



DEPARTMENT OF THE ARMY
KANSAS CITY DISTRICT, CORPS OF ENGINEERS
700 FEDERAL BUILDING
KANSAS CITY, MISSOURI 64106-2896

REPLY TO
ATTENTION OF:

June 2, 2008

Planning, Programs and Project Management Division
Planning Branch

NOTICE OF AVAILABILITY

An Environmental Assessment titled Sambo Slough Levee District No. 1 (Item 63), Farmers Drainage & Levee District (Item 63B), Wakenda Levee District No. 1 (Item 63C), and Root Levee District (Item 63G), Non –Federal, Emergency Levee Rehabilitation Project, and a draft Finding of No Significant Impact (FONSI) prepared by the U.S. Army Corps of Engineers, Kansas City, are available for your review on the project's website at: <http://www.nwk.usace.army.mil>.

The Kansas City District – U.S. Army Corps of Engineers (CENWK), in cooperation with the project sponsors, Sambo Slough Levee District No. 1, Farmers Drainage & Levee District, Wakenda Levee District No. 1, and Root Levee District, propose to construct the Sambo Slough Levee District No. 1, Farmers Drainage & Levee District, Wakenda Levee District No. 1, and Root Levee District Levee Rehabilitation Project under the authority of Public Law 84-99, of the Flood Control Act of 1944. Under this authority, the Corps of Engineers can provide assistance to public agencies in responding to flood emergencies such as the rehabilitation of flood control works damaged or destroyed by floods.

The project area is located in Carroll County, Missouri along the left descending bank of the Missouri River, between river miles 269.2 to 288.0. The proposed project would involve the re-seeding of landside and riversides slopes, in-place repair of levee breach, and excavation and repairs to drainage structure with backfill to original design grades. Repairs are required as a result of the flood event declared on May 6, 2007.

Copies of the EA and the draft FONSI are also available by contacting Mr. Neil Bass; U.S. Army Corps of Engineers; PM-PR, 601 E. 12th St, Kansas City, Missouri, 64106; to request a copy in writing, at (816) 389-3667 to request a copy by phone, or at neil.bass@usace.army.mil to request a copy by e-mail.

The public review and comment period for the EA and draft FONSI will end 30 days from the date of this letter.

Sincerely,

A handwritten signature in black ink, appearing to read "David R. Hibbs".

David R. Hibbs
Acting Chief, Environmental Resources Section



**US Army Corps
of Engineers**
Kansas City District

**KANSAS CITY DISTRICT
CORPS OF ENGINEERS**

and the

**SAMBO SLOUGH LEVEE DISTRICT NO. 1, FARMERS DRAINAGE & LEVEE
DISTRICT, WAKENDA LEVEE DISTRICT NO. 1 AND ROOT LEVEE DISTRICT**

Public Law 84-99 of the Flood Control Act of 1944

**Levee Rehabilitation – NEPA Review, Environmental
Assessment & DRAFT Finding of No Significant Impact**

**SAMBO SLOUGH LEVEE DISTRICT NO. 1 (ITEM 63), FARMERS
DRAINAGE & LEVEE DISTRICT (ITEM 63B), WAKENDA LEVEE
DISTRICT NO. 1 (ITEM 63C), AND ROOT LEVEE DISTRICT (ITEM 63G),
NON-FEDERAL, EMERGENCY LEVEE REHABILITATION PROJECT**

**Missouri River
Carroll County, Missouri**

May 2008



DEPARTMENT OF THE ARMY
KANSAS CITY DISTRICT, CORPS OF ENGINEERS
700 FEDERAL BUILDING
KANSAS CITY, MISSOURI 64106-2896

DRAFT

Finding of No Significant Impact

Sambo Slough Levee District No. 1 (Item 63), Farmers Drainage & Levee District (Item 63B), Wakenda Levee District No. 1 (Item 63C), and Root Levee District (Item 63G)
Levee Rehabilitation Project
Carroll County, Missouri

Project Summary

The U.S. Army Corps of Engineers, Kansas City District (CENWK), in cooperation with the project sponsors, Sambo Slough Levee District No. 1, Farmers Drainage & Levee District, Wakenda Levee District No. 1, and Root Levee District propose to construct the Sambo Slough Levee District No. 1, Farmers Drainage and Levee District, Wakenda Levee District No. 1, and Root Levee District Levee Rehabilitation Project, under the authority of Public Law 84-99 of the Flood Control Act of 1944. Due to the limited damage of the levee units, only two alternatives were considered: (1) In-place repairs of levee breach with re-seeding and (2) No action. The proposed project would involve the re-seeding of landside and riversides slopes, in-place repair of levee breach, and excavation and repairs to drainage structure with backfill to original design grades to repair the agricultural levees damaged by the declared flood event of 6 May 2007. The proposed repairs are located just southeast of the town of Carrollton, Carroll County, Missouri, along the left descending bank of the Missouri River from River Mile 269.2 to River Mile 288.0, with tiebacks along Wakenda and Moss creeks.

Alternatives

Due to the limited damages of the levee units, only two alternatives were considered: (1) In-place repairs with re-seeding (**Recommended Plan**) and (2) No action.

Recommended Plan

Sambo Slough Levee District No. 1

The recommended repair action consists of re-seeding riverside levee slopes (sta. 2+00 to 140+00 and 163+50 to 198+00). Construction areas would be seeded and mulched.

Farmers Drainage & Levee District

The recommended repair action consists of in-place repair of levee breach (sta. 165+19 to 171+49); re-seeding of riverside levee slope (sta. 0+00 to 61+00); and re-seeding of landside levee slope (sta. 90+56 to 165+19 and 171+49 to 184+38). Minor amounts of stockpiled soil on, and adjacent to, the levee embankment, as well as soil from a semi-open riverward area with sparse isolated timber will be used as borrow. The timber will be avoided to the extent possible; however, some (silver maple < 9 inches in diameter breast height) will be impacted. The U.S. Fish and Wildlife Service has stated that natural plant succession should provide adequate revegetation for these impacted areas. Construction areas would be seeded and mulched.

Wakenda Levee District No. 1

The recommended repair action consists of re-seeding riverside levee slope (sta. 137+70 to 412+00). Construction areas would be seeded and mulched.

Root Levee District

The recommended repair action consists of excavation and repairs to drainage structure, with disturbed area backfilled to original design grades (sta. 124+30); re-seeding landside levee slope (sta. 3+09 to 13+50 and 18+63 to 73+49); and re-seeding riverside levee slope (sta. 73+49 to 116+21, 121+59 to 140+25, and 145+25 to 147+00). Minor amounts of borrow will be required for this repair action, and borrow will be obtained by removing silt from within an existing landward drainage ditch or by widening the existing ditch into the adjacent agricultural lands. A small fringe of timber (< 9 inches diameter breast height) will be removed. The U.S. Fish and Wildlife Service has stated that natural plant succession should provide adequate revegetation for non-mast producing trees removed. Construction areas would be seeded and mulched.

Summary of Environmental Impacts

The flood risk management level achieved by the recommended plan would result in protection similar to the original pre-flood levees. The recommended plan would result in no impacts to any Federally-listed threatened or endangered species or their habitat. The recommended plan would result in no impacts to any properties listed, proposed for listing, eligible for listing, or potentially eligible for listing in the National Register of Historic Places. Areas of the existing levee sections damaged by flooding would be temporarily disturbed by the proposed construction activity. A minor amount of timber (silver maple < 9 inches in diameter breast height) will be impacted by the proposed project. The adverse effects associated with the proposed project are short term/minor associated with project construction. These minor adverse effects would be greatly offset by restoring the flood risk management capability, and its associated social and economic benefits of the existing levee system. Alternative 1, **In-place repairs with re-seeding**, meets the project purpose and need of rehabilitating the flood risk management capability and the associated social and economic benefits of the existing levee system. Of the two (2) alternatives considered, Alternative 1 –In-place repairs with re-seeding is recommended because it has a positive cost/benefit ratio, fulfills all the needs of the different levee districts, and is consistent with protection of the nation's environment.

Mitigation Measures

The recommended plan will result in minor impacts to mitigable resources as defined in USACE Planning regulations. A minor amount of timber will be impacted by the proposed project (silver maple < 9 inches in diameter breast height). The U.S. Fish and Wildlife Service as stated that natural plant succession should provide adequate revegetation for any non-mast producing trees removed. Therefore, no mitigation measures are warranted or proposed.

Public Availability

Prior to a decision on whether to prepare an Environmental Impact Statement, CENWK circulated a Notice of Availability (Notice) of the Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI), dated _____, 2008, with a thirty-day comment period ending on _____, 2008 to the public and resource agencies. The Notice was e-mailed to individuals/agencies/businesses listed on CENWK-Regulatory Branch's e-mail mailing list. The Notice informed these individuals that the EA and Draft FONSI were available on the CENWK webpage for review or that they could request a hard copy of the EA and Draft FONSI in order to provide comment.

Levee rehabilitation projects completed by the Corps under authority of Public Law 84-99 generally do not require the preparation of an Environmental Impact Statement. These projects typically result in long-term social and economic benefits and the adverse environmental effects are typically minor/long-term and minor/short-term construction related. Minor long-term impacts associated with these projects are typically well outweighed by the overall long-term social and economic benefits of these projects. As described above, the recommended plan is consistent with this assessment of typical levee rehabilitation projects completed by the Corps under authority of Public Law 84-99 of the Flood Control Act of 1944.

Conclusion

After evaluating the anticipated environmental, economic, and social effects of the proposed activity, it is my determination that construction of the proposed Sambo Slough Levee District No. 1, Farmers Drainage and Levee District, Wakenda Levee District No. 1, and Root Levee District Levee Rehabilitation Project does not constitute a major Federal action that would significantly affect the quality of the human environment; therefore, preparation of an Environmental Impact Statement is not required.

Date: _____

Roger A. Wilson, Jr.
Colonel, Corps of Engineers
District Commander



DEPARTMENT OF THE ARMY
KANSAS CITY DISTRICT, CORPS OF ENGINEERS
700 FEDERAL BUILDING
KANSAS CITY, MISSOURI 64106-2896

EXECUTIVE SUMMARY

The U.S. Army Corps of Engineers, Kansas City District (CENWK), in cooperation with the project sponsors, Sambo Slough Levee District No. 1, Farmers Drainage and Levee District, Wakenda Levee District No. 1, and Root Levee District propose to construct the Sambo Slough Levee District No.1, Farmers Drainage and Levee District, Wakenda Levee District No. 1, and Root Levee District Levee Rehabilitation Project, under the authority of Public Law 84-99 of the Flood Control Act of 1944. The proposed project would involve the re-seeding of landside and riversides slopes, in-place repair of levee breach, and excavation and repairs to drainage structure with backfill to original design grades. Repairs are required as a result of the flood event declared on 6 May 2007.

The Sambo Slough levee segment consists of approximately 36,400 linear feet of earthen flood control works (FCW) on the left bank of the Missouri River between river mile 282.5 and 274.0 in Carroll County, Missouri. The Sambo Slough Levee District No. 1 FCW protects approximately 11,181 acres of agricultural land (all in cropland). The Sambo Slough levee is part of a complete flood control unit which works in concert with the Farmers Drainage and Levee District, Wakenda Levee District No. 1, and Root Levee District. These levees collectively protect 39 businesses, 54 residences (occupancy varies), 50 barns, 85 machine sheds, 123 outbuildings, 3 irrigation systems, 142 grain bins, approximately 8 miles of State Highway Route 24 and 65, approximately 2 miles of State Highway Route 10, approximately 6 miles of State Highway B, approximately 44 miles of gravel surfaced roads and numerous miles of unimproved farm to market roads, approximately 6 miles of fiber optic lines, approximately 40 miles of underground telephone cable, approximately 20 miles of rural water lines, and numerous miles of overhead electrical lines. The recommended repair action consists of re-seeding riverside levee slopes (sta. 2+00 to 140+00 and 163+50 to 198+00). Construction areas would be seeded and mulched.

The Farmers levee segment consists of approximately 18,438 linear feet of earthen FCW on the left bank of the Missouri River between river mile 270.2 to 269.2, and the right descending bank of Wakenda Creek in Carroll County, Missouri. The levee protects approximately 1,530 acres of agricultural lands (1,475 in cropland) in addition to the assets described above. The recommended repair action consists of in-place repair of levee breach (sta. 165+19 to 171+49); re-seeding of riverside levee slope (sta. 0+00 to 61+00); and re-seeding of landside levee slope (sta. 90+56 to 165+19 and 171+49 to 184+38). Minor amounts of stockpiled soil on, and adjacent to, the levee embankment, as well as soil from a semi-open riverward area with sparse isolated timber will be used as borrow. The timber will be avoided to the extent possible; however, some (silver maple < 9 inches in diameter breast height) will be impacted. The U.S. Fish and Wildlife Service has stated that natural plant succession should provide adequate revegetation for non-mast producing trees removed. Construction areas would be seeded and mulched.

The Wakenda levee segment consists of approximately 41,957 linear feet of earthen FCW on the left bank of the Missouri River between River Mile 288.0 to 282.5, and the left bank of Moss Creek in Carroll County, Missouri. The levee protects approximately 6,458 acres of agricultural lands (all in cropland) in addition to the assets described above. The recommended repair action consists of re-seeding riverside levee slope (sta. 137+70 to 412+00). Construction areas would be seeded and mulched.

The Root levee segment consists of approximately 14,700 linear feet of earthen FCW on the left bank of the Missouri River between River Mile 274.0 to 270.2 in Carroll County, Missouri. The levee protects approximately 3,200 acres of agricultural lands (all in cropland) in addition to the assets described above. The recommended repair action consists of excavation and repairs to drainage structure, with disturbed area backfilled to original design grades (sta. 124+30); re-seeding landside levee slope (sta. 3+09 to 13+50 and 18+63 to 73+49); and re-seeding riverside levee slope (sta. 73+49 to 116+21, 121+59 to 140+25, and 145+25 to 147+00). Minor amounts of borrow will be required for this repair action, and borrow will be obtained by removing silt from within an existing landward drainage ditch or by widening the existing ditch into the adjacent agricultural lands. A small fringe of timber (< 9 inches diameter breast height) will be removed. The U.S. Fish and Wildlife Service has stated that natural plant succession should provide adequate revegetation for non-mast producing trees removed. Construction areas would be seeded and mulched.

Prior to a decision on whether to prepare an Environmental Impact Statement, CENWK circulated a Notice of Availability (Notice) of the Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI), dated _____, 2008, with a thirty-day comment period ending on _____, 2008 to the public and resource agencies. The Notice was e-mailed to individuals/agencies/businesses listed on CENWK-Regulatory Branch's e-mail mailing list. The Notice informed these individuals that the EA and Draft FONSI were available on the CENWK webpage for review or that they could request the EA and Draft FONSI in writing, in order to provide comment.

Additional information concerning this project may be obtained from Ms. Lekesha Reynolds, Environmental Resources Specialist, PM-PR, Kansas City District - U.S. Army Corps of Engineers, by writing the above address, or by telephone at 816-389-3160.

**NEPA REVIEW
ENVIRONMENTAL ASSESSMENT
&
DRAFT FINDING OF NO SIGNIFICANT IMPACT**

**PUBLIC LAW 84-99
SAMBO SLOUGH LEVEE DISTRICT NO. 1, FARMERS DRAINAGE AND LEVEE
DISTRICT, WAKENDA LEVEE DISTRICT NO. 1, AND ROOT LEVEE DISTRICT,
LEVEE REHABILITATION PROJECT
CARROLL COUNTY, MISSOURI**

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FINDING OF NO SIGNIFICANT IMPACT

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**NEPA REVIEW
ENVIRONMENTAL ASSESSMENT
&
FINDING OF NO SIGNIFICANT IMPACT**

**PUBLIC LAW 84-99
SAMBO SLOUGH LEVEE DISTRICT NO. 1, FARMERS DRAINAGE AND LEVEE
DISTRICT, WAKENDA LEVEE DISTRICT NO. 1 AND ROOT LEVEE DISTRICT
LEVEE REHABILITATION PROJECT
CARROLL COUNTY, MISSOURI**

Section 1: INTRODUCTION

This Environmental Assessment provides information that was developed during the National Environmental Policy Act (NEPA) public interest review of the proposed Public Law 84-99 Sambo Slough Levee District No. 1, Farmers Drainage and Levee District, Wakenda Levee District No. 1, and Root Levee District Levee Rehabilitation Project.

Section 2: AUTHORITY

The Kansas City District – U.S. Army Corps of Engineers (CENWK), in cooperation with the project sponsors, the Sambo Slough Levee District No. 1, Farmers Drainage and Levee District, Wakenda Levee District No. 1, and Root Levee District propose to construct the Sambo Slough Levee District No. 1, Farmers Drainage and Levee District, Wakenda Levee District No. 1, and Root Levee District Levee Rehabilitation Project under the authority of Public Law 84-99 of the Flood Control Act of 1944.

Section 3: PROJECT LOCATION

The Sambo Slough Levee District No. 1, Farmers Drainage and Levee District, Wakenda Levee District No. 1, and Root Levee District levee are located in Carroll County, Missouri, just southeast of the town of Carrollton, Missouri, along the left descending bank of the Missouri River from River Mile 269.2 to RM 288.0, and are described further below.

The Sambo Slough levee segment consists of approximately 36,400 linear feet of earthen flood control works (FCW) on the left descending bank (LDB) of the Missouri River between river mile 282.5 and 274.0 in Carroll County, Missouri.

The Farmers levee segment consists of approximately 18,438 linear feet of earthen FCW on the LDB of the Missouri River between river mile 270.2 to 269.2, and the RDB of Wakenda Creek in Carroll County, Missouri.

The Wakenda levee segment consists of approximately 41,957 linear feet of earthen FCW on the LDB of the Missouri River between River Mile 288.0 to 282.5, and the LDB of Moss Creek in Carroll County, Missouri.

The Root levee segment consists of approximately 14,700 linear feet of earthen FCW on the LDB of the Missouri River between River Mile 274.0 to 270.2 in Carroll County, Missouri.

Section 4: EXISTING CONDITION

A total area of about 22,369 acres is protected by the levee, including 22,314 acres of crops. Other property protected includes 54 homes and 39 businesses, as well as 258 farm outbuildings, 16 miles of state highway, 44 miles of gravel-topped county roads, 3 irrigation systems, and 142 grain bins. Total property value in the protected areas is conservatively estimated at more than \$55 million. The declared flood event on 6 May 2007 caused the follow damages to the Sambo Slough Levee District No. 1, Farmers Drainage and Levee District, Wakenda Levee District No. 1, and Root Levee District levees:

The damages to the Sambo Slough levee segment consist of intermittent reaches of lost (destroyed) sod cover on levee embankment slopes at stations 2+00 to 140+00 and 163+50 to 198+00.

The damages to the Farmers levee segment consist of one levee breach at station 165+19 to 171+49; and intermittent reaches of lost (destroyed) sod cover on levee embankment slopes at station 0+00 to 61+00, 90+65 to 165+19, and 171+49 to 184+38.

The damages to the Wakenda levee segment consist of intermittent reaches of lost (destroyed) sod cover on levee embankment slopes at station 137+70 to 412+00.

The damages to the Root levee segment consist of one area of landside and riverside slope erosion, with associated drainage structure damage; and intermittent reaches of lost (destroyed) sod cover on levee embankment slopes at stations 3+09 to 13+50, 18+63 to 116+21, 121+59 to 140+25, and 145+25 to 147+00.

Section 5: PURPOSE & NEED FOR ACTION

The project purpose and need is to rehabilitate the damaged levees and restore the associated social and economic benefits. The Sambo Slough Levee District No. 1, Farmers Drainage and Levee District, Wakenda Levee District No. 1, and Root Levee District received damages to sections of their respective levees during the 6 May 2007 declared flood event. Prior to the May 2007 event, the Sambo Slough Levee District No. 1, Farmers Drainage and Levee District, Wakenda Levee District No. 1, and Root Levee District levees provided an approximately 10+ year level of flood risk management. In their current damaged state, the Sambo Slough Levee District No. 1, Farmers Drainage and Levee District, Wakenda Levee District No. 1, and Root Levee District levees are estimated to provide an approximately two-year level of protection. The existing condition exposes all public and private infrastructure and agricultural croplands to a high level of risk from future flooding. Failure to restore the flood risk management capability

of the levee system would keep area residents livelihood and social well-being in turmoil, subject to the continuous threat of flooding until a level of flood protection is restored. Failure to reconstruct the levees could adversely affect the tax base of the counties and municipal governments and special districts, such as school districts. In addition, loss of jobs and potential losses in agricultural production on lands previously protected by the levees would also be incurred.

Section 6: ALTERNATIVES CONSIDERED BUT NOT SELECTED

One alternative was considered and not selected: (1) No action.

The “No Action” Alternative would involve no construction and the levees would remain in their damaged condition. The No Action alternative would continue to expose public and private infrastructure and agricultural croplands to a high risk level of future flooding.

Section 7: RECOMMENDED ALTERNATIVE

Because natural revegetation would not accomplish the project purpose, in-place repairs with re-seeding for lost (destroyed) sod was considered as described below.

Sambo Slough Levee District No. 1

The recommended repair action consists of re-seeding riverside levee slopes (sta. 2+00 to 140+00 and 163+50 to 198+00). Construction areas would be seeded and mulched.

Farmers Drainage & Levee District

The recommended repair action consists of in-place repair of levee breach (sta. 165+19 to 171+49); re-seeding of riverside levee slope (sta. 0+00 to 61+00); and re-seeding of landside levee slope (sta. 90+56 to 165+19 and 171+49 to 184+38). Minor amounts of stockpiled soil on, and adjacent to, the levee embankment, as well as soil from a semi-open riverward area with sparse isolated timber will be used as borrow. The timber will be avoided to the extent possible; however, some (silver maple < 9 inches in diameter breast height) will be impacted. The U.S. Fish and Wildlife Service as stated that natural plant succession should provide adequate revegetation for non-mast producing trees removed. Construction areas would be seeded and mulched.

Wakenda Levee District No. 1

The recommended repair action consists of re-seeding riverside levee slope (sta. 137+70 to 412+00). Construction areas would be seeded and mulched.

Root Levee District

The recommended repair action consists of excavation and repairs to drainage structure, with disturbed area backfilled to original design grades (sta. 124+30); re-seeding landside levee slope (sta. 3+09 to 13+50 and 18+63 to 73+49); and re-seeding riverside levee slope (sta. 73+49 to 116+21, 121+59 to 140+25, and 145+25 to 147+00). Minor amounts of borrow will be required for this repair action, and borrow will be obtained by removing silt from within an existing landward drainage ditch or by widening the existing ditch into the adjacent agricultural lands. A

small fringe of timber (< 9 inches diameter breast height) will be removed. The U.S. Fish and Wildlife Service has stated that natural plant succession should provide adequate revegetation for non-mast producing trees removed. Construction areas would be seeded and mulched.

Section 8: NATIONAL ENVIRONMENTAL POLICY ACT REVIEW

As part of the NEPA review for the proposed project, CENWK circulated a Notice of Availability (Notice) of the Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI), dated _____, 2008, with a thirty-day comment period ending on _____, 2008 to the public and resource agencies. The Notice was e-mailed to individuals/agencies/businesses listed on CENWK-Regulatory Branch's e-mail mailing list. The Notice informed these individuals that the EA and Draft FONSI were available on the CENWK webpage or that they could request the EA and Draft FONSI in writing, in order to provide comment. The following comments were received and evaluated from coordination of the Notice:

(Section pending comments)

Section 9: AFFECTED ENVIRONMENT:

The project area consists of agricultural row crop ground located on the Missouri River flood plain between river miles 269.2 and 288.0. The project area disturbance involves approximately 13 acres or less for Sambo Slough, approximately 10 acres or less (including borrow locations) for Farmers, approximately 20 acres or less for Wakenda, and approximately one acre (including borrow locations) for Root. The Corps Kansas City District's Standard Operating Procedures for identification of potential borrow sites, which was developed in consultation with the resource agencies to avoid/and or minimize adverse environmental effects, would be implemented for this project if different or additional borrow sites are needed.

Primary resources of concern identified during the evaluation included: noise levels, water quality, fish and wildlife, vegetation, wetlands, threatened and endangered species, agricultural, archeological and historical resources, flood control, economics and aesthetics. Projects impacts to other resources were determined to be no effect.

Section 10: ENVIRONMENTAL CONSEQUENCES:

Noise levels

The recommended plan, Alternative 1, would result in minor short term construction related noise impacts. These impacts are the result of the operation of heavy machinery during project construction. These noise levels would be in addition, but similar to those produced by agricultural equipment which is routinely operated in the project area. No residences, businesses, churches, park areas or other areas sensitive to increased noise levels were identified in the project area. There is a remote chance that the noise from project construction could disturb the occasional boater on the nearby Missouri River or person(s) participating in outdoor recreation on the private land in the project area.

The “No Action” alternative would produce no increase in noise levels in the project area.

Water quality

The recommended plan, Alternative 1, would result in minor, temporary, construction related adverse impacts to water quality resulting from site runoff and increased turbidity. The minor impacts associated with the recommended plan would be avoided and/or minimized to the greatest extent possible by the implementation of Best Management Practices and measures required under the National Pollutant Discharge Elimination System (NPDES) permit (see Appendix II). The best management practices would be designed to minimize the incidental fallback of material into waterways during construction and to minimize the introduction of fuel, petroleum products, or other deleterious material from entering into the waterway. Such measures could include use of erosion control fences; storing equipment, solid waste, and petroleum products above the ordinary high water mark and away from areas prone to runoff; and requiring that all equipment be clean and free of leaks. To prevent fill from reaching water sources by wind or runoff, fill would be covered, stabilized or mulched, and silt fences would be used as required. The NPDES permit will be obtained prior to project construction. All appropriate measures will be taken to minimize erosion and storm water discharges during and after construction. The recommended plan does not involve placement of fill material in a Water of the United States and therefore, Clean Water Act, Section 401 Water Quality Certification and Section 404b1 are not required.

In the “No Action” Alternative with the absence of the Federal action addressing levee improvements, a high water event could result in the release of a variety of industrial chemicals and substantially impact the natural and human environment within the project area. Avoiding repair actions could result in adverse impacts to water quality from increased levels of nutrient loading and wastes, including runoff of pollutants from industrial sources, petroleum products, and non-point sources of human and animal wastes.

Fish and wildlife

The recommended plan, Alternative 1, would result in minor, temporary, construction related adverse impacts to fish and wildlife resources. The impacts to wildlife resources would be related to noise and visual disturbance during the construction activity. The impacts to fishery resources would be related to site runoff and increased turbidity, which could make feeding, breeding, and sheltering difficult for species not accustomed to these conditions.

The “No Action” Alternative would have minimal effects on fish and wildlife resources. These impacts would arise from flooding within the now unprotected area. Wetland species may benefit as more frequent flooding could occur in the now unprotected areas. Wetlands would likely recharge since they are now hydrologically connected to the Missouri River. Other terrestrial organisms could be killed, be temporarily displaced or have their habitat degraded by flooding.

Threatened and Endangered Species

The recommended plan, Alternative 1, would have no adverse effects on any Federally-listed threatened or endangered species or their habitat. Pallid sturgeon (*Scaphirhynchus albus*) are found primarily in the Missouri River and Mississippi River. No work is proposed within the

Missouri River. Indiana bat (*Myotis sodalis*) roost in trees that tend to be greater than 9 inches diameter breast height during the spring and summer, and hibernate in caves during the fall and winter. Levee work will be conducted during the winter months, and only small trees will be removed during construction. No impacts to any state listed threatened or endangered species or their habitat were identified.

The “No Action” alternative would have no adverse effects on any Federally-listed threatened or endangered species or their habitat. No impacts to any state listed threatened or endangered species or their habitat were identified.

Vegetation

The recommended plan, Alternative 1, would be constructed along existing levee alignments. A few isolated trees (<9 inches breast diameter height) would be cleared during project construction. The US Fish and Wildlife Service has stated that natural plant succession should provide adequate revegetation for these minor impacts.

The “No Action” Alternative could result in increases to the floodplain and to floodplain vegetation if lands are abandoned from farming due to the high risk of flooding. Overtime, successional vegetative growth could result in large expanses of floodplain forest.

Wetlands

The recommended plan, Alternative 1, would have no adverse effects on wetlands. Borrow material used for levee repairs will be obtained from upland sites or from an existing landward drainage ditch.

The “No Action” Alternative could result in benefits to wetlands located on the flood plain within the now unprotected areas as these areas would be subject to a high level risk of future flooding.

Agricultural

The recommended plan would have no adverse impact on agricultural production.

The “No Action” Alternative would adversely impact agricultural activity by exposing approximately 22,369 acres of agricultural lands to increased flooding. This loss of agricultural production would have related impacts such as lost income, lower tax base, and decreased land value.

Archeological and Historical Resources

The recommended plan would have no impact to sites listed on or eligible for inclusion on the National Register of Historic Places (NRHP). A background check of the NRHP and site location maps identified no previously recorded sites within or near the proposed project areas. In a letter to State Historic Preservation Officer (SHPO), the Corps recommended that the project would have no effect on historic properties and that the project should be allowed to proceed. SHPO concurred with this recommendation on November 26, 2007 (Appendix II). The project will be coordinated with appropriate federally recognized Native American tribes (Tribes). If in the unlikely event that archeological material is discovered during project construction, work in

the area of discovery will cease, the discovery would be investigated by a qualified archeologist, and the find would be coordinated with SHPO and the Tribes.

The “No Action” Alternative would result in no effects to archaeological or historical resources.

Flood control

The recommended plan would restore an approximately 10+ year level of flood protection to the existing Associated Levee Districts levee system, which would equal the level that existed prior to the declared flood event of 6 May 2007. The area is located in the base floodplain and is subject to Executive Order 11988, “Floodplain Management”. In addition, since the proposed levee repair would restore this levee to its near original alignment and pre-flood grade and cross section, no increase in floodwater surface elevations would occur. As the recommended plan would not directly or indirectly support more development in the floodplain or encourage additional occupancy and/or modify of the base floodplain, the Corps has determined that the recommended plan complies with the intent of Executive Order 11988.

The “No Action” Alternative would continue to expose all public and private infrastructure and agricultural croplands previously protected to a high level risk of future flooding.

Economics

Based on the Corps’ economic analysis, the recommended plan is the most economical and prudent repair action. With the implementation of the recommended plan, the levees would be restored to a 10-year level of flood protection. Public and private infrastructure and agricultural croplands protected by the levee prior to the flood damage would continue to be protected against a 10-year flood event. Economic conditions are unlikely to change from those of pre-damage levee conditions with the repair of this levee system.

The “No Action” Alternative has a zero benefit to cost ratio and would continue to expose all public and private infrastructure and agricultural croplands previously protected by the levee to a high level risk of future flooding. People’s livelihood and social well-being would remain in turmoil, subject to the continuous threat of flooding until the level of flood protection is restored. Failure to reconstruct the levee could adversely affect the tax base of the counties and municipal governments and special districts, such as school districts. In addition, loss of jobs and potential losses in agricultural production on lands protected by the levee would also be incurred.

Aesthetics

The recommended plan, Alternative 1, would result in very minor and temporary adverse aesthetic impacts associated with the construction activity. The human population that could potentially be affected by the activity would be expected to be very low, restricted to the occasional boater on the Missouri River or person(s) participating in outdoor recreation on the private land in the project area. Upon completion of the project, esthetic impact of the project would be the same as the original levee.

The “No Action” Alternative would have no effect on aesthetics.

Section 11: CUMULATIVE IMPACTS

The combined incremental effects of human activity are referred to as cumulative impacts (40CFR 1508.7). While these incremental effects may be insignificant on their own, accumulated over time and from various sources, they can result in serious degradation to the environment. The cumulative impact analysis must consider past, present, and reasonably foreseeable actions in the study area. The analysis also must include consideration of actions outside of the Corps, to include other State and Federal agencies. As required by NEPA, the Corps has prepared the following assessment of cumulative impacts related to the alternatives being considered in this EA.

Historically, the Missouri River and its floodplain has been altered by bank stabilization, dams on the river and its tributaries, roads/bridges, agricultural and urban levees, channelization, farming, water withdrawal for human and agricultural use, urbanization and other human uses. These activities have substantially altered the terrestrial and aquatic ecosystem within the Missouri River watershed.

Currently, the Corps is undertaking studies of the Federal levees along the Missouri River to determine if measures to improve the reliability of these existing flood risk management projects are warranted. In addition, the Corps, which administers Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act, has issued and will continue to evaluate permits authorizing the placement of fill material in the Waters of the United States and/or work on, in, over or under a navigable water of the United States including the Missouri River and its tributaries. These levee repair projects typically result in minor impacts to the aquatic ecosystem. The Corps, under the authority of the Public Law 84-99 Levee Rehabilitation and Inspection Program, has and will continue to provide rehabilitation assistance to Federal and non-Federal levee sponsors along the Missouri River which participate in the Public Law 84-99 Program. These projects typically result in minor short term construction related impacts to fish and wildlife and the habitats upon which they depend. Resources typically affected by this type of project generally include, but are not limited to, wetlands, flood plain values, water quality, and fish and wildlife habitat. It should be noted that these projects do not result in an addition to flood heights or reduced flood plain area but are merely a form of maintenance to that which had previously existed.

Of the reasonably foreseeable projects and associated impacts that would be expected to occur, further urbanization of the floodplain will probably have the greatest impact on these resources in the future. The possibility of wetland conversion and the clearing of riparian habitat is ever present, and these activities also tend to impact these resources. Construction of additional agricultural levees may occur provided land becomes available for this purpose; however, the trend seems to be moving in the opposite direction and towards urban development. The era of major reservoir construction has likely past, thus impacts from these projects likely will not occur.

The adverse effects associated with the proposed project are long-term/minor associated with the loss of agricultural cropland, and short term/minor associated with project construction. These minor adverse effects would be greatly offset by restoring the flood risk management capability

and its associated social and economic benefits of the existing levee system. The PL 84-99 Program is designed to merely bring the damaged levees back to pre-existing conditions (i.e., the status quo). Thus, no significant cumulative impacts associated with the proposed rehabilitation of the existing levee system have been identified.

Section 12: MITIGATION MEASURES

The recommended plan will result in minor impacts to mitigable resources as defined in USACE Planning regulations but not under Section 404 of the Clean Water Act. A minor amount of timber will be impacted by the proposed project (silver maple < 9 inches in diameter breast height). However, the U.S. Fish and Wildlife Service has stated that natural plant succession should provide adequate revegetation for non-mast producing trees removed. Therefore, no mitigation measures are warranted or proposed.

Section 13. COMPLIANCE WITH ENVIRONMENTAL QUALITY STATUTES

Compliance with Designated Environmental Quality Statutes that have not been specifically addressed earlier in this report is covered in Table 1. Additional information is listed for the most pertinent statutes following the table.

Table 1
Compliance of Preferred Alternative with Environmental Protection Statutes and Other Environmental Requirements

Federal Polices	Compliance
Archeological Resources Protection Act, 16 U.S.C. 470, et seq.	Full Compliance
Clean Air Act, as amended, 42 U.S. C. 7401-7671g, et seq.	Full Compliance
Clean Water Act (Federal Water Pollution Control Act), 33 U.S.C. 1251, et seq.	Full Compliance
Coastal Zone Management Act, 16 U.S.C. 1451, et seq.	Not Applicable
Endangered Species Act, 16 U.S.C. 1531, et seq.	Full Compliance
Estuary Protection Act, 16 U.S.C. 1221, et seq.	Not Applicable
Federal Water Project Recreation Act, 16 U.S.C. 4601-12, et seq.	Full Compliance
Fish and Wildlife Coordination Act, 16 U.S.C. 661, et seq.	Full Compliance
Land and Water Conservation Fund Act, 16 U.S.C. 4601-4, et seq.	Not Applicable
Marine Protection Research and Sanctuary Act, 33 U.S.C. 1401, et seq.	Not Applicable
National Environmental Policy Act, 42 U.S.C. 4321, et seq.	Full Compliance
National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470a, et seq.	Full Compliance
Rivers and Harbors Act, 33 U.S.C. 403, et seq.	Full Compliance
Watershed Protection and Flood Prevention Act, 16 U.S.C. 1001, et seq.	Full Compliance
Wild and Scenic River Act, 16 U.S.C. 1271, et seq.	Not Applicable
Farmland Protection Policy Act, 7 U.S.C. 4201, et. seq.	Full Compliance
Protection & Enhancement of the Cultural Environment (Executive Order 11593)	Full Compliance
Floodplain Management (Executive Order 11988)	Full Compliance
Protection of Wetlands (Executive Order 11990)	Full Compliance
Environmental Justice (Executive Order 12898)	Full Compliance

NOTES:

- a. Full compliance. Having met all requirements of the statute for the current stage of planning (either preauthorization or postauthorization).

- b. Partial compliance. Not having met some of the requirements that normally are met in the current stage of planning.
- c. Noncompliance. Violation of a requirement of the statute.
- d. Not applicable. No requirements for the statute required; compliance for the current stage of planning.

Clean Water Act, Sections 404 and 401

The recommended plan does not involve placement of fill material in a Water of the United States and therefore, Clean Water Act, Section 401 Water Quality Certification and Section 404(b)(1) are not required.

Clean Water Act, Section 402

A NPDES permit has been received from Missouri Department of Natural Resources and is located in Appendix II.

Endangered Species Act, Section 7

The Corps has made a determination that no impacts to any federally listed threatened or endangered species or their habitat would occur with the project action. Coordination of ESA would be completed upon review of this EA and concurrence of this determination with the USFWS.

National Historic Preservation Act

In a letter to State Historic Preservation Officer (SHPO), the Corps recommended that the project would have no effect on historic properties and that the project should be allowed to proceed. SHPO concurred with this recommendation on November 26, 2007 (Appendix II).

Section 14: CONCLUSION & RECOMMENDATION

The flood risk management level achieved by the recommended plan would be the same as the original pre-flood levees. The recommended plan would result in no impacts to any Federally-listed threatened or endangered species or their habitat. The recommended plan would result in no impacts to any properties listed, proposed for listing, eligible for listing, or potentially eligible for listing in the National Register of Historic Places. Areas of the existing levee sections damaged by flooding would be temporarily disturbed by the proposed construction activity. The adverse effects associated with the proposed project are short term/minor associated with project construction. These minor adverse effects would be greatly offset by restoring the flood risk management capability and its associated social and economic benefits of the existing levee system. Alternative 1 – Combination meets the project purpose and need of rehabilitating the flood damage reduction capability and its associated social and economic benefits of the existing levee system. Of the two alternatives considered, Alternative 1 – Combination is recommended because it satisfies all the repair needs for the complete levee system, has a positive cost/benefit ratio, and is consistent with protection of the environment.

Based on coordination with the resource agencies and input gained through a public interest review, as documented in this Environmental Assessment, the Kansas City District – Corps of Engineers has made a preliminary determination that this project would have no significant impacts on the human environment including natural and cultural resources and Federally-listed threatened and endangered species; therefore, a Finding of No Significant Impact (FONSI) has

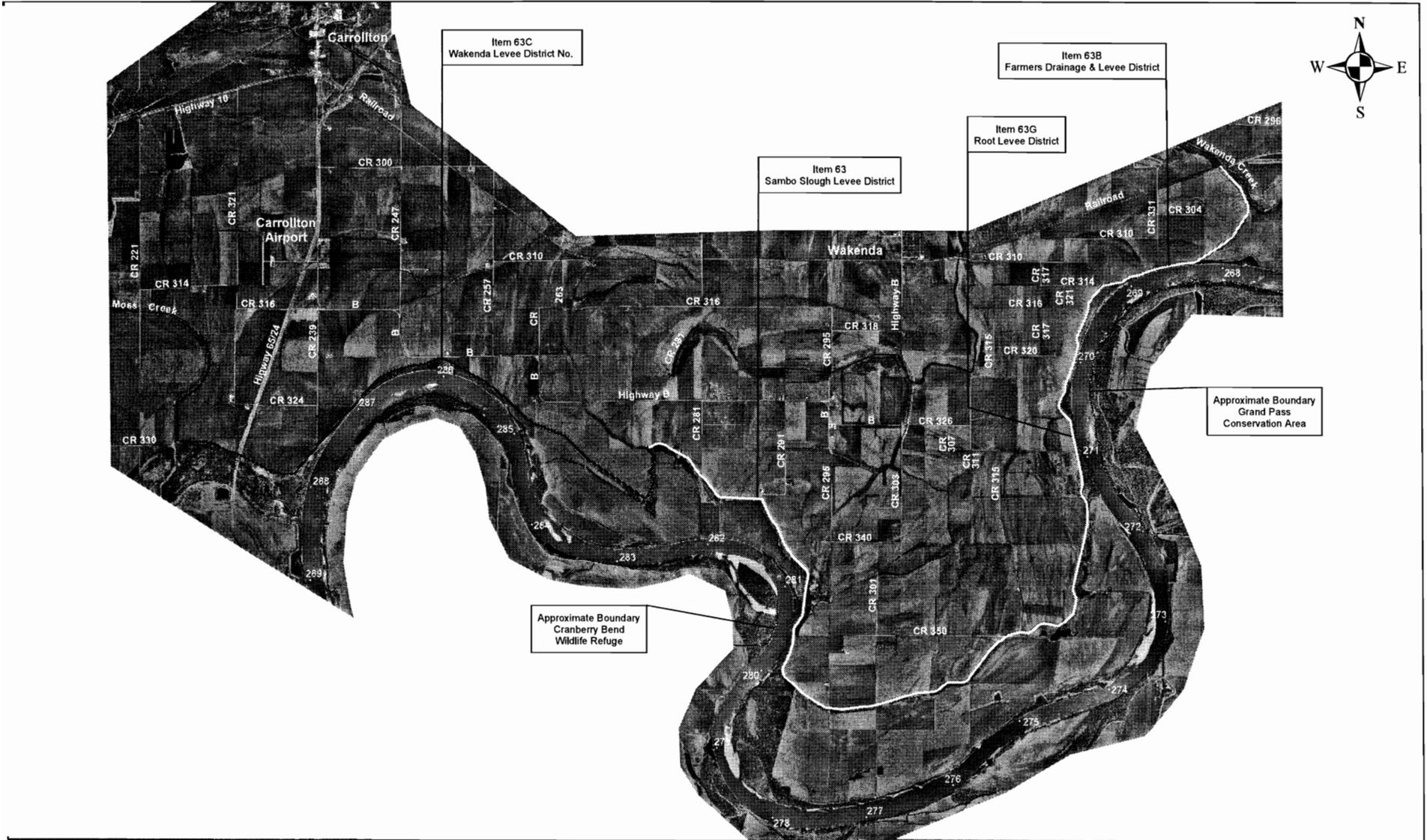
been prepared. This NEPA decision document will be forwarded to the District Engineer with a recommendation for approval.

Section 15: PREPARERS

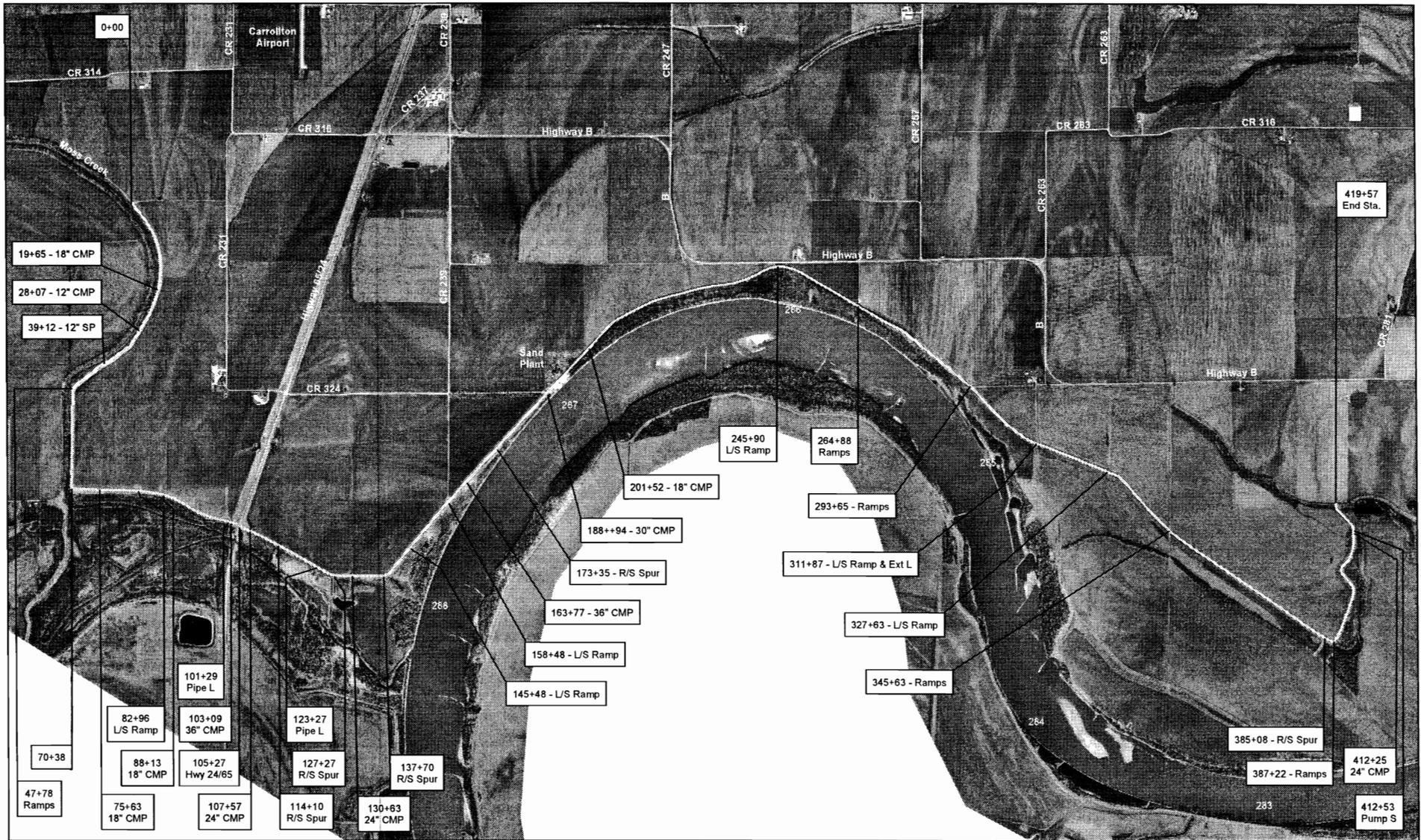
This EA and the associated draft FONSI were prepared by Ms. Lekesha Reynolds (Environmental Resource Specialist), with relevant sections prepared by Mr. Timothy Meade (Cultural Resources). The address of the preparers is: U.S. Army Corps of Engineers, Kansas City, District; PM-PR, Room 843, 601 E. 12th St, Kansas City, MO 64106.

APPENDIX I – PROJECT MAPS

*Sambo Slough Levee District No. 1 (Item 63),
Farmers Drainage & Levee District (Item 63B),
Wakenda Levee District No. 1 (Item 63C), and
Root Levee District (Item 63G)
P.L. 84-99 Levee Rehabilitation Project
Carroll County, Missouri
May 2008*



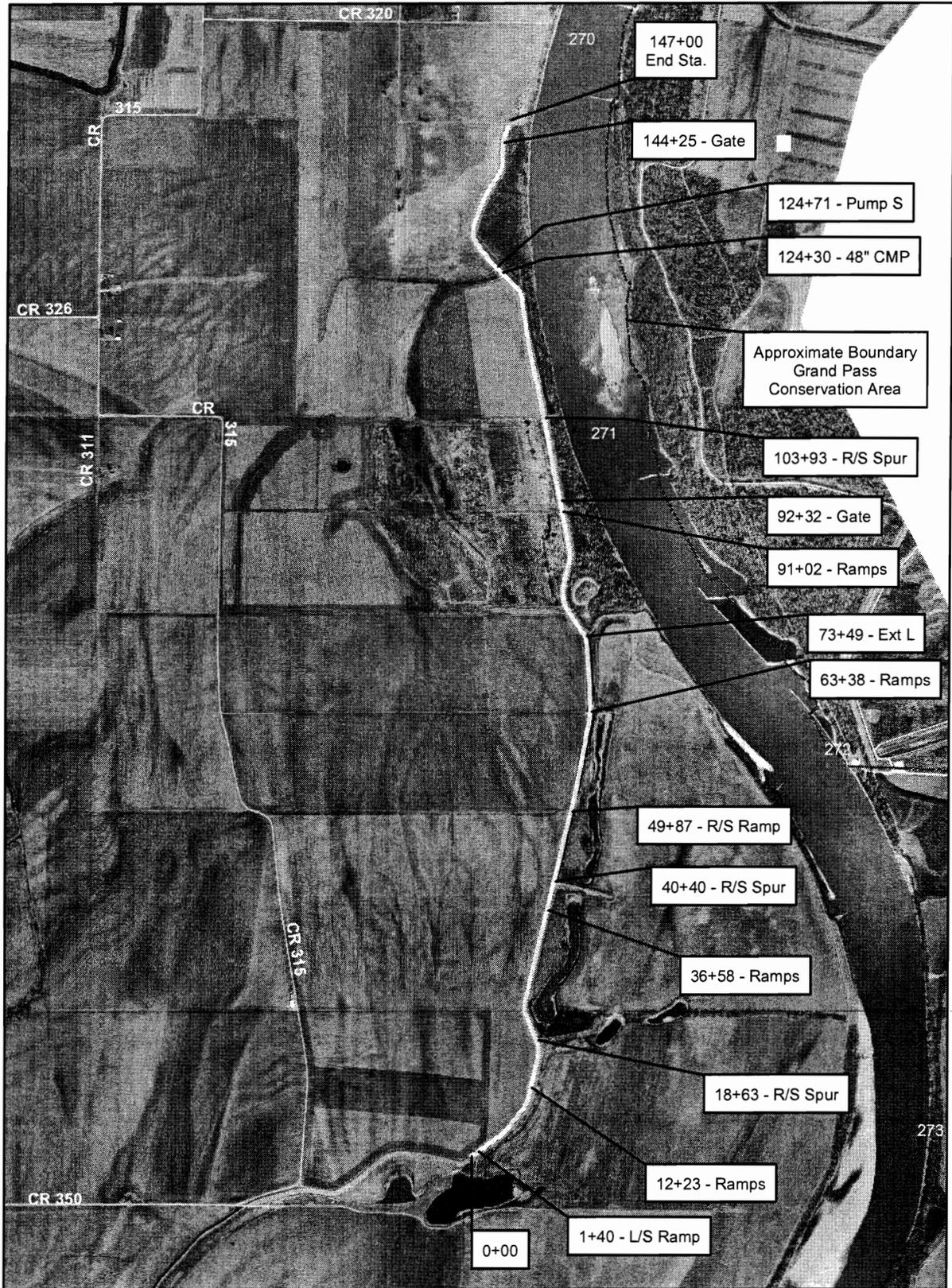
**Complete Flood Control Work
Item's 63C, 63, 63G & 63B**



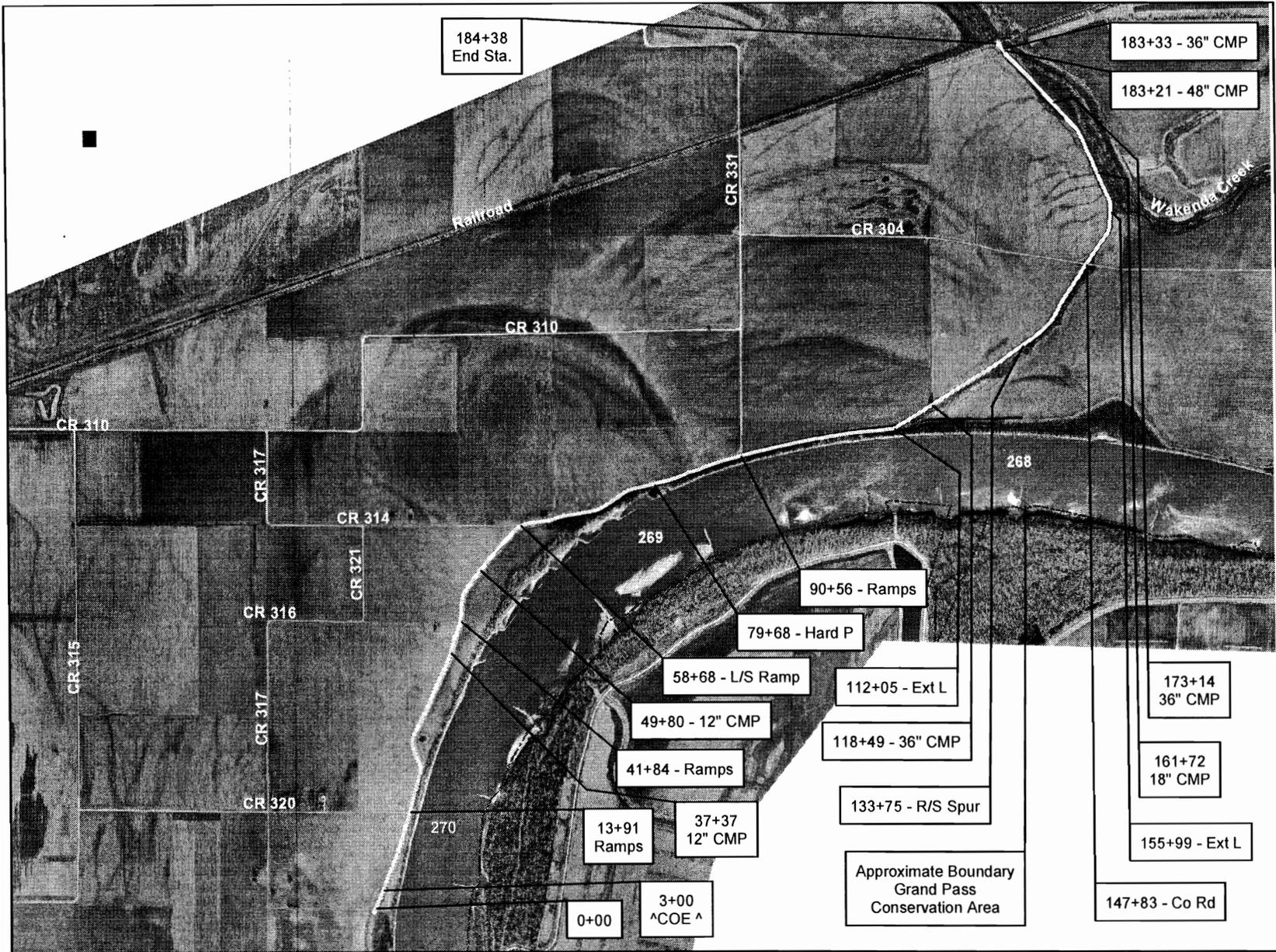
Item 63C
Wakenda Levee District No. 1



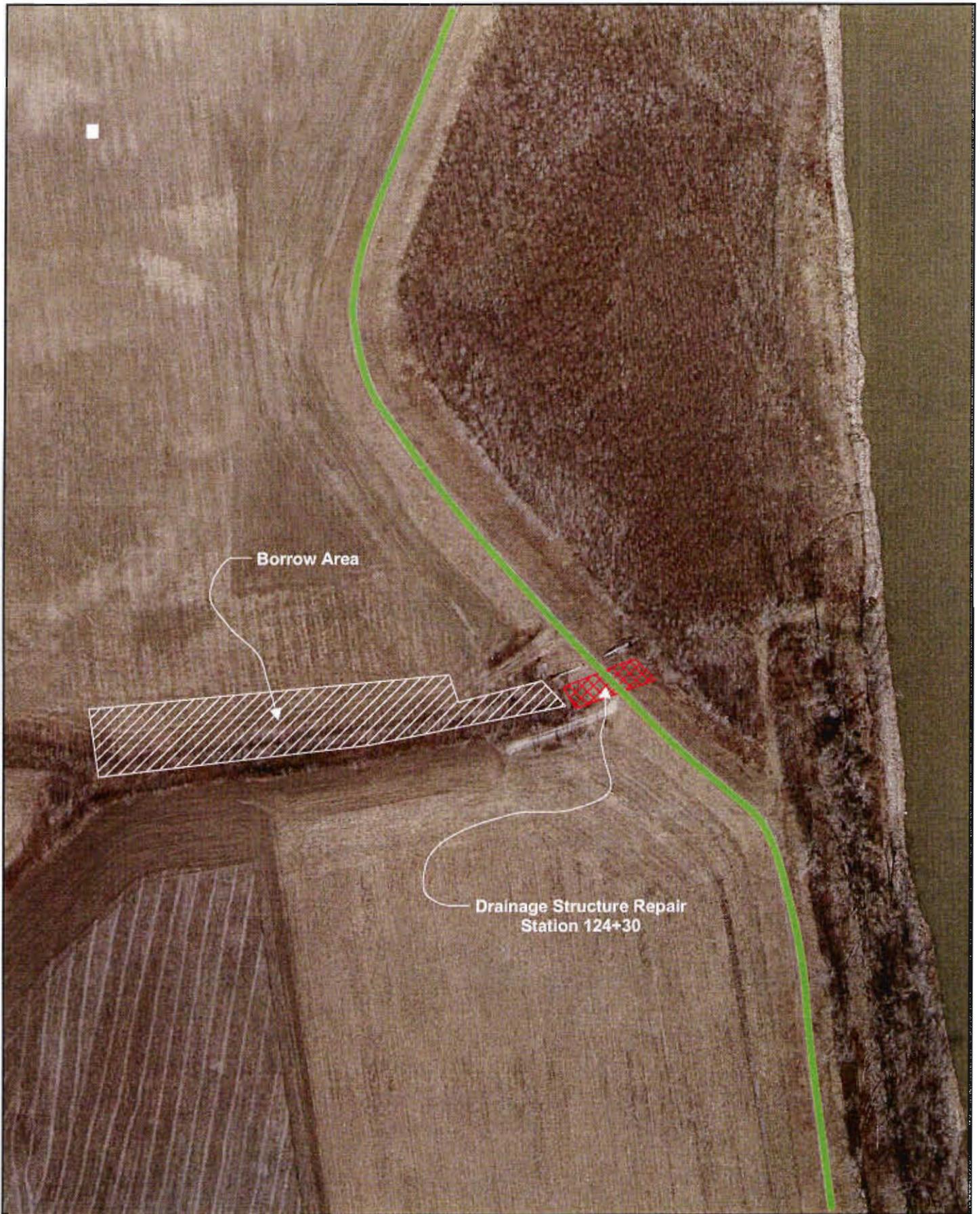
Item 63
 Sambo Slough Levee District

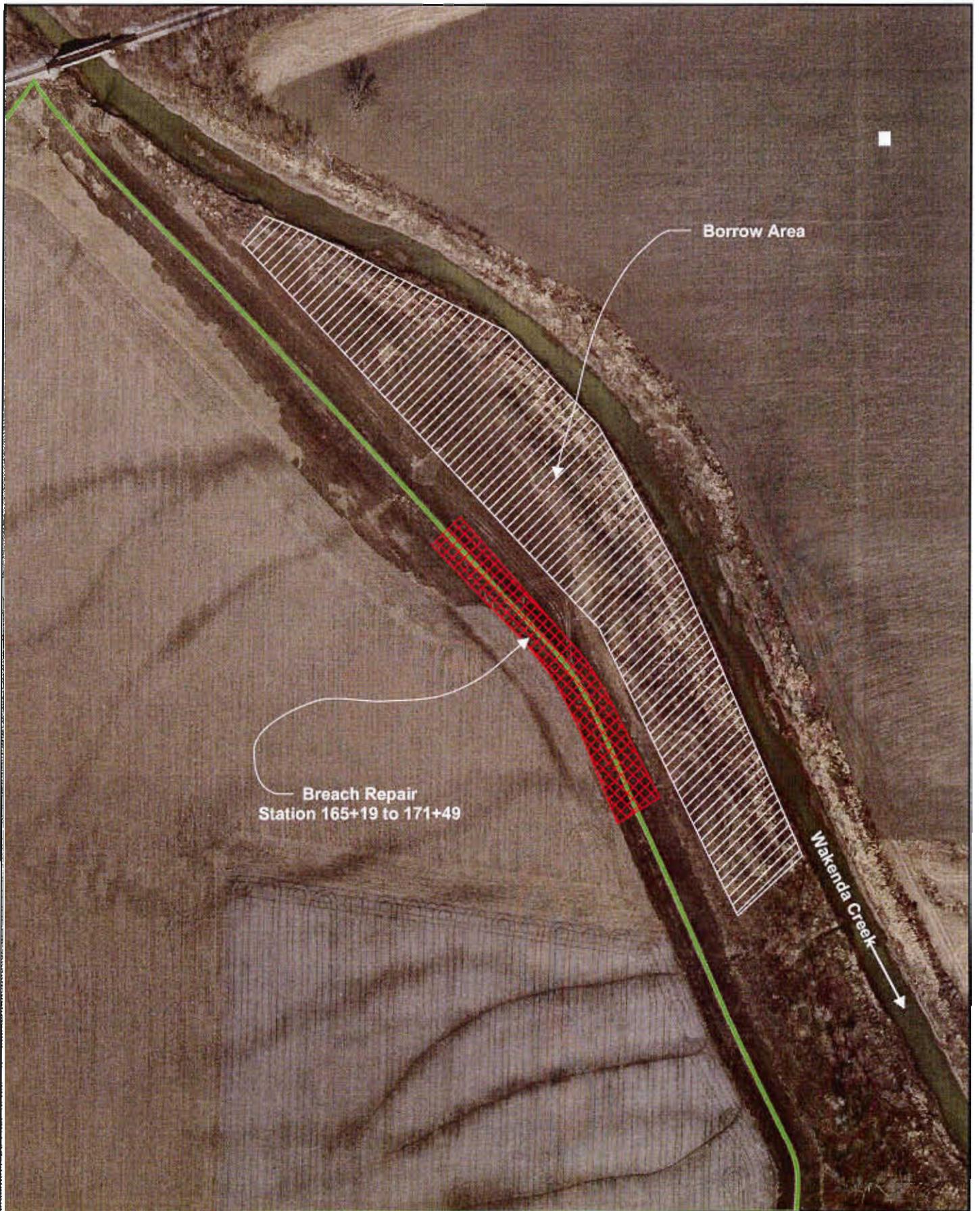


Item 63G
Root Levee District



Item 63B
Farmers Drainage & Levee District





APPENDIX II – NEPA REVIEW

*Sambo Slough Levee District No. 1 (Item 63),
Farmers Drainage & Levee District (Item 63B),
Wakenda Levee District No. 1 (Item 63C), and
Root Levee District (Item 63G)
P.L. 84-99 Levee Rehabilitation Project
Carroll and Ray Counties, Missouri
May 2008*

STATE OF MISSOURI Matt Blunt, Governor • Doyle Childers, Director
DEPARTMENT OF NATURAL RESOURCES

www.dnr.mo.gov

November 26, 2007

Timothy Meade
Corps of Engineers, Kansas City District
700 Federal Building
Kansas City, Missouri 64106-2896

Re: Emergency Repairs, Sambo Slough, Farmers, Wakenda & Root Levees (COE) Carroll County,
 Missouri

Dear Mr. Meade:

Thank you for submitting information on the above referenced project for our review pursuant to Section 106 of the National Historic Preservation Act (P.L. 89-665, as amended) and the Advisory Council on Historic Preservation's regulation 36 CFR Part 800, which requires identification and evaluation of cultural resources.

We have reviewed the information provided concerning emergency repairs to Sambo Slough, Farmers, Wakenda and Root Levees. Based on this review we concur with your recommendation that the projects are in areas of low potential or areas of previous disturbance, or have been previously surveyed with negative results, and that there will be **no historic properties affected**.

Please be advised that, should project plans change, information documenting the revisions should be submitted to this office for further review. In the event that cultural materials are encountered during project activities, all construction should be halted, and this office notified as soon as possible in order to determine the appropriate course of action.

If you have any questions, please write Judith Deel at State Historic Preservation Office, P.O. Box 176, Jefferson City, Missouri 65102 or call 573/751-7862. Please be sure to include the SHPO Log Number **(006-CA-08)** on all future correspondence or inquiries relating to this project.

Sincerely,

STATE HISTORIC PRESERVATION OFFICE



Mark A. Miles
Director and Deputy
State Historic Preservation Officer

MAM:jd

U.S. Army Corps of Engineers, KC District
MO-R100043, Various County



Matt Blunt, Governor • Doyle Childers, Director

DEPARTMENT OF NATURAL RESOURCES

www.dnr.mo.gov

NOV 30 2007

U.S. Army Corps of Engineers, KC District
700 Federal Building, 601 E. 12th Street
Kansas City, MO 64106

Dear Permittee:

Pursuant to the Federal Water Pollution Control Act, under the authority granted to the State of Missouri and in compliance with the Missouri Clean Water Law, we have issued and are enclosing a General State Operating Permit for U.S. Army Corps of Engineers, KC District.

Please review the requirements of your permit. Monitoring reports that may be required by this permit must be submitted on a periodic basis. Copies of the necessary report forms, if required, are enclosed and should be mailed to the regional office listed below. Please contact that office for additional forms.

This General Permit is both your federal discharge permit and your new state operating permit and replaces all previous state operating permits and letters of approval for the discharges described within. In all future correspondence regarding this permit, please refer to your general permit number as shown on page one of your permit.

If you were affected by this decision, you may appeal to have the matter heard by the administrative hearing commission. To appeal, you must file a petition with the administrative hearing commission within thirty days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the administrative hearing commission.

If you have any questions concerning this permit, please do not hesitate to contact the Water Protection Program at PO Box 176, Jefferson City, MO 65102 (573) 751-1300.

Sincerely,

WATER PROTECTION PROGRAM

A handwritten signature in black ink, appearing to read "Robert M. Childers".

NPDES Permit and Engineering Section

Enclosure

RECEIVED
REGULATORY BRANCH
07 DEC -5 PM 2:30

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



**MISSOURI STATE OPERATING PERMIT
WATER POLLUTION CONTROL PROGRAM**

General Operating Permit

In compliance with the Missouri Clean Water Law, (chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No.: MO-R100043

Owner: U.S. Army Corps of Engineers, KC District
Address: 700 Federal Building, 601 E. 12th Street
Kansas City, MO 64106

Continuing Authority: Same
Same

Facility Name: U.S. Army Corps of Engineers, KC District
Facility Address: 700 Federal Building, 601 E. 12th Street
Kansas City, MO 64106

Legal Description: See Page 2, Various County

Receiving Stream: See Page 2
First Classified Stream: See Page 2

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein.

FACILITY DESCRIPTION All Outfalls, SIC 1629

Construction or land disturbance activity (e.g., clearing, grubbing, excavating, grading, and other activity that results in the destruction of the root zone) that are performed by or under contract to a city, county, or other governmental jurisdiction that has a storm water control program for land disturbance activities that has been approved by the Missouri Department of Natural Resources.

This permit authorizes only wastewater, including storm waters, discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System, it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law

May 31, 2007
Effective date

November 30, 2007
Issue date

Doyle Childers, Director, Department of Natural Resources
Executive Secretary, Clean Water Commission

May 30, 2012

Expiration date
MO 780-1481 (7-94)

Edward Galbraith
Director of Staff, Clean Water Commission

Page 2

Permit Number MO-R100043

This permit accompanies the applicant's General Permit 41 (GP0-41) for the repair of levees due to damages from flooding.

Repair activities may take place anywhere along the Missouri and Grand Rivers and tributaries thereof. Location would be in any county along these waterways from Rulo Nebraska to Saint Louis Missouri.

Detailed receiving stream information is available upon request.