

Appendix D

Part 1

St. Johns Bayou and New Madrid Floodway, Missouri Project History and Applicable Congressional Authorizations



**U.S. Army Corps of Engineers
Memphis District**

St. Johns Bayou and New Madrid Floodway, Missouri Project History and Applicable Congressional Authorizations

Prior to 1928

Large-scale flood protection and drainage enhancement within the project area began in 1847 when a Swampland Convention was held in Bloomfield, Missouri. Two years later, the New Madrid – Stoddard Canal Company was chartered but failed to progress. The Swamp Land Acts of 1849 and 1850 gave the states possession of unsold swamp and overflow lands bordering the Mississippi River. That Act provided that proceeds from the sale of the lands would be used to construct levees and drainage ditches. Congress designated 3,346,936 acres of unsold land in Missouri as Swamp Land and gave it to the state. An area-wide development plan lasted two years before the State of Missouri gave proceeds from the sale of these lands to the counties.

Mississippi County was a prime beneficiary of these land sales and soon had a large internal improvements fund. After the major flood of 1858, work began on the construction of a levee. Starting from Birds Point, Missouri, the county had constructed 30 miles of levee by the time the Civil War started. Agricultural development soon followed and attention turned to drainage in the early 1900s. Drainage ditches replaced the majority of natural systems and new drainage ways were constructed. Levee construction also continued. Prior to 1927, local interests constructed the New Madrid-Sikeston Ridge Levee for protection of the southwestern part of the project area from Mississippi River floods.

Flood Control Act of 1928

Following the Flood of 1927, Congress passed the Flood Control Act of 1928 that authorized the Mississippi River and Tributaries Project (MR&T). The MR&T provides a, “project for flood control of the Mississippi River in its alluvial valley and for its improvement from Head of Passes to Cape Girardeau, Missouri.”

The MR&T Project has four major elements: (1) levees and floodwalls to contain floods; (2) floodways to pass excess flows past critical Mississippi River reaches; (3) channel improvement and stabilization to provide efficient navigation; and (4) tributary basin improvements.

The Mississippi River Levee feature began construction in 1928 and continues today. Within the project area, the 1928 Flood Control Act authorized the raising and enlarging of the New Madrid-Sikeston Ridge Levee to provide protection against the project design flood¹. A 4,200-foot gap was left in the levee to provide an outlet for the St. Johns Bayou Basin. Although this gap provided an outlet, it also permitted Mississippi River backwater to inundate the lower St. Johns Bayou Basin.

¹ Although there is no assigned flood frequency, the project design flood has a peak discharge of 2,360,000 cfs at Cairo, Illinois. The project design flood is the most probable chance of producing the greatest discharge on the lower Mississippi River (Mississippi River Commission, 2009).

In addition to levees, the MR&T Project included the Birds Point-New Madrid Floodway. Completed in 1933, the Birds Point-New Madrid Floodway was designed to lower flood stages upstream and adjacent to the Floodway during major flood events. The 56-mile-long frontline levee had existed prior to the 1927 flood. Congress also adopted The Jadwin Plan, named for then Chief of Engineers Edgar Jadwin, which included two principal innovations: floodways to divert peak flows and reduce stages in the main channel; and a systems design approach based on a “project flood.” The Jadwin Plan states:

“The serious problem begins at Cairo at the confluence of the Ohio and the Mississippi. From here to New Madrid the main levee on the west bank chokes the river unduly and should be set back sufficiently to lower the head of water at Cairo by 6 feet in an extreme flood. The existing riverbank levee will be retained but lowered 5 feet. The Floodway between the new and the old levees will be capable of cultivation at all times excepting in floods greater than that of 1922.”

A 36-mile-long setback levee was constructed to a grade equivalent to 60.0 feet on the Cairo gage as planned. The frontline levee was retained and a section of it was to be degraded to an elevation equivalent to 55.0 feet on the Cairo gage; the remainder of the frontline levee would remain at an equivalent height of 57.0 feet on the Cairo Gage. The plan of operation was one of natural overtopping of the degraded section at an equivalent stage of 55.0 feet on the Cairo gage. Two gaps in the levee system were left, one at the St. Johns Bayou (4,200 feet in length) outlet and one at the Mud Ditch (1,500 feet in length) outlet. The purpose of these gaps was to provide drainage for the St. Johns Bayou Basin via St. Johns Bayou and the New Madrid Floodway via Mud Ditch. Although these gaps provided outlets for interior drainage, they also resulted in Mississippi River **backwater flooding** that inundated both basins.

Flood Control Act of 1946

The Flood Control Act of 1946 authorized the closure of the 4,200-foot gap in the St. Johns Bayou Basin. A levee was constructed across the gap and six 10-foot by 10-foot reinforced concrete culverts controlled by six power-operated lift gates at the outlet end were constructed across St. Johns Bayou Basin. Construction was completed in 1953.

Flood Control Act of 1954

The Flood Control Act of 1954 amended the Birds Point – New Madrid Floodway Project by authorizing modifications to the floodway in accordance with House Document Numbered 183 Eighty-third Congress. The House Document recommended the “construction of a new levee to project grade extending about 1,800 feet from the fuseplug section of the frontline levee across the existing gap therein to the setback levee, ... and the construction of a floodgate for the release of interior drainage.” (H.D. 183, 83D Congress, 1st Session).

The authorization was based on the Chief of Engineers' report dated 11 July 1952 that recommended closing the existing gap at the lower end of the New Madrid Floodway. The scope of the report was as follows:

2. *Scope* – This report of survey scope presents a plan for improved flood protection in the New Madrid Floodway, Missouri to be obtained by the closure of the existing gap in the frontline levee and construction of drainage improvements. Surveys consisting of cross sections, profiles, and borings at the closure site were utilized. Recent aerial photographs were used to delineate cultural development. The related office studies cover the physiographic, hydraulic, hydrologic, and other physical and economic aspects of the basin. Local drainage officials, the United States Fish and Wildlife Service, the United States Soil Conservation Service, and the Missouri Conservation Commission have been informed of the plan of improvement proposed herein.

The report concluded the following:

33. *Conclusion* – Present investigations of measures desired by local interests from the improvement of flood protection in the New Madrid Floodway lead to the conclusion that the continued availability of the floodway is necessary for the protection of Cairo, Ill., and no modification of the existing project for flood control [Mississippi River and Tributaries] relative to such operation is warranted at this time. The closure of the existing gap at the lower end of the floodway and construction of a floodgate to benefit 48,000 acres against overflow of floodway lands by backwater from Mississippi River floods is justified for construction by the United States at an estimated first cost of \$1,556,000 (September 1951), provided local interests furnish required cooperation.

The report concluded that the Floodway could be closed without jeopardizing the operation of the Birds Point-New Madrid Floodway during catastrophic floods. The amendment did not include plans for the construction of a pumping station; therefore, a **sump area** would be needed when the floodgate was closed due to high water on the Mississippi River. The **sump area** would have been comprised of approximately 26,000 acres of “unimproved land” in the backwater area. This was the majority of the land for which flowage rights had not been purchased. Because of the necessity of the large **sump area** and recently observed **impounded interior runoff** conditions on the adjacent St. Johns Bayou Basin with the recently completed flood control structure, the plan did not receive local support and local interests requested that construction be deferred until a pumping plant was authorized.

Flood Control Act of 1965

Further modification to the floodway was authorized by the Flood Control Act of October 1965, substantially as recommended by the report of the Chief of Engineers published in House Document 308, 88th Congress. This document authorized the raising of the frontline levee to give more protection to the floodway area, by

“raising the levees forming the east boundary of the Birds Point – New Madrid Floodway and modifying operation thereof to include breaching of the fuse plug levee during floods which reach 58 feet and threaten to exceed 60 feet at Cairo.”

Whereas the plan authorized by the 1928 Flood Control Act provided for operation of the floodway by overtopping a fuse plug levee when the river stage at Cairo reached 55 feet, the modified plan authorized by the 1965 Flood Control Act provided for artificial breaching of the fuse plug levee during floods which reach 58 feet and threaten to exceed 60 feet at Cairo. As a result of the modified plan of operation, modified flowage easements (based on artificial degradation of portions of the frontline levee) were purchased over lands above 300-foot National Geodetic Vertical Datum (NGVD). Original flowage easements had already been purchased for natural overtopping of the Floodway. The second purchase of flowage easements, modified flowage easements, was necessitated by the change in operation to artificial crevassing.

Congressional Resolutions, adopted 9 April 1965 and 2 February 1966

A report was prepared in 1974 in response to Congressional resolutions adopted 9 April 1965 and 2 February 1966 that stated,

“RESOLVED BY THE COMMITTEE ON PUBLIC WORKS OF THE UNITED STATES SENATE, That the Chief of Engineers, United States Army, be, and is hereby requested to review the report on the New Madrid Floodway, Missouri, published as House Document Numbered 183, 83rd Congress, and other pertinent reports, with a view in determining whether any modifications of the recommendations contained therein are advisable at this time.”

“RESOLVED BY THE COMMITTEE ON PUBLIC WORKS OF THE UNITED STATES SENATE, That the Chief of Engineers of the United States Army is hereby requested to review the report on the Mississippi River and Tributaries Project, published as House Document Numbered 308, Eighty-eighth Congress, and other pertinent reports, with a view in determining the advisability of modifying the recommendations contained therein, with particular reference to providing additional improvements, including pumping plants, in the St. Johns Bayou Basin, Missouri, in the interest of flood control and interior drainage.”

The Report of the Chief of Engineers, Department of the Army, dated 26 September 1975 included an Environmental Impact Statement titled *St. Johns Bayou and New Madrid Floodway Missouri* filed with the Council on Environmental Quality on 2 June 1976. The report recommended authorization and construction of the following:

1. A 2,000 cubic-feet per second (cfs) pumping station in conjunction with 64.2 miles of channel improvements in the St. Johns Bayou Basin area.

2. Channel cleanout on 5.8 miles of streams in Sikeston, Missouri.
3. Construction of a 500 cfs pumping station in the lower New Madrid Floodway.
4. Construction of a 500 cfs pumping station, an outlet structure with two power operated lift-gates at the outlet end, channel improvement on 11.0 miles of streams, and construction of 4.0 miles of new channel in the St. James Bayou area of the New Madrid Floodway.
5. The purchase of approximately 2,500 acres in Ten Mile Pond with appropriate water control structures for fish and wildlife management, use of easements to permit annual flooding on lowlands, and access for fishing in borrow areas to mitigate fish and wildlife losses which are expected to occur as a result of the project.

Water Resources Development Act of 1976

Section 101(a) of the Water Resources Development Act (WRDA) of 1976 authorized,

“The Secretary of the Army, acting through the Chief of Engineers, is hereby authorized to undertake the phase I design memorandum stage of advanced engineering and design of the following water resources development projects, substantially in accordance with, and subject to the conditions recommended by the Chief of Engineers in, the reports hereinafter designated.

Lower Mississippi River Basin

The project for flood protection for St. Johns Bayou Basin and New Madrid Floodway, Missouri: Report of the Chief of Engineers dated September 26, 1975, at an estimated cost of \$300,000.”

The General Design Memorandum and Supplemental EIS titled, *St. Johns Bayou – New Madrid Floodway: Mississippi, New Madrid, and Scott Counties, Missouri* recommended the following changes to the project²:

1. St. Johns Area. Channel improvements would be accomplished on 97.6 miles of stream in lieu of 64.2 miles. Channel cleanout would be on 21.2 miles instead of 5.8 miles as recommended previously. The pumping station size would be reduced from 2,000 cfs to a 1,000 cfs station.
2. New Madrid Floodway. The feasibility report recommended a split floodway plan which would have required construction of two 500-cfs pumping stations and

² Although this draft EIS supplements the 1976 Mississippi River and Tributaries project for the closure of the New Madrid Floodway and associated gate structure as well as the 1982 St. Johns Bayou and New Madrid Floodway SEIS for channel modifications and pumping stations, it does not supplement subsequent NEPA reports. This document constitutes the full, final, and only draft EIS for this project.

two gravity outlets. The plan recommended by the District Engineer in the Phase I study called for a combined floodway plan (*i.e.*, the existing drainage patterns are essentially unaltered) with one pumping station (1,500 cfs) and one gravity outlet (already authorized for construction by the 1954 Flood Control Act).

3. Mitigation and Recreational Features. Fish and wildlife features for mitigation of project impacts remained essentially unchanged from the feasibility report with the exception of proposed restrictive easements on areas used for disposal of dredged material along improved channels and a fish pool weir and bike/hike trail in Sikeston, Missouri.

Report of the Chief of Engineers dated 4 January 1983

The Chief's Report was submitted to the Secretary of the Army on 4 January 1983. The report contained the recommendations outlined in the General Design Memorandum. The Record of Decision was signed 5 January 1983.

Water Resources Development Act of 1986

The St. Johns Bayou Basin and New Madrid Floodway project was authorized for construction by the Water Resources Development Act of 1986, Section 401(a):

“(a) AUTHORIZATION OF CONSTRUCTION – The following works of improvement for the control of destructive floodwaters are adopted and authorized to be prosecuted by the Secretary substantially in accordance with the plans and subject to the conditions recommended in the respective reports designated in this subsection, except as otherwise provided in this subsection:

St. Johns Bayou Basin and New Madrid Floodway, Missouri

The project for flood control, St. Johns Bayou Basin and New Madrid Floodway, Missouri: Report of the Chief of Engineers, dated January 4, 1983, at a total cost of \$112,000,000, with an estimated first Federal cost of \$78,500,000 and an estimated first non-Federal cost of \$33,500,000, except that the land for mitigation of damages to fish and wildlife shall be acquired as soon as possible from available funds, including the Environmental Protection and Mitigation Fund established by Section 908 of the Act, and except that lands acquired by the State of Missouri after January 1, 1982, for mitigation of damage of fish and wildlife within the Ten Mile Pond mitigation area shall be counted as part of the total quantity of mitigation lands required for the project and shall be maintained by such State for such purpose.”

The project was not immediately constructed because the local sponsor could not meet cost-sharing requirements also enacted by WRDA 1986. Therefore, construction was deferred until the local sponsor could obtain funding.

East Prairie, Missouri Enterprise Community

President Clinton designated East Prairie, Missouri, as an Enterprise Community (EC) in December 1994. The EC designation is designed to create self-sustaining long-term economic development in areas of pervasive poverty, unemployment, and general distress through the development and implementation of strategic plans that allow them to reach their full economic potential. A \$2.95 million grant was awarded to East Prairie based on its strategic plan. Its plan was framed around the key principles of economic opportunity, sustainable community development, community based partnerships, and a strategic vision for change. In addition to the \$2.95 million that was provided to the city for use towards local economic initiatives, the EC designation included the reduction of the local share of project costs to a level commensurate with the depressed economic conditions in the area (from 35 percent to 5 percent). The EC program is administered by the U.S. Department of Agriculture (USDA). USDA has pledged to provide the necessary funds required to reduce the local sponsor's costs to 5 percent (not including the \$2.95 million grant).

Water Resources Development Act of 1996

Congress facilitated the participation of USDA in project implementation by including language in Section 331 of WRDA 1996 to provide a statutory basis for using USDA funds to supplement local project funding capabilities, as follows:

“Notwithstanding any other provisions of law, Federal assistance made available under the rural enterprise zone program of the Department of Agriculture may be used toward payment of the non-Federal share of the costs of the project for flood control, St. Johns Bayou Basin and New Madrid Floodway, Missouri, authorized by Section 401(a) of the Water Resources Development Act of 1986 (100 Stat. 4118).”

1997 Limited Reevaluation Report

A Limited Reevaluation Report (LRR) of selected features of the overall authorized project that offer the most immediate benefits to East Prairie and vicinity was conducted in 1997. The LRR focused on updating economic analysis and environmental documentation for those project features associated with the initial phase of the project (*i.e.*, Phase 1).

Recommended Phase 1 project features included 4.5 miles of channel enlargement of St. Johns Bayou, 8.1 miles of channel enlargement of Setback Levee Ditch, 4.3 miles of vegetative clearing of Setback Levee Ditch, 10.8 miles of channel enlargement of St. James Ditch, a 1,000 cfs pumping station along St. Johns Bayou, and a 1,500 cfs pumping station in conjunction with the separately authorized New Madrid Floodway closure. Approximately 413 acres of the originally authorized 2,500 acres of land would be required to mitigate impacts of the Phase 1 portion of the project. In addition to compensatory mitigation, the selected plan included the potential to flood up to 5,700 acres of lands during waterfowl season.

The first item of work consisting of the 4.3 miles of vegetative clearing along Setback Levee Ditch was completed.

During the development of the LRR and based on concerns expressed by other governmental agencies, USACE made the determination to supplement the EIS for the project. In addition to documenting the effects of the St. Johns Bayou Basin and New Madrid Floodway project, the additional supplement would analyze the effects of constructing the mainline levee closure authorized by the Flood Control Act of 1954.

2000 Supplemental Environmental Impact Statement

A Supplemental Environmental Impact Statement (SEIS) titled, *Flood Control, Mississippi River and Tributaries St. Johns Bayou and New Madrid Floodway, MO First Phase: Supplemental Environmental Impact Statement* was prepared in 2000. The SEIS supplemented the existing Record of Decision (5 January 1983) for the St. Johns Bayou and New Madrid Floodway Project, as well as the 1976 EIS, titled *Mississippi Rivers and Tributaries, Mississippi River Levees (MRL) and Channel Improvement* that analyzed the overall MRL portion of the MR&T project, including the closure of the New Madrid Floodway.

The Avoid and Minimize Alternative was selected as the preferred plan. The features of this plan included reducing the width of channel work on St. Johns Bayou from 200 feet (with two-sided excavation) to 120 feet (with one-sided excavation); changing work to the right descending bank along a portion of St. James Ditch to avoid higher quality woodlands; and eliminating work proposed on the upper 3.7 miles of St. James Ditch to avoid the State endangered golden topminnow. In addition, nine transverse dikes would be placed in the lower four miles of St. Johns Bayou, and conservation easements would be placed along all improved channels and allowed to revegetate as bottomland hardwoods. Gate operations were modified to facilitate fish passage between the River and the two basins. Mussels would be relocated prior to construction, and a nine-foot wide strip of mussel habitat along one side of the Setback Levee would be avoided. A 10-year mussel monitoring plan would also be developed. Water levels in the lower project area would be managed, providing up to 6,400 acres of flooded land for winter and early spring waterfowl. To compensate for project impacts, 9,557 acres of seasonally inundated agricultural land would be restored to bottomland hardwoods. Additionally, flood easements would be purchased on 765 acres of herbaceous land to benefit shorebirds and fish.

Concerns were expressed by resource agencies and some environmental advocacy groups that environmental losses were not acceptable. A series of meetings were conducted among USACE, the Environmental Protection Agency (EPA), United States Fish and Wildlife Service (USFWS), Assistant Secretary of the Army (Civil Works), the White House Empowerment Board, Missouri Department of Natural Resources (MDNR), Missouri Department of Conservation (MDC), and the Council on Environmental Quality (CEQ) to discuss the project and the environmental concerns. A determination was made that the SEIS should be revised to analyze additional levee closure options, prioritize mitigation sites, and clarify **wetland** impacts.

2002 Revised Supplemental Environmental Impact Statement

The 2002 Revised Supplemental Environmental Impact Statement (RSEIS) was prepared to document the formulation and evaluation of additional alternatives to address the concerns expressed during the completion of the 2000 SEIS. Alternative levee closure locations were evaluated and an array of pump and gate operations that increased the period of connectivity of the floodway to the Mississippi River were considered. The RSEIS also contained a proposal for significant avoid and minimize measures designed to benefit the aquatic and wildlife resources of the New Madrid Floodway.

The selected plan consisted of a 1,000 cfs pumping station and 27.6 miles of channel modifications for the St. Johns Bayou Basin and a closure levee with a 1,500 cfs pumping station for the New Madrid Floodway. A major avoid and minimize measure would allow Mississippi River **backwater flooding** during the spring fisheries season to an elevation of 282.5-feet and 284.4-feet in the St. Johns Bayou Basin and the New Madrid Floodway, respectively.

Avoid and minimize measures that were formulated in the 2000 SEIS, including avoiding golden topminnow habitat, one-sided channel work, transverse dikes, and mussel relocation/monitoring were incorporated into the design. Compensatory mitigation included the acquisition in fee or in easement of a total of 9,140 acres of land. A total of 8,375 acres of land would be reforested and an additional easement purchased on 765 acres of herbaceous lands that could be managed for shorebirds. Mitigation lands would be obtained from willing sellers. Acquisition of frequently flooded lands would be the priority for mitigation in addition to the 1,800 acres of lands surrounding Big Oak Tree State Park and lands adjacent to Ten Mile Pond Conservation Area. The 2002 RSEIS also incorporated hydrologic restoration to Big Oak Tree State Park, 64 miles of vegetated buffer strips along New Madrid Floodway channels, and a wildlife corridor that would connect Big Oak Tree State Park to the Ten Mile Pond Conservation Area. The Record of Decision was signed on 25 August 2003.

The first three tracts of mitigation lands totaling 1,657 acres were purchased and a construction contract was awarded to begin work on Item 2 (New Madrid Floodway closure and pumping station). Legal challenges were filed in the State of Missouri concerning MDNR's issuance of 401 Water Quality Certification for the project and later in the U.S. District Court for the District of Columbia challenging compliance with Federal laws and statutes. During legal proceedings, concerns were raised regarding the project and adequacy of mitigation. As a result, the Record of Decision was withdrawn, construction suspended, mitigation acquisition ceased, and a decision was made to revise the NEPA documentation.

2006 Revised Supplemental Environmental Impact Statement 2

A RSEIS 2 was completed in 2006 that addressed the concerns raised during legal proceedings. The RSEIS 2 did not make any changes to the flood damage reduction features or avoid and minimize alternatives. However, compensatory mitigation was revised. It included a basic mitigation feature that consisted of restoring hydrology to

Big Oak Tree State Park, reforesting a minimum of 1,800 acres of cropland surrounding Big Oak Tree State Park, reforesting 1,293 acres in the St. Johns Bayou Basin, reforesting an additional 2,326 acres of cropland in the New Madrid Floodway, constructing modified **moist soil units** on 765 acres of cropland, providing vegetated buffer strips on 64 miles of New Madrid Floodway channels, establishing a wildlife corridor between Big Oak Tree State Park and Ten Mile Pond Conservation Area, and constructing 387 acres of modified borrow pits to benefit floodplain fish. Additional mitigation techniques that supplement the basic mitigation features were analyzed including additional reforestation, methods to increase duration of flooding on mitigated tracts, restoration/creation of permanent waterbodies, and creation of a spawning and rearing pool by modifying the gravity outlet structure operation. In addition, the RSEIS 2 recommended an adaptive strategy with a goal that mitigation would be achieved when impacted habitat units were replaced, not when a certain quantity of acreage was purchased.

Water quality certification was updated from the State of Missouri, the Record of Decision was signed on 23 May 2006, and construction resumed. A project monitoring plan and the first site specific mitigation plan was coordinated with the interagency team (made up of representatives from EPA, USFWS, MDNR and MDC) and approved by MDNR in compliance with the water quality certification.

2007 Court Decision

On 13 September 2007 the United States District Court for the District of Columbia rendered its decision in *Entl. Def. v. United States Army Corps of Eng'rs*, 515 F.Supp. 2d 69 (2007). In that decision, the Court overturned the 2002 and 2006 Environmental Impact Statements and the 2006 Record of Decision. In so doing, the Court found that USACE's fish impact analysis and mitigation measures were arbitrarily and capriciously in violation of the Administrative Procedures Act. More specifically, the Court found that the Corps should have included impacts to fish access as a factor in its predictive model; should not have calculated the mitigation value of the **sump area** for fish habitat by classifying it as a permanent water body; should have included impacts to beyond the two-year floodplain; erroneously calculated the value of borrow pits as mitigation; and could not support its assertion that borrow pits were only used to mitigate for permanent water bodies.

2011 Birds Point-New Madrid Floodway Operation

The Birds Point-New Madrid Floodway was operated on 2 May 2011 as a result of record flooding at the confluence of the Ohio and Mississippi Rivers. The Inflow Crevasse (upper crevasse adjacent to Cairo, Illinois) was artificially breached with explosive charges at approximately 10:00 p.m. on 2 May 2011, at which time the river gage at Cairo was at 61.72 feet. The Inflow/Outflow Crevasse No. 2 (lower crevasse in the vicinity of New Madrid) was artificially breached with explosive charges on 3 May 2011, followed by the Inflow/Outflow Crevasse No. 1 (middle crevasse, adjacent to Hickman, Kentucky in the vicinity of Big Oak Tree State Park) on 5 May 2011.

Repairs to the BPNM Floodway are being conducted using a two-phased approach, including: 1) a reset effort, or initial interim measures designed to provide a basic level of protection and functionality before the next flood season; and 2) a restore effort, to provide for the development and installation of permanent measures designed to return the structure to the full level of protection and functionality.

The reset effort has been completed and included filling in of the scour holes that formed as a result of Floodway operation and rebuilding most sections of the crevassed levees on the pre-existing alignment to an interim level of protection. Future restoration efforts would be scheduled based on funding and priority related to other Mississippi River and Tributaries components damaged by the flood. Ultimately, the goal is to provide the same level of protection that existed prior to Floodway operation as authorized by Congress. Analyses in this document assume the same level of flood protection that existed prior to operation.

A summary of the Birds Point-New Madrid Floodway Operation can be found in Appendix L.