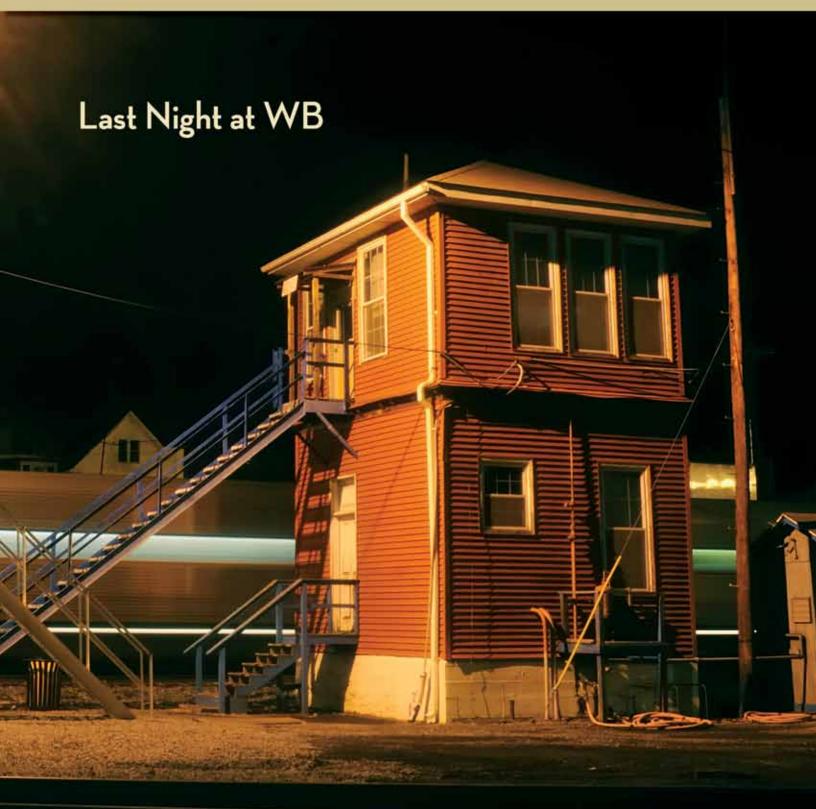
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LETTER FROM THE EDITOR

"Something there is that doesn't love a wall," wrote Robert Frost. That goes double for railroads. Nature is at war with that line of ties, rails and ballast. And when nature concentrates on the conflict, nature wins.

The B&O had more than its share of such assaults, especially since the terrain it traversed was so rough, being over so many rugged mountains and fast-flowing rivers. Usually, however, nature's victories were temporary. The railroad men returned and rebuilt, often better than before.

There was one notable case, however, when the B&O was more rescuer than rescued. It happened a quarter-century after the company had survived being the most damaged northern railroad in the Civil War. And it was a natural disaster so huge that it is still remembered today: the Johnstown flood of 1889. Oh, by the way, another well-known railroad was also involved.

Beth Ann Miller skillfully tells the story in drama and detail. One reporter called it, with some exaggeration I think, the biggest news event in America since the Civil War ended. A good sense of its impact is that it caused the biggest death toll of any natural disaster in American history and the largest casualty toll of any one-day event in the continental United States with the exception of the Civil War and September 11. More than 2,200 people died; 25,000, many of them injured, were left homeless.

An image that sticks in my mind is this anecdote: Johnstown's newspaper had its office on the upstairs floor of the B&O passenger station. They discovered that a wall of water from a broken dam was wiping away their town when a boxcar picked up by the tidal wave slammed into the building's wall. The solidly built structure was one of the few that survived.

Incidentally, the relief effort was organized wholly by private individuals and groups, a moving tale of American charity, generosity, and community. It also reminds us of an era when newspapers hired their own trains to get to a story, when communities called emergency meetings to raise donations, and when

a railroad parked open boxcars in the middle of a city to receive relief aid from citizens who pulled up in their wagons.

Jim Rogers writes about the B&O three-bay Pullman Standard covered hopper of the 1950s. I think we should give more attention to the revolutionary impact of the covered hopper. After all, it was the only truly innovative new freight car type—along with the reefer—between the railroad's early days and the modern super-cars.

It is also a car type originated by the B&O, in the late 1930s. On my layout of that era the two covered hoppers remind me of those rare mammals that began their evolution among the overwhelming bulk and numbers of the dinosaurs.

Not that covered hoppers replaced boxcars, of course, but they did take over many of their jobs and drastically changed how freight customers interacted with the railroads. These primarily carried sugar, grain, lime and minerals, each type of car adapted to its likely cargo.

Finally, we offer you Alex Mayes' "Preservation Projects in Need." It's a very short piece but an extremely important one because you can do something about it.

How many times have we heard about the destruction of irreplaceable and unique B&O structures and equipment? How often has it been simply too late to save anything at all? Well, here are two chances to stop that from happening again—to the Aberdeen station and the West Brunswick tower. Please read the details and consider helping as donor or volunteer.

Speaking of which, if you know of items—buildings, equipment, signals—that are in danger of destruction please do let us know so we can publicize this and if possible help preserve things.

It is probably also a good idea to have a catalogue of remaining on-site B&O stuff. Does anyone have something like that, even for a single state or line, or is anyone interested in taking the lead on such a project? It won't be easy, but in the Internet age, it can be done with less difficulty.—BARRY RUBIN

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ON THE COVERS

FRONT COVER: Westbound auto racks are a background blur on WB Tower's last night as a manned facility. Mike Collins tells the tale of the tower and the men who operated it in words and pictures beginning on page 15.

BACK COVER: No question where crane X58 was stationed, and showed off for a fan trip. In its heyday, the yard was a focal point for coal operations. (Bob's Photos)



Thirty acres of what some survivors called a huge dark ball of debris were lodged against the Pennsylvania Railroad's Stone Bridge as an estimated 20 million tons of water rushed down the Little Conemaugh River, carrying with it people and animals, living and dead. About dusk oil from railroad cars and kerosene from cook stoves caught fire, and it burned for three days.

Relief Trains and the 1889 Johnstown Flood B&O Was Quick to Move Aid to the Conemaugh Valley

By Beth Ann Miller

Photographs Courtesy Johnstown Area Heritage Association Archives Except as Noted

The people of Johnstown, Pennsylvania, were used to spring flooding, since they lived in a valley sandwiched between two rivers—the Little Conemaugh to the northeast and the Stonycreek to the south. When spring rains came, melting the winter snowpack and swelling the rivers, families instinctively moved treasured belongings to the upper floors of their homes for safekeeping. They were used to damp floors and water in the streets.

But they were completely unprepared for the deluge that engulfed the town when the South Fork Dam collapsed the afternoon of Friday, May 31, 1889. That day 2,209 people were killed, and the flood caused \$17 million in property damage, including the loss of 1,600 homes.

Over the next several days, and for months thereafter, an avalanche of donations from across the country and the world was delivered to the Conemaugh Valley by the Baltimore & Ohio and Pennsylvania railroads. And the relief effort began with a man who was not only the division head of a major railroad, but also a member of the Pittsburgh social club thought responsible for the dam's collapse.

The South Fork Dam was 14 miles northeast and 400 feet in elevation above Johnstown. It was built by the state as an additional source of water for the Pennsylvania Canal route in Johnstown. The reservoir was finally finished in 1852, but its intended use was short-lived. The Pennsylvania Railroad completed its railway through the area in 1854, and use of





Boxcars bearing the B&O's initials, probably carrying relief materials, are at the center of this photograph, which looks over the eastern end of Johnstown's central business district. St. John's Church, on the left side of the picture, burned as the floodwaters began to recede.

the canal dwindled. The PRR eventually bought the canal and the South Fork Dam property.

Ownership of the dam changed hands in 1875 and again in 1879, when Benjamin Ruff purchased it and incorporated the South Fork Fishing and Hunting Club. The club used the South Fork Dam as a private country retreat for its members, who included some of the best-known names in Pittsburgh business circles.

The afternoon of May 31, drenching rain and mountain runoff overwhelmed the dam, which lacked adequate controls for the release of excess water. Workers tried several methods to relieve the water pressure eroding the breast of the dam, but their efforts didn't work and the dam gave way at 3:10 p.m. The amount of water released, experts later decided, was about 20 million tons—equal to the amount of water going over Niagara Falls in 36 minutes.

The water barreled 14 miles down the Conemaugh Valley from South Fork to Johnstown in less than an hour, following the path of the Little Conemaugh and flattening the Johnstown suburbs of Mineral Point, East Conemaugh, Franklin and Woodvale along the way.

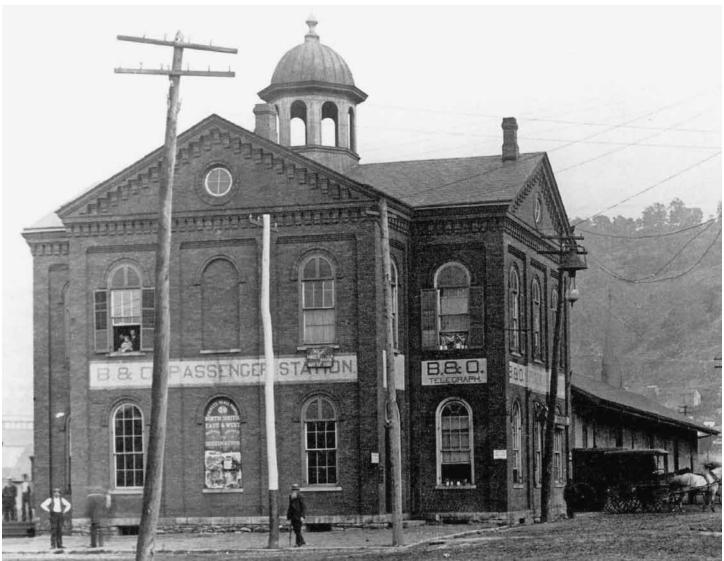


Tents for relief workers were set up near the B&O tracks in Johnstown. The B&O depot is the dark building in the center of this photograph, which looks over what was then the center of the city. Waters released when the South Fork Dam broke covered the 14 miles into the city in less than an hour, flattening suburbs along the way.

Telegraph operators in towers along the valley received warnings from South Fork that the situation at the dam was serious. While they passed the warnings along, few took them seriously. False alarms had been raised in the past, and many people

just did not believe the dam would actually break or cause much damage.

The first real warning some people got that day was the blaring sound of a train whistle. John Hess was an engineer with the Pennsylvania Railroad, working at



This was the B&O passenger depot on Washington Street in Johnstown. The floodwaters from the east reached to the sign hanging over the word "station" between floors. The B&O's Somerset and Cambria branch enters the city from the south, running along the Stonycreek River. The station was torn down in 1936. (B&ORRHS collection)

a site upstream from East Conemaugh called Buttermilk Falls. Hearing the roar of the water as it raced down the valley, Hess quickly realized the dam had broken. So he tied down his whistle, and drove the train at full speed from Buttermilk Falls into the East Conemaugh rail yard.

Many in town heard the whistle and knew it meant that something was wrong. By this time, however, they had only minutes to react and run to higher ground before the flood wave hit. Arriving at East Conemaugh, Hess and conductor R.C. Liggett jumped from the train, with the whistle still blaring, and ran for their lives.

Survivors later recalled that the wave they saw coming down upon them did not look like water at all. Instead, they saw a huge dark ball of debris—trees, houses, telegraph poles and wires, barbed wire, boxcars, dead and living animals and people—tumbling over and over upon itself, and consuming everything in its path.

The flood hit Johnstown at 4:07 p.m., and it took only 10 minutes to destroy a four-square-mile area. As the water came down the Little Conemaugh into Johnstown, part of it split into three streams, each targeting a parallel section of the city. The three streams, with their collected debris, joined the main wave at the Stonycreek River, slammed into Yoder Hill, washed back over the city and stopped at the seven arches of the Pennsylvania Railroad's Stone Bridge.

The Little Conemaugh and the Stonycreek merge just south of the Stone

Bridge to form the Conemaugh River. The Pennsylvania Railroad built the Stone Bridge in 1887 to carry passengers and freight over the Conemaugh into Johnstown from western cities, including Pittsburgh.

At the Stone Bridge, the flood debris created a massive drift, 350 feet wide and 40 feet high (15 feet higher than the top of the bridge). People who had escaped the deluge or managed to survive the terrifying ride to the Stone Bridge, and get free from the mass of debris, were trying earnestly to find relatives and help others still trapped in the rubble. At dusk, the debris at the Stone Bridge caught fire and was burning furiously; people trapped in the drift were screaming in fear and crying out to be rescued from the flames.

During 12-plus hours of terror, the people of Johnstown had only one goal in mind: survival. Now it was morning on Saturday, June 1, and in the midst of these efforts to rescue the living and collect the dead, a new threat to their survival became apparent.

The survivors were soaking wet, cold, injured, dazed, grief-stricken and hungry, and there was little left of the town to offer them: no food, no drinkable water, no medicine, no dry clothing or blankets, and very little shelter. Even if a man was fortunate enough to have some money in his pocket, there was nothing left in town to buy. Everything was either swept away or ruined by the foul water.

People from nearby communities and farms who were not affected came quickly to offer what they had to the flood victims: milk, potatoes, a little meat, some clothing. Neighbors from Brownstown and Morrellville took in around 3,000 people over two days. But the extreme need of about 25,000 displaced survivors overwhelmed what the locals were able to do. Johnstown needed help.

The afternoon of the flood, PRR's Pittsburgh Division superintendent, Robert Pitcairn, was in his private car on a train traveling east from Pittsburgh. Several days of rain had caused much concern about the condition of the tracks along the route, and Pitcairn was on board to inspect it personally. He also happened to be one of the 61 members of the South Fork Fishing and Hunting Club, which owned and maintained the South Fork Dam.

Pitcairn's train stopped just after 4 p.m. at Sang Hollow, about four miles west of Johnstown. The telegraph operator attempted to contact Johnstown for permission to send the train into town, but got no response. The Sang Hollow operator would not send the train through without approval from Johnstown, not even for Pitcairn, his employer.

While Superintendent Pitcairn considered whether to continue east, he noticed debris, water and people (both living and dead) floating down the Conemaugh from the direction of Johnstown. As the river rose, the men on the train used whatever they could



Members of the Cumberland Relief Committee, among the first rescuers to arrive via the B&O, sized up the job of dealing with what was left along the track. The force of the flood can be gauged by the erosion of the bank at the left of the photograph. A 14-car B&O relief train was the first to actually get into Johnstown to unload.

find-ropes, poles, limbs from trees-to try to rescue victims. They saved seven people, but many more were out of reach and floated past Sang Hollow downriver into the Conemaugh Gorge.

Pitcairn knew something must have happened at the dam, and decided to move the train west to New Florence to wait for any news from Johnstown. But before he left Sang Hollow at 6 p.m., and then again later from New Florence, he sent telegrams over the Pennsylvania's private wire to the Pittsburgh *Commercial Gazette*, telling the newspaper's editor that Johnstown had suffered a terrible disaster.

He asked Pittsburgh leaders to respond quickly to the dire needs of the Johnstown people, and he offered the services of the Pennsylvania to deliver supplies to Johnstown as soon as their tracks into the city were repaired. Late Friday night, Pitcairn returned to Pittsburgh to help organize the relief effort.

The *Gazette* received Pitcairn's first telegraph message at 7 p.m. on May 31, and the news of a major disaster in Johnstown sent the Pittsburgh area hustling.

First, the *Gazette* hired a special train to immediately take its reporters as close as possible to Johnstown to cover the story for the paper. Then it

and other Pittsburgh papers printed and distributed a bulletin from the mayors of Pittsburgh and Allegheny, calling for a community meeting at 1 p.m. Saturday, June 1 to collect money and supplies to send immediately to Johnstown.

At the town meeting, Pitcairn relayed what he had seen and heard in Sang Hollow and New Florence the night before, and demanded that the cities respond immediately to help the people of Johnstown. A relief committee was formed to coordinate resources and receive donations. Residents stuffed cash into the open hands of three men appointed to receive the money. In less than one hour more than \$48,000 was collected, and millions more would come later from across the nation and the world.

The Pennsylvania placed a line of boxcars on a siding on Pittsburgh's Liberty Street Saturday morning to accept donations of goods for the relief effort. As word spread about what had happened, individuals and businesses contributed goods of every kind, including food, clothing, blankets, medical supplies, coffins and building materials.

This first relief train also carried 75 men of various occupations who volunteered to help in Johnstown: physicians, policemen, firemen, undertakers, and



This was the scene in the northeastern suburb of Woodvale, where floodwaters derailed wooden cars, destroyed at least one building and left debris scattered across the tracks. But note that there appears to have been little damage to the track itself, making quick resumption of some rail service possible. The Johnstown Flood Museum estimates that the B&O brought more than 400 carloads of relief goods into the Conemaugh Valley in the days immediately after the flood.

others. The train, with its cargo of people and supplies, left Pittsburgh's Union Station at 4:30 p.m. on June 1.

The relief train was given top priority along the Pennsylvania line, but due to congestion of rail traffic halted by high water and damaged tracks, it did not arrive in Sang Hollow until 10:30 p.m. The Pennsylvania line from Sang Hollow to Johnstown was heavily damaged by the flood, so the relief workers unloaded two of the boxcars, put the provisions on their backs and carried them around the mountain to a work train waiting between them and the Stone Bridge. The work train took the goods east as far as the Stone Bridge, pulling in at 1:30 a.m. Sunday, June 2.

Meanwhile, the construction crew of the Pennsylvania worked all night Saturday, June 1, to replace the damaged track between Sang Hollow and Johnstown. At 8 a.m. Sunday, the first relief train with the rest of its cargo pulled up to the Stone Bridge. Some of the provisions were unloaded there; then the relief train backed west to the Cambria City station and unloaded the remainder of its cargo.

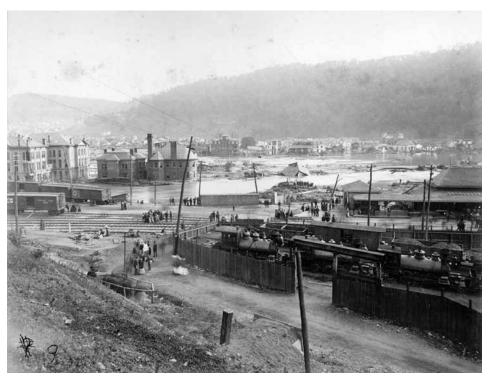
Although the Stone Bridge withstood the flood, the drift blocking the bridge forced flood water over its north embankment, carving a

"river" that was 300 feet long and 25 feet deep. This cut off any further movement of the Pennsylvania into Johnstown.



The Cambria Iron Company, whose buildings still sit along the north side of the Conemaugh River, suffered greatly, but some parts of its mills were back in service by June 4. What was left of one B&O car lies in the foreground of the debris.

James B. Scott, chairman of the Johnstown Relief Corps (the group handling the on-site work for the Pittsburgh Relief



The Pennsylvania Railroad passenger station and some locomotive facilities sat beside the Conemaugh River, which runs left to right through the center of this photograph. Floodwaters were continuing to drain off days after the catastrophe. To the left are the Cambria Iron Company and, farthest from the camera, Wood, Morrell & Company, Cambria Iron's company store.

Committee), in his final report, told what they did next:

"On Sunday morning a stout rope was swung over the river at the stone bridge and by this means many of the boxes and packages of food were taken over to the section in which is located the Pennsylvania Railroad station."

After this experience, the Johnstown Relief Corps sent word to Pittsburgh that future relief shipments into Johnstown should be sent over the Baltimore & Ohio instead of the Pennsylvania. The B&O's Somerset & Cambria branch line followed the Stonycreek River north from Rockwood to Johnstown, so its tracks did not cross the flooded Conemaugh. And although recent hard rains had caused problems along its route as well, damage to the B&O line was not as heavy as the Pennsylvania's. Superintendent J.V. Patton offered any and all help the B&O could give to the relief effort.

In fact, a Baltimore & Ohio relief train was the first to actually pull into the city of Johnstown with supplies for the flood victims. A 14-car train came from Somerset on Monday, June 3, and the shipments would continue daily for months.

Although a complete tally of all the freight brought into Johnstown by the two railroads was too extensive to record, the Johnstown Flood Museum estimates that 1,400 carloads of donated goods were brought to Johnstown. Of those, at least 408 carloads were brought into the Conemaugh Valley by the B&O and 500 carloads by the Pennsylvania.

In the June 21, 1889, edition of the Johnstown *Daily Tribune*, Editor George T. Swank wrote: "[the] Baltimore & Ohio Railroad Company has rendered to the people of Johnstown in their distress services the value of which cannot be reckoned in dollars and cents. Although badly crippled in many places—not so badly, however, as its great rival, the P.R.R –it kept its lines open and brought to us the first evidences of sympathy from the outside world, and it has been pouring in upon us daily ever since the flood the lavish generosity of humanity near and far."

The flood cut off all communication from Johnstown to the outside world. So, unaware of the relief efforts already under way in Pittsburgh, the men of Johnstown gathered Saturday afternoon to organize their own recovery. They sent messengers to communities in the south and east, including Hooversville, Somerset and Bedford, with word of the disaster. From there, telegrams relayed the news to the major cities of Washington, Philadelphia and New York City, and throughout the country. The news was sketchy, and full of inaccurate information, but the main idea was still true: Johnstown was in trouble.

Like the people of Pittsburgh, people across the United States were moved by the news and organized donation centers to collect goods and money to send to Johnstown. Churches made appeals for monetary gifts in their Sunday services. Charity groups collected supplies and money to deliver and distribute in Johnstown. Governor Foraker of Ohio sent 900 tents. Businesses donated lumber, nails, tools, horses, furniture, dishes, food and many other items.

William R. Thompson, treasurer of the Pittsburgh Relief Committee, noted in the Committee's final report that "[down] Liberty avenue and Water street the Pennsylvania Railroad and Baltimore & Ohio moved empty cars, which were promptly filled, and as promptly sent out."

A B&O relief train from Philadelphia brought 16 doctors to Johnstown, and another brought workers from the Philadelphia Red Cross. An article from the *Philadelphia Bulletin*, reprinted in the June 21 Johnstown *Daily Tribune*, said that "[the management of the B&O] aided the relief train, headed by Dr. Forbes and fifteen other doctors, precedence along the entire line. This relief train was pushed through as fast as the track-repairers made it possible. Following the relief train was the [Philadelphia] Red Cross Society.

"[In] addition to the above two trains of 137 cars of relief, supplies such as medicine, food, and clothing, were run through on their fast passenger schedule. [It] was the Baltimore & Ohio that made it possible for Philadelphia's work to be effective."

The volume of supplies coming in to Johnstown required quick construction of facilities to unload and store the items. The Baltimore & Ohio had a passenger depot and a freight warehouse on Washington



Back at the Stone Bridge, that ball of flood debris had created a drift estimated to be 40 feet high. It was eventually removed by a lot of dynamite and controlled burning. This photograph was taken about two months after the flood. Cambria Iron Company is beyond the bridge on the right.

Street–directly in the flood's path. The passenger depot was damaged, but was usable. According to the *Daily Tribune*, the freight warehouse was destroyed.

Dr. H.E. Collins of the Johnstown Relief Corps' Transportation and Distribution Committee discussed the need for warehouse space in his final report to Director Scott. This report was reprinted in the book *Through the Johnstown Flood: By A Survivor*, written by Rev. Dr. David J. Beale. It read in part:

"At this time a large number of cars containing relief supplies had arrived in and near Johnstown, and many more were on the way to that point; but there was not a single station or platform of any kind on the line of the Baltimore and Ohio Road within the limits of Johnstown, and the work of providing necessary terminal facilities, warehouses and depots for relief supplies of all kinds was intrusted to myself."

On Wednesday, June 5, Dr. Collins recalled, "Ample platforms were also laid at this point, some 2,000 superficial feet in extent, and the work of unloading cars and distributing to the various supply stations in Johnstown was at once commenced."

In his book *The Johnstown Flood*, historian David G. McCullough wrote, "[by] Friday, June 7, two hundred carloads of provisions had cleared Pittsburgh. At the Pennsylvania depot in Johnstown, and at the B&O depot, the platforms and yards were piled with cans of biscuits, boxes of candles, cheese, lamp chimneys and matches, huge cases of soap and canned goods, bacon by the barrelful, and hundreds of sacks of corn meal. People had donated cots, mattresses, hair combs, pipes, pillows, teakettles, tents, cookstoves, and more than 7,000 pairs of shoes."

Monetary donations totaled a staggering \$3,742,818.78 from donors in the United States and 12 foreign countries.

The South Fork Fishing and Hunting Club donated 1,000 blankets, and several members contributed money to the relief effort.

The B&O also brought to Johnstown a lady who arguably conducted the largest and most prolonged disaster relief for the flood survivors. Her work in the Conemaugh Valley made her organization famous for disaster relief in America from that moment on.

Clara Barton started the American Red Cross eight years before the Johnstown Flood, and had already assisted victims of natural disasters and epidemics in Ohio, Texas, Illinois and Florida. But none of these would compare with the scope of the disaster at Johnstown, the first major test for Barton and her American Red Cross.

Miss Barton had heard the news about Johnstown the evening of the flood, and like many who read the initial reports, hoped that the situation was not as bad



The flood scoured the Little Conemaugh valley; Woodvale, a suburb northeast of the city, was particularly leveled. In this view looking east, the only buildings left standing are two substantial brick-built mills. Nearest the camera is a woolen mill, A flour mill is out of sight behind it.

Relief supplies piled up quickly at the PRR depot once eroded tracks were repaired and some of the debris was removed from the Stone Bridge. This view looks south toward the Conemaugh River, taken from a vantage point to the right of the photograph on page 8.

as it first appeared. After receiving confirmation 24 hours later that the awful stories were true, Miss Barton and five Red Cross workers left Washington on the B&O that Sunday, June 2 and arrived in Johnstown on Wednesday, June 5.

She worked in Johnstown until October, setting up tents as hospitals and caring for the injured; organizing the construction of six Red Cross hotels for the homeless; and distributing blankets, food, clothing and money to everyone who applied for help.

On June 9, Governor Beaver of Pennsylvania came with members of the Pittsburgh Relief Committee to see the work going on in Johnstown. At a meeting later that day, Governor Beaver determined that the state should take over the responsibility for continued relief efforts. It was agreed that as of June 12, the state would be in charge.

Director Scott of the Johnstown Relief Corps, in his report to the Pittsburgh Relief Committee, said "at the early hour of one A.M., Friday, June 14th, the special car furnished by the Baltimore & Ohio Railway delivered in the station in Pittsburgh the remaining members of the relief corps which the Pittsburgh Relief Committee had sent out" on Sunday, June 1.

Scott praised the B&O in his final report, saying "[it] would be improper to conclude this report without special mention of the courtesies of the officials of the Pennsylvania Railroad and the Baltimore & Ohio Railway, who afforded

your representatives the fullest facilities in their power."

William McCreery, chairman of the Pittsburgh Relief Committee, also praised the railroad in the Relief Committee's final report:

"The Western Union Telegraph Company, the Baltimore & Ohio Railroad, and the Pennsylvania Railroad deserve especial mention. The whole service of all three was placed free at the disposal of this Committee; and while they had suffered in the great flood to the extent of millions of dollars, they seemed to forget all but suffering Johnstown."

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B&O Number 628041 was one of the first batch of three-bay covered hoppers built by Pullman Standard as class N-46. Forty-seven feet long, and with a design capacity of 2,893 cubic feet, they could hold up to 70 tons of medium-density material. Delivered in September 1957, many of these cars were assigned to lime service on the Shenandoah branch through the 1960s and '70s. All but one were gone by July 1992.

B&O's Three-Bay Covered Hopper The Pullman Standard Cars

By Jim Rogers Photographs From the Author's Collection

By the mid-1950s the covered hopper had secured its place as a popular car for handling bulk commodities requiring protection from the weather.

The class N-43 cars from Pullman Standard had a 70-ton, 2,003-cubic-foot capacity. While it was an ideal car for sand, cement and other dense commodities, shippers of medium-density commodities could not take full advantage of the 70-ton rates because the car would "cube out" before it could hold 140,000 pounds. The solution was a car of larger cubic capacity.

The B&O Mechanical Engineering Department in Baltimore designed a 70-ton, three-bay covered hopper in 1956. The Society Archives holds a copy of drawing T-80710. The drawing does not show a class designation. And it is

not known whether this was for shopping among the commercial builders or considered for construction in-house. The proposed car would have a capacity of 2,853 cubic feet and a light weight of 58,000 pounds.

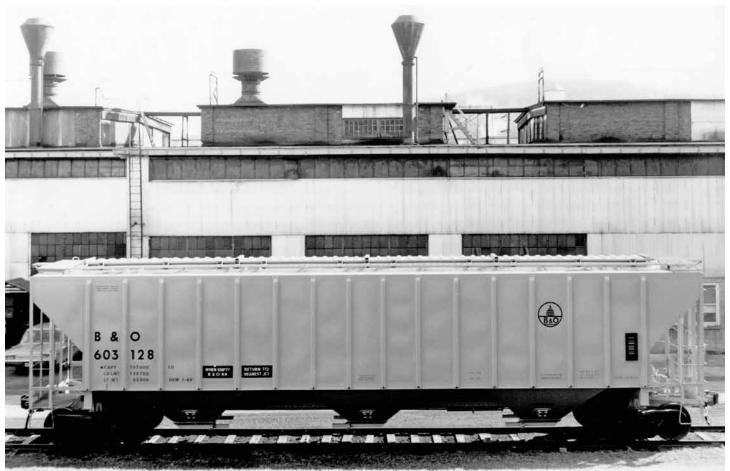
The B&O quickly decided to purchase cars from a commercial builder and after the success of the N-43, went back to Pullman Standard.

Pullman Standard delivered the new cars in September 1957, and they ushered in a new generation of covered hoppers. Numbered 628000 – 628044, they carried class N-46. At 47' long, the three-bay cars had the design capacity of 2,893 cubic feet but with a light weight of 61,300 pounds, allowing shippers to load up to 70 tons of medium-density materials—fertilizer, grains, sugar, lime, soy-

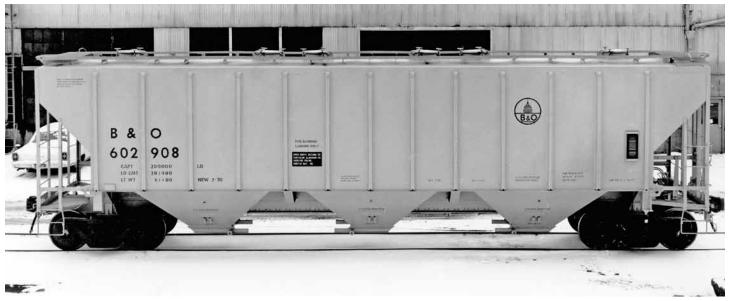
bean meal and other feed mill products.

Based on a study of available photographs and observation of movements, many of these cars were assigned to lime service from loading points on the Shenandoah branch. This small fleet held its own through the 1960s and '70s. The class became HC-9 under the C&O-B&O combined class system. In 1977 there were still 43 of the original 45 cars on the roster. The fleet size declined through the 1980s as shippers preferred the higher-capacity 100-ton cars. Only one car was left of this series in the July 1992 ORER.

The demand for larger cars continued, and P-S answered with cars of 4,000 cubic feet and a load limit of 98 tons. In 1963, B&O took delivery of 45 cars classed N-48. The following year, two more were purchased from the Atlantic Coast Line



B&O 603128 was part of the first of two lots, 603000-603199 and 603200-603299, in C&O-B&O class HC-27. Built to facilitate an expanding grain export market, they held 4,740 cubic feet of cargo in an interior length of 56 feet 6 inches. Their three bays were center-discharge, and they were loaded through a single trough hatch with a four-piece cover.



The class HC-30 cars were similar to the HC-27s but designed for medium-density commodities with a smaller capacity. They measured 40 feet 6 5/16 inches inside, 4,427 cubic feet. These cars had six circular loading hatches along the sides of the roof and center discharge. The 36 cars in the class were delivered in 1970, and some remained in service in the Baltimore area in 2011.