cayuga Inlet at Newfield	8.05	--
155	04233000	Cayuga Inlet nr Ithaca	35.2	1937-71
156	04233250	Buttermilk Cr. nr Ithaca	11.3	1962-69
157	04233255	Cayuga Inlet at Ithaca	86.7	1971
158	04233257	Coy Glen Cr. at Ithaca	--	--
159	04233310	Sixmile Cr. nr Ithaca	42.0	1966-71
160	04233314	Sixmile Cr. Trib. nr Ithaca	--	--
161	04233317	Sixmile Cr. at Potter Falls at Ithaca	45.5	1935
162	04233500	Cayuga Lake at Ithaca	1,564	1905-25 1956-71
163	04233676	Virgil Cr. at Dryden	20.6	1966-71
164	04234000	Fall Cr. nr Ithaca	126	1908-09 1925-71

Maximum flood previously known				Maximum during June 1972 flood				
Date	Gage height (feet)	Discharge		Day	Time	Gage height (feet)	Discharge	
		ft ³ /s	(ft ³ /s) /mi ²				ft ³ /s	(ft ³ /s) /mi ²
--	--	--	--	--	--	--	1,270	10.3
3-30-16	15.30	48,300	19.7	25	1245	15.89	31,300	12.8
--	--	--	--	--	--	--	1,280	42.5
--	--	--	--	--	--	--	683	15.4
--	--	--	--	--	--	--	296	296
--	--	--	--	--	--	--	3,150	82.5
3-16, 17-64	8.56	--	--	25	0945	10.47	--	--
7-8-35	--	4,600	365.1	--	--	5.40	11,500	119
4-27, 28	5.79	--	--	24	1345	9.35	--	--
29-61	--	--	--	--	--	--	119	517
--	--	--	--	--	--	--	255	300
2-13-66	3.78	640	3.1	22	1045	8.38	4,000	19.3
9-29-67	3.94	--	--	--	--	3.19	610	19.9
3-13-66	3.95	218	15.8	--	--	4.93	417	30.2
--	--	--	--	--	--	--	1,480	184
8-13-42	7.58	4,110	112.0	23	0115	8.10	4,800	136
--	--	--	--	--	--	9.94	1,060	93.8
3-15-71	10.74	5,200	60.0	--	--	14.6	11,800	136
--	--	--	--	--	--	--	516	--
2-13-66	3.82	--	--	--	--	9.37	5,360	128
--	--	--	--	--	--	--	187	--
7-8-35	--	4,330	95.2	--	--	--	4,430	97.4
4-4, 5-16	8.4	--	--	24	2400	9.76	--	--
				26	1100	9.77	--	--
3-28-67	2.58	656	31.8	--	--	3.90	1,380	67.0
7-8-35	9.52	15,500	123	23	0530	5.38	4,660	37.0

Table 2.--Summary of selected peak stages and discharges in central and western New York for the flood of June 1972 (Continued)

Map number	Station number	Stream and place of determination	Drainage area (mi ²)	Period of known floods
LAKE ONTARIO BASIN (Continued)				
165	04234018	Salmon Cr. at Ludlowville	81.7	1964-68
166	04234200	Mud Creek at East Victor	64.2	1958-68
167	04234250	Ganargua Cr. at Macedon	104	1965-69
168	04234400	West River nr Middlesex	29.3	1965-71
169	04234428	Reservoir Cr. nr Naples	5.76	--
170	04234500	Canandaigua Lake at Canandaigua	184	1927-71
171	04235000	Canandaigua Outlet at Chapin	195	1939-71
172	04235150	Flint Cr. at Potter	31.0	1964-68
173	04235250	Flint Cr. at Phelps	102	1959-71
174	04235276	Black Brook at Tyre	19.0	1965-71
175	04235300	Owasco Inlet at Moravia	106	1960-68
176	04235296	Owasco Lake nr Auburn	205	1967-71
177	04235500	Owasco Outlet nr Auburn	206	1912-71
178	04236000	Skaneateles Lake at Skaneateles	72.7	1890-1971

a Regulated.

b Outside the period of record.

c Elevation.

d Acre-feet.

e Estimated.

f About.

g Backwater.

Maximum flood previously known				Maximum during June 1972 flood				
Date	Gage height (feet)	Discharge		Day	Time	Gage height (feet)	Discharge	
		ft ³ /s	(ft ³ /s) /mi ²				ft ³ /s	(ft ³ /s) /mi ²
2-13-66	7.23	1,940	23.7	--	--	10.62	4,160	50.9
3-27-63	6.65	1,370	21.3	--	--	7.90	1,800	28.0
2-12-66	5.91	1,520	14.6	--	--	6.80	e1,950	--
3-29-67	3.16	242	8.3	--	--	6.82	2,790	95.2
--	--	--	--	--	--	--	1,600	278
3-11-56	9.54	--	--	24	1400	10.94	--	--
3-17-42	4.64	1,100	5.6	24	1500	5.62	1,710	8.77
3-5-64	6.87	920	29.9	23	0600	10.15	5,040	163
3-30-60	5.83	2,940	28.8	23	0400	5.74	2,800	--
				24	1500	5.75	2,820	27.6
2-14-66	2.70	258	13.6	--	--	3.61	530	27.9
6-30-61	12.21	11,600	109	23	--	16.17	--	--
3-5-64	12.76	g	--					
--	--	--	--	25	1800	c716.48	--	--
3-19-36	4.88	2,090	10.1	23	1715	6.28	3,250	15.8
				24	1030	6.28	3,140	15.2
--	--	--	--	25	0800	c865.20	--	--
				26	0800	c865.20	--	--

SUMMARY OF OTHER FLOODS

On January 25, very high winds raised the level of Lake Erie 9.2 ft (2.8 m) above normal in the Buffalo Harbor and caused flooding of property along the lakeshore and the Niagara River. Some residents in the Cayuga Island section of Niagara Falls were forced to evacuate their homes.

Heavy rain and wind-driven tides during February caused flooding in New York City, on Staten Island, and on Long Island's north and south shores. Many homes on Fire Island were also damaged.

Heavy rains, above normal temperatures, and ice jams caused considerable flooding during the first week in March. Numerous communities in Western New York and as far east as Montgomery, Otsego, and Delaware counties, reported flooding of streets, highways, and low-lying home lots and fields from the melting, deep snow cover.

There were very few reports of minor flooding in New York in April in spite of the high water content of the snow on the ground in the Adirondacks on March 27-29. (See fig. 21.) The mean air temperature for the month at Stillwater Reservoir was 6.9° Fahrenheit (3.8° Celsius) below the April normal for the years 1931-60. (See fig. 22.) The melting of the remaining snowpack was retarded, and the snowmelt runoff was delayed until early in May.

May was very wet in New York, especially in the central and southeastern regions. Precipitation averaged from 5.7 to 6.5 in. (145 to 165 mm) in the Eastern Plateau, Hudson River valley, and coastal divisions for an excess of 2 to 3 in. (51 to 76 mm) above normal. New York City had its greatest May rainfall since 1908. Albany and the Hudson River valley in general experienced their heaviest precipitation for May in 19 years. Early in the month, many camps and homes along the upper Hudson River were flooded, when the river overflowed its banks at several places upstream from Fort Edward. In the Schroon Lake area, the stream discharges were the highest in 13 years. Some roads and lowlands were flooded. Oneida Lake's highest level in 25 years caused severe flooding of lakeside homes. In the town of Cicero, many residents were forced to evacuate their homes. Some roads were closed for several days.

In spite of the heavy May rainfall and the delayed runoff from snowmelt, only one new record peak discharge was recorded at a long-term gaging station. The peak discharge of Raquette River at Piercefield was just slightly greater on May 8 than the previous maximum.

Heavy local rainstorms caused severe flooding at Syracuse and other communities in the central part of the State on June 15-16. There was some flooding of streets and basements in Batavia, Genesee County, at Perry in Wyoming County, and in the Adirondacks.

In July, August, and September, local thunderstorms caused various degrees of flooding in many areas of the State.

Beginning on October 6, a coastal storm brought more than 5 in. (127 mm) of precipitation and flooding to New York City and many communities on Long Island.

On November 8-9, another coastal storm produced heavy precipitation throughout the State, except in southwestern counties. The daily total of 5.6 in. (142 mm) on November 8 in New York City was the greatest daily precipitation that has occurred during any other November at that site. This was the third greatest daily precipitation for any month in the 103 years of record in New York City. Highway and rail-commuter travel were severely hampered. Isolated flooding was also reported in central and eastern regions on November 9. The Susquehanna River crested above flood stage at Conklin and Vestal, but flood damage was only major. The New York State Barge Canal was closed because its water level was so high that boats were in danger of hitting the bridges. On November 14 and again on November 19, the New York metropolitan area was drenched by recordbreaking rainfall. The 0.44 in. (11 mm) on November 19 put the yearly total above the previous maximum annual rainfall set in 1903. Both storms caused street and highway flooding. Rainfall on November 30 ended the wettest November on record and flooded some streets in New Dorp on Staten Island.

On December 6, New York City, Long Island, Staten Island, the southwestern counties, and a few other isolated areas reported minor flooding from heavy, short-duration rainstorms. On December 22, motorists on the Long Island expressways were delayed by flooding.

Damage from all floods in New York in 1972 except Tropical Storm Agnes and frontal storms, June 18-25, is shown by region in figure 23.

Chronological Descriptions of Other Floods Within Regions
Information that follows was extracted from cited sources.

Western Region

STORM DATA, January 25

Winds of gale force caused the water level of Lake Erie to rise 9.2 ft (2.8 m) above normal in Buffalo Harbor. Lowlands were flooded in the Dunkirk-Silver Creek area, as waves wrecked marina piers and catwalks. A concrete seawall in the town of Hamburg was overtopped and was broken up by waves, as inland flooding forced the evacuation of several lakeshore homes. High water also produced extensive flooding along Niagara River, as 12 families were forced to flee rising water in the Cayuga Island area of Niagara Falls.

NIAGARA FALLS GAZETTE, January 25

The city manager of Niagara Falls declared a state of emergency in the city today as wind-driven water of the Niagara River flooded parts of Cayuga Island and forced the evacuation of some of its residents.

A spokesman for Ontario Hydro said that the upper Niagara River, which normally flows at an average of 200,000 ft³/s (5,660 m³/s), was flowing at 340,000 ft³/s (9,630 m³/s) during the peak of the windstorm today.

NIAGARA FALLS GAZETTE, January 26

Most of the residents evacuated from their homes were able to return today. The flood in Little Niagara River reached its peak at 12:30 p.m., when water was 4 ft (1.2 m) above the banks. At about 11 a.m. the State Power Authority opened all 13 gates of its Robert Moses powerplant. The plant drew 107,000 ft³/s (3,030 m³/s) of water for an hour. According to State Power Authority records, the average flow in the river on January 25, 277,250 ft³/s (7,850 m³/s), was the highest since 1962.

STORM DATA, March 1-2

Rainfall of 1.2 in. (30 mm) and temperatures of 50-60 degrees Fahrenheit (10-16 degrees Celsius) caused rapid snowmelt and flash flooding of streams flowing into Lake Erie from Chautauqua and Erie Counties. Several persons were evacuated from homes along Cattaraugus Creek near its terminus with Lake Erie in the Silver Creek area. Flooding by Cazenovia Creek at West Seneca, Erie County, also forced evacuation of some families. Highways and basements of homes, stores, and schools were flooded in wide areas of Chautauqua, Erie, and Niagara Counties.

NORTH TONAWANDA NEWS, March 2

A combination of heavy rain and melting snow plagued the Tonawanda area today. Several streets were flooded in Tonawanda and North Tonawanda. All main roads in Niagara County were open, but many schools and industries were closed. Flooded cellars were common in Barker, Newfane, Middleport, and Olcott. A state of emergency was declared in West Seneca, when Cazenovia Creek overflowed and forced the evacuation of 30 families.

BUFFALO COURIER EXPRESS, March 2

A steady rainfall today caused minor flooding of streets and basements in Niagara Falls and Lewiston.

DUNKIRK OBSERVER, March 2

More than 20 persons were evacuated from their Silver Creek homes late last night, when the worst flood since 1959 covered the Central Avenue and Parkway area with water 3 ft (0.9 m) or more in depth. Moderate temperatures and heavy rainfall forced large blocks of ice down from the hills and jammed the mouths of Walnut and Silver Creeks. St. Albans Episcopal Church sustained the worst flood damage in its history.

Two and one-half hours after the flood in Silver Creek, Cattaraugus Creek reached flood level at Sunset Bay. About 55 persons were evacuated from the community, where the water backed up by an ice jam near the mouth of the creek reached a depth of 4 ft (1.2 m) in most of the area.

With temperatures in the high 50's (degrees Fahrenheit) or middle to high 10's (degrees Celsius) in the southern end of Chautauqua County today, waterways were overflowing their banks. Route 60 between Frewsburg and Kimball Stand was under water from flooding Conewango Creek.

OLEAN TIMES-HERALD, March 3

In suburban Wellsville, one couple had to evacuate their home for the night when water surrounded it.

BUFFALO COURIER EXPRESS, March 4

Demolition teams will dynamite a giant ice jam that is plugging Cazenovia Creek this morning before it causes a second flood in suburban West Seneca. The jam, pressed by the current to an almost solid wall of ice measuring about 300 ft (91 m) by 125 ft (38 m), is in a sharp curve in the stream just east of Orchard Park Road and Ridge Road.

An official of the Red Cross, after making a survey of the Sunset Bay area, reported that 250 permanent houses and temporary summer cottages were flooded by Cattaraugus Creek and that 125 persons were forced to leave their homes.

BUFFALO COURIER EXPRESS, March 25

Residents of Sunset Bay began to move back into their homes yesterday, but the ice jam that caused the flooding remained at the mouth of the Creek. More than 100 charges of dynamite were used, but the attempt to remove the jam was unsuccessful. The water has receded, and all the roads are now passable.

STORM DATA, September 14

Communities in northwestern Chautauqua County, near Lake Erie, received more than 3.0 in. (76 mm) of precipitation during morning thunderstorms. Flooding of streets and store and home basements was excessive in Dunkirk, Fredonia, and Westfield. Damage to merchandise in the basement of a store in Dunkirk was estimated to be \$10,000.

DUNKIRK OBSERVER, September 14

Northern Chautauqua County, the target of a driving rainstorm since the early morning hours today has received a near-record, 3.05-in. (77.5-mm) rainfall in less than 24 hours. Some streets, underpasses, and basements were flooded. One of the hardest hit locations in the city was a food market whose basement was flooded for the second time in 2 weeks. Stock and equipment were damaged considerably.

ANDOVER NEWS, December 6

Andover and the surrounding area was hit by flash flooding today as a result of high temperatures and rainstorms. A steady overnight rainstorm followed by thunderstorms this morning caused local creeks to reach flood stage. The approaches to several local bridges were damaged. Pupils were sent home from some schools before the roads became impassable.

STORM DATA, December 7

Many small streams in the southwestern part of the State caused minor flooding in low-lying areas. Extensive flooding of streets was reported in Buffalo and Jamestown today, and some schools in western counties were closed because of flooding of rural roads.

HORNELL TRIBUNE, December 7

Allegany County highway department crews were at work this morning repairing damages from yesterday's floods. Approaches to two bridges were washed out, and several roads were badly damaged.

OLEAN TIMES-HERALD, December 7

A few homes in the village of Wellsville had water in their cellars, and one family was forced to evacuate its home.

BUFFALO COURIER EXPRESS, December 7

Minor flooding occurred in Wyoming and Livingston Counties yesterday. Several roads and fields were flooded.

WELLSVILLE REPORT, December 8

According to the highway superintendent of Allegany County, flooding caused approximately \$50,000 damage to Allegany County highways on December 6.

MEDINA JOURNAL REGISTER, December 15

Water from Oak Orchard Creek flooded fields known as Welds Flats near Medina this week.

DUNKIRK OBSERVER, December 18

Some homes along Crooked Brook near Dunkirk were surrounded by water last weekend when the mouth of the creek was plugged with debris and silt was washed in from the lake by high waves.

Central Region

STORM DATA, March 1-2

Slight to moderate overflow occurred along the Susquehanna, Tioga, and Chemung Rivers, as minor streams and creeks rose sharply.

HORNELL TRIBUNE, March 2

Traffic was restricted for short intervals this morning in Steuben County, as rising creek waters and ice floes blocked several roads. Numerous homes in the Rural Avenue section of North Hornell were flooded by water from Big Creek, which was blocked by an ice jam.

GENEVA TIMES, March 3

Kashong Creek overflowed its banks yesterday afternoon and flooded some homes on the west shore of Seneca Lake.

A few basements were flooded by melting snow at Romulus yesterday.

CORNING LEADER, March 3

Minor flooding of a few streets and basements was reported in West Elmira yesterday. Some residents were evacuated from their homes last night but were able to return this morning.

BINGHAMTON EVENING PRESS, April 21

The yards and basements of a few houses at Endwell were flooded by water from the Susquehanna River.

SYRACUSE HERALD AMERICAN-POST STANDARD, April 23

Beach Road along the south shore of Oneida Lake, near Cicero, was closed late yesterday, as water overflowed the bank and flooded the area to a depth of 3 ft (0.9 m). Many residents reported water in their homes.

OSWEGO PALLADIUM-TIMES, May 3

A heavy rainstorm this afternoon flooded several streets in Oswego. Many cellars were flooded, and new seedlings of area muck farmers were destroyed.

STORM DATA, May 4-10

Oneida Lake, northeast of Syracuse, reached its highest level in 25 years. Flooding was extensive, especially along the southwest shore in the town of Cicero. Roads were closed, and several residents were forced to evacuate their homes.

ONEIDA DISPATCH, May 5

Fish Creek, near Sylvan Beach, overflowed its banks yesterday and flooded camps and boat houses along its shore.

SYRACUSE POST-STANDARD, May 16

Last night's rainstorm flooded streets and basements in the vicinity of Meadowbrook Drive in Syracuse.

SYRACUSE HERALD-JOURNAL, May 17

The Federal Small Business Administration announced today that the town of Cicero had been declared a disaster area because of the flooding of homes in early May.

NORTH SYRACUSE STAR, May 17

Beach Road along Oneida Lake is still impassable because of flooding; residents are forbidden to live in their homes along much of it. The high water disables home sewage units and makes their use unsafe and unsanitary.

STORM DATA, May 30

Streets were flooded by a foot of water, and basements of homes and stores were flooded by a heavy, short-duration thunderstorm today in Oswego.

FAYETTEVILLE EAGLE BULLETIN AND DEWITT NEWS TIMES, June 15

Floodwater from Limestone Creek and its tributaries in Manlius and Fayetteville caused thousands of dollars damages to homes last Thursday, June 10. One family was forced to evacuate its home.

STORM DATA, June 15-16

Rainfall totaled 2.0 to 2.4 in. (51 to 61 mm) in Onondaga and Oneida Counties. An observer at Skaneateles measured 1.88 in. (48 mm) in 2 hours. Highways and streets in Syracuse were flooded to a depth of 4 ft (1.2 m). Sections of rural roads were washed out in many areas of Onondaga County. Many basements were flooded in Cortland, Geneva, Auburn, and Oneida.

SYRACUSE POST-STANDARD, June 16

Heavy rainfall last night flooded streets and cellars in Syracuse. Route 81 in the city was closed when 18 in. (0.5 m) of water collected in the elevated section. Route 20 was also closed in the Lafayette area.

BINGHAMTON EVENING PRESS, August 4

More than 2 in. (51 mm) of rainfall in 2 days caused minor flooding of some streets in Vestal today.

ELMIRA STAR GAZETTE, August 4

A flash flood struck Bellona shortly before 4 p.m. Wednesday after a series of storms swept Yates County. Water 18 in. (0.5 m) deep flowed across the main street in the village. Basements of several homes were flooded.

OSWEGO PALLADIUM-TIMES, August 28

Heavy rainfall that began yesterday and continued through the night caused minor flooding in Fulton today.

SYRACUSE HERALD-JOURNAL, November 2

Some underpasses were flooded today.

ROME SENTINEL, November 9

Isolated areas in Chenango County were flooded overnight, as heavy rains lashed the area. At Norwich, 2.68 in. (68 mm) of precipitation was recorded between 7 a.m. Wednesday and 7 a.m. this morning.

STORM DATA, November 9

*Precipitation, on ground already soaked by previous rains, caused very high water levels in the Mohawk River and considerable lowland flooding in the Rome, Oneida County, area. Nearly 3.0 in. (76 mm) of precipitation in Chenango and Broome Counties caused tributaries of the upper Susquehanna River to crest at high levels but generally below flood stage. Some minor flooding also occurred in parts of Chemung County.

UTICA DAILY PRESS, November 9

Minor street flooding was reported last night in Chadwicks and Kirkland, Oneida County.

BINGHAMTON SUN-BULLETIN, November 10

Although the Susquehanna River crested above flood stage at Conklin and Vestal yesterday, only minor flooding was reported. A temporary bridge over Crocker Creek on Route 26 was washed out, and two pieces of heavy earth-moving equipment valued at \$130,000 were buried in 20 ft (6.1 m) of water in a gravel pit in the town of Vestal.

SYRACUSE POST-STANDARD, November 12

Water is being drawn off from area lakes at a greater than normal rate to prevent damage to shorelines and bordering homes, as this year's recordbreaking rainfall raises area streams and rivers to high levels. Precautionary runoff operations were being conducted at Skaneateles, Oneida, and Ontario Lakes. The New York State Barge Canal System was closed because the water level was so high that boats could hit the bridges.

ELMIRA STAR-GAZETTE, November 15

Yesterday's rainstorm caused minor flooding in Tioga and Chemung Counties. Some flooding was reported at two trailer parks in Horseheads.

HORNELL TRIBUNE, December 6

Rain and melting snow caused minor flooding of the flats between Hornell and Arkport today.

WELLSVILLE SPECTATOR, December 17

A report from the Steuben County Civil Defense office states that damages to bridges, highways, and water channels in the county from the December 6 flooding totaled \$828,000.

Eastern Region

UTICA OBSERVER DISPATCH, March 2

Unseasonably high temperatures for the past 2 days caused some flooding from melting snow and ice jams. In the town of Frankfort, 150 ft (45.7 m) of Center Road was under 2 ft (0.6 m) of water, and several road shoulders were washed out. Many of the houses near the Fulmer Creek bridge, in Mohawk, had water in their cellars.

ONEONTA STAR, March 3

A heavy, late-afternoon rainstorm yesterday, combined with melting snow, produced high-water conditions throughout the Oneonta area last night. A temporary bridge over Otsego Creek near Laurens was washed out. Pine Lake Road at Davenport Center was flooded.

TROY RECORD, March 3

A small stream that flows through Albany Rural and St. Agnes Cemeteries in Loudonville flooded property on Glenwood Drive, Harts Lane, and Broadway in Menands yesterday. A few roads in the town of Colonie were also flooded. River Road between Buskirk, in Rensselaer County, and White Creek, in Washington County, was flooded for a few hours by the Hoosic River. Breakup of an ice jam left large cakes of ice in the road.

SCHENECTADY GAZETTE, March 4

A few streets in Saratoga Springs incurred minor flooding yesterday. Some of the worst flooding in the county occurred in the town of Wilton, where water rose to the tops of the foundations of approximately 50 mobile homes.

SARATOGA SPRINGS SARATOGIAN, March 19

The City Public Works Department battled feverishly last night against floods that threatened to wash out Buff Road and adjacent streets in that part of the suburbs of Saratoga Springs.

TROY RECORD, April 21

Precipitation, mostly rain, totaling 0.76 in. (19 mm) in the Greater Troy area yesterday raised stream levels and flooded numerous basements. The Hoosic River overflowed its banks and flooded stretches of Route 67 in Washington County with nearly 4 ft (1.2 m) of water.

GLENS FALLS POST-STAR AND TIMES, May 5

Yesterday, the Hudson River overflowed its banks in many areas and caused the evacuation of homes at Lake Luzerne, Fort Edward, and in the towns of Moreau and Northumberland. A woman, her 6 month-old baby, and two family dogs were rescued by boat from their home in Wells Lane in the town of Northumberland.

All along the river, the scene was the same: flooded homes, camps, trailers, and boat houses. Tons of pulp wood, carried from resting places of 20 years on shore, trees, parts of demolished buildings, and wrecked boats filled the river.

Hundreds of acres were under water, and in many places only the tops of trees were visible. At a golf course at Stony Creek, only the tops of the flag sticks were above the water.

Below Lake Luzerne, along East River Drive, camps were flooded. Several camps were tied down with cables to prevent them from being floated away.

At least 9 mobile homes and camps at Route 9N bridge were flooded, and the road into the area was covered with 4 ft (1.2 m) of water.

Minor flooding of homes was reported by residents along the Hudson River in the Glens Falls area. Downstream from Hudson Falls flooding became serious again.

Flooding was reported on Rogers Island by residents at Fort Edward, and West River Road was blocked in at least four places. The road was under 3 ft (0.9 m) of water in some places.

Both gates of the Indian River Dam were opened 2 ft (0.6 m) at noon allowing 5,000 ft³/s (142 m³/s) to flow into the Hudson River. The gate of Lake Abanakee Dam at Indian Lake was opened to its full extent. All gates except the floodgates of Conklingville Dam on the Sacandaga River were open.

ONEONTA STAR, May 5

State Police reported that the road from Davenport Center to Charlotte Creek Road was covered with water and was impassable.

STORM DATA, May 16

A thunderstorm centered over Schenectady during the noon hour produced 1.1 in. (28 mm) of rainfall in 60 minutes and a total of nearly 2 in. (51 mm) before subsiding in early afternoon. City streets were quickly flooded, cars were stalled and abandoned in 2 to 3 ft (0.6 to 0.9 m) of water, building foundations were eroded, and numerous basements were flooded.

SCHENECTADY GAZETTE, May 17

Nearly 2 in. (51 mm) of precipitation was recorded in less than 3 hours in a series of thunderstorms that hit the Schenectady area yesterday. Many streets and basements were flooded. The small stream in Jackson's Garden at Union College became a large stream during the storm. A walkway was destroyed, and hundreds of flowers were ruined. A professor at the college said that the flooding was the worst that he had seen in the 32 years he had been there.

ONEONTA STAR, May 19

A flash flood that swept down Willow Brook through Cooperstown yesterday evening flooded streets and cellars and spread debris and mud over several streets.

HUDSON REGISTER-STAR, June 1

Spring rainstorms yesterday flooded the school auditorium and the music room at a new high school at Hudson. A Claverack weather observer measured $2\frac{1}{2}$ in. (64 mm) of rain yesterday and 1 in. (25 mm) more today. Roads in the Stockport-Stottville area incurred minor damage from high water.

CATSKILL MAIL, June 1

Two nights and a day of practically steady rainfall caused some damage from flooding of the streets and basements in Catskill.

STORM DATA, June 3-4

Heavy rainfall of 2.5 to 3.5 in. (64 to 89 mm) during the week ending June 4 caused the Wallkill River to overflow its banks in parts of south-eastern Ulster County. Damage was confined to farm lowlands near the river, where losses to corn, small grains, and hay were estimated to total \$17,000.

TROY TIMES-RECORD, June 30

Minor flooding of several streets in Cohoes this afternoon was reported by local police.

AMSTERDAM RECORDER AND DEMOCRAT, July 1

Yesterday's heavy rainfall flooded two streets and low areas in Amsterdam.

TROY RECORD, July 5

Heavy rainfall on June 30 resulted in the flooding of several sections of Mechanicville, principally in the Round Lake Avenue and North Main Street areas.

SARATOGA SPRINGS SARATOGIAN, July 5

Monday afternoon's torrential rainfall caused considerable damage to roads in the Geyser Crest development in Saratoga Springs. As much as 4 ft (1.2 m) of water surrounded some of the camps in other parts of the county.

SCHENECTADY GAZETTE, July 6

Several families were evacuated from their homes last week at Blenheim in the Schoharie Valley.

ALBANY KNICKERBOCKER NEWS, July 7

A thunderstorm hit the Albany area yesterday with 1.48 in. (38 mm) of rain and forced the temporary closing of several roads in the towns of Guilderland and Bethlehem.

STORM DATA, July 16

Late afternoon and evening thunderstorms produced intense rainfall in communities west and south of the city of Albany. Highways, recreation parks, and lowlands were extensively flooded in Guilderland, Voorheesville, New Salem, Slingerlands, and Delmar.

STORM DATA, July 20

Thunderstorms moving southward from the southern Adirondacks affected a narrow belt near the Hudson River in Saratoga, Rensselaer, Albany, and Columbia Counties. Intense rainfall between 7 and 8 p.m. totaled 1.3 in. (33 mm) at Troy and unofficially as much as 2.0 in. (51 mm) in some local measurements. Flooding of streets and highways in Troy and Cohoes was extensive.

ALBANY TIMES-UNION, July 21

Thunderstorms that rolled across the Capitol District early last night knocked out power in many areas and flooded or washed out numerous roads. In Cohoes and Troy, bank cave-ins were caused by the flowing surface water. In the city of Albany, the area hardest hit by flooding was the south end, where debris and mud was washed down Third Avenue to clog Broad and South Pearl Streets. Lower Sheridan Avenue, which formerly was a canal, had its usual deluge converging on Chapel and North Pearl Streets.

ALBANY KNICKERBOCKER NEWS, July 26

Heavy rainfall caused minor flooding of many streets in Albany yesterday.

STORM DATA, November 9

Considerable lowland flooding from the Mohawk River was reported in Montgomery County today.

LITTLE FALLS TIMES, November 9

A few roads and many areas of flatland on the east and west sides of Little Falls were flooded this morning by the heavy rain that began Tuesday night and continued until this morning.

GLENS FALLS POST-STAR AND TIMES, November 10

Mud slides and flooding were reported yesterday by residents throughout the Glens Falls area, as the ground became saturated after many days of rain.

A massive mud slide, estimated at 35 tons, spread across the railroad right of way in Hudson Falls and blocked the tracks for more than an hour. Several feet of water covered Padanaran Road in the town of Bolton. The water was several feet deep in some places, as Fly Brook overflowed.

ONEONTA STAR, November 10

Heavy rains that made roads impassable caused the Millrace to overflow on Webb Island at Oneonta this week and stranded the few residents of the island.

GLOVERSVILLE LEADER-HERALD, November 11

Numerous flooded farmlands and cellars near the New York State Barge Canal were the result of the heavy rain in the past few days. At Canajoharie, the sewage-treatment plant was temporarily flooded out of operation.

HUDSON REGISTER, November 21

High water in the Hudson River caused minor flooding of boat docks and a parking lot near Hudson.

SCHENECTADY GAZETTE, November 21

High water of Round Lake flooded a camp ground on its shore. The flooding was attributed to a blockage of the lake outlet.

Southeastern Region

STORM DATA, February 3-5

High winds and rains totaling 1.5 in. (38 mm) buffeted New York City and the extreme southeast part of the State. Expressways and lowlands were flooded by runoff in the metropolitan area, as wind-driven tides 3 ft (0.9 m) above normal flooded beaches and low-lying shore areas on Long Island's south shore.

STORM DATA, February 13

Rainfall of 0.7 to 1.0 in. (18 to 25 mm) in New York City and southeast upstate caused flooding of some major highways today.

STORM DATA, February 19-20

Wind-driven tides and 2.1 in. (53 mm) of rain caused much flooding of highways, streets, and beaches in New York City and Long Island.

STATEN ISLAND ADVANCE, February 20

Rain and above normal tides caused minor flooding in some areas of Oakwood Beach and Great Kills yesterday.

GARDEN CITY NEWSDAY, February 21

An erratic coastal storm with rain and high tides damaged ocean-front homes on both north and south shores of Long Island during the past weekend. Streets in Freeport, Merrick, and Douglaston were flooded. Eight families on a slender peninsula north of Nissequogue were marooned for 48 hours when high tides flooded the road connecting them to the mainland. Many homes on Fire Island were also damaged.

NEWBURGH NEWS, March 4

Warm weather and heavy thaws caused flooding in the Moodna Creek area in Washingtonville, where homes along Cardinal Drive have been flooded 8 times in the past 3 years.

BEACON NEWS, April 24

Heavy rains on April 22 caused collapse of 40 ft (12 m) of a 60 ft (18 m) retaining wall just above the dam on Wappinger Creek in Dutchess County.

NEW YORK POST, May 9

Flooding caused by nearly 1 in. (25 mm) of rainfall delayed rush-hour traffic in Manhattan, Queens, and Brooklyn today.

STORM DATA, May 19-20

Heavy rains of 2.0 to 3.3 in. (51 to 84 mm) in a 24-hour period caused severe flooding of streets in Staten Island and Brooklyn.

NEW YORK TIMES, May 21

A record-shattering rainfall yesterday flooded roads in the metropolitan area.

STORM DATA, May 31

Heavy rainfall of 2.5 to 3.5 in. (64 to 89 mm), mostly during early- and mid-morning hours, covered a wide area in the southern half of the Hudson River valley, including Dutchess, Putnam, Ulster, and Orange Counties. Creeks and brooks reached bank-full stages, and some overflowed. City streets, highways, and rural roads were flooded in numerous communities in the four-county area. Many roads were covered with soil and gravel from erosion of nearby slopes and minor washouts of roadbeds.

The ground floor of the Ulster County jail and courthouse at Kingston and basements of homes in low-lying areas were flooded by the storm.

MIDDLETOWN TIMES HERALD-RECORD, June 1

Near torrential rains Wednesday flooded the basements of several homes in the Amchir section in Middletown.

POUGHKEEPSIE JOURNAL, June 1

Wednesday's heavy rain caused the flooding of some streets in Poughkeepsie.

MOUNT VERNON DAILY ARGUS, June 2

The flash rains that hit Mount Vernon this week flooded the area around South Third and Columbus Avenues. An elderly woman was nearly sucked into an open manhole but was saved by three men who went to her aid.

STORM DATA, June 3-4

Heavy rainfall of 2.5 to 3.5 in. (64 to 89 mm) during the week ending June 4 caused the Wallkill River to overflow its banks in parts of southeastern Ulster County. Damage to crops on lowlands near the river was estimated to total \$17,000.

NEW YORK POST, June 30

A brief rainstorm between 11 p.m. and midnight yesterday in New York City left 0.65 in. (17 mm) of precipitation, which flooded some of the city's streets and highways.

NEW YORK TIMES, July 4

Rainfall in some areas of Westchester County totaled almost 1 in. (25 mm) in a 3-hour period today. The Rhinebeck area reported minor flooding.

POUGHKEEPSIE JOURNAL, July 10

A severe rainstorm Saturday, July 8, caused \$100,000 worth of damage in the town of Poughkeepsie. Basements were flooded, and sections of asphalt pavement were undermined.

STORM DATA, July 13

A downpour of 2.5 to 3.0 in. (64 to 76 mm) of precipitation during the mid- and late-morning hours flooded subways, streets, highways, parking lots, and basements from Staten Island to Yonkers today.

NEW YORK POST, July 13

Motorists were up to their hubcaps in water in many parts of New York City this morning, as heavy rain flooded commuter arteries and caused major delays.

YONKERS HERALD-STATESMAN, July 14

Minor flooding struck Yonkers again yesterday, as more than 3 in. (76 mm) of precipitation drenched the city. Troublesome Brook overflowed its banks and flooded the basement and parking lot of an apartment house.

STATEN ISLAND ADVANCE, July 14

Many streets and basements were flooded on Staten Island by yesterday's rainstorm.

NEWBURGH NEWS, July 14

Overflow from Crystal Lake was blamed for flooding the basements of three homes in Newburgh last night.

MOUNT VERNON DAILY ARGUS, July 18

A thunderstorm Sunday night, July 16, dumped nearly 1 in. (25 mm) of rain on Mount Vernon and caused some flooding in the southeastern part of the city.

NEW ROCHELLE STANDARD STAR, July 22

A short-duration storm caused minor flooding in New Rochelle yesterday.

POUGHKEEPSIE JOURNAL, August 28

The more than 1 in. (25 mm) of precipitation in less than 2 hours yesterday afternoon in the Poughkeepsie area flooded a few basements.

LONG ISLAND PRESS, September 19

Scattered storms that hit Long Island throughout last night caused flash floods in Jamaica and other communities.

STORM DATA, October 6-7

A coastal storm brought unusually heavy precipitation to New York City and the western half of Long Island. The storm began early in the evening of October 6, and rainfall became very heavy during the morning hours of October 7. The rain gage at Central Park recorded 2.8 in. (71 mm) between 1 a.m. and 8 a.m. on October 7 and a storm total of 4.4 in. (112 mm). Heaviest rainfall occurred in western Suffolk County, where 5.8 in. (147 mm) was measured at Brookhaven National Laboratory, 5.7 in. (145 mm) at Kings Park, and 5.6 in. (142 mm) at Holbrook. Deep flooding was reported on many expressways, highways, and city streets in New York City, as well as in Nassau, Suffolk, and southern Westchester Counties. Snarled auto traffic caused numerous collisions. A trestle bridge on the Long Island railroad near Bethpage was washed out. Basements of many stores and homes were flooded. Storm precipitation totaled 2.5 to 3.0 in. (64 to 76 mm) on eastern Long Island as well as in the lower Hudson River valley.

NEW YORK POST, October 7

The record-breaking downpour that dumped 3 in. (76 mm) of precipitation on New York City today flooded many streets and expressways and stranded hundreds of motorists.

STATEN ISLAND ADVANCE, October 8

The record 4-in. (102 mm) rainfall that began Friday night and continued until near noon yesterday, flooded roads, ground-level homes, and basements throughout Staten Island. Communities affected were Midland Beach, Bulls Head, Eltingville, New Springville, Rosebank, Bay Terrace, Willowbrook, Princes Bay, South Beach, Graniteville, and other places on the south shore.

NEW YORK POST, November 8

Heavy rainfall and tides 2 ft (0.6 m) above normal caused by a coastal storm brought flooding and tieups to many of the New York City's major arteries during the morning rush hour today.

STORM DATA, November 8-9

A heavy coastal storm produced 5.60 in. (142 mm) of precipitation in New York City, most of which was recorded on November 8. This was the heaviest daily amount of rain of record for November and the third greatest amount of any month in 103 years of record at New York City. Flooding severely crippled highway and street travel in many parts of the metropolitan area. Commuter trains were occasionally halted by flooded tracks, washouts, and mud slides. Lowland and highway flooding was reported in the lower Hudson River valley.

NEW YORK TIMES, November 9

A storm with winds up to 60 mi/h (96 km/h) moved northward along the coastline yesterday and brought record rains, flooded roads and basements in the New York City area, and disrupted air and subway traffic. Thousands of motorists converging on the city's streets and highways at about the same time as the storm created massive traffic jams that extended into late evening hours.

LONG ISLAND PRESS, November 9

Long Island, still awash from yesterday's record-breaking rainstorm of 5.09 in. (129 mm), today was surveying the damages to stalled cars, flooded streets, and basements. College Point, with only four roads into and out of the community, was virtually isolated at the height of the storm. The Interboro Parkway in Queens and the Bronx River Parkway in the Bronx were closed for their full length. Many other roads were closed in certain sections. In Ozone Park, some streets were under 5½ ft (1.7 m) of water.

KINGSTON FREEMAN, November 9

Torrential rains yesterday caused some flooding of the usual trouble spots in Kingston and near New Paltz.

STATEN ISLAND ADVANCE, November 9

Yesterday's heavy rain forced the Staten Island Rapid Transit to suspend service in the afternoon when tracks were flooded in many places. Areas in the Island where flooding is frequently a problem experienced flooding in this storm. Great Kills, Dongan Hills, Princes Bay, and Graniteville reported flooding.

GARDEN CITY NEWSDAY, November 10

High tides and heavy rainfall flooded some streets in Seaford yesterday.

TARRYTOWN NEWS, November 10

Roads in Irvington incurred water damage from this week's storm.

POUGHKEEPSIE JOURNAL, November 12

Overflow from Morgan Lake caused minor flooding of streets in Poughkeepsie yesterday.

STORM DATA, November 15

Rainfall averaging 2.0 in. (51 mm) in New York City and on Long Island today flooded expressways and caused massive traffic jams.

NEW YORK DAILY NEWS, November 15

New York City was drenched yesterday by the second record-setting rainfall in 6 days. Streets and highways were flooded, and traffic was backed up for miles in some areas. The heavy rainfall on ground still saturated from last week's downpour and on accumulated fallen leaves, which blocked sewers, was blamed for the flooding.

STATEN ISLAND ADVANCE, November 20

Yesterday's rainfall of 0.44 in. (11 mm) in New York City broke the previous record for annual rainfall set in 1903. There was minor flooding on major highways around the city this morning.

STATEN ISLAND ADVANCE, December 2

Rains on Thursday night, November 30, ended the wettest November on record and flooded streets in New Dorp on Staten Island.

NEW YORK TIMES, December 7

A downpour flooded roads in the metropolitan area last night.

STATEN ISLAND ADVANCE, December 7

A torrential downpour swept across Staten Island late yesterday afternoon, snarled rush-hour traffic, flooded low-lying roads in scattered areas, and knocked out service to about 300 telephones.

NEWBURGH NEWS, December 12

Overflow from Crystal Lake flooded the Temple-Ellis Avenue area in Newburgh yesterday.

LONG ISLAND PRESS, December 22

Flooding of some Long Island Parkways and Expressways delayed motorists today during the morning and evening commuter rush hours.

GARDEN CITY NEWSDAY, December 23

Approximately $1\frac{1}{2}$ in. (38 mm) of precipitation, helped by unusually high tides, flooded streets in Freeport, West Babylon, and other South Shore communities yesterday.

Northern Region

WATERTOWN TIMES, May 3

Heavy rains in the headwater region of the Black River, accompanied by high temperatures, which have reduced the lingering snow pack, have swelled the Black River overnight, closed the East Martinsburg Road in Lewis County, and threatened Route 26A near New Bremen.

UTICA DAILY PRESS, May 4

Rising water forced two families between the river and the road on the north side of the Black River in Forestport to leave their homes last night. Reports from residents of the area indicated that the river was about 2 ft (0.6 m) above its banks.

STORM DATA, May 4-10

The combination of melting snow in the Adirondacks and excessive rainfall caused widespread, high water levels and overflow flooding in lakes and major rivers north of a line from Syracuse to Albany. Precipitation totals of 2.5 to 3.5 in. (64 to 89 mm) during early May 3 in the Adirondacks and Mohawk and upper Hudson River valleys caused varying degrees of flood conditions for about a week. Rivers affected included the Moose and the upper Black in the southwestern Adirondacks, the Schroon and the upper Hudson in the eastern Adirondacks, and the Saranac and the Ausable, which flow northeast to Lake Champlain. Several homes and camps were evacuated, roads were closed, and lands were flooded in the Forestport area of Oneida County and in Essex County.

PLATTSBURGH PRESS-REPUBLICAN, May 5

A few buildings on the shores of Lake Champlain were surrounded by water yesterday when the lake level rose to 100.4 ft (30.60 m). A trailer park at Plattsburgh experienced some slight flooding by the Saranac River.

TICONDEROGA SENTINEL, May 10

Rain and floods in the Adirondacks last week closed ferries, damaged trailers and cabins, and put many roads under water. The severest damage was in the Schroon Lake area, where streams were the highest in 13 years. Schroon River flooded and partly blocked Route 73. The East Shore Road was closed to all travel. In Ticonderoga, many low areas were under water.

STORM DATA, June 15-16

At Old Forge, in the central Adirondacks, a weather observer measured 3.1 in. (79 mm) of precipitation within a few hours on June 15 and a storm total of 4.25 in. (108 mm). Rains in excess of 3.0 in. (76 mm) spread eastward to the Elizabethtown area of Essex County. Many Adirondack roads sustained extensive washouts and bank erosion. Lowlands on the Bouquet River at Wadhams, Essex County, were flooded on June 16.

MASSENA OBSERVER, July 25

The heaviest rain of the season--1.63 in. (41 mm)--was dumped on Massena and the St. Lawrence River valley around 7 o'clock last night. Main and other streets were flooded in many places.

PLATTSBURGH PRESS-REPUBLICAN, July 26

Two separate electrical storms dumped a deluge of rain and caused some flooding in the Plattsburgh area yesterday. Several streets and intersections were flooded.

WATERTOWN DAILY TIMES, November 28

Flooding continued today in lowland sections of the Black River from Carthage to Glenfield.

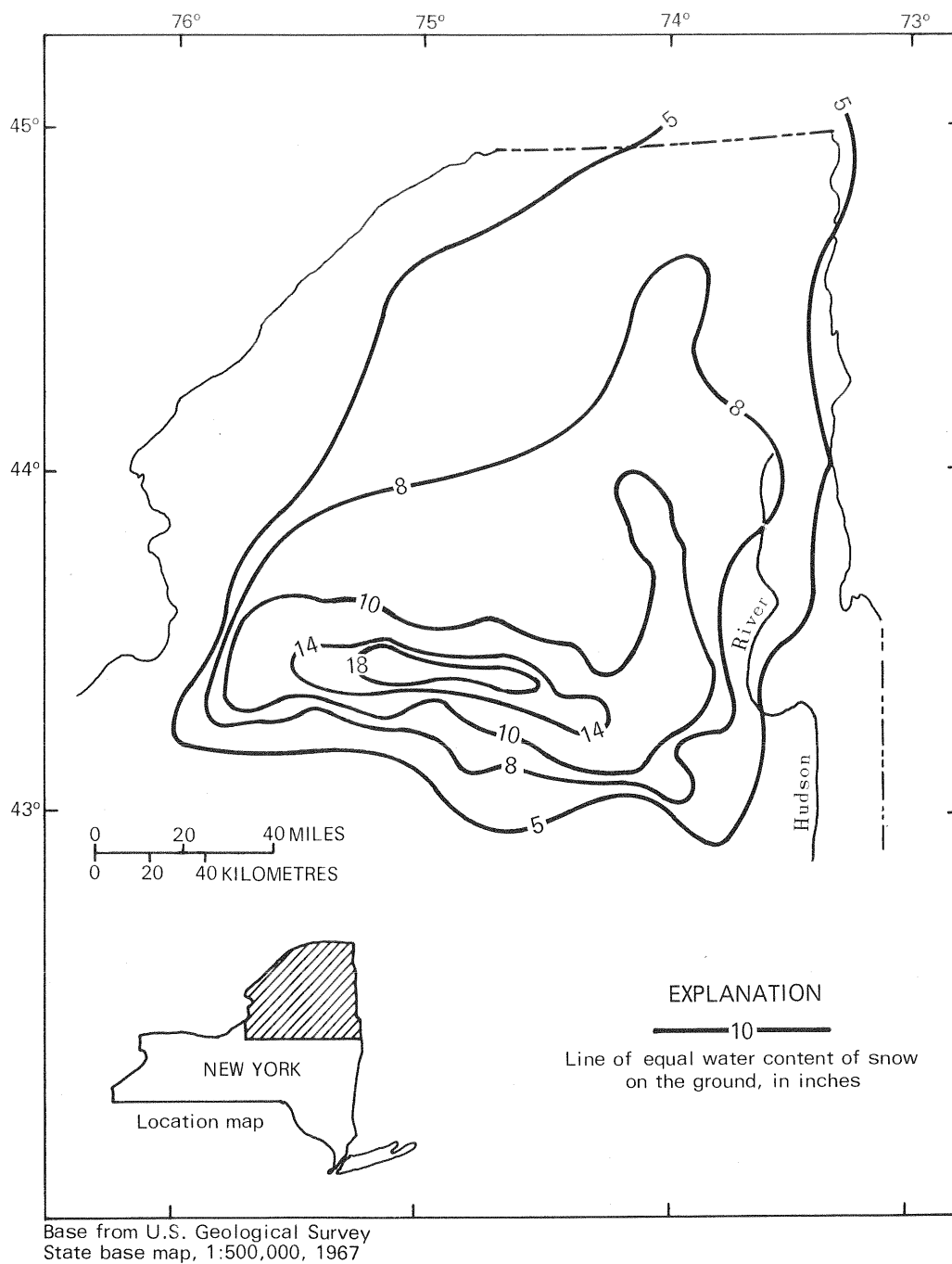


Figure 21.--Water content of snow on the ground
in northern New York, March 27-29.

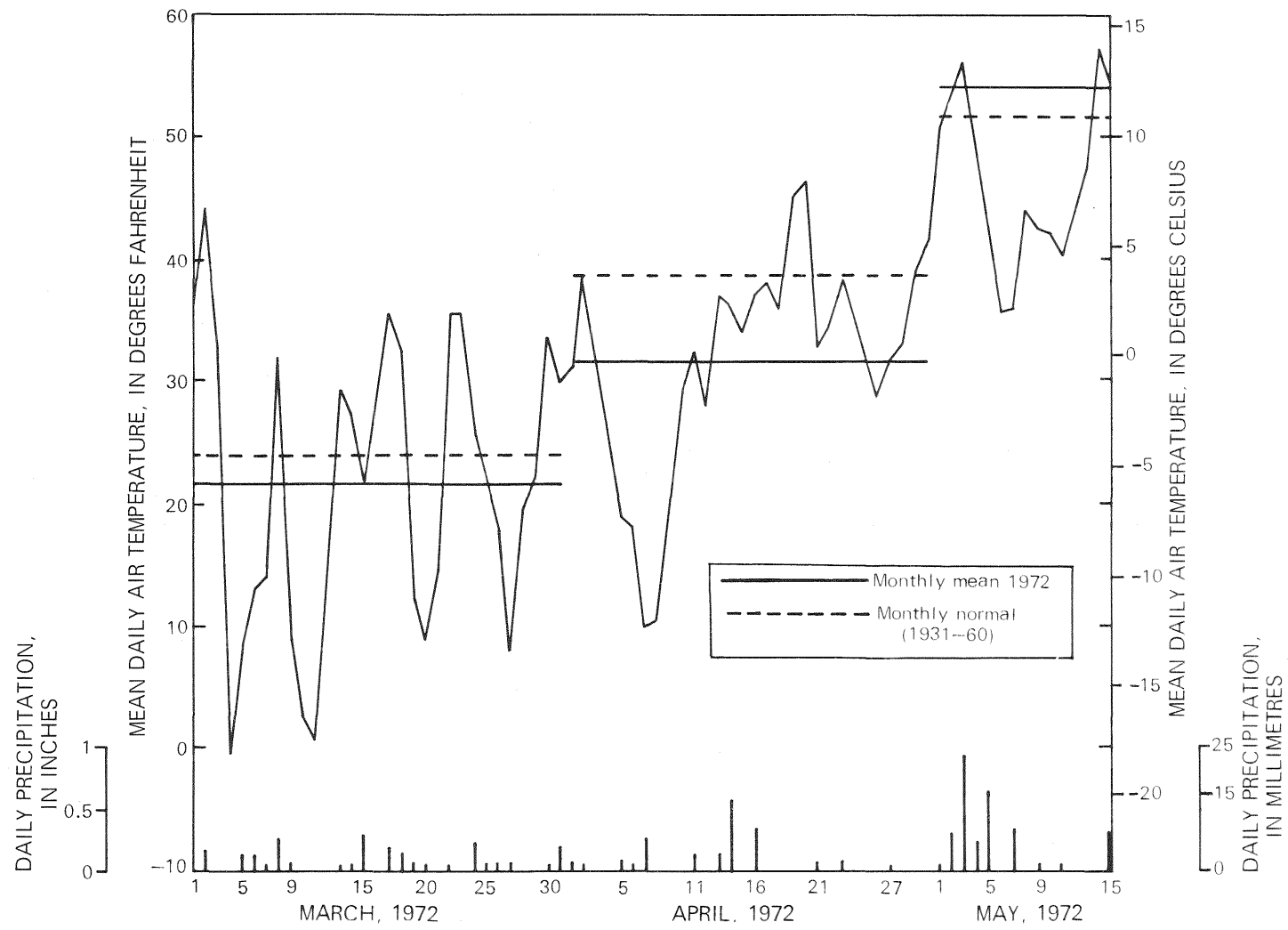
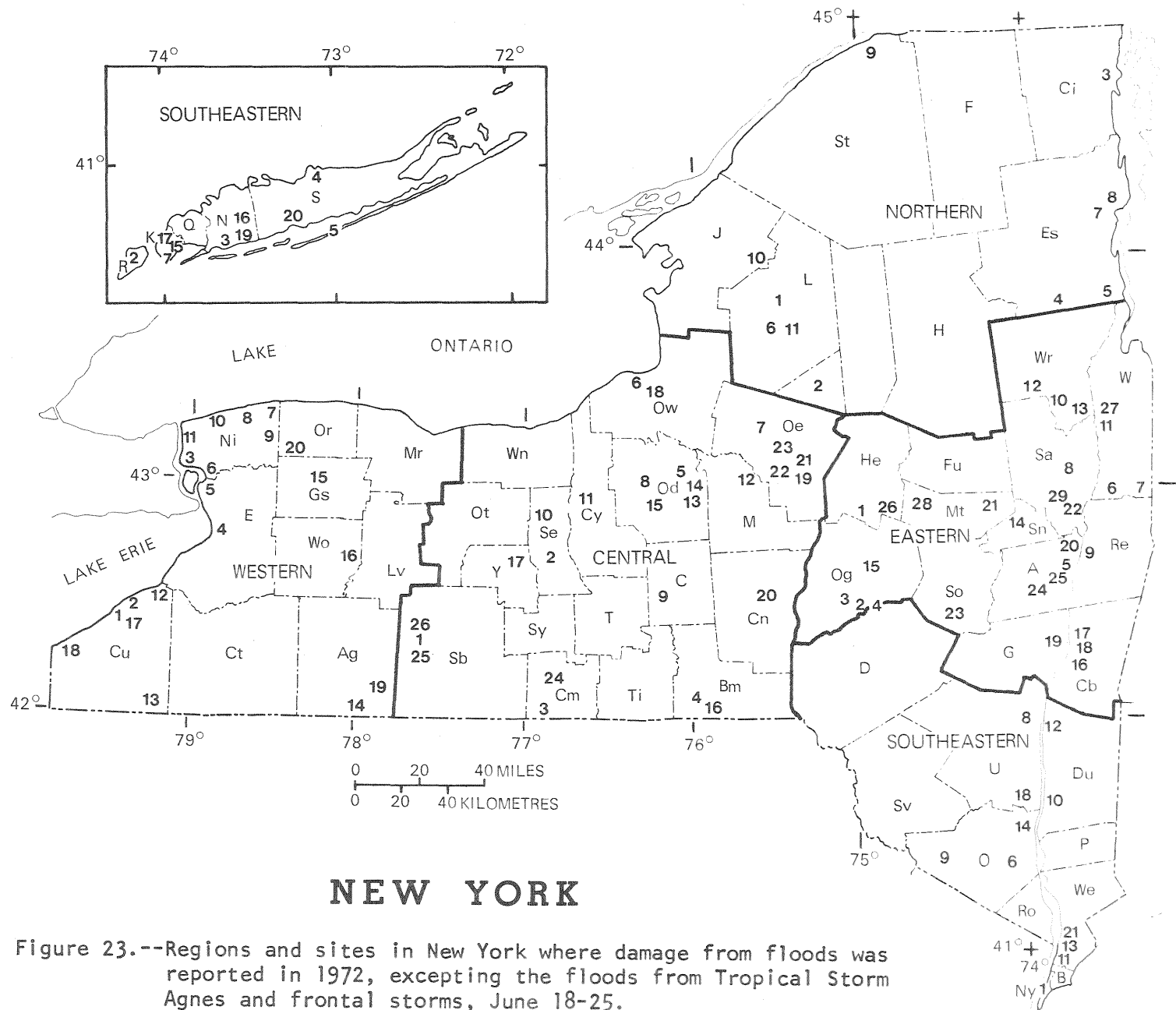


Figure 22.--Mean daily air temperature and precipitation at Stillwater Reservoir, March 1-May 15.



Letter Symbols for Counties in New York

County Name	Letter Symbol	County Name	Letter Symbol
Albany	A	Niagara	Ni
Allegany	Ag	Oneida	Oe
Bronx	B	Onondaga	Od
Broome	Bm	Ontario	Ot
Cattaraugus	Ct	Orange	O
Cayuga	Cy	Orleans	Or
Chautauqua	Cu	Oswego	Ow
Chemung	Cm	Otsego	Og
Chenango	Cn	Putnam	P
Clinton	Ci	Queens	Q
Columbia	Cb	Rensselaer	Re
Cortland	C	Richmond	R
Delaware	D	Rockland	Ro
Dutchess	Du	St. Lawrence	St
Erie	E	Saratoga	Sa
Essex	Es	Schenectady	Sn
Franklin	F	Schoharie	So
Fulton	Fu	Schuyler	Sv
Genesee	Gs	Seneca	Se
Greene	G	Steuken	Sb
Hamilton	H	Suffolk	S
Herkimer	He	Sullivan	Sv
Jefferson	J	Tioga	Ti
Kings	K	Tompkins	T
Lewis	L	Ulster	U
Livingston	Lv	Warren	Wr
Madison	M	Washington	W
Monroe	Mr	Wayne	Wn
Montgomery	Mt	Westchester	We
Nassau	N	Wyoming	Wo
New York	Ny	Yates	Y

1/ EASTERN

1. Mohawk
2. Oneonta
3. Laurens
4. Davenport Center
5. Menands
6. Buskirk
7. White Creek
8. Saratoga Springs
9. Troy
10. Lake Luzerne
11. Ft. Edward
12. Stony Creek
13. Glens Falls
14. Schenectady
15. Cooperstown
16. Hudson
17. Stockport
18. Stottville
19. Catskill
20. Cohoes
21. Amsterdam
22. Mechanicville
23. Blenheim
24. Guilderland
24. Bethlehem
24. Voorheesville
24. New Salem
24. Slingerlands
24. Delmar
25. Albany
26. Little Falls
27. Hudson Falls
28. Canajoharie
29. Round Lake

1/ NORTHERN

1. New Bremen
2. Forestport
3. Plattsburgh
4. Schroon Lake
5. Ticonderoga
6. East Martinsburg
7. Elizabethtown
8. Wadhams
9. Massena
10. Carthage
11. Glenfield

1/ CENTRAL

1. North Hornell
2. Romulus
3. West Elmira
4. Endwell
5. Cicero
6. Oswego
7. Sylvan Beach
8. Syracuse
9. Cortland
10. Geneva
11. Auburn
12. Oneida
13. Manlius
14. Fayetteville
15. Lafayette
16. Vestal
17. Bellona
18. Fulton
19. Oriskany
20. Norwich
21. Rome
22. Chadwicks
23. Kirkland
24. Horseheads
25. Hornell
26. Arkport

1/ WESTERN

1. Dunkirk
2. Silver Creek
3. Niagara Falls
4. West Seneca
5. Tonawanda
6. North Tonawanda
7. Barker
8. Newfane
9. Middleport
10. Olcott
11. Lewiston
12. Sunset Bay
13. Frewsburg
14. Wellsville
15. Batavia
16. Perry
17. Fredonia
18. Westfield
19. Andover
20. Medina

1/ SOUTHEASTERN

1. New York City
2. Oakwood Beach (Staten Island)
3. Great Kills
3. Freeport
3. Merrick
3. Douglaston
4. Nissequogue
5. Fire Island
6. Washingtonville
7. Brooklyn
8. Kingston
9. Middletown
10. Poughkeepsie
11. Mt. Vernon
12. Rhinebeck
13. Yonkers
14. Newburgh
15. Jamaica
16. Bethpage
2. Midland Beach
2. Bulls Head
2. Eltingville
2. New Springville
2. Rosebank
2. Bay Terrace
2. Willow Brook
2. Princes Bay
2. South Beach
2. Graniteville
2. College Point
17. Ozone Park
18. New Palitz
19. Seaford
2. Great Kills
2. Dongan Hills
2. New Dorp
20. West Babylon
21. Irvington

1/ Listed in chronological order of occurrence within regions.

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☆U.S. GOVERNMENT PRINTING OFFICE: 1976-617-703/112-76(2-11)

