The Johnstown Flood Study Guide

The Johnstown Flood by David McCullough

BOOKRAGS

Contents

Plot Summary

The Johnstown Flood describes how on May 31, 1889, the earthen dam holding back Lake Conemaugh 15 miles upriver from Johnstown, PA, gives way in abnormally heavy spring rains, and a wall of water races down the valley, scraping away all trace of several small communities before destroying and drowning the populace of Johnstown in ten minutes. Relief operations begin immediately, involving the American Red Cross, and locals try unsuccessfully to blame a club of rich Pittsburghers who own the dam and lake. Most surviving Johnstownians return to rebuild their city and forget the terrible disaster.

Above Johnstown on Memorial Day, employees of the South Fork Fishing and Hunting Club prepare for the season under abnormally bad weather. Johnstown, PA, has an ethnically diverse population of 10,000, boasts modern amenities, and its working class population enjoys a good life, menaced by the threat of flooding should the 72-foot high South Fork dam, a mound of overgrown rubble 15 miles upriver, break and allow 20 million tons or water to rush down the valley. The club's fancy facilities are resented - and exaggerated - by locals. The lake begins decades earlier as part of the state's canal system, is owned briefly by the Pennsylvania Railroad, and stands in partial ruins until Benjamin F. Ruff and fifteen wealthy Pittsburgh friends buy it for a summer retreat. Ruff repairs the dam on the cheap and ignores warnings of catastrophe to the steel town in which the Cambria Iron Company has invested some $50 million.

By dawn on May 31, 1889, water stands 2-10 feet deep in Johnstown and is rising fast. Men are working feverishly to shore up the dam, deepen its spillway, and remove debris but by 11 AM, begin sending warnings, which are ignored. When the dam gives way, the lake empties swiftly, the torrent picks up natural and manmade debris, and stands 70-75 feet high when it hits and demolishes its first major obstacle, a massive stone viaduct. Mineral Point is shaved to bare rock. A railroad engineer runs ahead of the wave the last half-mile to the Conemaugh yards and his open whistle provides a brief warning, but passengers on the stranded *Day Express* suffer fatalities.

Woodvale is next stripped of all traces of human habitation, before Johnstown is hit without warning at 4:07 PM. Within ten minutes, it is drowned and destroyed. Houses and rooftops with people clinging atop spin off and most pile into the stone bridge, which withstands the impact, grows clogged with oil soaked debris, and catches fire. Spotty word reaches Pittsburgh, and both railroad magnate Robert Pitcairn and the newspapers head for Johnstown, but get no further than Bolivar, where bodies are being recovered, suggesting "hundreds if not thousands" have been killed in "an appalling catastrophe." At the risk of their own lives, rescue parties in Johnstown clamber through rubble searching for signs of life.

After a night of hideous sounds, June 1, 1889, dawns eerily quiet as crowds of cold, nearly naked, hungry people, many badly injured, gather in clumps, trying to understand. By noon, people are coming in from outlying areas bearing supplies and caring for children. Newspapermen straggle in and begin filing major stories. An

organizational meeting is called and committees set up to deal with the first aid, provisions, sanitation, and security. No final body count is ever made, but the accepted figure is 2,209. Hundred of bodies are never found. The first relief trains get through bearing bread, cheese, and crackers, collected throughout Pittsburgh after a 1 PM mass meeting and the collection of donations city wide. The "Pittsburgh Relief Committee" and Daniel Hartman Hastings, Pennsylvania's Adjutant General, arrive to help. Clara Barton leads a delegation of 50 doctors and nurses from the American Red Cross, which directs hundreds of volunteers distributing a half million dollars' worth of blankets, clothing, food, and cash. On Sunday, June 9, the sun shines over a religious service at which the Cambria Iron Company's John Fulton stirs the crowd with a call to rebuild bigger and better than ever.

Deep-seated resentment against the South Fork Fishing and Hunting Club surfaces and is trotted out before the press and coroners. Wealth, not technology, becomes the target of the press as papers editorialize the club is criminally guilty. Clubmen donate to the relief fund, but this helps little. Lawsuits are filed but not a nickel is ever collected, as the club has no assets and its lawyers argue "Act of God." Johnstown business people want simply to forget the disaster. Grandview Cemetery is dedicated, May 31, 1892, with a granite monument inscribed to the "Unknown Dead," behind which are arranged 777 small white marble headstones.

Chapter 1

Chapter 1 Summary and Analysis

The Johnstown Flood describes how on May 31, 1889, the earthen dam holding back Lake Conemaugh 15 miles upriver from Johnstown, PA, gives way in abnormally heavy spring rains, and a wall of water races down the valley, scraping away all trace of several small communities before destroying and drowning the populace of Johnstown in ten minutes. Relief operations begin immediately, involving the American Red Cross, and locals try unsuccessfully to blame a club of rich Pittsburghers who own the dam and lake. Most surviving Johnstownians return to rebuild their city and forget the terrible disaster.

Chapter 1, "The sky was red," sketches life in Greater Johnstown, PA, on Memorial Day, May 30, 1889, as context for the devastation next day when Lake Conemaugh breaks its dam and its waters crash down the valley into the prosperous steel town. The chapter also introduces a few characters whose fate in the catastrophe the historical record allows to be followed, and the South Fork Fishing and Hunting Club, a private summer resort set on the lake's western shore. Not yet open for the season, the club houses a few employees and some members drawn from Pittsburgh for the holiday. Around 8:30 PM, John G. Parke, Jr., the college-educated "resident engineer," supervising repairs and improvements, is surprised the weather is clearing rather than breaking into one of the sudden "thunder-gusts" common in the mountains. Around 11 PM sheets of rain driving against the clubhouse wake him. Originating in Kansas and Nebraska, the storm has generated tornadoes and snow squalls en route to the Allegheny Mountains, and proceeds to drop seven inches of rain at the club overnight, while Pittsburgh, 65 miles to the west, receives under an inch and a half.

Most of the Memorial Day crowd is back indoors before the rains start. As usual, the flag- and flower-bedecked town has closed for the 2:30 PM parade, attended by folks from neighboring towns. Marchers proceed up Main St. to Bedford St., and then turn south along the river to the Sandy Vale Cemetery. Aging veterans of the Grand Army draw the largest cheers on the three-mile tramp. Since they marched off to save the Union, Johnstown has tripled in size, as the Cambria Iron Company provides steel for America's westward expansion. The valley is smoky by day and glows fiery by night as workers in the rolling mills toil in intense heat for 10-12 hours a day, six days a week, earning $10 a week. Johnstown is not pretty, but the surrounding densely forested "hogback" ridges are magnificent.

The town is built on a nearly level flood plain at the confluence of two rocky, oversized, swift-flowing mountain streams termed rivers, the Little Conemaugh and Stony Creek, which in the springtime run wild. The people are poor but do not realize it. Many live in cheap pine-board company houses along the riverbanks, unlike the appalling conditions of Pittsburgh and other big cities. Newcomers either find jobs or move on to Pittsburgh, and some Johnstown residents have begun leaving, their places being filled by

"hunkies," a collective term for any immigrant willing to work cheap. Most of these live in Cambria City beyond the new stone bridge. Most of those watching the parade are Irish, Scotch-Irish, German, or Welsh, Germans predominating. Blacks and Jews are few.

The first white settlers, Solomon and Samuel Adams arrive with their sister Rachael in 1771 but perish at the hands of the Delaware Indians or flee, and permanent settlement begins in 1794. Joseph Schantz (or Jones) lays out Conemaugh Old Town and moves on in 1804, selling to Peter Levergood, and the town remains a backwoods trading center until the canal arrives. By 1835, Johnstown has a drugstore, a newspaper, a Presbyterian church, and a distillery. By 1840, its population tops 3,000, and when the Pennsylvania Railroad arrives in the 1850s, everything changes. In 1889, Johnstown is the largest of ten tightly clustered boroughs kept from uniting by political jealousies and tax disputes. Its population of 10,000 is four times greater than the biggest remaining town. It boasts banks, hotels, a jail, a full-time police force, five-story office buildings, up-to-date stores, an opera house, a night school, a library, many churches, and several handsome homes owned by Iron Company executives. The most imposing houses are on Main St. and Prospect Hill. Everyone else lives in small frame houses with porches and fences. Life is simple and pleasures few, including Saturday night band concerts in the park and lectures in the library. On Sundays, folks go strolling in their best clothes. Fishing is superb upstream, and summer brings the circus. In the fall, hunting is popular and during the winter snow sports are in vogue. Greater Johnstown has 123 saloons, where many spend their paychecks on Fridays and "disturbances" are reported in the Monday paper. Lizzie Thompson's is the best known of the many "sporting houses." People work hard, feeling they are getting somewhere, heading into a glorious new age.

The city is booming financially, which shows in streetlights, a new railroad station, hospital, and telephone exchange. Most have electricity or gas, many have bathrooms, and the Hulbert House has an elevator and steam heat. The town has no debt, low taxes, and a declining cost of living, but some still talk of the "good old days" and there is muted resentment against the company, which has quashed two strikes. Floods, fires, and epidemics hit swiftly and unexpectedly, terrifying all and killing many children. Every year a few men perish or are maimed in the mills and a few boys are hit by trains while playing on the tracks. The year 1889 has been healthy, except for measles, and people hope steel prices will be strong and profits may be passed to the workers. The newspaper tells of the Eiffel Tower, buildings that reach the heavens, and prairies turning into farms and cities overnight. It is a good time to be alive. Best of all, the U.S. seems to have recovered a strong spirit of unity at its 100th birthday.

When the rain starts at 4 PM, it is fine and gentle, but unwelcome because the rivers are running high from snow runoff and eleven days of rain. Spring flooding is expected annually, but people always hope the rivers may behave. It has been an odd weather year. The rain stops at 5 PM, and the Rev. H. L. Chapman the Methodist minister who lives two doors off Main St. in a new parsonage facing the park, sits on his porch. Chapman is a Blairsville native who served in a half dozen parishes between Pittsburgh and Johnstown before settling here with wife Agnes a few years back. His stone church is the largest in town and a landmark. Gentle rain resumes at 9 PM. Hopeful of late business, George Heiser keeps his Washington St. store open until 10 PM, and thinks

little of the rain as he shuts off the lights. If Johnstown has a typical married couple, it is George and Mathilde Heiser, who with 16-year-old son Victor live above their store two blocks north of Main and opposite the noisy B&O tracks and depot. The Civil War veteran does not go in for politics but is friendly and well liked. After George fails to get rich quick in Oil City, Mathilde takes over the books. She is well educated and determined Victor will be even more learned to avoid working in the mills, mines, or their store. The Heisers are atypical only in not being beholden to the Cambria Iron Company beyond depending on the spending power of its employees. They have lost a child and gone on, daily fight dirt, save every nickel, are proud of the progress they are making, and consider Johnstown a good place to make their home.

Chapter 2

Chapter 2 Summary and Analysis

Chapter 2, "Sailboats on the mountain," draws its title from the odd sight of pleasure craft on the artificial Lake Conemaugh, owned by an elite club of Pittsburgh moguls after they buy the state-created reservoir whose purpose - to feed water into the canal system - becomes obsolete when the railroads come through. Chapter 2 explains how people have lived for decades with the threat of flooding, and how Johnstown has grown dependent on the Cambria Iron Company, which is already at odds with the Pittsburghers.

Some 1,500 people live in South Fork, a coal town like a half dozen others along the main line of the Pennsylvania Railroad between Altoona and Johnstown. Seen from below, the South Fork dam is a mound of overgrown rubble, rising steeply 72 feet by 900 feet wide, with a spillway at the far left, crossed by a wooden bridge that leads to a path to the top. There the path divides, with the left fork crossing another wooden bridge over the spillway, while the right crosses the breast of the dam to the club a mile away. To the right, the dam drops off abruptly and South Fork Creek winds toward Lamb's Bridge. The broad surface of Lake Conemaugh normally lies 6-7 feet below the top of the dam. In the spring, it covers 450 acres and is 70 feet deep in places. The difference in elevation between the top of the dam and the stone bridge 15 miles away in Johnstown is 450 feet, and the weight of the water is estimated to be 20 million tons. Organized in Pittsburgh in 1879, the club owns the dam, the lake, and 160 acres around them. By 1889, there are 16 fancy "cottages," boathouses, and stables there, and a 47-room clubhouse, that dwarfs them all. The club has a fleet of fifty rowboats, canoes, sailboats, two small steam yachts, and an electric catamaran, but the white sails against the dark forest high in the mountains make the greatest impression. Pittsburghers take pleasure in this paradise, for the Monongahela and Allegheny rivers are growing ever more polluted.

Cresson is founded before the Civil War by Dr. Robert Montgomery Smith Jackson at the site of "iron springs," including one named for old Ignatius Adams, discoverer of the curative waters, who favored mountain living to teeming urban life. Adams' friend, J. Edgar Thompson, president of the Pennsylvania Railroad, builds a hotel there, and Cresson becomes a summer haven for the well-to-do of Pittsburgh and Philadelphia. In 1881, the railroad clears forest for a second hotel, the Mountain House, the grandest piece of architecture in Cambria County. Andrew Carnegie, the first Pittsburgher to show an interest in the regenerative power of the Alleghenies, has lived in New York, Scotland, or Cresson rather than Pittsburgh for 20 years. Cresson's drawback is that it is too close to the railroad for privacy and lacks standing water where the expensive and relaxing gentlemen's sports of boating and fishing might be enjoyed.

The Old Reservoir at Stony Fork seems a perfect solution, initially funded by the state legislature in 1836 to hold extra water needed during dry months by the Western

Division of Pennsylvania's "Main Line" canal from Johnstown to Pittsburgh. It is joined to the Eastern Division, running from Philadelphia to Hollidaysburg, by an ingenious system of railroads and steam-powered hoists that carry boats over the crest some 36 miles at a 1,400-foot elevation at Portage. Water shortages are bad for business, so the Western Reservoir is begun in 1838 under the direction of head canal engineer, Sylvester Welsh, who proposes an 850-foot long earth dam with stone spillways at both ends to discharge wastewater. Sluices regulate the supply of water to the canal. Engineer William E. Morris works out the design and estimates it will take a year to build, but money problems drag it out until 1850. Later engineering experts rate the work competent.

They use cheap construction techniques accepted for thousands of years, which aim above all to prevent water from going over the top or seeping through internally. The embankment is built up of successive horizontal layers of clay, each packed down ("puddled") by lying under a skim of water for a period of time to render it watertight. As the wall rises, it is coated ("riprapped") on the steep outer face with loose boulders and with smaller stones on the gentler inner face. A 72-foot wide spillway is cut through the rock on the eastern hillside, where the dam is "anchored. The breast of the dam is 930 feet long, 20 feet wide on top and 270 feet thick at the base. At the center of the base, five two-foot diameter pipes are set into a culvert to release water toward Johnstown.

Work ends on Jun. 10, 1852, and by the end of August, the water is 40 feet deep. Six weeks later, the first Philadelphia to Pittsburgh rail run renders the canal obsolete. No one wants to buy the Main Line until the Pennsylvania Railroad puts up $7.5 million for the right-of-way. Five years later, on Jun. 10, 1862, the South Fork dam breaks for the first time, during heavy thunderstorms. No records or photographs survive to document how the break comes about, but residents are said to have been stealing lead from the pipe joints during the years of abandonment, causing serious leaks. Alarm in the valley is great but the damage slight, because the lake is under half full, the creeks are low, and a watchman releases much of the pressure by opening the valves in time. For the next 17 years, there is just an oversized pond and acres of dry lakebed used by local farmers for grazing. In 1875, Congressman John Reilly of Altoona buys the property for $2,500 but does nothing with it. He sells it for $2,000 to Benjamin F. Ruff, who gets fifteen Pittsburghers to go with him in at $200 each. They capitalize at $10,000, quickly increased to $35,000, and obtain a charter Nov. 15, 1879, in Allegheny County from Judge Edwin H. Stowe. Judge Stowe ignores the law requiring registration in the county where operations are carried on. Reilly removes the cast-iron discharge pipes to sell for scrap. Ruff wants to rebuild the dam to a height of just 40 feet and cut the spillway 20 feet deeper to handle the overflow, but finds this will cost more than repairing the old break and restoring the dam to its old height. For $17,000, Ruff repairs the dam by boarding up the stone culvert and dumping on the culvert rock, mud, vegetation, and even dung, but does not replace the discharge pipes. Edward Pearson, a railroad man with no engineering credentials, supervises work. It washes away on Christmas Day 1879, and is damaged again severely in February 1881, but no one is discouraged. By the end of March, clubmen stock the lake with fish and launch steamboats. The *Tribune* reports the railroad is planning to build a narrow-gauge spur from South Fork to the lake

to service the clubmen, who are looking to establish a 1,500-acre private game reserve south of Johnstown.

The clubmen are extraordinarily rich and influential, but not mostly millionaires as assumed, and shun the ostentation of Newport, Cape May, and Tuxedo Park. In 1881, honeymooning in New York, Frick visits Carnegie and his mother, talks a little business, and within the decade owns or controls vast coal lands and sits as Chairman of Carnegie, Phipps & Company, in charge of the world's biggest iron and steel enterprise. The Carnegie empire is also represented at South Fork by long-time partner Henry Phipps, a wealthy financial wiz, vice chairman John G. A. Leishman, and lawyer Philander Chase Knox.

Other members include close friends Robert Pitcairn and Andrew Mellon. Pitcairn runs the Pittsburgh Division of the Pennsylvania Railroad, a position of great power and prestige, while shy but quick-witted Mellon through T. Mellon & Sons is financing much of Pittsburgh's furious industrial growth. The rest of the list (revealed only after the flood) reads like the Pittsburgh "Blue Book," young men preoccupied with steel and doing very well. Orders for steel rails have tapered off after 73,000 miles of track have been laid in a decade, but all sorts of architectural steel is needed for Chicago skyscrapers, and the new steel Navy. Prices are not as high as steel men would like, and there is constant talk of labor strikes, but no one expects the Pittsburgh boom to end soon. Life could not be better for the clubmen, God-fearing, steady, solid Republican Presbyterians, the "best people" to run Pittsburgh and look after business. It is natural they gather away from the city - but not too far away - during the summers. Johnstowners are flattered such people want to summer near-by, but the club's management irritates local fishermen by erecting fences and threatening to shoot poachers when the fences "disappear," and an undeclared war goes on for years. These feuds will resurface in Chapter 9, as survivors of the flood look for someone to blame.

Even before the first full season at South Fork in 1881, a rumor spreads the dam is about to break under pressure of a flash flood, but the Cambria Iron Company sends men to examine it, and the *Tribune* reports water an undisturbing two feet from the breast of the dam and plenty of room for it to spread out before reaching Johnstown. Nevertheless, people in the lowest part of town spend the night in mortal fear - and during any drenching rain. How many of those who come forward after the flood, claiming to have had doubts about the engineering and premonitions of doom, are authentic cannot be determined, but there is good reason for fear. The valley walls are as steep as a sluice and the water has but one way to go. In 1808, a small dam across Stony Creek breaks, creating Johnstown's first flood. "Pumpkin Floods" occur a dozen years later, and there are significant events in 1847, 1875, 1880, when a 16-foot dam fails to cause little damage only because it is built below town; and in 1885, 1887, and 1888. By 1889, people understand flooding occurs because the mountains are stripped of timber and the river channels narrowed to make room for new buildings and bridges. With the forests destroyed, the 800 tons of water per acre they retain are free to rush in torrents down the mountainsides. This carries away additional soil and ground cover, and deposits it down river, further shrinking the capacity to handle runoff. The water cannot dig deeper channels in rock, as some Johnstowners believe. Rumors of disaster

spread every summer, and it becomes a local joke in Heiser's store. Years later Victor writes about living in the shadow of Vesuvius, calloused to the possibility of danger. Few heed warnings, reasoning it has not happened yet, the owners of the dam being some of the most amazing men in the country, must surely know what they are doing, and there is nothing anyone can do about it. The *Tribune* downplays alarm - unless a dam break occurs in conjunction with a great flood in the Conemaugh Valley. One citizen on May 31, 1889, opines the water will rise but two feet in the valley if the dam should let go.

As Ruff begins restoring the old dam in 1879, the management of the Cambria Iron Company becomes "extremely exercised." Manager Daniel Johnson Morrell looks on Carnegie and his colleagues as brash, unprincipled upstarts in the iron business, in it for quick money. Morrell is the most powerful man in Johnstown. Besides running the Iron Company, he presides at most town meetings, the two banks, and the water and gas companies. He has served two terms in Congress and remains a powerful voice in the Republican Party and the American Iron and Steel Association. He lives like a king on Main St. in the town's finest house.

Morrell is born in Maine in 1821, grows up in Philadelphia, and moves to Johnstown in the 1850s, charged with keeping the floundering Cambria Iron Company out of bankruptcy. He learns the iron business, reorganizes the company, keeps his nerve, and turns the company into the biggest producer in the country. He encourages research into a new pneumatic process for making steel that contributes to dramatic changes in the iron business. In 1856, with William Kelly, Morrell gerry rigs the "Irish Crank" in a corner of the Cambria yard experimenting with "refining" molten iron for the rolling mill by blowing air into it.

By 1862, they develop something close to the Bessemer process, named for the brilliant English chemist, Henry Bessemer, a contemporary who gets all the credit for it. The Bessemer process produces good quality steel in less than an hour, rather than the weeks or months required to oxidize carbon impurities previously. After costly setbacks and disappointments, Johnstown becomes one of the liveliest steel centers in the U.S., and employs the most inventive minds in the industry to experiment in ways even Bessemer dares not try. The Civil War produces flush times, and the age of cheap steel continues into the late 1880s. By then, Cambria Iron employs 7,000 in two huge plants, owns and operates coalmines, coke ovens, and railroads. It is the largest landowner in the county, rents 700 frame houses to workers and owns the reasonably priced Wood, Morrell & Company department store. Johnstown is a company town, run by Morrell's iron hand, and non-unionized.

By the standards of the day, however, Cambria Iron is paternalistic about the welfare of its workers and their town. In one plant, it maintains the eight-hour day, tried and abandoned by every other steel company. The company builds the town hospital and pays for treatment there for anyone injured on the job. It establishes a library and night school for employees wishing to learn things useful on the job. It has invested some $50 million in the region by the time the club is organized, giving Morrell a vested interest in what the Pittsburghers are up to.

Further motivation comes from the fact that in the 1870s, when Carnegie decides to get into the Bessemer steel business, he raids Cambria Iron of its best workers for his new Edgar Thomson works at Braddock. Captain Bill Jones, Morrell's knowledgeable but independent assistant for 16 years, whom he turns down for a promotion, goes over with a number of his "high-class graduates," and within a year Edgar Thomson is outproducing Cambria. Jones turns down Carnegie's offer of partnership to preserve his influence with the men, but accepts a salary of $25,000 - more than the U.S. president. Hearing what the Pittsburgh crowd is doing at the South Fork dam, Morrell, experienced with dams and the violent consequences of bungled innovations, sends accomplished engineer and heir apparent, John Fulton, over to investigate, and he is met by Colonel E. J. Unger, C. A. Carpenter, and several contractors.

Fulton's report, dated Nov. 26, 1880, states the dam can hold back the water, but expresses misgivings about lack of a discharge pipe and unsubstantial repairs, which leave a large leak in the new embankment. The dam holds 40 feet of water. Should it reach 60 feet during a season of flood, it will leak again and threaten the whole Conemaugh. The amount of damage cannot be estimated because it will depend on the size of the breach and the proportional rapidity of discharge. The present lining on the upper slopes should be overhauled and an ample discharge pipe be constructed to facilitate repairs. Morrell forwards the report to Ruff, who responds Dec. 2, with obvious impatience at Fulton's findings; no one is in danger from the enterprise. Morrell is unwilling to let it go at this and writes Ruff on Dec. 22, backing Fulton's conclusions in the whole. Morrell does not want to obstruct progress but protests this perpetual menace to lives and property in the upper valley. An outlet pipe or gate is required for safety and as a means of alleviating drought in the mountains, and Cambria Iron is willing to help foot the bill.

Ruff declines, so to keep a foot in the door, Morrell purchases two club memberships. He soon begins suffering a mental decline, however resigns his civic responsibilities, retires from business, and dies peacefully in 1885. Johnstown shuts down for his funeral. Ruff dies two years later, Mar. 29, 1887. Nine years later, engineers judge Fulton's findings correct, but find four crucial changes made by Ruff's men that Fulton fails to notice: 1) the height of the dam is lowered to give room for carriages to pass each other comfortably, which makes the difference in height between the top and the spillway smaller; 2) the spillway is screened to prevent fish from going over, which can become clogged with debris; 3) the dam sags slightly in the middle at the old break - the point at which the dam should be the highest and strongest; and 4) the clubmen raise the water level to 65 feet - nearly the brim - and springtime flooding raises it further.

Chapter 3

Chapter 3 Summary and Analysis

Chapter 3, "There's a man came from the lake," takes its title from the recollections of the South Fork telegraph operator who hears the warning of eminent trouble brought by John Parke in a Paul-Revere-like ride. The chapter follows the rising water, efforts to deal with the structural defects in the dam, and attempts to get warnings downstream.

The cold, hard rain eases off by the morning of May 31, but a thick mist hangs in the air. By 6 AM, everyone knows Johnstown is in for a bad time because the yellow-brown, log-choked rivers are rising faster than a foot an hour. By 7 AM, mill workers coming off shift are told to look after their families. By 10 AM, most cellars in the lower part of town have water; school is let out, and children are splashing in the streets. Distinguished lawyer W. Horace Rose has seen lower Main St. flood many times, so, sending his sons, Forest and Percy, to drive their cow to higher ground, he sets off in an open wagon to help evacuees.

Rose is a former orphan who reads law at 19, opens his own office, marries Maggie Ramsey, and is wounded, captured, and released during the Civil War. He serves as a state legislator and district attorney, and founds Johnstown's Literary Society. Unable to proceed downtown, Rose heads up to Bedford, where he jokes with old friend Charles Zimmerman about the cows drinking river water on Main St. When the rain resumes coming down hard, Rose buys raincoats, heads to his office on Franklin, 100 feet from roaring Stony Creek, to move documents above the 1887 flood line, and heads home. Rose and banker John Dibert agree the situation is serious for property holders in the lower part of town, and want to see the Iron Company obey town ordinances about the minimum width of the rivers. Rose arrives home to find he cannot get near his front door, and once inside by other means, is disturbed water has ruined his new wallpaper. They spend the morning and early afternoon upstairs in a party mood, joking with neighbors and shooting rats on an adjacent wall.

Hundreds of other families are wading through the streets pulling rude rafts or half-submerged spring wagons. Some head to higher ground, others head for friends or relatives to take them in, and a few go to the big hotels in the center of town. Most walk sheepishly, dreading the looks and kidding they will endure when they return home. Water everywhere in Johnstown is 2-10 feet deep, already deeper than during the 1887 flood. At 11 AM, a log boom bursts up Stony Creek, sending a wild rush of logs through the valley and slamming into the stone bridge below town. Soon afterward, Stony Creek rips out the Poplar St. and Cambria City bridges and interrupts Mary McNally's funeral mass. Teamster Joseph Ross, father of four, drowns trying to evacuate a stranded family - Johnstown's first flood-related death. Shopkeepers work feverishly to move goods out of reach of the water, and at noon George T. Swank, cantankerous editor and proprietor of the *Tribune,* begins work on a running log of the day's events. Waters are rising below his window at 18 inches an hour and flowing at 6 mph. Nearby, Rev.

Chapman is interrupted writing his Sunday sermon by cousin-in-law A. D. Brinker, who is sure Johnstown will be destroyed. Chapman has a hard time not laughing at her oft-repeated prediction and invites her in to ride out the storm. Later, a student friend named Parker drops in to help move furniture, but Chapman believes the new parsonage's high foundation makes them safe.

About noon, Chapman and Swank observe Cyrus Elder, chief counsel for the Iron Company and sole surviving member of the South Fork Fishing and Hunting Club in Johnstown, walking through waist-deep water, joking about doing some fishing while awaiting rescue. Elder is too hefty to climb on a horse and has to await a wagon. Elder is trying to get home to his wife and daughter, having pulled into Johnstown at 10:15 AM from Chicago by way of Pittsburgh aboard the two-section *Day Express.* The first section consists of seven cars carrying 90 passengers and crew, the second carries 50 passengers and crew, and a three-car mail train also stuck in Johnstown carries members of the *Night Off* en route to perform in Altoona. During their wait, passengers wave to families in upstairs windows or watch crewmembers dislodge logs and driftwood from the bridge. Because the eastbound track up the valley is washed out, the trains are ordered to use the westbound track to East Conemaugh, the main marshaling yard for Johnstown, where "helper" engines are picked up to assist the eastward climb over the mountain.

Trouble in Lilly holds the trains in East Conemaugh, where the river is still in its banks, but rising fast. Townspeople have gathered to watch the wooden bridge above town sweep by. A telegraph message arrives between noon and 1 PM addressed to local yardmaster J. C. Walkinshaw and to Pitcairn, head of the entire division, in Pittsburgh. No one later recalls seeing it, but there is consensus its gist is the South Fork dam is liable to break and Johnstown should prepare for the worst. Minutes later this message reaches Johnstown, where freight agent Frank Deckert glances at and dismisses it, while two others read it and laugh out loud. Deckert neither moves his family to safety nor spreads the warning to the central part of town. Old timers can remember no night like this on the mountains around South Fork and Lilly. The Heidenfelter family reports being awakened and frightened by "rumbling, roaring sound" near their house followed by a downpour that sounds like a gigantic tank being dumped of water. The wife thinks the last day has come. Nearby families report thunder-like sounds but are sure it is not thunder. Virtually every farm has swamped cellars, pastures under 4-5 feet of water, and fresh gullies three feet deep are cut in fields. Crops are washed away.

At 6:30 AM, Parke awakens a second time, hearing a "terrible roaring as of a cataract" coming from the head of the lake. He recruits a workman and begins exploring the creeks by rowboat. The upper quarter of the lake is covered with debris and at the far end is a flooded cow pasture. South Fork Creek is a "perfect torrent" sweeping through the woods. Parke is summoned to the dam, where 50 people have gathered, a clump of bystanders, a team of Italian sewer diggers laboring to heighten the dam, and 10-12 men cutting a new spillway through tough shale. Little progress is being made under the direction of Col. Elias J. Unger, the Pittsburgh clubmen's new president and manager.

Unger has been with the railroad since age 20, working his way up from brakeman to superintendent of hotels. In 1888, he purchases a place on the lake, settles into retirement, but accepts the light summer assignment. He is a cut below the clubmen socially and financially, but his hotel management experience makes up for it. Just home from Harrisburg, Unger is baffled to find the valley below water and rushes to take charge. Bidwell, en route home to Pittsburgh, stops to ask how things are going, and Unger doubts the dam will survive the day, but if it does, he wants major changes made to prevent a repetition. Unger orders debris cleared from the fish screens covering the main spillway. Parke arrives and rides back and forth on horseback, exhorting the men to dig harder and faster.

By 11 AM, the water is level with the top and it is clear the workers will not prevail. As serious leaks develop on the outer face, Unger decides to warn the people below. With the only telephone line not yet working, Parke rides to South Fork, where Boyer and Bidwell have already convinced people there is no danger. The telegraph operator, Emma Ehrenfeld, recalls a man running to her tower, much excited, saying "a man came from the lake" ordering Johnstown warned. Because Parke is not well known in town, Ehrenfeld is cautious, and line trouble prevents her from contacting anyone but the next tower in Mineral Point. Its operator, W. H. Pickerell, is an old hand, so Ehrenfeld asks his advice. Together they prepare a message to send to East Conemaugh through trackman William Reichard, who happens by en route to flagging a landslide at Buttermilk Falls. Reichard gives the message to division foreman L. L. Rusher and is sent back for additional messages. Wires are open westward from the "AO" tower, and operator R. W. Shade sends it on to Walkinshaw and Deckert.

Pittsburgh operator Charles Culp takes the message to Pitcairn and within an hour, his private railroad car is off to Johnstown. About 12:30 PM, Pitcairn's friend, J. P. Wilson, sends Dan Siebert from South Fork with another warning, as Pitcairn has asked three years earlier. Siebert observes a 50-60-foot wide sheet of water coming over the top, which worries Wilson enough to ask ticket agent C. P. Dougherty's advice on notifying Pitcairn. Dougherty signs the dispatch, saying water is running dangerously over the center and west end. Experienced operator Elmer Paul has trouble getting this off, but it reaches Mineral Point at 1:52 PM, and is walked to the "AO" tower by Wilson. Seeing waters raging across the flats 30 minutes later, Wilson has Ehrenfeld send yet another warning, which reaches East Conemaugh in ten minutes. Fixing his circuit, Pickerell gets it off to Deckert by 2:45 PM and phones Hettie Ogle at the central telephone switchboard in Johnstown. At 1 PM, Ogle moves with daughter Minnie to the second floor, and around 3 PM notifies Pittsburgh this could be her last message. She calls Swank at the *Tribune*, who records the town is impatient, unable to do anything in its "dreary situation." A live cow has swept past and slammed into a pier. At 3:15 PM, the central telephone office passes word from Deckert the situation is getting worse; he cannot speculate how much damage three square miles of water can cause. By then, Lake Conemaugh is on its way to Johnstown.

Parke returns shortly before noon, confident his warning has been sent on, to find water crossing the top directly above the old culvert. Within minutes, the sheet of water is 100 yards wide and the dam is dishing. The spillways are not coping, and men are tearing

up the bridge to use in dislodging the logjam. Parke rides out, finds gullies not as bad as he fears, and briefly thinks of cutting another spillway in the dam proper to prevent a catastrophic center break. Deciding the decision is foolhardy and unsure the dam will give, Parke goes to dinner. By the time he returns, big rocks on the outer face have washed away, water is pouring across the top and digging a 10 X 4-foot hole. They can do nothing but watch, wait, and hope. Bystander George Gramling, who has seen a smaller dam fail, has been concerned all morning. The Rev. G. W. Brown and his neighbors turn out moments before the first break; Brown says it is large enough to admit a train of cars. Others liken it to a knife cutting suddenly through. The dam does not burst as some later say, but simply moves away in a push, at 3:10 PM.

Chapter 4

Chapter 4 Summary and Analysis

Chapter 4, "Rush of the torrent," describes the dramatic advance of the great wall of mud and debris through four communities before slamming into Johnstown. Much of it is given to describing and explaining how the varied topography of the valley makes the onslaught a constantly changing but ever destructive phenomenon. Miners and anyone living on a creek in springtime understands basic hydraulics, but no one is prepared for what happens when Lake Conemaugh leaps out like a living thing at treetop level. The lake empties in 36-45 minutes, creating a rush of water rivaling Niagara Falls in velocity and depth. Huge trees snap off or are uprooted and plunge away as the hill opposite the dam is scraped bare for 50 feet up. The torrent picks up natural and manmade debris, including George Fisher's place and little Lamb's Bridge. The valley then turns sharply to the right and disappears, leaving the witnesses to walk around acres of oozing lake bottom to the clubhouse. Unger collapses and must be carried to his bed while his workmen gather fish in blankets and baskets.

Tired, cold trainmen visit Ehrenfeld's South Fork telegraph tower all day, seeking news or warming themselves. Ehrenfeld holds the *Chicago Limited* west of the bridge, but engineer H. M. Bennett is uneasy about being in the path of a possible flood. He runs the *Limited's* helper across to test the bridge and, when it holds, pulls the rest of the cars across without permission and parks them at the depot, a half-mile away, shortly before 3 PM. Sitting with Ehrenfeld and conductor S. W. Keltz in the tower, which commands a view of the town, Bennett notices figures racing toward the hill and insists they get out fast. A mountain of water spreads the full width of the valley, which Keltz overestimates at 200 feet high (it is 40).

Ehrenfeld runs with the crowd for higher ground while Bennett and Keltz rush to crewmembers asleep in the caboose. About 200 yards from the bridge, the water claims its first human victim, Michael Mann, an English coal-miner and self-styled preacher, who ignores warnings to leave his shanty. Cutting the engine lose, Bennett and Keltz race toward the oncoming waters, seeking protection to the left of the station. The locomotive derails but the Bennett and Keltz jump onto an escaping freight, which the water hits and roars past. The flood carries off the rest of the *Limited* (with the crewmembers), crushes the planning mill, wrenches the bridge from its piers, destroys the coal tipple and telegraph tower, and plows into the mountainside, creating a violent backwash up the Little Conemaugh. Stacked on a hillside, most of town is undamaged.

The water rages westward between sharp wooded bluffs for a mile tearing up railroad properties, until the valley narrows abruptly, which causes the front wall of water to grow to 70-75 feet. The river then turns sharply south for several miles to a narrow three-mile oxbow and the water's first major obstacle, a massive landmark stone viaduct, 50 years old, 75 feet high, that rises above it as a shortcut. Hitting this dividing point, part of the giant wave crashes over the viaduct and into the river gully, while the rest - the greater

portion - follows the tortuous path of the river bed, heaped 70 feet high, pushing before it two miles' worth of heavy timber, rock, and mud.

The bridge briefly holds and Lake Conemaugh re-forms 5.5 miles downstream of its origins, held by debris clogging the great 80-foot arch. When this lets go, suddenly and violently, water explodes with maximum power and concentration. A mile ahead lies the quiet, clean, white frame village of Mineral Point. Its telegraph tower is on the opposite bank, beyond the last house, sawmill, and several turns in the river. Pickerell is sitting there when he hears a roar, sees trees and water approaching, climbs onto the office roof, watches the channel overrun its bank, hears crying, and sees many people atop floating houses. All but 16 of Mineral Point's 200 people survive, as the heavy rains inspire them earlier to move to higher ground, but the town is shaved to bare rock. The water moves down the valley, picking up speed wherever the path straightens and slowing when it twists again. Theoretically, the flow could reach nearly 90 mph, but the friction of the rough terrain and rubbish it is carrying cut this to an estimated 40 mph. Eyewitnesses say the debris several times creates momentary dams which, when they burst, increase the explosive nature of the flow. Drag causes the lower water to move more slowly than that above and it crests and falls vertically like beach surf, driving victims deep into the mud.

Engineer John Hess sits in the cab of work train No. 2 at Buttermilk Falls, a half mile upstream from the Conemaugh yards, stopped by a flagman. He and conductor R. C Liggett have finished repair work in Cambria City by 11 AM when an order comes to proceed to Wilmore. They advance under a mile when the washout appears too dangerous to continue and they go to Mineral Point to telegraph a report. There, Pickerell tells them about messages from South Fork. About 2 PM, they get another report about Buttermilk Falls, test the stability of the tracks with empty cars, decide they will hold, couple up, and roll on. Twenty minutes later Liggett hears a hurricane approaching and sees the tops of the trees bending. Hess shouts at the men to run and they scramble 400 yards before finding a path to higher ground. Hess and Liggett fire up Engine 1124, tie down the whistle, and shriek (at 12 mph) to East Conemaugh - and into history as heroes of a dash to spread the alarm. They are pulled from the cab and up a hillside less than two minutes before the water hits. An open locomotive whistle means one thing to anyone living along a railroad: something is very wrong. Nearly everyone in East Conemaugh understands instantly the only warning they receive.

For passengers on the *Day Express,* the five-hour East Conemaugh layover in pelting rain is dreary and monotonous. The Rev. T. H. Robinson is busy writing in his diary, while others amuse children, sleep, gripe about their situation, or discuss what little is known about a dam up the mountain. No one takes seriously that the great Pennsylvania Railroad would allow its cars to be endangered and porters comfort those concerned. Yardmaster Walkinshaw, a 49-year-old widower with five children, in charge here for 23 years, today can do nothing but move trains as far from the river as possible, parking Section 2 even with the depot, Section 1 next to it, and four tracks closer to the river, the mail train. The crews warm themselves in the mail train's caboose between trips to the tower for news.

Walkinshaw might have moved the passengers to higher ground, but many would have resisted going out in cold rain and mud. One survivor recalls Walkinshaw saying fatalistically, if the dam breaks the whole valley will be swept. About 3:15 PM, the bridge below the telegraph tower falls, its foundations eaten away by the current, which causes a great stir in the crowd. At 3:45 PM, the yardmaster hears a whistle blowing and orders everyone to higher ground. He sees Hess jump from his cab as a large wave comes around the hill. Conductors run between cars shouting, "Get to the hill!" Robinson recalls telling the woman next to him there is no danger - until he sees a 50-foot hill of rubbish heading for them, 300 yards away. Nearly everyone gets out of Section 1, but some balk at the mud and an old minister and his wife resign themselves to their fate. Once out of the train, passengers must jump over, crawl under, or run around Section 2 and across a 10-foot ditch, where many flounder or panic. Once in town, they join locals in running, screaming, towards steep, slippery embankment to safety. Robinson gets lost in back alleys but eventually climbs high enough to see a railroad car break up and float off with two men perched on top, and people rushing about frantically as the first wave, 28-30 feet high, hits Front St. and either topples buildings or carries them off. Locomotives swirl like logs and the roundhouse is crushed like a toy in the hands of a giant. The passenger trains are swamped in an instant.

Section 2 and the mail train miraculously survive as the roundhouse and other structures deflect the onrush and valley geography cooperates. Half of town is destroyed and the only track left lies beneath the two surviving trains. Thirty locomotives as heavy as 80 tons are scattered up to a mile away, and one boiler makes it to Johnstown. How many die is never determined, but the toll certainly includes 22 *Day Express* passengers and porters and 28 inhabitants of East Conemaugh and Franklin. Sixteen people inside Section 2 survive inside, soaked and shaken, as only those who run for their lives lose them. The mail train, 100 yards from the river is also intact, saved when the telegraph tower falls and pins the engine in place as the waters pass. None of the passengers is killed, having been briefed by conductor Charles Warthen about the seriousness of the situation at South Fork. Company collects its belongings, pins up its skirts, and is ready to move when Hess' whistle sounds. Warthen suggests they head for high ground earlier, but the troupe manager wants to wait. Years later the Pennsylvania Railroad conducts an investigation into the whereabouts and activities of its employees and finds most fatalities occurred in Section 1, where brakeman Samuel S. Miller looks out for himself rather than the passengers.

Before hitting East Conemaugh, the water divides at a second oxbow, the "big cut," which saps the wave of energy. Thereafter, however, the valley opens up considerably as the river heads directly for a meeting with Stony Creek, and the wave gathers speed. Woodvale, bigger, newer, and prosperous, the model town of the Cambria Iron Company bordering Johnstown, gets it next. Its 1,000 residents get no warning and within five minutes, except for a fringe of houses on the foothills, there are no traces of human habitation left. Officials later put the death toll at 314 - one in three. The boilers in the huge Gautier works send up a terrific geyser when the waters hit, then the building topples and is carried away. The wireworks contribute miles of barbed wire to the mountain of wreckage and water. It is under an hour since the dam gave way. Rain is still falling, but not as hard. The sun is brighter. In Johnstown, the water seems to be

subsiding, which gladdens the residents who know they face a night without gas or electricity.

Chapter 5

Chapter 5 Summary and Analysis

Chapter 5, "Run for your lives!" tells the harrowing story of the wave crashing into populous Johnstown proper with no warning. The deep, steady rumble approaching at 4:07 PM, sounds like an avalanche, thunder, an on-rushing train, or horses grinding oats, and is accompanied by shouting, screaming, buildings falling or ripping apart, glass shattering, factory whistles and church bells. Those who see the wall of water describe debris as large as locomotives tossed "like so much chaff." A dark spray, talked of later as an evil "death mist," hangs over the front - like dust raised by a great fire, a cavalry charge, or an explosion. The Gautier boiler explosion accounts for much of it, which Rose witnesses from his third-floor window. He figures his family has 2-3 minutes to act or be crushed to death. The wave is at least 36 feet high at the center and ten feet lower towards the sides as the water spreads out in the half-mile wide valley. Many recall a wind precedes it by a split second.

The wave hits Johnstown harder than earlier locales, drowning and destroying the city in ten desperate minutes. At the Heiser store, which disappears in an instant, the wave takes on three destructive thrusts, one aimed north through the Methodist Church and park, which is left treeless; one straight through the center of town; and one sticking to the channel of the Little Conemaugh. Brick buildings collapse while smaller wood-frame buildings jump from their foundations and float until they smash into other structures. Every landmark is destroyed. When the wave slams into the immovable hill on the far side of town, it raises a 550-foot backwash up Stony Creek, destroying miles of the densely populated valley before plunging back to batter down buildings that have somehow withstood the first onslaught. Houses and rooftops with people clinging atop spin off with the current; some drift for hours but most pile into the stone bridge beneath which all water must go. The bridge, crossing the Conemaugh River below where Stony Creek and the Little Conemaugh join, is shielded by Prospect Hill and must withstand only part of the wave's impact. Oil soaked debris builds up rapidly against its massive stone arches as Lake Conemaugh, once again, gathers in a new setting. This "dam" holds longer than the one at the viaduct and around 6 PM catches fire, becoming a funeral pyre for some 80 people trapped in the debris and by 10 o'clock is bright enough to read by in the lower half of town.

Water in front of the Heisers' is knee-high by early afternoon- a record for Washington St. - as people wander in and out, joking about the weather and buying sundries. George pays little attention to what is going on outside, but around 4 PM, has son Victor untie the horses, just before the wave arrives. Victor freezes in terror in the doorway, hearing the roar and crashing, sees his father beckoning him to climb to the barn roof through a trap door installed weeks earlier as a precaution. From there, Victor sees the approaching devastation and watches his home crushed and swallowed. Wrenched from its footings, the barn rolls like a barrel, as Victor somehow manages to stay on top, ploughs over the neighbors' house. Victor catches onto another house as the barn

collapses, hangs on as long as he can, and falls sickeningly onto a remnant of the barn roof. For the first time, Victor sees water and, lying on his stomach, rides the wave across Johnstown. He sees the Mussante family sail by and perish and, as his "raft" slams into the wreckage of the Methodist Church, is catapulted through the air. A freight car looms overhead but he shoots beneath into open water above the park. Out of immediate danger, he looks around to see people struggling and dying, including familiar faces. He can do nothing for anyone. As his raft is caught in the backwash at the Stony Creek juncture, Victor looks for landings on the mountainside or at the bridge, but is swept due south. As the current slows, he hops onto a roof where several people already huddle. Checking his watch as he had as the avalanche approached, Victor sees less than ten minutes have passed.

Rev. Chapman sees a boxcar roll past at 4 PM, and its rooftop "passenger" swings to safety through his second-floor window. Chapman knows the reservoir has broken, shouts for everyone to run to the attic, pauses to shut off the gas fire, and barely makes it to safety. A terrified "Arabian" clad in underdrawers bounds through the attic window and has to be quieted, lest he alarm the ladies. The parsonage appears to withstand the fury and, as the roar dies off, Chapman surveys the desolation at nightfall. Johnstown is a lake 30-feet deep, with few structures sticking up above the surface. There are no lights and no people. The fine four-story brick Hubert House, catering to salesmen, holds 60 people at 4 PM, only nine of whom survive when it collapses. Many seek refuge there, assuming it will be one of the safest places in town. Survivor G. B. Hartley recalls discounting the possibility of the dam breaking just before it does. He, proprietor F. A. Benford, and a few others scramble onto the roof when it lifts off and floats away.

Diagonally across Clinton St. stands a dry goods and notions store co-owned by James Quinn, one of the few prominent Johnstownians who understands the ramifications of a dam failure. The Quinns live in an opulent three-story, red brick house that appears safe from even the worst spring floods. Six-year-old Gertrude is the fifth of seven children born to the ex-cavalry officer, and wife Rosina, the daughter of the Bavarian immigrant who founds the bustling store. James is also president of the Electric Light Company, member of the school board, and trustee of the Johnstown Savings Bank. James goes in early to supervise moving goods to higher levels, ordering his family, houseguests, and nursemaid to stay indoors. By noon, water reaches the curbstone and James worries about the dam, but his sister-in-law is sure nothing can harm such a big house. He goes back to work and returns shortly before 4 PM to find Gertrude dangling her feet in the water off the front porch. Seeing and hearing the wave, James wraps ailing daughter Marie in a blanket and orders everyone to follow him up the hill. Aunt Abbie holding her baby and Libby Hipp holding Gertrude are afraid to enter the rising water and climb to the third floor. When James reaches high ground to find none of his family behind him, he hands off Marie and starts back, only to see the wave crush his home, inside which the women sob hysterical prayers and terrified Gertrude climbs into a cupboard in which she often plays.

Gertrude alone washes free, somehow scrambles onto a mattress. Her outer clothing ripped away, Gertrude shivers as night falls, prays in German as she has been taught, and curses a "terrible" man who floats by and ignores her pleas. She later clings to a

stranger, a powerful mill worker named Maxwell McAchren, who leaves the safety of the remains of the Arcade Building to help her. At least half of his 20 companions perish in a whirlpool, while he throws Gertrude into the arms of Henry Koch, who wraps her in a blanket and someone eventually carries her uphill. Gertrude is taken in along with other refugees by the Metzes and, unable to sleep, watches fire burning on a lake where the city had been.

The Rev. David Beale of the Main St. Presbyterian Church is one of several hundred refugees crowded into the tallest, largest structure in Johnstown, pitch-dark Alma Hall across from the park. He stops work on his Sunday sermon around 4 PM to take up the carpet in the parsonage when the wave hits and he, his wife, several neighbors, and a man washed in through a window find themselves on the third floor. The man has been washed down from Woodvale. Beale leads the group in prayer and Bible reading about God being their refuge and strength. For blocks around, nothing is standing and acquaintances float by, a few of whom he saves, doubting the frame building will last long. They pick their way across the floating debris to Alma Hall, a block away. One girl falls in, disappears, but is rescued. As darkness falls, Johnstown is a huge, vile-looking lake, crusted over by a grinding pack of wreckage across which other groups of tiny figures are groping toward the hills or surviving structures.

About this time, a break occurs in the railroad embankment to the right of the stone bridge, releasing a torrent of water which dashes into Cambria City below countless houses with people clinging to their roofs. Some, including McAchren, are fished out alive, miles downstream. The break drops the water level slowly and overnight buildings reappear, having somehow survived. For those inside, the long night is agonizing. Beale's group reaches Alma Hall and joins 200 others. Another 60 find refuge in the Dean Canan house, 51 in Dr. Walter's attic, 125 in Fred Krebs' house, 200 in the upper floors of the Union St. School, more than 100 atop the Wolfe Building, 175 at the Morrell house, and close to 90 at Dr. Swan's tall brick house, including a badly mutilated Horace Rose.

Rose recalls being hypnotized at his window by the approaching torrent, watching John Dibert's house squashed like a paper bag, and other nearby buildings charge toward him. He hears a noise, feels himself falling, and all goes dark. A moment later, in excruciating pain, he believes he is being crushed to death. His youngest child calls for help, but he cannot move; he sees daughter June sink out of sight; a stranger rescues Mrs. Rose, and she and most of the family clamber onto a passing rooftop, which is hurled toward the Stony Creek channel. As they float about for hours, Rose is helpless to move, severely chilled, and in terrible pain. They see the spire of St. John's Catholic Church catch fire around 8 PM and then topple into the water and float over the site of Rose's office on Franklin St. The great bell of the Lutheran Church is somehow still bonging every half hour, but otherwise the night is silent. Eventually, they drift into the main channel of Stony Creek and lodge against the side of Swan house. Rose is lifted through a window to safety.

Those inside Swan house fear fire. Beale and Captain A. N. Hart take charge to prevent panic among the 264 refugees, whom Beale leads in prayer. Lawyer James Walters is

named director of the building, having survived a spinning rooftop ride across town and being thrown headlong through the window of his own office. The fourth member of the ad hoc governing board is a physician, Dr. William Matthews, who spends the night tending to the wounded despite his own injuries. The eerie glow of fires is the only light that "night of indescribable horrors," without food, water, dry clothing, blankets, or medical supplies. Outside, the rain still sounds, along with faint calls for help, occasional screams, and the haunting noise of suffering animals. Nor are they sure the enormous building will not yet give way and bury them. People move as little as possible and worry if they die whether their corpses will be recognizable enough to bury. It seems morning will never come.

Alma Hall survives the night, along with the Presbyterian Church, its parsonage, Dr. Lowman's house, and the Methodist parsonage - all because the big stone Methodist Church bears the brunt and splits the wave. Elsewhere buildings are wholly destroyed or burn down to the waterline including most spectacularly St. John's and the Keystone Hotel. Small clusters of people survive trapped in the attics of their floating homes, not knowing what will come next. A baby boy is born to Mrs. Williams amidst his new family in the dark attic of half their former house. Scores of people float on anything available with no protection from the pouring rain, many severely wounded. Several spend the night in trees, unable to risk falling asleep. Those lucky enough to get to dry land are in a state of shock and stumble blindly through the woods until dawn.

By far the greatest horror is the fire at the bridge. Survivors tell of hearing screams all night from thousands of people trapped in the flaming rubble; each time a burnt section collapses there is a moment of solemn silence before the voices rise again. William Tice sees hundreds throw up their hands and fall backward into the fire, a fate far worse than drowning. Eventually, it is too horrible to watch and Tice walks away. Conductor Frank McDonald continues watching and is reminded of flies caught on flypaper, struggling without hope to save themselves. New houses continually sweep into the pile-up and catch fire. People crawl out, try to help one another, and perish, silhouetted against a wind-whipped wall of flame. Of 500-600 people driven into this heap, only 80 survive, many thanks to the courage of bystanders who rush to their help. Young Rose Clark nearly has her leg amputated by rescuers as flames bear down, but is freed at the last moment. The fire is still blazing come morning, and towns miles away downriver see the shimmering, blood red glow in the sky. Survivors traumatized by what they have seen, by not knowing the fate of loved ones, can only wait and hope.

Chapter 6

Chapter 6 Summary and Analysis

The brief Chapter 6, "A message from Mr. Pitcairn," describes the initial response of the Pittsburgh railroad magnate, earlier introduced, to spotty word coming from Johnstown and eastward. Shortly before noon, his private upholstered car leaves Pittsburgh bound for Lilly. Since the club lacks communications and reports of problems at the dam are an annual occurrence, Unger's incoming messages are odd, and Pitcairn is on the road when Dougherty and Wilson's warnings arrive. Pitcairn's first interest in the dam comes during the 1862 break, which wrecks railroad property. Twenty years later, when repairs are made, leaks at the base cause talk in the valley, and Pitcairn inspects it thoroughly with Ruff, who promises to strengthen it. He asks Wilson and others to keep an eye on the worrisome "springs" (leaks). It is unlikely he joins the club to keep his own eye on the dam, for he has social and business reasons for membership. Pitcairn knows every detail of the trip into the hill country, where he is supreme commander of the rail line through Altoona. Railroad old-timers still blame him for the "Great Strike" of 1877, which burned much of Pittsburgh to the ground, killed 57, and forced men back to work without gain. He looks tired from a night of checking the weather and an early morning of hearing things grow worse. The passing landscape, awash beneath sheets of rain, shows how serious things are.

The train stops at 4:05 PM in the deep "Packsaddle" (Conemaugh Gap) at Sang Hollow. Pitcairn exits and is told the lines eastward are dead. Pitcairn decides to proceed cautiously, until he sees debris in the muddy water, which soon threatens to topple telegraph poles and the tower. Of the 119 desperate people riding debris downstream at 15 mph whom valiant male passengers try to save, only seven can be rescued. About 6 PM, Pitcairn orders the train back to Pittsburgh and sends ahead a message, directing the morning papers to report a dam has failed at South Fork, causing a disastrous flood at Johnstown.

The train rolls slowly back to New Florence, where waters are high but not rising further. For the next several hours, he sits and waits as rain hammers down and men run in, talking of more bodies and a few survivors. Sitting on high, dry ground, New Florence suffers little and the locals turn out to talk and watch a dull, red glow form in the eastern sky. At 10 PM, W. N. Hays arrives in Sang Hollow on foot and his story is put on the wire to New Florence, whence Pitcairn sends a second message to Pittsburgh, which is quoted at length in the morning papers. It tells of bodies passing and of the "wiping out" of Johnstown. Debris at the stone bridge is 40 feet high and burning. Pitcairn fears "terrible suffering" among survivors and calls for public meetings to send food, clothing, etc., through on the first clear track available. Before morning, the nation learns the spotty but horrible news.

The rush to Johnstown begins hours before, as the five Pittsburgh newspapers charter two trains with reporters aboard, but can get no further than Bolivar, where bodies are

being fished out and a few rescues made. Locals are anxious to tell about how, before dark, a man and two women had been seen riding a barn roof, looking for a way to escape. Men dangle ropes from the two local bridges and nearly rescue them, but the upstream bridge breaks up, careens into them, and sweeps them away. It is too dark to see much except the lanterns of those looking for signs of life. Johnstown is 20 miles away, and the journalists discuss what to do next. The tracks from Bolivar are under water, so most decide to head by foot or wagon to New Florence, arriving toward 3 AM, dead-tired, cold, wringing wet, and searching for anyone willing to talk so they can get stories on the wires to Pittsburgh. It is clear "hundreds if not thousands" have been killed in "an appalling catastrophe." They report rumors of panic-stricken people fleeing through the woods and perhaps 85 floating downriver to New Florence. Much of what they dispatch about the dam is exaggerated, but they name the South Fork Fishing and Hunting Club and the recent inspection by Pennsylvania Railroad engineers. This suggests Pitcairn is talking. About 4 AM, a carpenter and his wife stagger into town and report hardly a building left standing, substantiating the wildest of rumors. Soon afterward, Pitcairn orders the train back to Pittsburgh, while several reporters figure if the McCartneys can cross the mountain on foot, so can they.

Chapter 7

Chapter 7 Summary and Analysis

Chapter 7, "In the valley of death" describes in detail the desolation that is Johnstown on Jun. 1, 1889, and the initial reaction of locals and fellow Americans to the disaster. After a night of hideous sounds, life at dawn is eerily missing everyday noises. Crowds of cold, nearly naked, hungry people, many badly injured, gather in clumps, trying to understand. From first light, survivors emerge, most heading to dry ground at Green Hill, joined by returnees from the hills. Details begin emerging in the panorama of destruction: still-standing buildings look squashed, blasted, or dumped like carcasses; telephone poles, giant chunks of machinery, trees stripped of bark, animals, and countless human corpses are strewn about. The litter of thousands of lives is heaped 20-30 feet high or floats in brown puddles.

The flood and the night that follow have a majestic, Judgment-Day quality, as though "God Awful" were destroying the whole world, but Jun. 1 is simply cold, ugly, and heartbreaking. At the risk of their own lives, rescue parties clamber through rubble searching for signs of life. At the stone bridge, gangs have worked haplessly all night to free people trapped alive. Survivors wander expressionlessly, seeking their bearings and describing separated loved ones. Even casual reunions transcend the normal differences of religion, politics, and position, but the dead are found in great numbers. There is no order, organization, or sense to people's actions. Many want only to get away from this desolate place, which faces enormous and critical problems: ravenous hunger, horrible wounds, sleep deprivation, shock, and exposure, with few edible provisions and no potable water, dry clothing, or medicine. There is not gas or electric light but constant danger a gas main may explode. Telegraph and telephone contact is down, the roads are impassible, and the railroad is destroyed. Hundreds of human and animal carcasses make violent epidemic probable.

By noon, things improve a bit. Rafts have been built, people are coming in from outlying areas bearing supplies, and unclaimed children are being looked after. A rope bridge is strung across the Little Conemaugh, and newspapermen, who arrive around 7 AM, begin rigging a telegraph wire downriver to San Hollow. More reporters straggle in all day and by nightfall, major stories are being filed. At 3 PM, an organizational meeting is called, with every able-bodied man crowding into the Adams St. schoolhouse to elect a "dictator." The first choice is John Fulton, presuming his absence does not mean he is dead, and the second is Arthur J. Moxham, the prosperous young owner of the Johnstown Steel Street Rail Company, widely acclaimed the best newcomer since Morrell. Both are energetic, able executives, wealthy, and reform-minded. Moxham takes charge and organizes committees to handle pressing issues. Preachers Beale and Chapman direct morgues, Zimmerman and Tom Johnson handle animal removal, Drs. Lowman and Matthews establish temporary hospitals, Capt. Hart organizes a police force, and George Swank and Cyrus Elder handle supplies and finance. Hart deputizes 75 men, mostly Johnson Company employees, cordons off the banks, and

recovers some $6,000 in cash. The search for the living and the dead continues as dusk gathers, and everyone seems to be missing a family member. James Quinn has been reunited with Gertrude tearfully on the Metz's porch. Victor Heiser spends most of the day searching for his parents. Two young ladies, stripped naked by the torrent, spend the day hiding in the bushes, too ashamed to venture out until dark. Cyrus Elder's wife and daughter are missing; Horace Rose learns his family is alive - and all but he are uninjured. John Dibert is among the few dead who are identified the first day.

At emergency morgues opened at the Adams St. schoolhouse and a saloon in Morrellville, bodies pile up faster than they can be cleaned, valuables preserved, and set aside for safekeeping. The confusion is terrific, and even paper is lacking to keep records. Many bodies are too badly disfigured to identify. The total number of dead cannot be determined, and new ones continue to be found. Estimates are as high as 10,000, and casualties downriver are anyone's guess. Six more emergency morgues are set up and it is a week before there is anything like a system set up. No final count is ever made, but the accepted figure is 2,209. Hundred of bodies are never found, and one in three bodies cannot be identified. Early entries show the anguish and turmoil in which identification is done, limited to sex, approximate age, and hair color. Later, poignant details are added to later descriptions, but by summer, new finds are too decomposed to be recognizable. Some 663 are labeled "unknown."

The problem is compounded by the fact Johnstown has many visitors staying over after Memorial Day, most never found. Many of the dead are well-known merchants, doctors, lawyers, and preachers. Ninety-nine whole families are wiped out, and 396 children under ten years old die. Some 98 children lose both parents, 124 women and 198 men are widowed. Morgue A (Adams St. schoolhouse) logs 301 bodies, B (the Presbyterian Church) logs 92, and C (the Millville schoolhouse) logs 551. The population of the valley had been 23,000, which puts the mortality rate at 10%, while in Johnstown it is 11%. Bodies continue to be found into the fall, and two turn up west of New Florence as late as 1906. By dark on Saturday, only 300-400 dead have been accounted for and few buried. Most of the living take shelter in the hills or walk to little towns above Cambria City. Victor Heiser spends several nights in Brownstown with 1,000 refugees, all taken in by the town's 53 families.

Any upright structure for miles around is pressed into service and blankets, bedspreads, and rubble are used to fashion tents and lean-tos. The cold is nearly as cruel as the first night and people spend it in dreadful fear, much of it justifiable, for typhoid and famine threaten a greater catastrophe than the flood itself unless help arrives soon. There are rumors of prowling thieves, gangs of toughs, and drunken brawls wherever whiskey is found in the rubble, so men exhausted from searching for families and belongings spend the night standing guard in turns. Worst of all, there is a wholly irrational fear of night itself and the ghosts of the unburied dead.

Sunday, the weather eases off and the sky clears. People ferry bodies across the Little Conemaugh to Prospect Hill for burial without ceremony in shallow graves. A post office is set up and a clearinghouse for those alive to register and tell what they know about the rest of the family. The temporary hospital cares for its first patients, and the first

relief trains get through from Somerset on the B&O tracks. Trains from Pittsburgh can still get no farther than Sang Hollow. The lonely little depot is alive with activity from 11 PM Saturday onward, as boxcars are unloaded and volunteers begin moving things upriver on their backs over landslides and trackless roadbeds.

By morning, two carloads of supplies have been deposited at the western end of the bridge and work has begun on a precariously swaying rope bridge to get them across the Conemaugh. By 8 AM Sunday, a Pittsburgh train steams up on newly laid track, bearing bread, cheese, and crackers, collected throughout Pittsburgh after a 1 PM mass meeting raises $48,116.70 and wagons fan out to bring donations to Union Station. The first train with 20 cars leaves at 4 PM, carrying the 80 volunteers of the "Pittsburgh Relief Committee," a dozen reporters, 30 police, and Durbin Horne, a member of the South Fork Fishing and Hunting Club, who wants to find out about missing relatives and friends.

Later on Sunday, good-sized boats are hauled up the valley by train and put into service ferrying 3,000 people back and forth. On Monday, they carry 7,000, along with supplies and dead bodies. Wagons laden with salt port, bedding, and other goods arrive from Ebensburg and Loretto, doctors and work crews from Altoona, and hundreds of volunteers from dozens of little railroad towns. The governor of Ohio sends a shipment of tents, and an 11-car train comes from Pittsburgh bearing coffins. In their eagerness to help, people send things of little use, but even the most trivial item is put to some good use - and there is nowhere near enough to help 27,000 people. By nightfall Sunday, there are 1,000 out-of-towners come to help, including undertakers, railroad work crews, a Pittsburgh fire department, and a Republican politician who believes the military should take over.

Daniel Hartman Hastings, Pennsylvania's Adjutant General, a lawyer with no military experience, is convinced by Moxham and his committeemen to allow the locals to handle their problems if for no other reason than to help them get over their anxieties. Hastings sends back to Pittsburgh a company of troops sent by the Chamber of Commerce. Another meeting is held at nightfall, which formally requests troops from the governor. Two days later, Moxham resigns and James B. Scott, head of the Pittsburgh Relief Committee, takes over as civilian head. Rumors of looting and drunken fighting are exaggerated but not unfounded, as whiskey is plentiful and Hart's police inadequate.

A lieutenant spreads lurid stories about shooting some thieving Hungarians, and soon anyone who looks or sounds foreign goes about in fear. Sunday night, word comes Booth and Flinn, a large Pittsburgh construction company, is sending 1,000 riffraff employees that will have to be fed, sheltered, and policed. Unknown thousands of charity workers, doctors, preachers, job seekers, criminals, drifters, temperance workers, prostitutes, and sightseers are en route. Capt. Bill Jones brings three carloads of supplies and 300 men from the Edgar Thomson works, many veterans of the Cambria mills. In Philadelphia, society girls pack medical supplies and prepare for a relief mission organized by a half-dozen churches. Clara Barton in Washington, DC, and her newly organized American Red Cross board a special B&O train. The Johnstown Flood is the biggest news story since Lincoln's assassination, even before direct

communications between Johnstown and Pittsburgh is established late Saturday night. Today it is hard to imagine the impact across the country of the dreadful news . Saturday papers are cautious about casualty figures, but Sunday papers pull the stops, despite sketchy information. The New York *World* headlines: 10,000 dead - half the population of the cut-off, burning city. The Pittsburgh *Post-Gazette* sells out editions so fast it has to downsize pages to avoid running out of paper. People talk of little else and demand facts, names, details, and pictures. A hundred journalism-related professionals head to the city.

Chapter 8

Chapter 8 Summary and Analysis

Chapter 8, "No pen can describe," consists of two parts, the first detailing at length how reporters, photographers, and artists deal with the drama of the great wave and the horrid aftermath, with imagination and emotion making up lacking facts. It serves in a sense as documentation of the sources upon which this book is based. Part 2 deals with the unprecedented outpouring of charity the journalists' words and images inspire.

Henry S. Brown of the Philadelphia *Press* catches a westbound train after word of the flood comes in, but gets no further than Harrisburg. He plots a roundabout route by rail and horse teams that in 28 hours brings him to the stricken city, only to meet colleague F. Jennings Crute, who has ridden the rails across New York to Cleveland and doubled back. They join the rest of the reporters filing stories from the brickworks above the stone bridge, the de facto press center. Those who have been on the scene over 24 hours are on the point of collapse but keep writing. The "Lime Kiln Club" develops an *esprit de corps* as in wartime. Telegraph operators serve on night and day shifts, and newcomers from New York, Chicago, and Philadelphia find places wherever they can.

Bodies continue floating by, the bridge is still smoldering, and the brickworks is rickety, causing several injuries among reporters. One, Crute, dies of pneumonia. Competition among papers is friendly but fierce. A survivor of the *Day Express* writes a long, florid account of his "race for life" with the "monster Destruction." Reporters interview people who cannot tell where they might be standing in the leveled town. They disbelieve Hastings' estimate of 8,000 dead, but report several prominent people's demise wrongly. James McMillan, vice-president of Cambria Iron, says rebuilding will begin immediately, with the dynamiting of the wreckage of the bridge. Health workers plead to let it burn, despite the stench, for otherwise typhus could spread downriver to Pittsburgh, where the papers are urging citizens to boil their water. The head of the Pennsylvania Board of Health authorizes sheriffs to tear down drift heaps and remove dead bodies to protect their counties from pestilence. The wreckage from the bridge is described in detail, with estimates of its extent ranging from 30 to 60 acres.

Tension with the Hungarians increases and is covered in colorful, albeit unchecked, detail. They are depicted as fiends, ghouls, wild beasts, looting bodies and being hunted down by vigilantes. One is caught blowing up a bank safe and, in one version, lynched. Armed farmers chase four of 13 Hungarian looters to their deaths into the surging river. Eastern papers pick up the stories and lurid illustrations quickly until suspicious correspondents caution their editors not to print wild rumors. Hastings denies lynchings and rioting and criticizes the papers for publishing such stories. There is a kernel of truth, but no one in Johnstown has the kind of riches being described, and Hungarians are not involved. Chal Dick, who started the stories while berserk over the loss of his wife and children, tries to combat them now. There had been little resentment in Johnstown against the 500 or so Hungarians and other southern Europeans lumped

together as "hunkies," unlike in Pittsburgh, where they take thousands of low-paying jobs from Irish, German, and American workers. After the flood, hunkies endure several days of abuse and terror before papers in Chicago transfer blame to other "debased" immigrant groups.

Monday, Unger arrives with several club employees and the press falls on them. Unger summarizes events at the dam and how they tried to avert disaster. He estimates the loss to the club at $150,000, and notes the club members who had been there are safe in Altoona. Parke is quoted as blaming "storm after storm" rather than any person, and believes everyone in the region by noon should have understood the danger.

Herbert Webber, interviewed separately, tells of seeing water shooting out between rocks in the dam face. Although his story is preposterous, reporters use his image of a watering can. Enterprising reporters make their way to the club, examine the dam construction, and question locals, eventually commanding attention. For the time being, however, reporters concentrate on recording frightful personal experiences, concentrating on the ironic and incredible. One of the best comes from the Philadelphia *Press'* effete cub reporter, Richard Harding Davis, who entertains "Newspaper Row" by asking colleagues about restaurants, renting a horse and buggy, and buying a white shirt, before getting down to work on human-interest pieces about pretty relief workers, fist fights, adopting orphans, and a prisoner found drowned in his cell.

Some 200 photographers with ponderous, fragile equipment also pick through the ruins, and at least one augments his composition with a posed corpse. The most popular subject is John Shultz's home, pitched on its side and pierced by a gigantic uprooted tree. *Harper's Weekly, Frank Leslies'* and other picture magazines send artists to cover the story, and several writers gather material for quick books. The *World* gets 70-year-old Walt Whitman to write a poem about sudden death and continuing life in Johnstown. Newspapers excerpt Charles Reade's 1870 novel, *Put Yourself in His Place*, which describes the bursting of a reservoir and dreadful flooding in Sheffield, England which claimed 238 lives in 1864. The physical resemblance to Johnstown and premonitions of trouble at the dam are uncanny.

The phrase, "no pen can describe" keeps cropping up, but writers go on trying. New York and Boston papers run Johnstown stories on their front page for days and weeks. *Frank Leslies'* calls it "the most extraordinary calamity of the age," and allows such things might occur in India or China "where human life is cheap," but not in the U.S. Victorian sentimentality has a heyday, as artists draw pathetic orphans to accompany lists of the dead and stories of families saying good-bye before being swept away.

Chicago publisher Kurz & Allison's color lithograph of a dam bursting almost directly on top of Johnstown becomes one of the popular works of art of the age. In it, women and children are panicking, barefoot and in their nightclothes (at 4 PM), while the men folk dash about bravely. Reporters are long on imagination, exaggeration, and downright nonsense, as in stories of buzzards circling the stone bridge, rivers dammed with corpses, and flesh-satiated wild dogs.

Many emphasize the pitiable fate of the innocent. Among the most splendid of stories is about Daniel Peyton, the "Paul Revere of the Flood," said to have galloped down the valley warning people to run to the hills. Peyton appears to be a conflation of John Baker, John Parke, and a fictional character in Reade's novel. John Eliot Bowen publishes an epic poem, "The Man Who Rode to Conemaugh" in *Harper's Weekly*, in which everyone ignores the lunatic - and suffers their fate. In all versions, Peyton ends up caught in the floodwaters as he ends his mission, a necessary feature, lest anyone else interview him. In the "official" account, by two Pittsburgh newsmen, Peyton is about 30 and does ride clear from South Fork but sticks to the streets of Johnstown. The story appears in a dozen versions and is accepted as fact outside Johnstown, where Peyton is unknown. Victor Heiser and his friends try to track its origins down, but turn up nothing. Despite all the fabrication and bunk, the truth of the flood is far worse. For publishers, circulation breaks all records. Magazines publish special editions filled with pictures and maps. Books -- several best sellers - are dashed off within weeks from newspaper copy, full of repetition, contradictions, and nonsense.

On the Saturday after the flood, more than $100,000 is raised in Pittsburgh, en route to a total of $560,000. New York City gives $516,000, Philadelphia $600,000, and Boston $150,000. Schools, prisons, and churches make donations. Madison Square Garden, the Metropolitan Opera House, John Philip Sousa, and Buffalo Bill hold benefits. Large companies, wealthy individuals, small towns, politicians, and organizations contribute. U.S. contributions total $3,601,517.80 and overseas $141,300.98 from 14 nations, to which must be added the value of trainloads of goods.

By June 6, when 20,000 lbs. of Cincinnati hams arrive, danger of food shortage is over, and the problem becomes equitable distribution. The situation improves when Hastings calls in the 580-man 14th Regiment from Pittsburgh, which forms part of some 7,000 volunteers camped out and working in the valley for good pay. Enormous dining halls are erected to feed these masses. By sundown Thursday, the worst of the debris and animal carcasses are burned, machinery is hauled out of the muck, and teetering walls are torn down.

Dynamite arrives midweek to break the jam at the stone bridge. The valley echoes for days with great blasts. The largest, a 450-lb. charge, causes work to stop all over town and finally results in daylight appearing beneath the arches. Many become exhausted or nauseated by the grueling work and depart. The wreckage strewn across Johnstown is far greater than the quantity of what had stood in before the flood, for the wave has swept the valley clean of everything humans have built in 80 years and dumped it there to be sifted through, burned, or carted away.

The entire district must be disinfected with quicklime and soaked bedding, clothes, and carpet gathered and burned, for the waters are "heavily charged with every kind of filth." Lacking plumbing, the work camps add to the problem, but 98 doctors and the Army enforce sanitary practices. For ten days after the flood, low temperatures and frequent drenching rains slow decomposition while making work miserable. On Friday, Capt. Jones is back in Pittsburgh, exhausted from four days of work without rest. He has paid out of pocket for the supplies he delivers and the wages of the men he leads. He credits

Moxham with great leadership and lauds 100 Hungarians who work for him like heroes. Hastings and Scott perform well in their tasks.

The most resilient worker is Clara Barton, leading a delegation of 50 doctors and nurses who arrive Wednesday morning. Barton, 67, is a veteran of caring for soldiers in the American Civil War and the Franco-Prussian War and has presided over the work of the American branch of the International Red Cross following natural disasters in Ohio, Texas, Illinois, and Florida. These are minor challenges compared to Johnstown, where she intends to prove the organization's reason for being.

Barton sets up headquarters in an abandoned railroad car, orders several hospital tents opened immediately and construction begun on six two-story wooden "hotels" for the homeless. Hastings does not know what to make of Barton as she begins a door-to-door survey of the people's needs, which reveals widespread "melancholia" among survivors. She is a tough New Englander who allows no one to tell her how to run her business. She works nearly around the clock directing hundreds of volunteers distributing a half million dollars' worth of blankets, clothing, food, and cash. She proclaims the Red Cross is there to stay as long as there is work to do, and only in October is she able to leave, thanked and blessed by Johnstown and honored in Washington by the President.

Small-time crooks queue up among the victims to collect Red Cross donations until they are driven out of town, but some move to neighboring towns to bilk people of considerable cash with stories of alleged suffering. Religious fanatics, "harpies" (pimps) from Pittsburgh, and ardent crusaders from the Woman's Christian Temperance Union (WCTU) add to the mix of visitors. Incredibly, hundreds of sightseers carrying picnic lunches are present almost from the morning after the disaster, and the stone bridge holds a special fascination. Some enterprising locals sell souvenirs saved from the ruins, but Hastings and other officials ask the railroads to stop selling them tickets. There might have been more sightseers were fear of disease not widespread.

The first clear-cut case of typhoid comes on Jun. 10, and for a week, news is suppressed. By Jul 25, there are 215 cases in the flooded area and 246 beyond. Dead-tired doctors and sanitation crews scramble to keep the valley from panicking. Only 40 people die of typhoid and they are not included in flood victim statistics. Otherwise, Johnstown enjoys fewer colds, measles, and other springtime disorders than usual. Those who survive the first days are caught up in the continual excitement of summer, glad to be alive, and having much to do. Nearly everyone believes they will rebuild everything. Most parents, including James Quinn, send their children to live with relatives in Pittsburgh while remaining to help with the clean-up, but the few days the children spend in Johnstown fill them with lifelong memories of high adventure. Many boys help build prefabricated houses ("Oklahomas") or hunt relics.

On Sunday, Jun. 9, the sun shines for the first time since the flood, and work goes on while the church bells ring. Near the depot, the Army Chaplain, Chapman, and Beale conduct a service, which initially attracts 30, but people continue drifting over. John Fulton stirs the crowd with a call to rebuild bigger and better than ever. Things could

have been worse, he says- the stone bridge has saved hundreds of lives. They should trust in God for renewed prosperity. The crowd shouts "Amen!" and people remember for years words spoken by a man of God who is also the voice of the Cambria Iron Company. Fulton waves his report on the dangers posed by the dam, which he submitted to the club years ago. There had been talk about the club prior to this statement, but now it takes on an angry, flammable character. The issue of blame is now out in the open and it is clear where the Iron Company stands. A showdown is in the offing.

Chapter 8

Chapter 8 Summary and Analysis

Chapter 9, "Our misery is the work of man," turns to the pointing of fingers of blame in the aftermath of the disaster. For two and a half weeks, Pittsburgh is the only channel for relief to Johnstown, with which it is linked through the steel business and family ties. Pittsburghers talk about nothing else and their papers delve most deeply into the facts. Thousands of refugees pour in, many orphans, and people drop everything to help. The railroad depots are busier than during the Civil War, schedules are cancelled, normal business stops, and traffic is nearly too great to handle, but Pitcairn is authorized by the main office in Philadelphia to expedite repairs and supply and works without let-up. The Pennsylvania Railroad donates $5,000 to the relief fund, but bearing the cost of emergency operations far outstrips this amount.

With military-style discipline and organization, the Pennsylvania brings its vast resources to bear, swiftly and efficiently, and people afterwards recall that during the crisis not even the state rivaled its contributions, which considerably improves its tarnished reputation. People bring children to watch the Allegheny River slip past with its wreckage so they can tell their children they have seen something of the Johnstown Flood. Many take souvenirs. A baby is found unscratched floating in its cradle in Verona, 80 miles from Johnstown, by John Fletcher, who exploits the infant to advertise his business until the mother hears and rushes down to claim her.

Pittsburgh and the nation begin taking an interest in the South Fork Fishing and Hunting Club and what members will do next. At the Saturday mass meeting called by Pitcairn, Frick and Phipps are named to the executive board of the Relief Committee, but that night, other members decide in private to say and do nothing beyond donating 1,000 blankets. A few others speak candidly, however, one (anonymously) about fears of "mountain floods," while another denies the club has washed away - how could businessmen put $15,000-$20,000 a year into dam maintenance that does not work? James MacGregor's wild, tactless notions that appear in the Sunday paper are not unique.

James Reed, a partner in Knox & Reed, the firm destined to represent the club in lawsuits, intimates the Lilly dam is to blame. An anonymous Allegheny County lawyer is quoted saying the club has been repeatedly warned of the dam's danger and predicts criminal indictments. Reporters finally reach the dam on Monday, Jun. 3, clarify the situation, and begin building an oral history of the dam that bodes badly for the club. Finding no club members on the property, vigilantes vandalize several cottages before heading to the Unger farm, where the colonel is also absent. The clubmen head to Altoona almost immediately after the dam breaks, increasing the locals' contempt for able-bodied men whose help would have been useful. Deep-seated resentment against the rich city men surfaces when locals describe Ruff's rebuilding of the dam. Old feuds,

grudges, and insults are trotted out before the press. Locals repeat their stories to the Westmoreland County coroner when he arrives.

The editors of two professional engineering journals investigate, the New York *Sun* states bluntly the dam has no engineering "worthy of the name," and in Johnstown, Hastings talks about carelessness and criminal negligence. The Westmoreland coroner's jury begins hearing testimony and issues a verdict on Jun. 7 milder than Hasting and a Cambria coroner's jury, which fixes blame on the owners of the dam for thousands of deaths. A week later, the engineering journals publish reports. *Engineering News* proclaims the original dam "thoroughly well built" but Ruff's repairs are carried out with none of the original care. Such negligence aggravated the problem, which consisted primarily in the lowered crest, central sag, absence of outlet pipes, and obstruction of the spillway. Had someone acted as John Parke had considered - cut the dam at one end - the disaster might have been averted. The editors hammer home that the botched rebuilding is the work not of qualified engineers but of rich and powerful amateurs.

Wealth not technology becomes the target of the press as papers editorialize the club is criminally guilty and across America a howl of righteous indignation rises that a decade earlier would have been impossible. It will be three years before "real Americans" strike in Homestead against those who bring in "hunkies," buy off legislatures, cut wages, and grow richer themselves, but the sentiment is growing that will lead to trust-busting. Reporters accept the myth of the incredible hereditary wealth of club members and seethe at the idea of a lake serving as a private resort. Several editorials say the tragedy would be less distressing had the lake served a *practical* purpose. Several papers liken the clubmen to the pleasure-seeking Romans who care nothing about the victims that perish for their entertainment.

Despite the abuse being hurled at the club, few papers mention individual names and those that do concentrate on a dozen. Pittsburgh papers are particularly cautious, with the *Press* saying the break could have happened before the club bought the aged dam. Connelly and Jenks' *Official History* goes out of its way to counteract popular images of opulent splendor at the lake, and *Forest and Stream* says sportsmen maintaining a lake for pleasure is legitimate. Preachers use the disaster as an opportunity to put the apocalypse before sinners' eyes, to praise the spirit of sympathy sweeping the U.S., or to suggest America heed the Lord's sign of destroying a sinful steel town- as in Noah's day. Many embrace this as the only way to make sense of the tragedy, but Johnstown wags point out several brothels survive - showing God has a poor aim.

Swank, who resumes publishing the *Tribune* on Jun. 15, speaks for almost everyone saying the work of man, not the hand of God has stricken them. Rats in a bucket have a better chance than Johnstownians at the hands of the "dudes" enjoying their summers. Most who speak to out-of-town newsmen about the club withhold their names. The exception is Cyrus Elder, who has as much reason to lash out as anyone for all he has lost, but sticks to his position: the club had never considered the dam structurally faulty or heard it cause concern among Cambria Iron people. Unpopularly, Elder says Johnstownians edgy about the dam are at fault for not speaking up earlier.

Engineering and Building Record agrees, but general-circulation papers never take up this theme. The club's guilt is an established fact for the press and calls for amends by the rich to the downtrodden victims is heard. Clubmen give $6,000 and 1,000 blankets to the relief fund, but it helps their cause little. One paper says this shows they are negligent but not heartless and suggests they out of remorse sacrifice their wealth to alleviate the suffering they have caused. Several give more generously, Frick $5,000, the Mellons $10,000, Carnegie $10,000, and several smaller amounts, but about 30 give nothing. Members offer the clubhouse as an orphanage, but this is turned down as inconvenient. S. S. Marvin, a baker who donates much bread to the relief effort, dares visit Johnstown in person, suffers no injury or insult, and says, "Johnstown is a funeral," a line picked up by newsmen. Most members, however, grow cautious about speaking. Unger reminds reporters the dam had been built by the state originally - suggesting legal remedies will be complicated. Uncommunicative Frick, the second best-known and powerful member, is identified as a founding member and ranking stockholder with Ruff, but he has a standing policy of not talking to the press. Carnegie has much to say, but does not for over a year suggest he has any connection with the club. Carnegie is in Paris at the time of the flood, attends a meeting of Americans that sends condolences and 40,000 francs, and then goes to Scotland and London. Meanwhile, reporters learn the club is capitalized at a mere $35,000, with a $20,000 mortgage on the clubhouse. The prestigious lawyer Reed states liability suits cannot be brought against members' wealth and he sees no grounds for damages.

Other lawyers disagree, and in late July, Nancy Little, mother of eight, files the first case, seeking $50,000 for the loss of her husband John. Knox & Reed file a voluntary plea of not guilty, which postpones the case for months. Later, James and Ann Jenkins sue the club for $25,000 for the loss of her parents and brother. Victims also sue the Pennsylvania Railroad, the most important case being Farney S. Tarbell, whose wife and three children perish aboard the *Day Express.* Countless suits are filed for lost luggage and freight. Not a nickel is ever collected from the club or any of its members. It has no assets and, with Ruff dead, negligence cannot be established. No living member knows more about the state of the dam than Morrell and Fulton, and they assume the men who rebuilt it knew what they are doing. There is no doubt the storm is unprecedented; allowing Knox and Reed to argue "act of God."

The club further argues the dam by its positioning is sure to give way even without structural flaws. Contradicting this is the fact several small dams built by Morrell to supply Johnstown's drinking water withstand the storm. Defense lawyers must have claimed (transcripts are not in those days recorded) water had risen so fast that at some point it would have gone over the top, a condition no earth dam is prepared to bear. They added had the break occurred at night the results would have been more disastrous. These assumptions cannot be borne out. Photographs show the break occurs at the point of Ruff's repairs. Dismissing all other arguments, the lack of discharge pipes show the owners never had control over the level of the lake. Had Reilly not removed them or Ruff installed replacements, Unger, Parke, and others could have kept the lake at a safe level.

Furthermore, humans have ravaged the forest's protective timber, obstructed the capacity of the rivers, and not adequately considered the consequences of their tampering with nature. The dam is the most dramatic violation of the natural order but is no reason to condemn dams in general as some hysterical editorials do. Everyone in the valley dangerously assumes the people responsible for their safety are behaving responsibly and few are willing like Cyrus Elder to accept any blame for not foreseeing the catastrophe or, like Fulton, recording their fears on paper.

Generations of Johnstownians resent bitterly that no clubmen are forced to pay for their mistakes. Their summers at South Fork are over, however, their cottages left high and dry in a mud flat, abandoned. Only Unger returns to live out his life on the farm. The rest of the property is broken up and sold at sheriff's auction. The Cambria works resumes work in mid-July, but it is a long time before the furnaces are again at capacity and the payroll is restored. The company suffers an estimated $17 million in property damage. Banks reopen, Saturday concerts resume, surviving stores restock, a camera club starts, and plumbers and steamfitters unionize. New houses and shops go up all over town. People who fled the valley return. The place still smells but jobs are plentiful for years. Hundreds like Victor Heiser lose all connection with the city and leave. Beale is too bitter to remain when his congregation criticizes him for allowing the church to be used as a morgue. For years, people wonder how many of those listed as unfound dead are alive somewhere far away - a comforting thought - and in the summer of 1900, Leroy Temple shows up, confessing he crawled out of the bridge wreckage and walked off to Beverly, MA. Stories of the flood live on for years and take on the flavor of legends.

Children at the time grow old recalling vivid details that could not have happened. There persists gossip about "certain people" who get rich on relief money. The Johnstown Flood finds its way into saloon signs and Coney Island and Atlantic City attractions. Hastings is elected governor and Flinn a state senator, largely on reputations gained during the clean up. Pitcairn talks up the railroad's services in after-dinner speeches, but Bill Jones says little beyond suggesting Johnstown rebuild on higher ground. He dies in a furnace explosion in Braddock late that summer. Clubmen remain silent and within a generation, the club is forgotten in Pittsburgh. Johnstown business people want to forget the flood as soon as possible, the attitude expressed by Swan in the *Tribune* the morning after the Grandview Cemetery is dedicated, May 31, 1892. A granite monument is inscribed to the "Unknown Dead," behind which are arranged 777 small white marble headstones. The Relief Commission buys the unknown plot and moves bodies from a dozen locations in the fall of 1889. Some 10,000 people show up for the afternoon ceremony.

Characters

Clara Barton

The Rev. David Beale

D. W. C. Bidwell

Andrew Carnegie

The Rev. H. L. Chapman

Frank Deckert

Chal Dick

Emma Ehrenfeld

Cyrus Elder

Henry Clay Frick

John Fulton

Capt. A. N. Hart

Daniel Hartman Hastings

George and Mathilde Heiser

Victor Heiser

John Hess

Capt. Bill Jones

Andrew Mellon

Daniel Johnson Morrell

John G. Parke, Jr.

Daniel Peyton

Henry Phipps

Robert Pitcairn

Gertrude Quinn

Charles Reade

W. Horace Rose

Benjamin F. Ruff

James B. Scott

George T. Swank

Colonel Elias J. Unger

J. C. Walkinshaw

Objects/Places

The Cambria Iron Company

Johnstown's leading employer in the late 19th century, the Cambria Iron Company produces the steel products needed to move folk westward and settle after the Civil War. On the brink of bankruptcy in the 1850s, the Iron Company rebounds under the direction of Daniel J. Morrell, and is the premier U.S. steel maker during the early post-Civil War boom, becoming a leader in advanced applications of the Bessemer process. Although upstaged by Carnegie's Edgar Thomson works in 1898, Cambria Iron still employs 7,000 in two huge plants, owns and operates coalmines, coke ovens, and railroads. It is the largest landowner in the county, rents 700 frame houses to workers and owns the reasonably priced Wood, Morrell & Company department store. Johnstown is a company town, run by a Morrell's iron hand, and non-unionized. By the standards of the day, however, Cambria Iron is paternalistic about the welfare of its workers and their town. In one plant, it maintains the eight-hour day, tried and abandoned by every other steel company. The company builds the town hospital and pays for treatment there for anyone injured on the job. It establishes a library and night school for employees wishing to learn things useful in the workplace. It has invested some $50 million in the region by the time the club is organized, giving Morrell a vested interest in what the Pittsburghers are up to. During the May 31, 1889, flood, the company suffers an estimated $17 million in property damage, but resumes work in mid-July. It is a long time before the furnaces are again at capacity and the payroll is restored.

Cresson, PA

The pre-Civil War town founded by Dr. Robert Montgomery Smith Jackson at the site of "iron springs" at the crest of the Allegheny divide, Cresson (or Cresson Springs) is serviced by the Pennsylvania Railroad, whose president, J. Edgar Thompson, builds its first hotel. Nearby cottages owned by Andrew Carnegie, B. F. Jones, and other Pittsburgh businessmen go up, and Cresson becomes a summer haven for well-to-do families from Pittsburgh and Philadelphia. In 1881, the railroad clears forest for a second hotel, the Mountain House, the grandest piece of architecture in Cambria County.

East Conemaugh

The third town hit by the water that shoots out of Lake Conemaugh when the South Fork dam gives way, East Conemaugh is fortunate that the water has divided at an oxbow, the "big cut," sapping the wave of some energy. East Conemaugh houses the main marshaling yard for Johnstown, where "helper" engines are picked up to assist the eastward climb over the mountain. Thirty locomotives and much rolling stock is housed

in the massive roundhouse when the waters hit. A telegraph warning from South Fork, addressed to yardmaster J. C. Walkinshaw, arrives shortly after the wooden bridge above town is dramatically swept away, but no one recalls seeing it. The only warning comes minutes before the wall of water and debris arrives, as John Hess' Engine 1124 arrives, whistle sounding continually - an accepted sign of imminent danger. Passengers on two sections of the *Day Express* out of Chicago, are stranded in East Conemaugh for five-hours. Walkinshaw moves these and a local mail train as far from the river as possible as a precaution. Half of town is destroyed and the only track left lies beneath the two surviving trains. Locomotives are scattered up to a mile away. How many die is never determined, but the toll certainly includes 22 *Day Express* passengers and porters and 28 local inhabitants.

Johnstown

The fifth and last town hit by the water that shoots out of Lake Conemaugh when the South Fork dam gives way, Johnstown is in 1889 is the largest of ten tightly clustered boroughs kept from uniting by political jealousies and tax disputes. Its population of 10,000 is four times greater than the biggest remaining town. It boasts banks, hotels, a jail, a full-time police force, five-story office buildings, up-to-date stores, an opera house, a night school, a library, many churches, and several handsome homes. Most Johnstownians are employed by the Cambria Iron Company, live simple lives, work hard, and feel they are heading into a glorious new age. The city is booming financially, has no debt, low taxes, and a declining cost of living, but some still talk of the "good old days" and there is muted resentment against the company, which has quashed two strikes. Floods, fires, and epidemics hit swiftly and unexpectedly, terrifying all and killing many children. The wall of water on May 31, 1889, picks up an immense amount of debris in Woodvale, including miles of barbed wire, before crashing without warning into Johnstown at 4:07 PM. It is at least 36 feet high and hits harder than in earlier locales, drowning and destroying the city in ten desperate minutes. The stone bridge at the end of town holds, preventing the destruction from continuing downstream. Few others structures remain standing. The wreckage jammed in the bridge arches catches fire and burns all night, causing even greater horror. Help is dispatched as quickly as possible from Pittsburgh, where many Johnstownians have relatives, but the tracks are washed out and 80 years worth of human building throughout the valley have been chewed up, contaminated, and deposited in the city along with untold bodies, human and animal.

The accepted fatality figure is 2,209. Daniel Hartman Hastings, Pennsylvania's Adjutant General, directs the immediate response, eventually calling in the army for assistance. Among the 7,000 volunteers who descend on Johnstown is Clara Barton leading a delegation of 50 doctors and nurses from the newly formed American branch of the International Red Cross. By mid-July, Cambria Iron resumes work, banks and surviving stores reopen, and new houses and shops go up all over town. People who fled the valley return. The place still smells but jobs are plentiful for years. Johnstown business people want to forget the flood as soon as possible. The Grandview Cemetery is dedicated, May 31, 1892, with a granite monument is inscribed to the "Unknown Dead,"

behind which are arranged 777 small white marble headstones. Some 10,000 people show up for the afternoon ceremony.

Lake Conemaugh

A 450-acre, 70-foot deep artificial lake 15 miles from Johnstown, PA, Lake Conemaugh holds 20 million tons of water behind the South Fork or "Three Mile Dam." The Pittsburgh-based South Fork Fishing and Hunting Club buy it and some 160 acres of surrounding forest in 1879. The broad surface of the lake normally lies 6-7 feet below the top of the dam. The club has a fleet of fifty rowboats, canoes, sailboats, two small steam yachts, and an electric catamaran. The white sails against the dark forest high in the mountains make the greatest impression. After the South Fork dam gives way, the lake is left a muddy hole, which quickly sprouts grass that the neighboring cattle graze upon. The fact Lake Conemaugh served only the pleasure of the clubman rather than a practical purpose (as it was first intended - to provide emergency water to the canal system) grates on the ruined inhabitants of the valley and turns them more assuredly against the clubmen.

The Little Conemaugh River

The swifter of the two rivers joining in Johnstown, PA, the Little Conemaugh drops 1,147 feet from its source in the Allegheny Mountains to the east at Lilly. The Little Conemaugh and Stony Creek join to form the Conemaugh River, which flows westward to join the Allegheny above Pittsburgh.

Mineral Point

The second town hit by the water that shoots out of Lake Conemaugh when the South Fork dam gives way, Mineral Point is shaved to bare rock. The force of the water strengthens when it is briefly caught behind debris in the great 80-foot arch of the railroad bridge a mile above the quiet, clean, white frame village. Mineral Point's telegraph tower, manned by W. H. Pickerell, has kept those downstream somewhat advised about what is happening at the dam. Hearing a roar and seeing trees and water approaching, Pickerell climbs onto the office roof, watches the channel overrun its bank, hears crying, and sees many people atop floating houses. All but 16 of Mineral Point's 200 people survive, as the heavy rains inspire them to move to higher ground before the dam breaks.

The Pennsylvania Railroad

When the Pennsylvania Railroad reaches the Allegheny Mountains in the 1850s, Johnstown ceases to be a backwater town. The railroad buys Lake Conemaugh from the state for $7.5 million to secure right-of-way, and in 1862, the South Fork dam breaks for the first time. Alarm in the valley is great but the damage slight, and the site lies

fallow for 17 years. Under president J. Edgar Thompson, the railroad builds a hotel at Cresson, which becomes a summer haven for the well-to-do of Pittsburgh and Philadelphia. In 1875, Congressman John Reilly of Altoona buys the property and later sells it to Benjamin F. Ruff, founder of the South Fork Fishing and Hunting Club, who supervises shoddy repairs and refills Lake Conemaugh. The influential manager of the Pittsburgh Division of the Pennsylvania Railroad, Robert Pitcairn, joins the exclusive club. Despite record rains on May 30-31, 1889, passengers on the railroad cannot believe the great Pennsylvania Railroad would allow its cars to be endangered and so do not seek safety. After the flood, which destroys tracks, facilities, locomotives, and rolling stock, the main office in Philadelphia authorizes Pitcairn to expedite repairs and supply, and donates $5,000 to the relief fund - a pittance compared with the cost of the emergency operations the Railroad freely runs. With military-style discipline and organization, the Pennsylvania brings its vast resources to bear, swiftly and efficiently, and people afterwards recall that during the crisis not even the state rivaled its contributions, which considerably improves its tarnished reputation. Nevertheless, some victims sue the railroad alongside the club, the most important case being Farney S. Tarbell, whose wife and three children perish aboard the *Day Express*. Countless suits are filed for lost luggage and freight. The railroad conducts an independent study of fatalities and blames lax porters on one train.

South Fork Dam

The earthen dam across South Fork Creek creating Lake Conemaugh, the dam is a mound of overgrown rubble, rising steeply 72 feet high and 900 feet wide, with a spillway cut into solid rock at the far left, crossed by wooden bridges at the valley level and at the top. At the top is a riding path across the breast of the dam to the club a mile away. To the right, the dam drops off abruptly and South Fork Creek winds toward Lamb's Bridge. The dam is originally built by Pennsylvania to store water needed by the western half of the canal system. It is begun in 1838 under the direction of Sylvester Welsh, designed by William E. Morris, and built by contractors James N. Moorhead of Pittsburgh and Hezekiah Packer of Williamsport. Work halts 1842-46, when the state runs out of money, resumes briefly, and is finally finished on Jun. 10, 1852, and by the end of August, the water is 40 feet deep. Six weeks later, the first Philadelphia to Pittsburgh all-rail run renders the canal obsolete. No one wants to buy the Main Line until the Pennsylvania Railroad puts up $7.5 million for the right-of-way.

In 1875, Reilly buys the property but does nothing with it until Ruff takes it off his hands. Reilly removes the cast-iron discharge pipes to sell for scrap. For $17,000, Ruff repairs the dam by boarding up the stone culvert and dumping on the culvert rock, mud, vegetation, and even dung, but does not replace the discharge pipes. Edward Pearson, a railroad man with no engineering credentials, supervises work. It washes away on Christmas Day 1879, and is damaged again severely in February 1881, but no one is discouraged. By the end of March, clubmen stock the lake with fish and launch steamboats. As unprecedented rain falls in the Alleghenies, Lake Conemaugh rises to the breast of the dam, which sags after Ruff's repairs. Grating over the spillway, intended to prevent loss of fish, quickly fills with debris, reducing the spillway's

efficiency, and without discharge pipes, there is no way for the water level to be safely managed. Engineers later say cutting into the side of the dam might have lessened the catastrophic break.

South Fork Fishing and Hunting Club

The private club chartered in Allegheny County in Nov. 15, 1879, the South Fork Fishing and Hunting Club becomes a summer resort in nearby Cambria County for the crime of Pittsburgh's elite. Located on the western shore of Conemaugh Lake, midway between the crest of the Allegheny range and the city of Johnstown, its property, bought by Benjamin F. Ruff, sits conveniently back from the rail line for privacy. It is originally capitalized at $10,000, but this is raised to $35,000 to accommodate the amount of repair work needed on the dam. People assume all the clubmen are millionaires, and while all of them are extraordinarily rich and influential, most are not that wealthy. Only after the flood is a membership roster published. The club shuns the ostentation of resorts like Newport, Cape May, and Tuxedo Park, but one Pittsburgh newspaper aptly calls it a "Bosses Club." Only a few clubmen are on site when the dam breaks, and they flee safely to Altoona. Members Frick and Phipps are named to the executive board of a Relief Committee.

Most members agree in private to say and do nothing beyond donating 1,000 blankets, but a few speak candidly, one (anonymously) about fears of "mountain floods," while another denies the club could be washed away when prominent businessmen are putting $15,000-$20,000 a year into dam maintenance. Member James Reed, a partner in Knox & Reed, the law firm destined to represent the club in lawsuits, intimates the Lilly dam instead is to blame. Pittsburgh papers are particularly cautious about criticizing the club or its members. Clubmen give $6,000 and 1,000 blankets to the relief fund, but it helps their cause little. Under pressure from the press, several individuals give more, Frick $5,000, the Mellons $10,000, Carnegie $10,000, but about 30 give nothing. Nancy Little and later James and Ann Jenkins sue the club, but not a nickel is ever collected. The club has no assets and, with Ruff dead, negligence cannot be established. Knox & Reed easily claim "act of God." The property is broken up and sold at sheriff's auction.

Stony Creek

The broader and deeper of the two rivers joining in Johnstown, PA, Stony Creek flows from the south and until 1889 is considered the more dangerous than the Little Conemaugh because it drains a larger area. Stony Creek and the Little Conemaugh join to form the Conemaugh River, which flows westward to join the Allegheny above Pittsburgh.

Woodvale

The fourth town hit by the water that shoots out of Lake Conemaugh when the South Fork dam gives way, Woodvale is the prosperous, picturesque model town of the

Cambria Iron Company bordering Johnstown. Its 1,000 residents get no warning of the approaching wave, which has accelerated as the valley opens up. Within five minutes, except for a fringe of houses on the foothills, there are no traces of human habitation left in Woodvale, which suffers 314 deaths - one in three. The boilers in the huge Gautier works send up a terrific geyser when the waters hit, then the building topples and is carried away. The wireworks contribute miles of barbed wire to the mountain of wreckage and water.

Themes

Technology

The Johnstown Flood demonstrates the danger of humans manipulating nature without due understanding and caution. Johnstown is a child of the technological era, emerging from a backwater existence when the Pennsylvania Railroad puts down tracks in the Allegheny Mountains, supplanting the system of canals just recently finished linking Philadelphia and Pittsburgh. The railroad allows the city to become a major center for steel production during the boom years of the Civil War and the laying of track across North America. Johnstown hopes the vertical building beginning in Chicago and the U.S. Navy's conversion to a steel fleet will keep them prosperous.

Most Johnstownians are employed in the Cambria Iron Company, which is a leader in advanced applications of the Bessemer process. Residents read in their newspapers stories about the Eiffel Tower and other wonders of technology, and look towards a bright future. True, their valley is smoky by day and glows fiery by night, and every year a few men perish or are maimed in the mill, but this is the price of progress. Johnstown enjoys gas, electricity, telephones, and telegraph service. People trust the railroad and the iron company to look after their own interests, which will also protect them. People *hope* the rivers will behave during regular spring flooding, while industry is doing two things that guarantee a heavy rain will cause greater flood damage: narrowing the rivers' courses, which diminishes their capacity; and cutting down forests for building timber which increases the amount of runoff into the rivers.

The South Fork dam, no marvel of technology but merely an earthwork dam of the kind built safely for millennia, has broken several times. It was last repaired in 1880, at which time the new owners dismiss an inspector's misgivings about it threatening the whole valley, with the amount of damage depending on the size of the breach and the proportional rapidity of discharge. They omit means for controlling the water height in an emergency, means which saved the valley in the earlier break. The difference in elevation between the top of the dam and the stone bridge 15 miles away in Johnstown is 450 feet, and the weight of the water is estimated to be 20 million tons. In the hours leading up to disaster, telegraph service is knocked out by the weather, diminishing or eliminating warning. The water rushes through the valley, scraping away all natural and manmade objects and throwing them before it as a wall of debris. Even a solid aqueduct stands before the flood only briefly. Locomotives are tossed about like toys by the raw power of nature. After the flood, the rail beds are in ruins, but the Pennsylvania Railroad gets the tracks back in order swiftly to begin reconstruction.

Religion

The Johnstown Flood is remarkable for how little it says about formal religion in the steel town before the coming of the flood. Much more detail is offered about aspects of

secular life and, indeed, McCullough devotes more space to the religiosity of several members of the South Fork Fishing and Hunting Club in Pittsburgh, using their membership in the city's fashionable Presbyterian churches as a pointer to their characters and outlook on life. McCullough notes Johnstown's large ethnic communities each practice their own form of religion and remarks on the architecture of several places of worship, including St. John's Catholic Church, which catches fire after the flood and a Lutheran church whose bell survives and tolls throughout the night of horror.

The appended lists of victims by cemetery suggest a large Catholic population, but McCullough mentions by name and follows the fates of only two Protestant pastors, the Rev. David Beale of the Main St. Presbyterian Church, and the Rev. H. L. Chapman, a Methodist. The men appear friendly to each other before and after both survive and join the temporary administration, directing the operation of temporary morgues. During the crisis, Beale leads in prayer a large group of survivors in Alma Hall, helping to prevent panic. After a week of clean up, the two local clergymen join an Army chaplain in conducting the a Sunday service. Beale then leaves town, bitter that some members of his congregation criticize him for allowing the church to be used as a morgue during the emergency. Other members defend him, saying his actions were the only Christian thing to do. Religion is squeezed in among the other, more colorful and telling details of everyday life in Johnstown in 1889.

The Johnstown Flood mentions only a few displays of religiosity during the flood, including an eight-year-old German-American girl, Gertrude Quinn, who recites her prayers in German as she has been taught after watching her Aunt Abbie and Libby Hipp pray and cry hysterically as the house is being crushed. She alone washes free and survives. Another example has a family riding to their deaths on a large piece of debris, singing - in four-part harmony - "Nearer, My God, to Thee." This story is related in a section where McCullough is debunking tall tales "witnesses" relate to reporters milling around for stories.

In the only section of the book that focuses directly on religion, newspapers cover how American preachers present the Johnstown Flood from their pulpits. Some emphasize how people's goodness shines forth through donations to the victims - and church donations are scrupulously buried among donations far more massive from secular organizations and from individuals. Other preachers use it as an opportunity to strike the fear of God into parishioners, warning death can strike at any moment , some suggesting the Apocalypse is near. Naturally, many draw their texts from the great flood in the Book of Genesis, which God purportedly uses to wipe out mankind, all birds, and all terrestrial animals, while preserving breeding stock in Noah's Ark to start over. Some preachers say in Johnstown God has again wiped out sinfulness, and many swallow this bitter and offensive pill, seeing no other way to explain why the valley has been so devastated. Wags, however, point to the surviving local brothels, located on higher ground, as proof God has a bad aim.

Wealth

Up the valley from Johnstown, a prospering but not wealthy blue collar steel city, stands an exclusive summer resort owned by some of the wealthiest men in nearby Pittsburgh. One of them buys Lake Conemaugh and the South Fork dam which creates it, and finds others in his social set to buy shares. The South Fork Fishing and Hunting Club is quite secretive, which only helps spawn rumors about the members' extreme wealth and decadent lifestyle on the lake. Locals see in the distance a fleet of sailboats rising behind the repaired dam, but are chased off the posted lands, have access to the streams that feed the lake barred by fences and guards, and even watch clubmen screen the spillway to prevent fish from escaping into the public river. Such actions begin an undeclared war that goes on for years.

After the flood rages through the valley, the Pennsylvania Railroad, a former owner of the dam, donates $5,000 to the relief fund and bears the substantial cost of emergency operations, which improves its tarnished reputation. At the Saturday mass meeting called in Pittsburgh by local railroad director and clubman Robert Pitcairn, a Relief Committee is formed, which coordinates the collection of money, blankets, clothing, and food for transport up the mountain as soon as the tracks are cleared. Meanwhile, at the former lake, finding all club members have fled, vigilantes vandalize several cottages. That the rich clubmen would not remain to help when every able body is essential only increases the locals' contempt. Deep-seated resentment against the rich city men surfaces when reporters arrive, and locals trot out old feuds, grudges, and insults, which they then repeat to the Westmoreland County coroner when he arrives.

When engineering journals make clear the botched rebuilding of the dam is the work not of qualified engineers but of rich and powerful amateurs, wealth rather than technology becomes the target of the press as papers editorialize the club is criminally guilty. A howl of righteous indignation rises. Reporters accept the myth of the incredible hereditary wealth of club members and seethe at the idea of a lake serving as a private resort. Several editorials say the tragedy would be less distressing had the lake served a practical purpose - such as the one for which the Commonwealth of Pennsylvania originally created it. Several papers liken the clubmen to the pleasure-seeking Romans who care nothing about the victims that perish for their entertainment.

Clubmen give $6,000 and 1,000 blankets to the relief fund, but it helps their cause little. One paper says this shows they are negligent but not heartless and suggests they sacrifice their wealth to alleviate the suffering they have caused. Several give generously, Frick $5,000, the Mellons $10,000, Carnegie $10,000; others give smaller amounts and about 30 give nothing. Reporters learn the club is capitalized at a mere $35,000, with a $20,000 mortgage on the clubhouse, and one prestigious lawyer states liability suits cannot be brought against members' wealth and sees no grounds for damages. Several are filed, but not a nickel is ever collected from the club or any of its members. Johnstown remembers this perceived injustice bitterly for generations to come.

Style

Perspective

The Johnstown Flood is the book that launches David McCullough's remarkable career as popular historian, biographer, lecturer, teacher, and host of the popular PBS television series, "Smithsonian World." After *The Johnstown Flood,* McCullough goes on to write *The Great Bridge, The Path Between the Seas, Mornings on Horseback, Brave Companions, John Adams,* and *Truman,* winning the Francis Parkman Prize, the *Los Angeles Times* Book Reward, and National Book Awards for history and for biography.

In researching *The Johnstown Flood*, McCullough uses three previously published books about the disaster, only one of which is a scholarly treatment. He also digs personally through voluminous records, diaries, letters, and a previously unknown transcript of an investigation conducted by the Pennsylvania Railroad. In addition, conducting research in the mid 1960s, he is able to interview the last remaining survivors of the tragedy. As a native of Pittsburgh, PA, the city downriver from Johnstown, McCullough writes with a particular eye and ear for local color. McCullough paints rich word pictures of events leading up to the tragedy, the downriver race of the wave of destruction following the catastrophic failure of the South Fork dam, and the massive rescue, relief, and rebuilding efforts that follow in the wake.

McCullough's writing gives the reader a far richer feel for how tragedy touches individual lives than from today's news anchors hovering in helicopters and offering thirty-second sound bites while covering contemporary "acts of God." The story of Johnstown and the other towns in the Conemaugh Valley is told movingly but without falling into mawkishness and may well inspire some to visit Johnstown to tour the Flood Museum and see the high-water marks left on the few buildings that survive May 31, 1889.

Tone

The Johnstown Flood, like every work of history or biography that comes from the pen of David McCullough, is objective but not emotionally detached. McCullough is a native of Western Pennsylvania, where the 1889 flood is still remembered, and conducts his research before the last living survivors of the tragedy passes on. Many of their stories have already been recorded by the hordes of reporters that descend on Johnstown in the aftermath of the flood, looking for every possible human-interest angle possible. Reporters are long on imagination, prone to exaggeration, and willing to describe downright nonsense, picturing buzzards circling the stone bridge, rivers dammed with corpses, and flesh-satiated wild dogs.

Unfounded reports that "Hungarians" have been looting bodies circulate widely and for many days, those who look or sound foreign dare not exit their homes for fear of mob violence. Eventually reporters learn the truth and quit filing provokative reports. There

are too many good stories about the pitiable fate of the innocent to record. Several reporters hurriedly rework their reports into monographs, which sell well, and which form a large part of McCullough's written sources, works filled with Victorian sentimentality and pathos, which he wisely allows to be told in context with minimal warning to the reader they may be apocryphal - as though the reader might not be able to figure that out him or herself. It is like reading a digest of what avid newspaper readers in 1889 would have read. Finally, however, in discussing the press and its influence on philanthropy after the flood, McCullough yanks on the narrative reigns to show how the uncritical depictions are the stuff of myth not history. In the closing pages, he points out how some events recalled in minute detail by ancient men and women who survive the flood as infants and children are literally impossible. This approach gives the reader of *The Johnstown Flood* both the feel of the time and objective truth.

Structure

The Johnstown Flood consists of two pages of author David McCullough's acknowledgements, nine titled chapters, a list of victims, a bibliography, and an index. It is a story with a myriad of names but no "main characters," and the reader can be thankful McCullough is studious in establishing the names in context each time they are mentioned.

The body of the text is arranged chronologically after Chapter 1, "The sky was red," deftly establishes what it is like to live in the highly populated and thriving steel town, Johnstown, PA, on Memorial Day, May 30, 1889, the eve of the disaster. Chapter 2, "Sailboats on the mountain," chronicles the founding of the exclusive South Fork Fishing and Hunting Club, owners of Lake Conemaugh and the ill-fated dam and how the locals view the rich Pittsburghers who enjoy their summers at the lake many view as a threat to the valley's inhabitants.

The next four chapters focus on the May 31, 1889, as rain-swollen Lake Conemaugh steadily rises and is suddenly released by the failure of the South Fork earthen dam down the South Fork Creek, slamming into four towns along the way, the last and greatest of which is Johnstown. Chapter 3, "There's a man came from the lake," concentrates on the South Fork dam as runoff from a record storm make the waters inch dangerously high and clubmen and employees at the site scramble to make emergency repairs and eventually to warn the towns below of imminent disaster. By this point, communications and transportation are compromised by the weather and many important people do not believe the dam can fail. Chapter 4, "Rush of the torrent," describes the pushing away of the dam and the almost instantaneous escape of the lake water into the narrow confines of South Fork Creek. It follows the leading edge of the wave as it strips the earth bare of everything natural and manmade.

This description continues in Chapter 5, "Run for your lives!" the tale of the crushing of four towns, Johnstown being the last and worst hit. How the mass of water is affected by topography is shown throughout in terms any layman can appreciate and survivors' recollections of the horrors - and miracles - are related. Chapter 6, "A message from Mr.

Pitcairn," describes the initial reaction by the local head of the Pennsylvania Railroad and the beginning of an influx of relief workers and journalists. Chapter 7, "In the valley of death," surveys the desolation on Jun. 1, 1889, and details the massive relief operations that continue for weeks, as some 7,000 volunteers descend on Johnstown.

Chapter 8, "No pen can describe," focuses on how the press covers the greatest story since Lincoln's assassination and the humanitarian reaction to the story in nearby Pittsburgh, the United States, and around the world. Chapter 9, "Our misery is the work of man," concludes the work, looking at how journalists and survivors point the finger of blame at the rich clubmen and how engineers evaluate the evidence. It ends with the dedication of a memorial to the victims at Grandview cemetery on June 1, 1892.

Quotes

"It was in fact during the month of May 1889 that Carnegie was finishing up a magazine article to become known as 'The Gospel of Wealth,' in which he said, and much to the consternation of his Pittsburgh associates, 'The man who dies thus rich dies disgraced.' The gist of the article was that the rich, like the poor, would always be with us. The present system had its inequalities, certainly, and many of them were disgraceful. But the system was a good deal better than any other so far. The thing for the rich man to do was to divide his life into two parts. The first part should be for acquisition, the second for distribution. At this stage the gentlemen of the South Fork Fishing and Hunting Club were attending strictly to the first part." Chapter 2, pg. 60.

"'From seven o'clock on the water rose. People who were glad they 'didn't live downtown' began to wish they didn't live in town at all. On the water crept, and on, up one street and out the other... Eighteen inches an hour the Stony Creek rose for a time, and the Conemaugh about as rapidly.' "On the street below his window the current, coming across from the Stony Creek, was rushing at an estimated six miles an hour." Chapter 3, pg. 83.

"At this point, Colonel Unger decided that perhaps something ought to be done to warn the people in the valley below. The only way was to send a man down. There was a telephone line from the clubhouse to South Fork, but it was used only during the summer season and had not as yet been put in working order. "With all the rain there had been, the road to South Fork was in very bad shape, but John Parke made the ride in about ten minutes. Parke's relative youth, and the fact that he was not well known in the area, may account for the marginal success of his mission." Chapter 3, pg. 93.

"Parke estimated that it took forty-five minutes for the entire lake to empty, but others said it took less, more in the neighborhood of thirty-six or thirty-seven minutes. In any case, later studies by civil engineers indicated that the water charged into the valley at a velocity and depth comparable to that of the Niagara River as it reaches Niagara Falls. Or to put it another way, the bursting of the South Fork dam was about like turning Niagara Falls into the valley for thirty-six minutes." Chapter 4, pg. 102.

"A locomotive whistle going without letup meant one thing on the railroad, and to everyone who lived near the railroad. It meant there was something very wrong. "The whistle of John Hess's engine had been going now for maybe five minutes at most. It was not on long, but it was the only warning anyone was to hear, and nearly everyone in East Conemaugh heard it and understands almost instantly what was meant." Chapter 4, pg. 115.

"Because of the speed it had been building as it plunged through Woodvale, the water struck Johnstown harder than anything it had encountered in its fourteen-mile course from the dam. And the part of the city which took the initial impact was the eastern end of Washington Street, which ran almost at right angles to the path of the oncoming

wave. "The drowning and devastation of the city took just about ten minutes." Chapter 5, pg. 147.

A girl named Rose Clark was trapped near one end of the bridge, half submerged under water, with a broken arm and a broken leg which was pinned down by timbers. A group of men had worked for several hours to free her leg but without success and the fire kept spreading closer. For a short while there was talk among them of cutting her leg off, rather than letting her burn to death, and for a few tense minutes, when the flame was almost on top of them, it looked as though they would have to. But the leg came free at last, and they carried her to safety." Chapter 5, pg. 173.

"There was some shouting back and forth among the men. People who had been separated during the night would suddenly find one another. 'What strange meetings there were,' wrote one man. 'People who had hardly known each other before the flood embraced one another, while those who found relations rushed into each other's arms and cried for very gladness that they were alive. All ordinary rules of decorum and differences of religion, politics, and position were forgotten.'" Chapter 7, pg. 187.

"At one o'clock a mass meeting was held at Pittsburgh's Old City Hall, at which Robert Pitcairn stood up and spoke briefly about what he had seen. 'Gentlemen,' he said in closing, 'it is not tomorrow you want to act, but today; thousands of lives were lost in a moment, and the living need immediate help.' Then there was a call for contributions. At the front of the hall two men using both hands took in $48,116.70 in fifty minutes. 'There was no speech making,' a reporter wrote, 'no oratory but the eloquence of cash.'" Chapter 7, pg. 199.

"The early arrivals at last got some sleep that night, there at the brickworks, while the newcomers found what accommodations they could elsewhere around town. Eight of them, including the Philadelphia man, wound up on the narrow first floor of the signal tower across the river. About midnight they were awakened by a man at the door saying, 'Isn't it terrible. Look at them, human beings, drowned like rates in their hole.' At which point one of the corpses sat bolt upright and said, 'Get the hell out of here and let us sleep!'" Chapter 8, pg. 207.

"Still, with all the stretching of facts, with all the fabrication and bunk being printed, no one seemed to mind very much. If the horror of what had happened was not described exactly according to facts, people knew that what had happened was still a great deal worse than any words could convey, however accurate. And if a few small fables had been called up for the occasion, well they were really no more extraordinary than a dozen other stories that were 'the God's truth.'" Chapter 8, pg. 223.

"Children who were only four or five years old at the time would live to be old men and women who would describe in the most remarkable detail how they had watched the flood strike the city (from a place where it would have been impossible to have seen the water) or how they had looked at their wrist watch at that exact moment (there were no wrist watches in 1889) and read (at age five!) that it was exactly such-and-such time." Chapter 9, pg. 266.

Topics for Discussion

How do you react to the rich and powerful men of Pittsburgh owning a private lake that causes such a massive disaster? Locate your position in the social structure - upper, middle, or lower class - and try to picture how readers in the two other classifications would react to the same question.

If you were on a jury assessing liability for the accident, to whom - if anyone - would you assess guilt, in what amount, and for what specific reason(s)?

If you were to rebuild the South Fork dam, what precautions would you take against a recurrence of the Johnstown Flood? If you were a county official, what would you demand of such a contractor?

How would modern news coverage of the Johnstown Flood differ from that in 1889? Would it be better, worse, or the same?

Why would Johnstownians want to forget the flood? Would victims today share such an attitude?

What is the function of the "Hungarians" in this story and what does it say about the racial views of the era? Do such attitudes survive today, or has America grown more tolerant of diversity?

Are there any true "heroes" in this story or simply participants? Why do you say that? If there are heroes, with whom do you most identify - and why?