The South Fork Dam broke, or "simply moved away" as some eyewitnesses said, at 3:10 on the afternoon of May 31, 1889. It took one hour for its waters to move down the 14 twisting miles of the Little Conemaugh to Johnstown. The devastation of the city itself was over in about 10 minutes. But in that time more than 2,200 persons were killed. Practically everyone in Johnstown and in the villages above the city was left homeless. Property damage totaled more than $17 million.

The residents of Johnstown had been warned that the dam might break, but they paid no attention, for there were accustomed to spring floods. There had been a flood every year but one since 1880. And each time the water rose in the city there was talk about the dam breaking, but it always held. Through the years man had set the stage for these floods by abusing the land in the narrow valley between the forks of the Little Conemaugh and Stony Creek rivers, which drain 618 square miles of the Allegheny Mountains.

Johnstown, first settled in 1794, had remained a small backwoods trading center until 1834 when the Allegheny Portage Railroad and Pennsylvania Canal brought in industry and trade. By 1840 the area boasted a population of 3,000 persons and after the arrival of the Pennsylvania Railroad and the establishment of the Cambria Iron Company in the 1850's, Johnstown grew rapidly. By 1889 the population of the valley was nearly 30,000 and Johnstown had become one of the largest steel producing centers in the country.

As the community grew, man stripped the nearby hills and mountains of their forests for lumber. Spring thaws and summer thunderstorms then sent torrentes racing down the mountain sides, tearing away more and more of the soil and the dwindling ground cover. In the valleys below, man narrowed the river channels to make room for new buildings, bridges, and people. Fitting the steel mills, people, stores, and railroads into the narrow river valley started a contest for the land in which man and his enterprises had their way at the expense of the natural environment. The result was high water and floods every spring.

The storm bringing the 1889 flood moved into western Pennsylvania on the afternoon of May 30. Forced by winds into the mountainous area of the

The U.S. Army Corps of Engineers, with a Hay Hospital, constructed in Barton's (3) direction. This hospital (5) was one of six built to relieve the burden of the water flowing over the top of the dam, until something was done to release more water than the spillway was able to handle. Colonel G. Parke, Jr., the young resident engineer, to this in his report of the early days, said, "The dam itself was not a failure, but by 11 a.m. the water was about level with the top. At this point, Unger sent John H. Parkes, Jr., the young resident engineer, to South Fork to see how high the water had risen. The condition of the dam's several features were sent down the valley warning of the impending disaster, but none was heeded. By 1 p.m. John Parkes returned to the dam only to see that the water had already started pouring over the top of the dam right above the point where the old discharge pipes had been. It was only a matter of a few hours until the dam broke, for the water was rapidly wearing down the ends of the embankments and the lake level continued to rise.

The big break took place at just three o'clock," Parkes wrote later, and it was about ten feet wide at first and shallow, but when the opening was made, the fearful rushing waters opened the gap with increasing rapidity that soon after the entire lake leaped out and started on its fearful march of death down the valley of the Conemaugh. It took but forty minutes to drain that three-mile length of water. The big boulders and great rafts of logs that were in the bed of the river were picked up, like so much chaff and carried down the torrent for miles. Trees that stood fully seventy-five feet in height and four feet through were snipped off like pipe stems.

The 30- to 40-foot high flood wave moved as fast as 40 m.p.h. down the narrow mountain valley, picking up speed and debris as it advanced toward the unsuspecting towns below. Sometimes, the debris formed a dam of its own and stopped the water altogether. But then it broke loose and raced on, faster than before. Shortly after 4 p.m. the flood waters reached Johnstown and in short order the town was ravaged. The rushing flood waters carried buildings, machines, trees and all that stood in its path downstream. And the debris rapidly piled up among the massive stone arches of the railroad bridge across the Conemaugh. The debris at the bridge was reported to be five feet high, covering 45 acres. But worse was to come in the swirling eddies and viscous currents at the bridge, for the frame buildings caught fire, trapping many who had survived thus far.

Contact with the rest of the world was completely broken off. Washed out railroad rights-of-way, camps, boppings down the valley, and the few terror-stricken refugees from Johnstown who had managed to get out of the valley helped to fan the wild rumors about the events of May 31. The horror of the rumors was scarcely lessened concisely as the staggering weight of truth began to be learned.
Enormous sympathy for the flood victims aroused by telegraph, newspapers, and pictures brought about the greatest outpouring of popular charity the country had ever seen. Contributions from within the United States and abroad totaled $3,742,818.78. Clara Barton, "angel of the battlefield," put her newly organized American Red Cross to the test by caring for the flood victims. With her delegation of 50 doctors and nurses from Washington, D.C., hospitals were organized and food and clothing were distributed to the flood victims. Clara Barton and the Red Cross stayed five months.

The work of rebuilding the city began almost immediately after the flood waters subsided. Within a few years the city regained the population it lost during the flood and the manufacturing centers were put back into operation. But a half century later Johnstown again became a victim of flood waters. The St. Patrick's Day Flood in March 1936 took several lives and caused damage estimated at $41 million. This disaster prompted the widening and deepening of the river channels and the building of river walls. These programs spared Johnstown from Pennsylvania's most devastating natural disaster, the flood of June 1972 spawned by Hurricane Agnes.

Begun in 1838, the Western Reservoir was completed 15 years later. The reservoir contained more than 430 million cubic feet of water, and the dam was one of the largest earthen ones in the world at that time. The 531-foot long and 72-foot high reservoir embankment was well built and safe. The walls were 270 feet wide at the base, 20 feet wide at the top and contained a core of well-puddled clay supported on both sides by layers of stone rip-rap and slate gravel.

Perhaps 300 people were trapped in the walkway which piled up behind the stone bridge of the Pennsylvania Railroad. About 50 perished when the train passed over the bridge without stopping. A number of other deaths were caused by the flood waters. In South Fork, where homes, about $50 to $100 houses were destroyed.

To complete the conversion of the canal reservoir into a fisherman's lake, a bridge was built over the spillway. And to prevent the fish from going over the spillway, heavy wire screens were fastened to the bridge supports. In the water in front of the spillway, nail-studded logs arranged in a zig-zag fashion kept the fish from leaping onto the bridge or dam wall. Thus the three devices prevented the fish in the reservoir from escaping. The three obstructions also acted as a trap for any debris and thereby slowed the water, much like food caught in the kitchen sink drain. When the rains came in late May 1889, washing more refuse than usual into the lake, the spillway became so clogged that it reduced the normal flow.

The repairs to the South Fork Dam were completed in 1881 and the impounded water formed beautiful Lake Conemaugh. Twenty Queen Anne-type cottages and a clubhouse of 47 rooms were erected on the green slopes which bordered the shores of the lake. Two steam yachts glided through the placid basin of the lake and excursion trips were frequent. Boating was distinctly fashionable, and fishing, thanks to Izaak Walton, a gentleman's sport.

By 1889 when the club membership had grown to 68, the resort contained 700 acres, of which 500 formed a reservoir storing 540 million cubic feet of water. The lake was more than two miles long and 65 feet deep at the dam. Conditions were ripe for disaster.

ABOUT YOUR VISIT
Johnstown Flood National Memorial is located along U.S. 219 and Pa. 869 at the South Fork Dam site, 10 miles northeast of Johnstown near St. Michael, Pa. At the dam site, a small visitor contact station provides information, and park rangers give interpretive talks during the summer months. Interpretive trails, picnic facilities, and comfort stations are provided in the park. Camping, hunting, and removal of any object of antiquity are prohibited.

FOR YOUR SAFETY
Do not allow your visit to be spoiled by an accident. While every effort has been made to provide for your safety, there are still hazards which require your alertness and vigilance. Exercise common sense and caution.