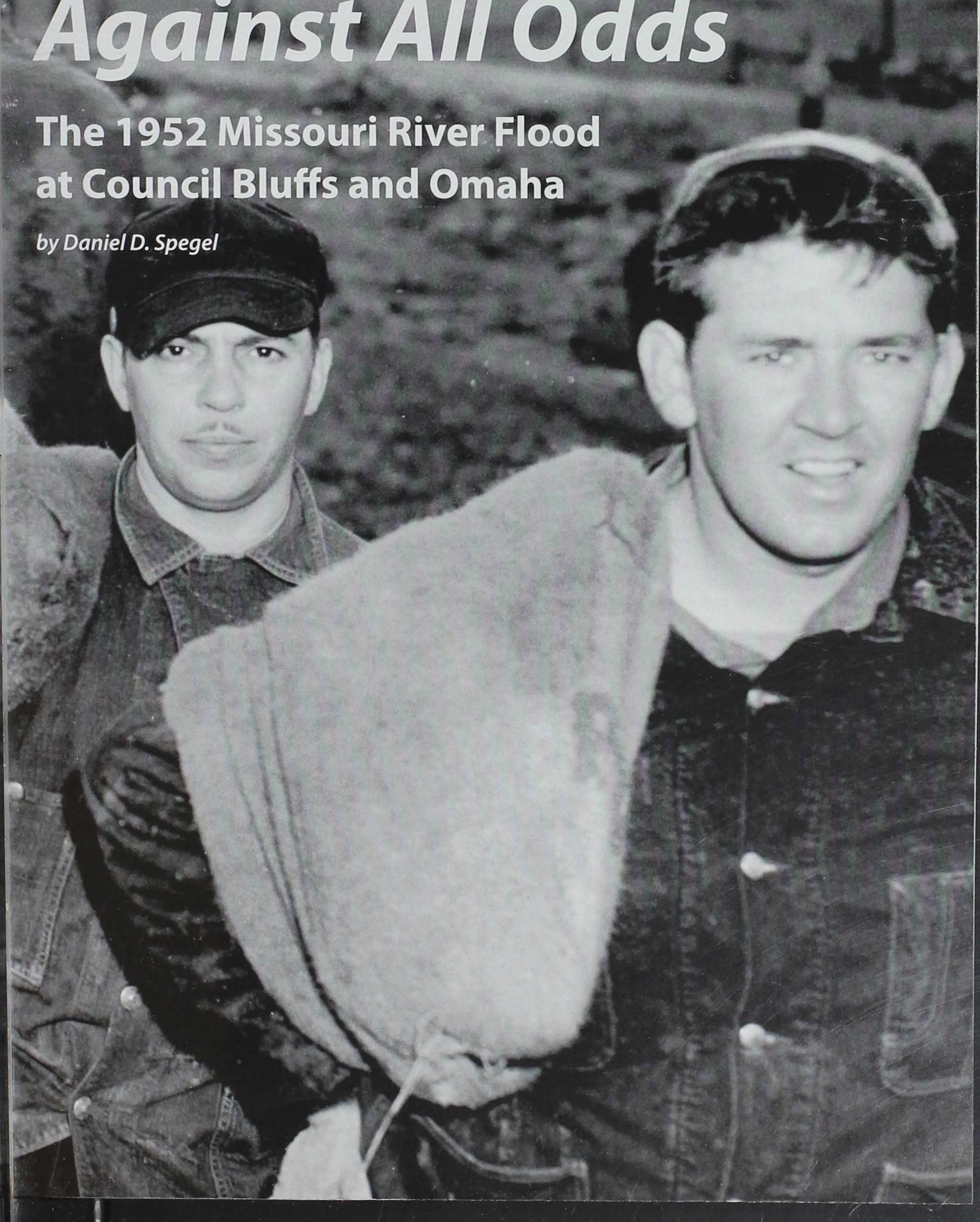


Against All Odds



or centuries, the Missouri River has lured people seeking beauty, transportation, and prosperity. These riches, however, have come at a cost, because the river's generous disposition sometimes turned on them in a radical way. John Neihardt, renowned essayist and intimate observer of the Missouri long before massive engineering projects transformed it, wrote, "The Missouri is unique among rivers. I think God wished to teach the beauty of a virile soul fighting its way toward peace—and His precept was the Missouri."

The river's complex nature burst forth in 1952 when it released a flood of immense proportions. By all rights large sections of the cities of Council Bluffs, Iowa, and, directly across the river, Omaha, Nebraska, should have been devastated. The winter months upstream had produced the perfect weather conditions for disaster, and river-engineering efforts designed to prevent floods were incomplete. Even so, the citizens of this large metropolitan area held back one of the greatest floods ever observed on the Missouri River.

The Missouri River is formed by the junction of the Jefferson, Madison, and Gallatin rivers at Three Forks, Montana, and flows for 2,460 miles, making it the longest river in the nation. With its tributaries and source streams, it drains an immense area of 529,000 square miles, one-sixth of the United States. Starting at an el-

evation of 4,032 feet above sea level, the river leaves its mountainous origins and descends more than 400 feet over a 12-mile series of cataracts to the Great Plains. It later widens at the large reservoir above Fort Peck Dam in northeastern Montana. The remainder of its journey is through mostly flat grasslands, with bluffs often flanking its valley.

Despite this otherwise long and tranquil journey, the Missouri has had an unruly reputation. Lewis Pick, Chief of Engineers in the U.S. Army Corps of Engineers in the 1950s, described it as one of the wildest rivers on earth.

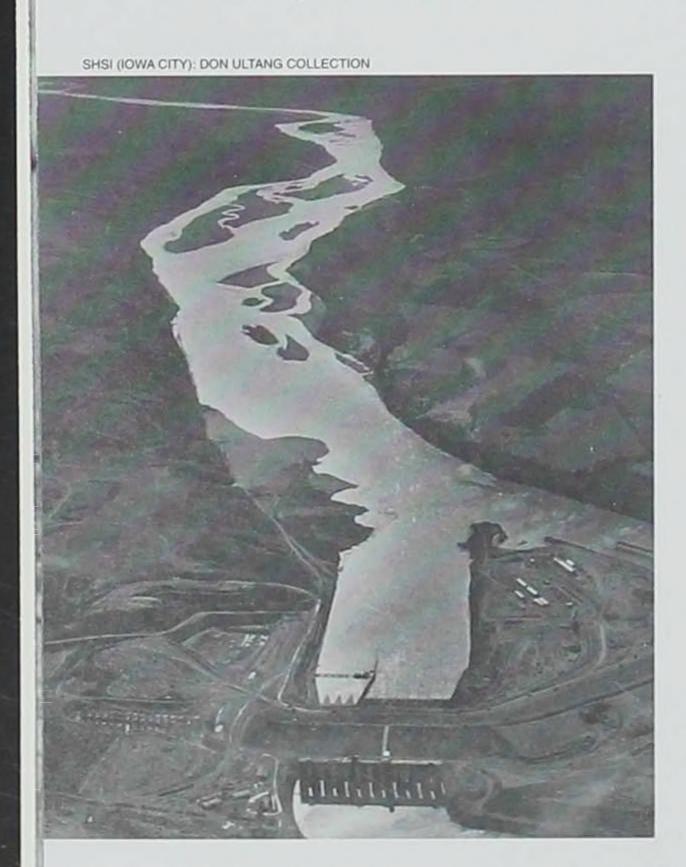
Flooding has historically been a common event on the Missouri River. Two predictable rises occurred each spring—one in March, due to snowmelt on the plains and the break-up of ice in the main channel, and the other in June, caused by melting snow in the Rockies and spring rains on the plains. These recurrent floods replace land lost to erosion with nutrient-rich silt. While seasonal flooding promotes the exchange of nutrients and organic materials, it is also threatens farms, small towns, and urban centers.

Efforts to control the Missouri River were somewhat sporadic until Congress authorized the Pick-Sloan Missouri Basin Plan in 1944, the largest and most durable alteration of the river and its flood plain. As a part of the Flood Control Act of 1944, the plan was named for William Glenn Sloan (of the U.S. Bureau of Reclamation) and Lewis Pick (Corps of Engineers). The plan called for the construction of five additional main-stem reservoirs in North and South Dakota, which would supplement the massive Fort Peck Dam in Montana. Reinforcing banks and dredging a navigation channel had also helped tame the lower reaches.

Between 1946 and 1950, the Army Corps of Engineers built levees and a floodwall in Omaha and Council Bluffs. The earthen levees stretched for 36 miles along both sides of the river. An additional mile-long concrete floodwall protected an industrial area in east Omaha.

Construction of the upstream dams, however, experienced delays due to flooding in the late 1940s and budget cutbacks in the early 1950s. The delays would prove to be costly for those who lived near the Missouri River, because in the winter months of 1951–1952, all the right ingredients for a massive spring flood were coming together in the upper basin.

Montana and the Dakotas, with one of the heaviest snow covers in the recorded history of the Great Plains. Accumulation in South Dakota started with a severe snow and ice storm on December 6. The January snowfall was abnormally heavy in Montana and twice the average depth in North Dakota. Brutal storms continued through Feb-



Previous page: Council Bluffs, April 1952—determined sandbaggers carry a few of the six million sandbags used that week.

SHSI (DES MOINES) DES MOINES REGISTER AND TRIBUNE, APRIL 20, 1962

Above: The Fort Randall Dam in South Dakota was nearly complete when the 1952 flood struck. The dam was one of several federal projects completed between the late 1940s and early 1960s to control the river. (Aerial photo by Don Ultang)



As the flood began to threaten Council Bluffs and Omaha, extensive planning and coordination to fight it relied on the skills of private citizens, military troops, and local, state, and national officials.





ruary and March. The ground was still frozen from an unseasonably wet and frigid autumn, so the normal freeze/thaw cycle never took place. River ice measured two feet in the Dakotas, and remained hard on tributary streams.

The snow pack possessed a powerful flood potential due to its high water content, especially in an area centered around Pierre, South Dakota, where 21 inches of snow equaled over seven inches of water. The Army Corps of Engineers reported that the amount of snow across the mountains and northern Great Plains exceeded that preceding the disastrous flood of 1943.

Incoming data on moisture content in the upper Missouri basin had agencies worrying about what the spring might bring. Ivory P. Rennels, meteorologist for the U.S. Geological Survey Office in Sioux City, Iowa, confirmed in March that the northern plains had received 155 percent of the average precipitation since December 1, with Pierre totaling a whopping 460 percent. "The presence of this ice in the river channels," the Geological Survey reported, "together with a very heavy snow cover over most of the eastern two thirds of the state, presents a major flood threat for the breakup period in South Dakota." All this, of course, would affect farms and cities downstream

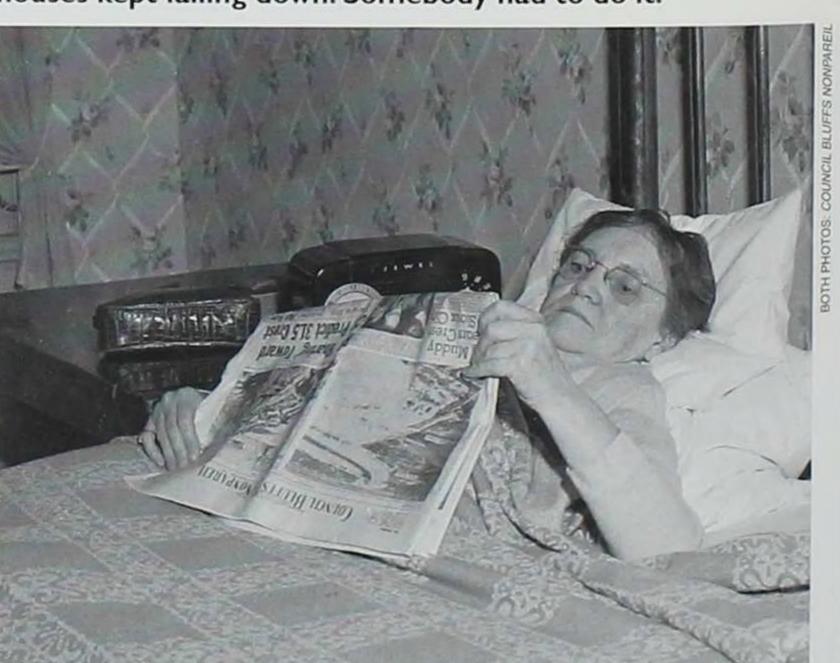
ild and variable weather continued. On March 18, a powerful blizzard inundated North Dakota, stranding 1,200 farm families. Heavy rains fell the following day over Nebraska and Iowa, and the North Fork River, a Missouri tributary, overflowed its banks. Bitter cold air flowed in behind.

Then, as unseasonable temperatures climbed, meltwater rushed into the streams and rivers that fed the Missouri. On March 29, the mercury reached 75 degrees in Council Bluffs and nearly as warm upstream. Roads once impassible from deep snow were now quagmires; airplanes were used to deliver livestock feed to ranchers. The Omaha District of the Army Corps of Engineers suggested that local municipalities along the river review flood-fighting policies, stockpile sandbags and other supplies, and take precautions to



Flood fighters in Council Bluffs and Omaha take muchneeded breaks. Above: Some of the 58 volunteers from the Winnebago and Omaha tribes relax after a 12-hour shift filling sandbags.

Below: Resting after six days of moving families, collecting clothes, and piling sandbags, 71-year-old Elizabeth McCammon checks news of the flood. "This is just pulling me apart," she said. "Sandbags at the back doors of these [west side] houses kept falling down. Somebody had to do it."



protect the levees. At Akron, Iowa, the Big Sioux rose ten feet in only three days.

In the next several days, Omaha and Council Bluffs residents read the headlines of devastation as the flood made its way downstream. Flooding on a Montana tributary forced 1,500 people to flee Havre, Montana, which now rested beneath ten feet of water. In the countryside, ranchers shot suffering cattle that were stranded. Flood relief operations soon were in place in 27 counties in North and South Dakota, and Red Cross chapters in 12 Nebraska and Iowa counties were on alert. In Sioux City, the stockyards were flooded. A state of emergency was declared, three National Guard units were mobilized, and evacuations began. Some evacuees tried to keep a healthy perspective. Harold Moes commented, "Sure we're going to lose our home, but why get excited? If it's gone, it's gone. We can be thankful we're all here. We can replace our stuff, but not ourselves." Meanwhile, downstream from Sioux City, levees collapsed under the immense pressure, flooding thousands of acres.

Forecasters were now predicting flood stages in Council Bluffs and Omaha that would exceed those of 1943, when waters rose to above 24 feet. Estimates of the flood's magnitude evolved daily as conditions changed and new data arrived. On Monday, April 7, fears of a major catastrophe rapidly escalated when local meteorologist E. F. Stapowich predicted that the river would beat the 1881 all-time record of 24.6 feet. Still, the Corps of Engineers reassured residents that the levees were designed to carry a crest of 26.5 feet of water—though at 31.5 feet, the levees would fail. Authorities warned curious onlookers to stay away from the river for their own safety. Omaha's civil defense director called up the auxiliary police force to secure the levees.

The flood stage rose another 18 inches on Wednesday, and Omaha mobilized, compiling lists of nurses and identifying extra men to help at sewage pumping stations. Experts predicted an 8-foot

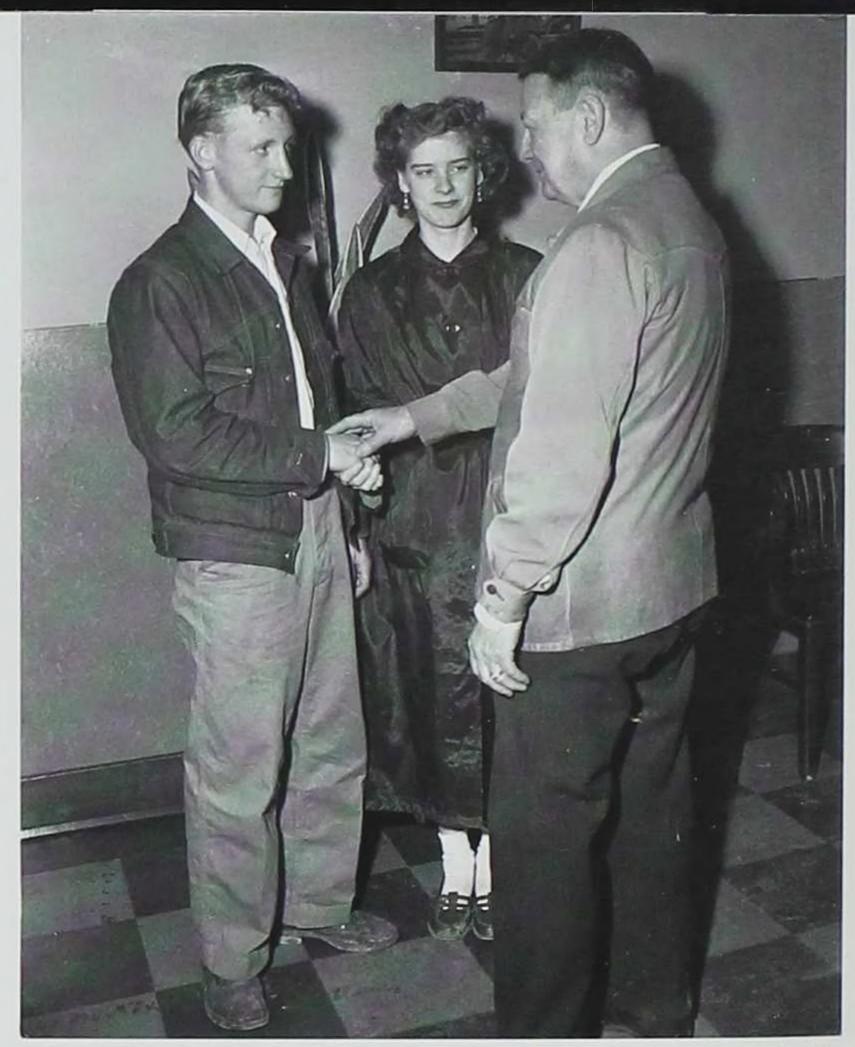


Coffee and quick naps fueled sandbaggers and other volunteers as they took on the rampaging Missouri.





John Vinson Jr. raids his evacuated home for dog food after talking Council Bluffs police into a neighborhood pass. "Ragsey's smart enough to climb up on the shed and float away—or even swim. I'm only afraid he'll starve to death," John said. "I know he'll be waiting for me when the flood is over."



Wanda Delores Edie weds James Croghan Jr. on April 18; Judge Andy Nielsen officiates. The bride couldn't retrieve her wedding dress from her evacuated home, but the county clerk stopped sandbagging to open the district court office in Council Bluffs and issue the marriage license.



Mary Lou Allred tries to comfort a distraught Janice Collier in an emergency shelter set up in Lincoln High School in Council Bluffs.



Gary Lee Meek helps evacuate the grocery store of his grandfather R. V. Thomas in Hamburg, south of Council Bluffs. Emergency vehicles share the street with the Meeks' trailer.

rise in the flood stage within the week. Coordinator E. I. Meyers asked citizens not to panic, to ignore rumors but heed official news releases. To keep sightseers from crowding the levees, only flood workers were given emergency passes. All unnecessary railroad cars holding oil or gas were removed, and owners of storage tanks were urged to fill them so they wouldn't float away. Council Bluffs Mayor James Mulqueen briefed residents about a possible evacuation, and warned that any people caught returning to their homes would be treated as looters.

As the river reached 22.4 feet on Friday, Council Bluffs and Omaha went into high gear. Two National Guard companies were called up to maintain law and order, and volunteers rushed to raise levees by two feet under the direction of Corps engineers. The Nebraska State Employment Service organized a reserve labor pool to provide a steady supply of volunteers. The U.S. military flew in 73,500 pounds of supplies for distribution from nearby Offutt Air Force Base.

While businesses boarded up windows and laid sandbags around buildings, residents of east Omaha began to evacuate. Engineers advised evacuees to fill basements with clean water to equalize pressure on the foundation. Checker, Yellow, and Safeway cab companies put 200 vehicles into service, and the Veterans of Foreign Wars pledged its help. At the Omaha Municipal Airport, United and Mid-Continent airlines prepared to move operations to Lincoln. The Red Cross readied more facilities for evacuees and brought in a mobile canteen from St. Louis. The South Omaha Bridge was closed to all non-essential vehicles. In a radio address, the Council Bluffs mayor encouraged citizens to remain stoic. "We do not want to alarm you," he said, but added, "we proclaim an emergency exists."

n Saturday, the river crept up another two feet. Residents in the lowlands of East Omaha and Carter Lake were ordered to evacuate by 6 p.m. the next day. To avoid an electrical brownout, workers sandbagged entrances and windows of Omaha's main power plant, built an east-west dike, and sealed off an older section of the plant thought to be expendable.

In Council Bluffs, many businesses were ordered to close, freeing up employees to fight the flood, and residents west of 30th Street were told to evacuate. People clogged major city streets during the exodus. Hundreds of evacuees swamped local moving and storage services; Walt's Van and Storage Company reported 100 calls the day before. Grocery stores gave

out boxes and cartons for packing. Auxiliary police and the National Guard patrolled city streets, and all highways leading into the city were closed except for flood workers and equipment. Hospitals stocked up on extra water and standby lighting. American Red Cross president E. Roland Harriman placed the entire organization in emergency status to aid flood victims. The Council Bluffs Red Cross opened shelters at Recreation Hall on Broadway for older girls and women, the Skylark Club on West Broadway for women and small children, and the Moose Hall for men and boys. As the local paper reported, "The city swung into a furious race against time Saturday to withstand the 30-foot wallop the Missouri river is expected to deliver here next Thursday."

Council Bluffs added two secondary dikes; one ran down Twenty-ninth Avenue from the river levee to the bluffs, and the other stretched from the Illinois Central Railroad bridge to the hills. Rain on Saturday made the work miserable. "The trouble is, is that you get cold and wet," one worker complained." And when you get cold and wet, you can't dry out." Adding to workers' grief were sandboils, which could undermine dikes and levees as the water pressure forced flood waters to seep through the saturated ground. One crew labored for several hours near the Ak-Sar-Ben Bridge to contain a single sandboil.

On April 13, Easter Sunday, the Missouri reached 25.5 feet, with 250,000 cubic feet per second of water rushing past the banks. Workers heightened Omaha's concrete floodwall with wooden panels called flashboard.

Council Bluffs residents received warning that electricity would be shut off at 1:00 p.m. the next day. To ensure a source of clean water, Omaha's Metropolitan Utilities District ran a 12-inch pipe across the Ak-Sar-Ben Bridge. The air force ferried a quarter-million pounds of supplies from Ohio. The Coast Guard brought in a helicopter and planned on two more. The generous outpouring of community support continued as volunteers worked 15- to 20-hour shifts, and trucking facilities helped around the clock to evacuate people and their belongings.

A full-blown evacuation was now under way as 5,000 people fled the east Omaha/Carter Lake area, and 30,000 left western and southern Council Bluffs. Some remained skeptical; one man called the evacuation "probably mass hysteria," but he still moved out of his month-old home. More shelters were established—a blessing and a challenge. "The worst part about living in a shelter [is] the noise," one person commented. Church Lyons said, "I was so nervous I forgot

to bring my clothes. When they said get out, I got. I'm so raggedy I'm ashamed. I want to go back and get my good pants." The 73-year-old passed the time recounting stories about the 1943 flood to children at the shelter. In one shelter, a reporter described a "middle-aged woman sitting staring off into space—thinking how she 'complained about ironing last Tuesday.' . . . She would give anything to be back at the ironing board."

On Monday, the river rose more than a foot. Contractors attempted to raise levees with wood cribbing filled with dirt. A confident Otto Sokol, field man in charge of levee work in Council Bluffs, said, "I'm sure we'll hold 31.5 feet, how long, I don't know." The mayor expanded the evacuation area in Council Bluffs. Trucks with loudspeakers drove through the area, which now covered three-quarters of the city, advising people to leave by dawn of the next day. "The Missouri is coming with a rip and a roar," Corp engineer Don Shingler declared. "We're in a hell of a lot of trouble."

maha and Council Bluffs were not alone in this battle with nature. On Tuesday, 87 towns in the upper basin were flooded or threatened, and the head of the Corps of Engineers ordered all federal levees to be raised wherever possible. Some 50 miles north of Council Bluffs, a reporter toured the area around Onawa, Iowa, in a powerboat. "We were seven miles inland from the Missouri River channel, but there was water as far as you could see." In Council Bluffs and Omaha, this vast body of water 12 miles wide would crash into a bottleneck only 12,000 feet wide. Experts predicted only a 50 percent chance that flood defenses would hold. Every second, 322,000 cubic feet of water pounded past levees originally designed for only 250,000.

On Wednesday President Truman flew to Offutt Air Force base in Omaha for a conference with federal, state, and local officials. He later flew over the devastated area and officially declared Council Bluffs and Omaha a disaster area. The weather bureau abandoned its pinpoint prediction of a crest at 9 p.m. the next night; the enormous amount of water made accurate predictions impossible for Omaha and Council Bluffs. In evacuated areas, streets were empty and quiet except for truck convoys carrying workers and materials to the levees. One Council Bluffs resident, Lyman Giles, had refused to evacuate his home near the river and would wait out the flood with his dog. "I'm just bullheaded, I guess. That's the only reason."

The day wore on, and the Missouri continued its

assault. Water oozed through the saturated earthen levees, and the concrete portion of Omaha's floodwall was now covered. Bulldozers and giant earth-rollers compacted more dirt onto the original dike. Floodlights lit up the dikes on both sides of the river as workers sandbagged through the night. "I hate to leave it," a Creighton University student volunteer remarked. "It would be good to stand here behind all this work and watch the river take a beating." The New York Times called the effort "the battle of the inch."

On Thursday, the river gauge read 30 feet, just inches from the predicted crest. Water surged at 395,000 cubic feet per second, exerting extreme pressure on the levees. The bridges were essentially closed. Thousands of workers kept constant watch for weak areas on the dike, and the civil air patrol flew all day along over the river. If a levee failed, residents in Omaha would be alerted by a siren during the day or flares in the night; in Council Bluffs, by bullhorns from circling planes, by civil defense air-raid sirens, more sirens at the railroad roundhouses and on fire trucks, and even by church bells.

Sandboils continued to frustrate workers. "We threw a dozen bags of sand in there," said a worker at one spot, "and the river threw them right back at us. Finally we made some of them stick and then we dumped two loads of dirt in to squelch the threat." The director of the labor pool pleaded for more volunteers. "We particularly need new blood," he said. "A lot of the volunteers are white-collar people who aren't used to this work, and they are pretty near exhaustion."

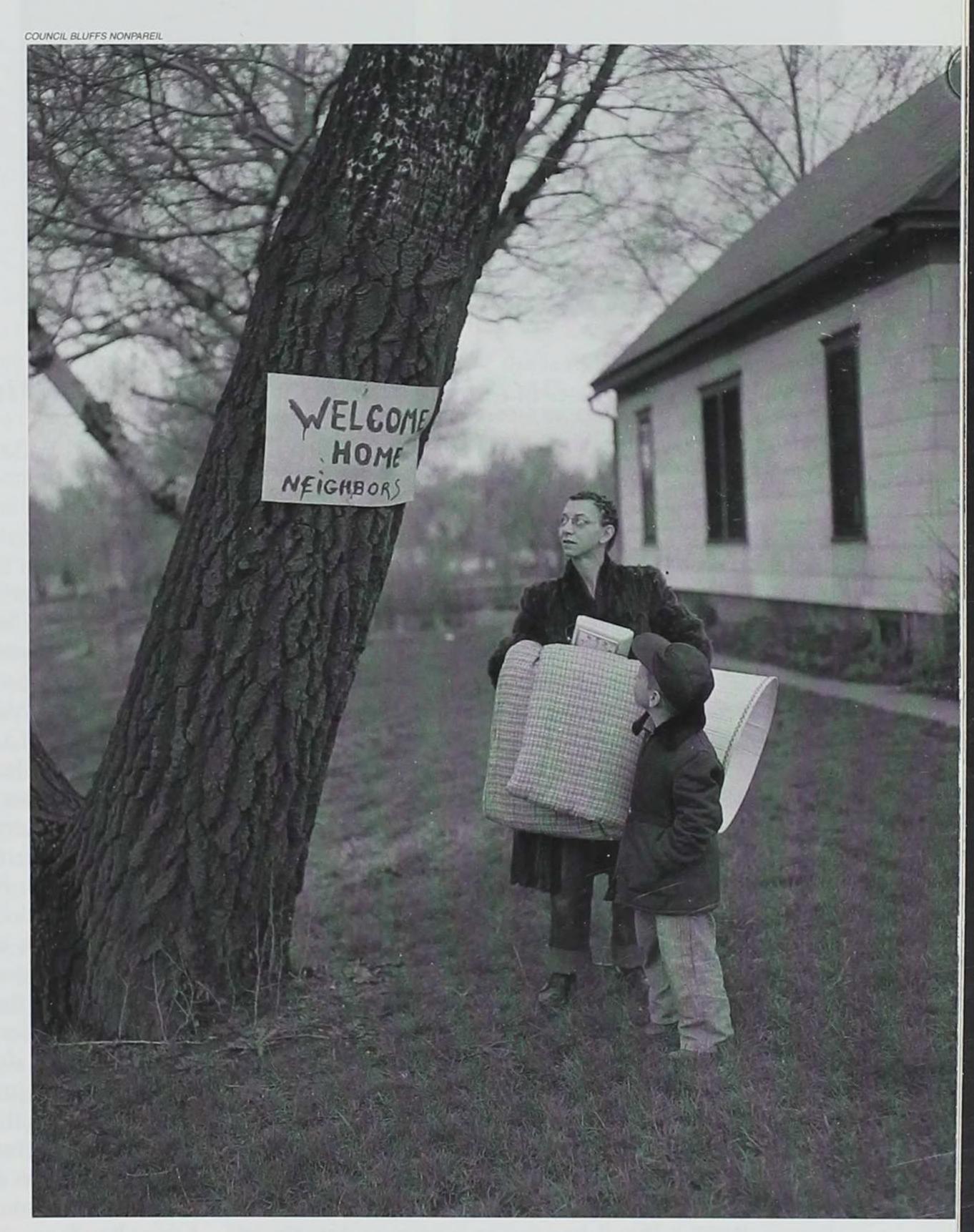
The crest arrived on Friday, April 18, at the then record height of 30.24 feet. Nearly 400,000 cubic feet per second—a record that stands to this day by a substantial margin—surged along for hours as the crest passed.

At Omaha's Municipal Airport, 500 volunteers passed sandbags down a human chain a hundred yards long to reinforce a levee holding back 15 feet of water from the runways. That evening a sewer line broke at Grace and Thirteenth streets in Omaha. As water shot several feet into the air, 120 feet of pavement blew apart. Hundreds of men dumped rocks and sandbags into the opening, but without success. Barges delivered steel beams to the sewer's outlet in the river, where engineers used them to seal the opening. The sewer break flooded two square miles of east Omaha and took eight hours to contain.

By the next day, the river had dropped more than two feet. Three days later evacuees received the green light to return to their homes. Lewis Pick headed back to his Corps of Engineers office in Washington, D.C., confident that the cities were now safe. The citizens had shown great spirit and teamwork, he said, "without parallel in my experience." Fifty thousand people had come together and successfully fought back the water. According to historian Robert Kelley Schneiders, "The Corps estimated that the Omaha and Council Bluffs levee system prevented approximately \$62.5 million in damages"—\$507 million in today's dollars.

his triumph should not be viewed lightly. Western Iowa suffered \$43 million in damages, Schneider writes. The agricultural sector lost more than a third of that, through damages to farms and machinery and reduction in potential earnings. Thanks to advanced warning and monumental work, the cities of Council Bluffs and Omaha withstood the last great natural Missouri River flood. The upstream system of reservoirs and levees has since controlled seasonal flooding, but it isn't perfect, as evidenced by the Great Flood of 2011. During springs of exceptionally high runoff, there must be adequate storage space in the reservoirs to hold back the water from large-scale flooding downstream. But as long as the reservoirs exist, it is unlikely that a flood with such great volume as the one that occurred in 1952 will find its way through Council Bluffs and Omaha in the near future. *

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Margaret Pearsall and her son, Bryce, read a welcome-home sign posted by neighbor Henry Vanderziel. The Pearsalls returned home five days after the crest hit Council Bluffs.

NOTE ON SOURCES

The Council Bluffs Nonpareil and Omaha World-Herald in April 1952 were essential sources. Articles also appeared in the New York Times, April 12–19, 1952. Secondary sources include John Neihardt, The River and I (Lincoln: University of Nebraska Press, 1968); Robert Kelley Schneiders, Unruly River: Two Centuries of Change Along the Missouri River (Lawrence: University Press of Kansas, 1999); B. F. Sylvester, "Omaha's Flood, 1952," Nebraska History 35:1 (1954); U.S. Army, Corps of Engineers, Office of the District Engineer, Omaha District, Preliminary Report on the Flood of April 1952 in the Missouri River Basin (Omaha: Corps of Engineers District Office, 1952); and U.S. Department of the Interior, Geological Survey, Floods of April 1952 in the Missouri River Basin (U.S.G.S. Water-Supply Paper, 1260-B) (Washington, DC: U.S. Government Printing Office, 1975). Annotations are housed in the lowa Heritage Illustrated production files (SHSI-lowa City).