

BAILEY'S DAM

A.D. 1864

Porter's fleet passing through Colonel Bailey's Dam above Alexandria, May 1864. From Frank Leslie's Illustrated Newspaper, July 16, 1864. Courtesy of the State Library of Louisiana.

Sometimes, an archaeological site reveals how a powerful idea was put into action. One example in central Louisiana is a Civil War site called Bailey's Dam. Low water in the Red River at Alexandria trapped the Union naval squadron above rocky rapids. At first, all hope of an escape seemed lost.

Then, Union officer Joseph Bailey designed a dam to raise the level of the river, using materials that were nearby. Remarkably, the dam worked, and the boats passed over the rapids and on to safety. The dam's story is one of teamwork, courage and creativity.



Time and Place

Union soldiers built Bailey's Dam in Rapides Parish, near the city of Alexandria. The dam is on the Red River, which flows just east of the city. The Red River runs for over 1,200 miles from its source in Texas, giving a route across Louisiana. In places, the bottom of the river near Alexandria has rocky outcrops. During the Civil War, the rocks were a big hazard for boats.

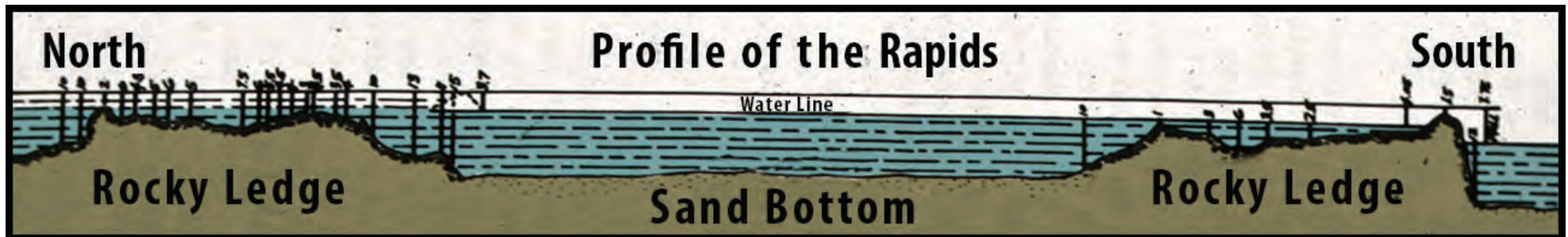
The Red River played a relatively minor role during the Civil War, but it was the route of the Union's failed Red River Campaign. The goal of the campaign was to go from the Mississippi River to Shreveport, but it never got that far. After the Battle of Mansfield, the Union army and navy retreated. As they headed south, the water level in the Red River dropped. The river was so low that the Union fleet could not pass over the rocks at Alexandria. Bailey's Dam raised the water level in the Red River, letting Union boats escape.

Bailey's Dam was actually a series of small dams that worked together. The design was very unusual, and the dam played a key role in history. For these reasons, it was added to the National Register of Historic Places in 1976. Archaeologists studied the remains of the dam in the 1980s. They learned details about the construction that were not in historical drawings.



(Above) Map showing the location and layout of Bailey's Dam. The lower (main) dam had two parts and the upper dam had three parts. All these together are Bailey's Dam.

(Below) Illustration of the rapids. Sandstone and siltstone outcrops on the river's floor formed the rapids near Alexandria. These outcrops were higher than other parts of the river bottom. They caused the river to flow quickly when it was low and also blocked boats from traveling over them. The water flowed from the north to the south. Detail from Map and Profile of the Red River Falls, Board of State Engineers, 1874. Courtesy of the State Library of Louisiana.



On to Battle

Major General Nathaniel P. Banks, of the Union army, led the Red River Campaign, which started in March of 1864. Rear Admiral David D. Porter led the campaign's navy. The official purpose of the mission was to gain control of Shreveport. This move would cut a link between Texas and the rest of the Confederacy and prevent the movement of men and supplies between them. It would also put valuable cotton that was stored in barns along the river in Union hands.

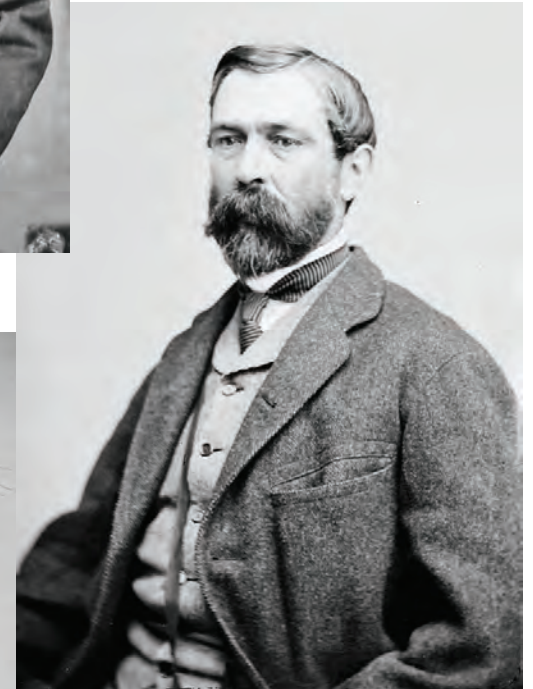
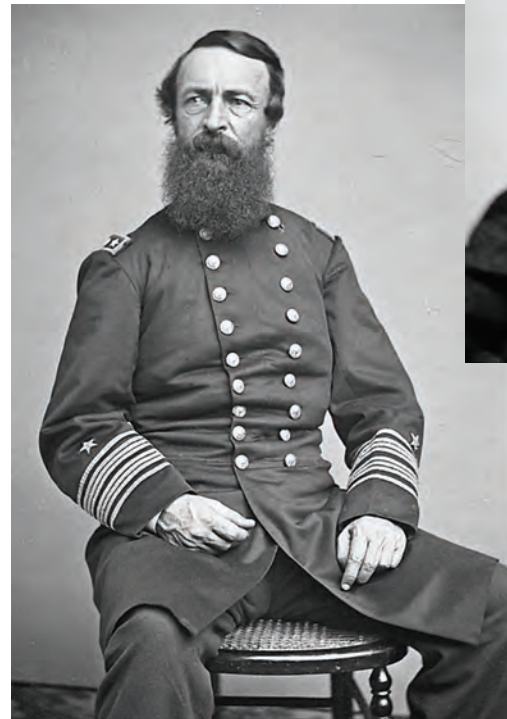
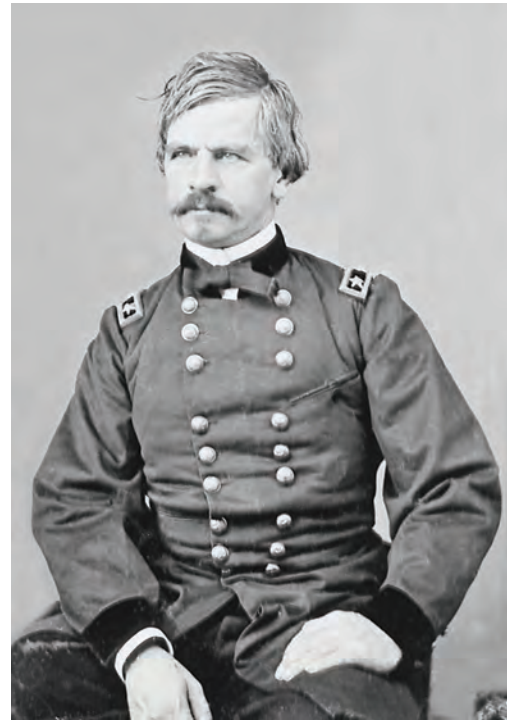
Admiral Porter was worried about the mission from the start. First, he was very critical of Banks' ability to lead. Banks had lost key battles in Virginia, which harmed his reputation. Second, Porter had noted that the Red River was too low, and he feared the mission was in danger. Despite his concerns, Porter's warning was dismissed. Banks received his orders, and the campaign began.

In 1863, Major General Banks had captured Port Hudson. This gave the Union access to the Mississippi and Red rivers. The first official act of the Red River Campaign was at Fort DeRussy, in Avoyelles Parish, on March 14, 1864. Union forces attacked the fort and quickly captured it. The next goal was to seize the city of Alexandria.

(Top) Union Major General Nathaniel P. Banks. Courtesy of the National Archives 111-BA-1528.

(Middle) Confederate Major General Richard Taylor. Courtesy of the Library of Congress, LC-B813-2113 B [P&P].

(Bottom) Union Rear Admiral David D. Porter. Courtesy of the National Archives NWDNS-111-B-1889.



The Union forces were encouraged by the victory and by the number of men in the combined army and navy. Confederate troops were scarce in central Louisiana. Major General Richard Taylor, who was in command there, needed backup. Most of his men had been sent away to Arkansas as reinforcements. He was down to only 6,000 soldiers. The Union, on the other hand, had nearly 30,000 men and 90 armed vessels.

Alexandria soon fell under Union control. Here, Union forces saw that the Red River was going to be trouble. The river dropped so low that the gunboats could not make it upriver over the rapids. The water level rose again, but Porter knew that the low water was not a good sign. Worse, Taylor knew he could defeat the Union army now if he had more soldiers. He anxiously awaited backup from Texas.

Meanwhile, Union reinforcements arrived in Alexandria. Even though Banks and Porter had to leave men and boats behind to secure the city, they had a large force. By the time Union troops set out for their next target, Shreveport, Taylor's extra men also had arrived. Now he had nearly 11,000 soldiers facing Banks' 32,500 men.

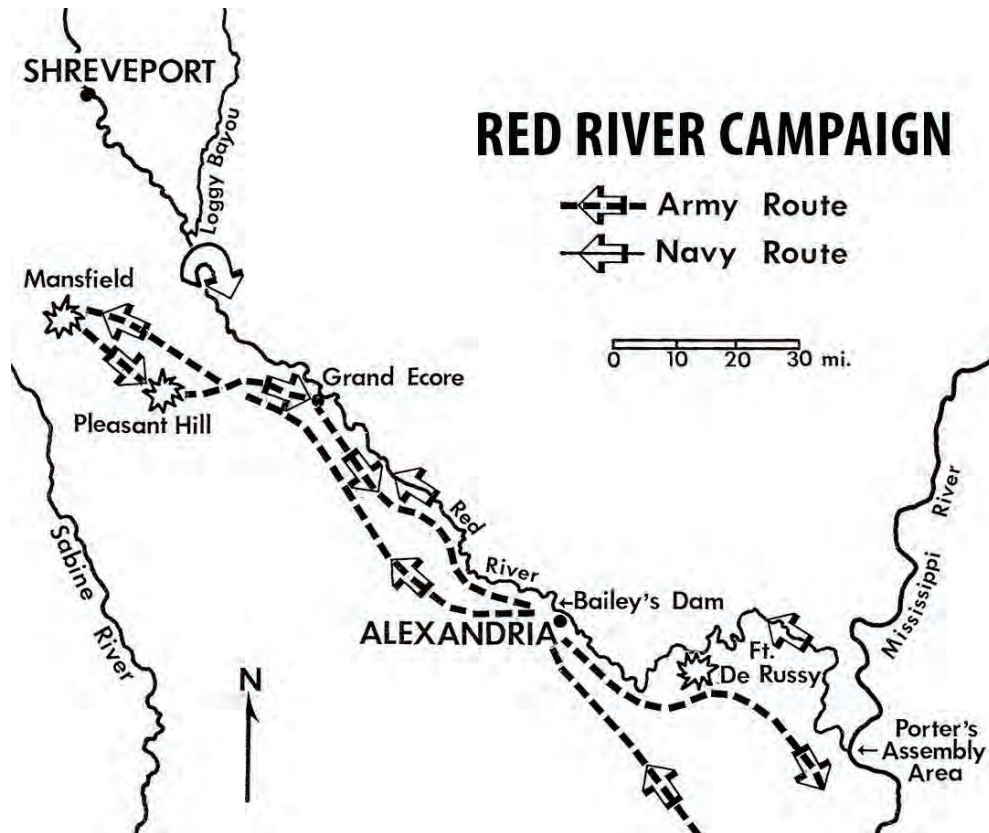
(Below) Banks's army, in the advance on Shreveport, crossing Cane River, March 31. From Frank Leslie's Illustrated Newspaper, May 7, 1864, p. 108. Courtesy of the Library of Congress. LC-USZ62-111176.



Retreat!

When Banks and Porter left Alexandria and started toward Shreveport, Porter took only 12 gunboats and 30 transports. The river was still low in spots, which made travel slow. Banks led his troops along a narrow road far from the river. This meant that Banks and Porter could not support each other, which was a serious tactical error.

Banks' men were strung out for more than 20 miles along the road to Shreveport. Awaiting him near Mansfield on April 8 was Taylor's smaller, but more concentrated, army. Taylor seized his chance and attacked. Banks' soldiers, tired and panicked, fled back down the road chased by Taylor's cavalry. This Confederate victory marked the end of the Union advance toward Shreveport.



(Below) Rebel attack on our gun-boats in the Red River. Harper's Weekly May 14, 1864. Courtesy of the Library of Congress. LC-USZ62-117668.



The next day, Banks regrouped his army and repulsed Taylor's advance at Pleasant Hill, allowing Union forces to withdraw to Grand Ecore and rejoin the navy. Taylor's men withdrew, and Banks ordered a retreat to Grand Ecore. Then, both the Union army and navy headed to Alexandria. Along the way, Taylor's men fired on Banks' army and ambushed Porter's gunboats. The low waters of the Red River made it hard for the Union fleet to escape. The largest gunboat, the *Eastport*, hit a mine, and it sank. The Union was able to re-float it, but could not tow it to safety. The Union navy blew up the *Eastport* to keep the Confederates from capturing it.

Back in Alexandria, Porter's worst fears came true. Ten of his gunboats became trapped above the rapids. Stuck in less than 4 feet of water, they could not move. The lightest boats in the fleet would need at least 7 feet of water to pass over the rapids. Things seemed hopeless. Supplies in Alexandria were low. The expedition was under attack by Confederates firing from nearby forests. Worse still, many of Banks' men were exhausted and had lost faith in his ability to lead them. Banks and Porter desperately needed a plan to get the boats moving again.

(Below) Repulse of the Rebels at Pleasant Hill, Louisiana. From Harper's Weekly, May 7, 1864. Courtesy of Edwin Adams Davis.



A Lumberman's Solution

Lieutenant Colonel Joseph Bailey, one of Banks' engineers, had an idea for getting past the rapids. He suggested building a dam from any materials they could find. Some of the men laughed at Bailey. After all, Bailey was not formally trained as an engineer. How was he to build a dam from scratch? However, Bailey had spent 20 years working as a lumberman on the frontier in Wisconsin. There, he mastered the craft of dam and bridge building.

Without any other options, Banks gave Bailey command of his men. Nearly 3,000 soldiers began cutting down trees. Others searched for the materials that Bailey needed. Some went into the city and began stripping buildings of their wood and bricks. They worked day and night. Soldiers building the dam dodged enemy fire. Bailey was steadfast, though. He had a clear plan in mind and tirelessly directed the soldiers.



(Left) Joseph Bailey proposed a plan to build a dam to raise the river level. No one knew if the plan would succeed. The Confederate snipers hiding in the woods even watched in amusement. Tales about the dam traveled fast, no doubt an unusual piece of news in war-time. The dam even caught the interest of the citizens of Alexandria. Courtesy of the National Archives 111-BA-188.

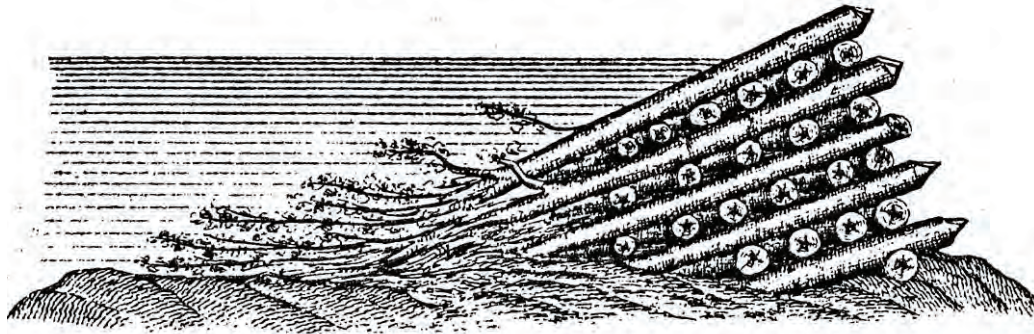
(Top right) Building the Red River Dam. Courtesy of the Library of Congress LC-DIG-ppmsca-34043.

(Bottom right) Building the Red River Dam. Courtesy of the Library of Congress LC-DIG-ppmsca-34042.



Union forces built the main dam near the river's lower rapids. The dam had three parts that worked as a whole. These were 1) a tree dam on the east bank of the river, 2) a series of cribs (boxes) on the west bank, and 3) a section in the middle made of four sunken coal barges anchored to the dams. The barges filled a 150-foot gap between the tree dam and the crib dam. Together, these parts forced water into a central, rapidly flowing channel.

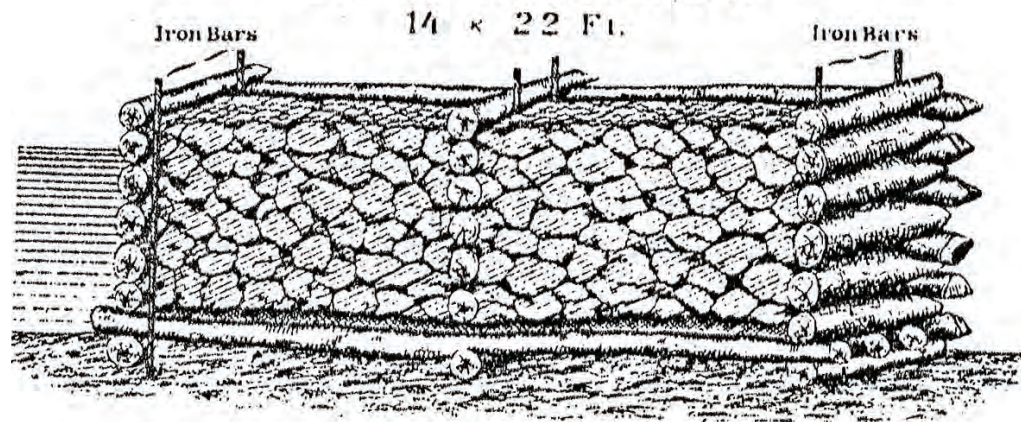
SECTION OF TREE-DAM.



While 28 military units helped build the dam, the majority of the work was done by three crews. The 29th Maine Volunteer Infantry Regiment worked on the east side of the river, closest to Pineville. Freed slaves in the 97th Regiment and the 99th Regiment of the United States Colored Troops (USCT) Infantry worked on the Alexandria side of the river.

On the east side of the river, a Maine regiment cut down trees from nearby forests to build the tree dam. Like the cribs, soldiers weighed the tree dam down with stones and bricks. The diagram shows that the trees were placed with their tops going upstream and the trunks pointing downstream. During fieldwork, archaeologists found that the actual direction of the trees was opposite from that shown in the drawing. Still, the picture gives a good overview of a tree dam. Sketch of tree dam, which accompanied Colonel Bailey's report (U.S. War Department 1891-1895: Plate 53-3).

CRIB OF STONE.



Two USCT regiments were instrumental in building the dam on the west bank of the river. This part was made of a row of boxes known as "cribs of stone." The picture shows that the boxes were filled with stone and held in place with iron bars. Historical accounts say that soldiers put bricks, stone and machinery in the dams. However, archaeologists found that they mainly used sand and mud in the crib dam and only placed brick and stone on the top. Sketch of crib dam, which accompanied Colonel Bailey's report (U.S. War Department 1891-1895: Plate 53-3).

Success!

Union soldiers started building the main dam on April 30, 1864. By May 6, the water had risen 4 feet. By May 8, the water had risen up 5 feet 4 inches. The dam was working! Hundreds gathered from the city to watch the spectacle. Four of the lighter vessels crossed the upper rapids at this time, and waited behind the dam. Yet, as the water level behind the dam rose, so too did the pressure on it.

The next day, the dam burst from the strain. Two of the four barges forming the middle section of the dam moved out of place, opening a hole. Water began gushing through. Seizing the opportunity, Porter ordered one of the four waiting boats to go through the

gap. Ten thousand spectators watched the gunboat *Lexington* steer toward the opening in the dam. The water was running wildly through the gap. Porter feared the *Lexington* would be destroyed. The gunboat struggled to maintain control.

To everyone's amazement, the ship made it through the dam and past the lower rapids. Onlookers cheered in awe. Bailey had succeeded! The three other waiting vessels also went through the gap before the water got too low. After more dam building at the upper rapids, the water rose again. The largest remaining gunboat, *Mound City*, ran the gap in the main dam on May 12. By the next day, all the gunboats had passed over the rapids.

Porter's fleet passing the dam at Alexandria. From Harper's Pictorial History of the Civil War, c1894. Courtesy of the Library of Congress LC-USZ62-39604.



Union soldiers left Alexandria exhausted and beaten. Yet, they knew they had also done something amazing. Congress honored Bailey with a gold medal and a promotion for his service. Porter personally gave Bailey a gold inlaid sword. The other naval officers presented Bailey with a silver punch bowl. Despite his recognition, however, Bailey was not the only hero of the Red River Campaign. The fleet would have surely been lost without the teamwork and courage of all of the men of the expedition.

(Below) General Joseph Bailey's silver punch bowl and sword. Photo from the Wisconsin Historical Society, WHS-4242.

