

# 106 SUCCESS STORY

## Army Corps Manages Flood Protection Along Mississippi River

Birds Point/New Madrid Floodway, Missouri



“The Mississippi River will always have its own way; no engineering skill can persuade it to do otherwise...”

— MARK TWAIN



### THE STORY

Following a devastating flood in 1927 in the lower Mississippi Valley, the 1928 Federal Flood Control Act authorized the Mississippi River & Tributaries (MR&T) program, a comprehensive system of levees, floodways, and channel improvements to provide flood protection and maintain a navigable Mississippi River. The system is managed by the U.S. Army Corps of Engineers (Corps). A critical component of the system is the Birds Point-New Madrid Floodway, an arrangement of inner and outer levees across 136,000 acres of privately owned floodplain in southeast Missouri below the confluence of the Mississippi and Ohio rivers. This rich floodplain contains numerous prehistoric archaeological sites important to several Indian tribes. During floods, the river is kept in its channel by a system of levees along its banks. In extreme situations to reduce flooding upriver, the Corps can break the Floodway's levees with explosives and allow the floodwaters to flow across it as a rushing sheet of water, where it rejoins the Mississippi River at New Madrid and continues flowing south toward the Gulf of Mexico.

### THE PROJECT

The floodway's levees were first intentionally breached during the 1937 record flooding on the Mississippi River. It was activated again in 2011 during the 400-year flood event in the Mississippi and Ohio river valleys. Under a declaration of emergency, the Corps dynamited gaps in the levees, and the floodwaters flowed across the farmland in the floodplain. Approximately 1,200 people live within the borders of the floodway.

### THE 106 PROCESS

The Corps is responsible for conducting the Section 106 process under the National Historic Preservation Act and in the mid-1990s determined that, if it were to use the floodway again, the scouring effects of the rushing water could have adverse effects on historic properties within the floodway. Section 106 requires that federal agencies identify historic properties and assess the effects of the projects they carry out, fund, or permit on those properties. Federal agencies also are required to consult with parties that have an interest in the fate of the property when adverse effects are likely to ensue.

Photos: Above, the New Madrid Floodway, inundated by the breaching of the levees, contains buildings amid the farm fields. (photo courtesy State of Missouri); Right, This photo shows the edge of the inflow section of the levee which was breached May 2, 2011. Water is flowing into the floodway area. (photo courtesy U.S. Army Corps of Engineers); With a rise in the river forecast, Corps crews construct a temporary loop levee around a scour hole at the Birds Point-New Madrid Floodway middle inflow/outflow crevasse June 22, 2011, to prevent additional water from entering the floodway. (photo courtesy U.S. Army Corps of Engineers)

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Photo: The unprecedented flooding in 1927 resulted in the project to alleviate future major floods. This image shows the train carrying Vice President Charles G. Dawes and Secretary of Commerce Herbert Hoover after it wrecked near Heads, Miss., on the Yazoo & Mississippi Valley railroad. The engine went into 40 feet of water, killing the engineer, during the flooding in the Mississippi Delta on July 29, 1927. The relief efforts Hoover led on behalf of the federal government resulted in his being catapulted into national prominence and assisted his successful bid to be elected president in 1928. (photo courtesy *The Commercial Appeal* files/ Harmon Barlow Collection)

The Corps entered into a Programmatic Agreement in 1996 with the Advisory Council on Historic Preservation (ACHP) and Missouri State Historic Preservation Officer (SHPO) for a program of archaeological survey and select data recovery at those significant archaeological sites most likely to be adversely affected by scouring.

The results of the activation of the floodway in 2011 caused the Corps to revisit the existing Programmatic Agreement (PA). The Corps, ACHP, and SHPO determined the earlier PA should be revised to include the maintenance actions needed to keep the floodway ready for use and to enhance Corps consultation with Indian tribes about the ensuing effects on properties important to them.

In 2012, the Corps, ACHP, SHPO, and six federally recognized Indian tribes signed the revised Birds Point/New Madrid Floodway PA. Working with the consulting parties, the Corps undertook a full damage assessment of the Floodway using Light Detection and Ranging imagery analysis and on-the-ground inspection. The revised PA contains stipulations for identification, evaluation, and treatment of historic properties encountered in the floodway. It also contains detailed procedures for treatment of human remains, artifact curation, inspection of the floodway after it is used, and involving the consulting parties in Corps activities at the floodway. The Corps also committed to the restoration of any significant site damaged by floodwater scouring.

**Consulting Parties:**

- U.S. Army Corps of Engineers
- ACHP
- Missouri State Historic Preservation Officer
- Osage Nation of Oklahoma
- Eastern Shawnee Tribe of Oklahoma
- Delaware Nation
- Quapaw Tribe of Oklahoma
- Thlopthlocco Tribal Town
- Absentee Shawnee Tribe

**THE SUCCESS**

The new Birds Point/New Madrid Floodway PA was the product of an intensive program of tribal consultation involving numerous Indian tribes. It resulted in the protection of significant traditional cultural properties on private property, and committed the Corps to a long-term program of damage assessment and site restoration in the event of future activations of the floodway. Pre-activation investigations conducted with tribal consultation before the emergency operation of the floodway will preserve significant sites with research potential, save time and money during and after floodway activation, and allow for faster levee restoration and reduced flood damage. Based on consultation, site restoration will include the reburial of exposed human remains, the placement of special fabric over the scoured areas, and the replacement of soil to a depth sufficient to allow future farming while protecting archaeological sites.

Through Section 106 consultation, the Corps was able to address the historic preservation concerns of the Indian tribes while continuing to provide flood protection to the four million people living within the 35,000 square-mile MR&T project area.

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For more about Section 106 and the ACHP go to [www.achp.gov](http://www.achp.gov)



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