



US Army Corps
of Engineers
Kansas City District

**KANSAS CITY DISTRICT
CORPS OF ENGINEERS
and the
SUGARTREE BOTTOM LEVEE DISTRICT**

**Public Law 84-99 of the Flood Control Act of 1944
Levee Rehabilitation – NEPA Review, Environmental
Assessment & Finding of No Significant Impact**

**SUGARTREE BOTTOM LEVEE DISTRICT,
ITEM NO. 68, 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

Finding of No Significant Impact

Sugartree Bottom Levee District (Item 68) Levee Rehabilitation Project Carroll County, Missouri

Project Summary

The U.S. Army Corps of Engineers, Kansas City District (CENWK), in cooperation with the project sponsor, Sugartree Bottom Levee District, proposes to construct the Sugartree Bottom Levee District Levee Rehabilitation Project, under the authority of Public Law 84-99 of the Flood Control Act of 1944. Due to the limited damages to the Sugartree Bottom levee, two alternatives were considered: (1) In-place repairs and (2) No action. The Corps has identified Alternative 1 – In-place repairs as the recommended plan. The proposed project would involve in-place repairs to landside slope erosion areas, levee breaches, a drainage structure, and re-seeding of both levee landside and riverside levee slopes in order to return the agricultural levee damaged by the declared flood event of 6 May 2007 to its pre-existing condition. The proposed repairs are located in Carroll County, Missouri, a few miles south of Carrollton, along the left descending bank of the Missouri River from River Mile 298.5 to River Mile 288.5, the left descending bank of Dirt Slough, and the right descending bank of Moss Creek.

Alternatives

Two alternatives were considered: (1) In-place repairs (**RECOMMENDED PLAN**) and (2) No action.

Recommended Plan

The recommended repair action consists of in-place repair of landside slope erosion area (sta. 60+35 to 137+00); in-place repair of drainage structure (sta. 593+87) using carbon fiber reinforced cured-in-place pipe liner; in-place repair of two breach areas (sta. 624+30 to 631+60 and 670+60 to 677+00); re-seeding of landside levee slope (sta. 166+00 to 263+85, 433+60 to 624+30, 631+60 to 670+60, 677+00 to 701+60 and 703+00 to 788+00); and re-seeding of riverside levee slope (sta. 11+15 to 360+90, 434+60 to 624+30, 631+60 to 670+60, 677+00 to 701+60 and 747+00 to 788+00).

Summary of Environmental Impacts

The levee flood risk management level achieved by the recommended plan would be the same as the pre-flood condition. 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. The recommended plan will result in minor fill impacts to mitigable resources as defined in USACE Planning regulations and under Section 404 of the Clean Water Act as approximately three acres of scrub-shrub wetland would be filled to repair the levee breaches. However, the recommended plan would have a net benefit to wetlands as approximately 29 acres of riverward wetlands would be enhanced through borrow operations. Additionally, some cottonwood and willow trees, the majority of which measure less than 9 inches diameter breast height (dbh), will be removed during borrow operations to facilitate levee repair. Areas of the existing levee sections damaged by flooding would be temporarily disturbed by the proposed construction activities.

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, meets the project purpose and need of rehabilitating the flood risk management capability, and its associated social and economic benefits of the existing levee system. Of the two alternatives considered, Alternative 1 -In-place repairs is recommended because it has a positive cost/benefit ratio, and is consistent with protection of the human environment.

Mitigation Measures

The recommended plan would result in minor fill impacts to mitigable resources as defined in USACE Planning regulations and under Section 404 of the Clean Water Act. These impacts are associated with filling three acres of scrub-shrub wetland to repair the levee breaches. General Permit Number NWKGP-41 authorizes these actions. Additionally, some cottonwood and willow trees, the majority of which measure less than 9 inches dbh, would be removed during borrow operations to facilitate levee repair.

The identification of borrow sites was completed in accordance with the Standard Operating Procedures for the Selection of Borrow Sites Missouri River and Tributaries 1995 Levee Repair (Appendix II). These guidelines were developed through coordination with the U.S. Fish and Wildlife Service (USFWS) and the Missouri Department of Conservation (MDC) to avoid and/or minimize adverse impacts to the aquatic ecosystem to the greatest extent practicable, and where possible, take advantage of the borrow acquisition activity to enhance the aquatic ecosystem. Clearing of early successional woody vegetation and excavation which removes accumulated silt from existing wetlands and scours are considered beneficial and will enhance the overall function and value of the aquatic ecosystem. CENWK has determined in coordination with MDC and the USFWS that natural plant succession should provide adequate re-vegetation of non mast producing trees. Borrow activities which expands existing scour holes increases their function and value. As the proposed borrow activity within the previously used scour

hole/wetland has been designed to enhance the functions and values of the aquatic ecosystem, no mitigation is 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 Finding of No Significant Impact (FONSI), dated May 22, 2008, with a thirty-day comment period ending on June 22, 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 a hard copy of the EA and Draft FONSI in order to provide comment.

One comment was received from the U.S. Fish and Wildlife Service (USFWS) by letter dated June 16, 2008. The USFWS stated that the proposed activity is not likely to adversely affect federally listed species or designated critical habitat.

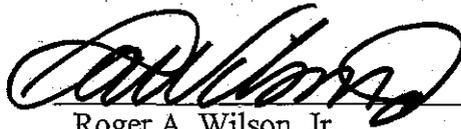
Levee rehabilitation projects completed by the Corps under authority of Public Law 84-99 generally do not require the preparation of an Environmental Impact Statement. These projects typically result in long-term social and economic benefits and the adverse environmental effects are typically minor/short-term construction related. Minor, short-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 Sugartree Bottom 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:

10 July 08



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



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

EXECUTIVE SUMMARY

The U.S. Army Corps of Engineers, Kansas City District (CENWK), in cooperation with the project sponsor, Sugartree Bottom Levee District, propose to construct the Sugartree Bottom Levee District Levee Rehabilitation Project, under the authority of Public Law 84-99 of the Flood Control Act of 1944.

The Sugartree Bottom Levee District levee segment consists of approximately 78,800 linear feet of earthen flood control works (FCW) on the left descending bank of the Missouri River from River Mile 298.5 to River Mile 288.5, the left descending bank of Dirt Slough, and the right descending bank of Moss Creek in Carroll County, a few miles south of Carrollton, Missouri. The FCW protects approximately 20,954 acres of agricultural lands (20,744 acres in cropland), approximately four miles of U.S. Highway 24/65, approximately 40 miles of gravel surfaced County and Township roads, numerous unimproved farm to market roads, approximately 28 miles of AMOCO pipeline, approximately 26 miles of Southwestern Bell phone lines, approximately 26 miles of Farmers Electric power lines, approximately 12 miles of Sprint fiber optic lines, and approximately four miles of Williams natural gas pipeline.

The proposed project would involve in-place repairs to landside slope erosion areas, levee breaches, drainage structures, and re-seeding of both levee landside and riverside levee slopes in order to return the agricultural levees damaged by the declared flood event of 6 May 2007 to their pre-flood conditions.

The recommended plan would result in minor impacts to mitigable resources as defined in USACE Planning regulations and under Section 404 of the Clean Water Act as three acres of scrub-shrub wetland would be filled to repair the levee breaches. General Permit Number NWKGP-41 authorizes these actions. However, the recommended plan would have a net benefit to wetlands as approximately 29 acres of riverward wetlands would be enhanced through borrow operations by shallow excavation and the sloping of perimeter faces.

Borrow material would be obtained from riverward borrow areas adjacent to breach locations and are positioned around existing 1993/1995 "environmentally cleared" scour/borrow areas. A small amount of woody vegetation consisting of cottonwood and willow would be removed during borrow operations.

The proposed action would not impact sites listed on or eligible for inclusion on the National Register of Historic Places or threatened and endangered species. Overall, the minor short-term impacts associated with this project are outweighed by the long-term social and economic benefits. CENWK in cooperation with the Missouri Department of Conservation and the U.S. Fish and Wildlife Service has stated that natural plant succession should provide

adequate re-vegetation of impacted areas. Mast-producing trees are not affected by the project. As such, no mitigation is proposed.

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 May 22, 2008, with a thirty-day comment period ending on June 22, 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 Mr. Neil Bass, Environmental Resources Specialist, PM-PR, Kansas City District - U.S. Army Corps of Engineers, by writing the above address, or by telephone at 816-389-3667.

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

**PUBLIC LAW 84-99
SUGARTREE BOTTOM LEVEE DISTRICT
LEVEE REHABILITATION PROJECT
CARROLL COUNTY, MISSOURI**

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**PUBLIC LAW 84-99
SUGARTREE BOTTOM 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 Sugartree Bottom Levee District Levee Rehabilitation Project.

Section 2: AUTHORITY

The Kansas City District – U.S. Army Corps of Engineers (CENWK), in cooperation with the project sponsor, the Sugartree Bottom Levee District, propose to construct the Sugartree Bottom 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 Sugartree Bottom Levee District levee consists of approximately 78,800 linear feet of earthen flood control works (FCW) located in Carroll County, a few miles south of Carrollton, Missouri along the left descending bank of the Missouri River from River Mile 298.5 to River Mile 288.5, the left descending bank of Dirt Slough.

Section 4: EXISTING CONDITION

The declared flood event on 6 May 2007 caused damages to the Sugartree Bottom Levee District flood control works. These damages consist of landside slope erosion at station 60+35 to 137+00; two levee breaches at stations 624+30 to 631+60 and 670+60 to 677+00; intermittent reaches of lost (destroyed) sod cover on levee embankment slopes at stations 11+15 to 360+90, 433+60 to 624+30, 631+60 to 670+60, 677+00 to 701+60, and 703+00 to 788+00, and damage to the drainage structure at station 593+87 (see Appendix I, Attachment B-1).

Section 5: PURPOSE & NEED FOR ACTION

The project purpose and need is to rehabilitate the damaged levee and restore the associated social and economic benefits. The Sugartree Bottom Levee District received damages to sections of its levee during the 6 May 2007 declared flood event. Prior to the May 2007 event,

the Sugartree Bottom Levee District levee provided an approximately 10-year level of flood risk management. In its current damaged state, the Sugartree Bottom Levee District levee is estimated to provide an approximate two-year level of protection. The existing condition exposes all public and private infrastructure and agricultural croplands to a higher 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 levee could adversely affect the tax base of the county and municipal government. In addition, loss of jobs and potential losses in agricultural production on lands previously protected by the levee would also be incurred.

Section 6: ALTERNATIVES CONSIDERED

The alternatives considered for levee repair were based on the type and severity of flood damage.

STATION 11+15 TO 360+90, 433+60 TO 701+60 AND 703+00 TO 788+00. Flood damage includes landside slope erosion and two levee breaches (see Appendix I, Borrow Map). Repair alternatives considered include: (1) In-Place Repair (**RECOMMENDED**) and (2) No Action.

Alternative 1: In-Place Repair. Due to the relatively limited nature of damages at these locations, and that the majority of levee embankments were in-tact, a landward levee setback was not considered a prudent repair action. Based on the Corps economic analysis the in-place repair of erosion and levee breaches was considered the most prudent and economical repair action. Soil to repair the breaches and eroded areas would be obtained from riverside borrow areas as described below in Section 7, Recommended Alternative. Landside and riverside slopes would be seeded following construction to reestablish protective sod cover.

Alternative 2: No Action. The "No Action" Alternative would involve no construction or re-seeding, and the levee would remain in its damaged condition. The no action alternative is unacceptable as it would not achieve the project purpose of repairing the damaged levee to pre-flood conditions. The no action alternative would continue to expose public and private infrastructure and agricultural croplands to a high risk level of future flooding.

STATION 593+87. Flood damages include a damaged drainage structure. Repair alternatives considered include two in-place repair alternatives and the no action alternative.

Alternative 1: In-Place Repair. The repair of the existing drainage structure would be accomplished using either corrugated metal pipe or carbon fiber reinforced cured-in-place pipe liner. Either in-place alternative would repair the structure to pre-damaged conditions. The location of the drainage structure and areas disturbed by construction would be seeded following construction to reestablish protective sod cover.

Alternative 2: No Action. The no action alternative would involve no construction or seeding, and the levee would remain in its damaged condition. The no action alternative is unacceptable as it would not achieve the project purpose of repairing the damaged levee to pre-flood

conditions. 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

The recommended repair action is Alternative 1, which consists of in-place repair of landside slope erosion area (sta. 60+35 to 137+00); in-place repair of drainage structure (sta. 593+87) using carbon fiber reinforced cured-in-place pipe liner; in-place repair of two breach areas (sta. 624+30 to 631+60 and 670+60 to 677+00); re-seeding of landside levee slope (sta. 166+00 to 263+85, 433+60 to 624+30, 631+60 to 670+60, 677+00 to 701+60 and 703+00 to 788+00); and seeding of riverside levee slopes to reestablish the protective sod cover (sta. 11+15 to 360+90, 434+60 to 624+30, 631+60 to 670+60, 677+00 to 701+60 and 747+00 to 788+00).

The in-place repair of landside slope erosion was determined by Corps economic analysis to be the most prudent and economical repair alternative. The in-place repair of the damaged drainage structure would be accomplished using the carbon fiber reinforced cured-in-place pipe liner as this alternative was determined by Corps economic analysis to be a more cost effective alternative than corrugated metal pipe. Both materials would provide a similar repair solution. Damaged sod cover on riverside and landside erosion areas would be seeded to establish protective sod cover. Borrow to repair the breaches and erosion would be obtained as described below (see Appendix I, Borrow Map).

Station 593+87: Borrow would be obtained from existing riverward spoil piles adjacent to the drainage structure outlet ditch.

Stations 624+30 to 631+60 and 670+60 to 677+00: Borrow would be obtained from two riverward borrow areas adjacent to breach locations that are positioned around existing 1993/1995 scour/borrow areas. A small amount of fringe woody vegetation consisting of cottonwood and willow, the majority measuring less than 9 inches dbh, would be removed to facilitate borrow operations.

All of the above designated borrow locations are positioned within previously "environmentally cleared" borrow locations assessed during the 1993 and 1995 repair actions. Identification of borrow sites was completed in accordance with the Standard Operating Procedures (SOP) for the Selection of Borrow Sites Missouri River and Tributaries 1995 Levee Repair. These guidelines were developed through coordination with the U.S. Fish and Wildlife Service (USFWS) and the Missouri Department of Conservation (MDC) to avoid and/or minimize adverse impacts to the aquatic ecosystem to the greatest extent practicable, and where possible, take advantage of the borrow acquisition activity to enhance the aquatic ecosystem. CENWK has determined in coordination with MDC and the USFWS that natural plant succession should provide adequate re-vegetation of non mast producing trees. The clearing of early successional woody vegetation and excavation which removes accumulated silt and enhances existing wetlands and scour holes are considered beneficial and will enhance the overall function and value of the aquatic ecosystem.

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 May 22, 2008, with a thirty-day comment period ending on June 22, 2008 to the public and resource agencies. The Notice was e-mailed to individuals, agencies, and 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:

The only comment received was a letter from the USFWS stating that they have determined that the project actions are not likely to adversely affect federally listed species or critical habitat.

Section 9: AFFECTED ENVIRONMENT:

The project area consists of the agricultural levee and riverside borrow areas located on the Missouri River flood plain between river miles 298.5 and 288.5. A wide variety of resources along with related environmental, economic and social effects were considered during the development and evaluation of project alternatives. These include: air quality; noise levels; water quality; water supply; soil control; fish and wildlife; vegetation; energy resources; wetlands; geological resources; agricultural activity; employment; tax base; public service; growth patterns; land use; recreation; archaeological and historical resources; flood control; aesthetics; navigation; transportation; health and safety; community service; population density and other items identified through public and agency comments.

Section 10: ENVIRONMENTAL CONSEQUENCES:

Primary resources of concern identified during the evaluation included: noise levels, water quality, wetlands, fish and wildlife, vegetation, threatened and endangered species, agricultural activity, archeological and historical resources, floodplain, economics and aesthetics. Projects impacts to other resources were determined to be no effect. The recommended plan would disturb an area measuring approximately 15 acres or less including borrow locations.

Noise Levels

The recommended plan, Alternative 1, would result in minor, short-term construction related noise impacts. These impacts are the result of operating 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. Noise from project construction could disturb the occasional boater on the nearby Missouri River or person(s) participating in outdoor recreation within 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, could potentially result in minor, temporary, construction related adverse impacts to water quality resulting from site runoff and increased turbidity. The minor, potential 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.

Best management practices would minimize the incidental fallback of material into the river during construction and would 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.

In the "No Action" Alternative with the absence of a Federal action addressing levee improvements, a high water event could result in a substantial impact the natural and human environment within the project area. Avoiding repair actions could result in adverse impacts to water quality from erosion, 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.

Wetlands

Approximately three acres of scrub-shrub wetland that formed in existing riverward scour/borrow areas would be filled to repair the levee breaches. General Permit Number NWKGP-41 authorizes this action (Appendix II). However, the recommended plan would have a net benefit to wetlands as approximately 29 acres of riverward wetlands would be enhanced through borrow operations. Borrow activities have been designed to enhance the existing scour holes/wetland areas through the removal of silt via shallow excavation of approximately two feet and the sloping of perimeter faces, which would increase scour hydrology. Borrow operations would enhance the overall function and value of these areas and benefit the aquatic ecosystem.

The "No Action" Alternative could result in benefits to wetlands located behind the breached levees as these areas would be subject to a new level of future flooding.

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 potential site runoff and increased turbidity, which could make feeding, breeding, and sheltering difficult for species not accustomed to these conditions.

Although approximately three acres of wetlands would be cleared and filled to facilitate the levee breach repairs, displaced wildlife that utilize scrub-shrub wetland and scour habitat would benefit from the enhancement of about 29 acres of wetland as a result of borrow operations as described above.

The "No Action" Alternative would have minimal effects on fish and wildlife resources. These impacts would arise from flooding within the now less protected area. Wetland species may benefit as more frequent flooding could occur in the now less protected area. Wetlands would have a better chance of recharge since they have a direct hydraulic connection to the Missouri River. Other terrestrial organisms could be temporarily displaced or have their habitat degraded by flooding.

Vegetation

The recommended plan, Alternative 1, would be constructed on the agricultural levee and utilize adjacent riverward borrow areas. During borrow operations, some early successional cottonwood and willow trees would be cleared. The majority of this vegetation measures 9 inches dbh or less and is located on the fringe of former borrow/scour areas. The proposed project would also repair sod damaged by the flooding through seeding.

The "No Action" Alternative could result in increases to the floodplain and to floodplain vegetation if levees are not repaired and lands are abandoned from farming due to the higher risk of flooding. Increased hydrology within abandoned agricultural land would result in increased areas of floodplain forest.

Threatened and Endangered Species

The recommended plan 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 these rivers. Indiana bats (*Myotis sodalis*) roost in trees that tend to be greater than 9 inches dbh during the spring and summer and hibernate in caves during the fall and winter. Levee work would not impact any potential Indiana bat habitat. 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.

Agricultural Land

The recommended plan would return the flood risk management level of the levee to its pre-existing condition. The recommended plan would allow agricultural activity to return to the area as it did prior to the declared flood event.

The "No Action" Alternative would adversely impact agricultural activity by exposing approximately 20,954 acres of agricultural lands (20,744 acres of croplands) 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), dated December 3, 2007, 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 December 3 and 5, 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.

Floodplain

The recommended plan would restore an approximate 10-year level of flood protection to the existing Sugartree Bottom Levee District 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". Since the proposed levee repair would restore the levee to its 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 higher level risk of future flooding.

Economics

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 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. Based on the Corps' economic analysis, the recommended plan is economically justified with a benefit to cost ratio of 4.7.

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

The "No Action" Alternative would have no effect on aesthetics.

Section 11: SUMMARY OF ENVIRONMENTAL EFFECTS OF THE NON-RECOMMENDED PLAN

The "No Action" Alternative has not been recommended because it does not meet the project purpose and need of rehabilitating the damaged flood risk management project to its original condition and; therefore, restoring its associated social and economic benefits. The "No Action" alternative would have no permanent or temporary construction related impacts. The "No Action" alternative would continue to expose all public and private infrastructure and agricultural croplands previously protected by the levee prior to a higher 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 proposed level of flood protection is restored. Failure to repair the levee could adversely affect the tax base of the county and municipal governments. In addition, loss of jobs and potential losses in agricultural production on lands protected by the levee would also be incurred.

Section 12: 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 Federal and State 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.

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, floodplains, water quality, and fish and wildlife habitat. It should be noted that these projects do not result in an addition to existing 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 are 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 passed, thus impacts from these projects will not likely occur.

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. The PL84-99 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 13: MITIGATION MEASURES

The recommended plan would result in minor fill impacts to mitigable resources as defined in USACE Planning regulations and under Section 404 of the Clean Water Act. These impacts are associated with filling three acres of scrub-shrub wetland to repair the levee breaches. General Permit Number NWKGP-41 authorizes these actions. Additionally, some cottonwood and willow trees, the majority of which measure less than 9 inches dbh, would be removed during borrow operations to facilitate levee repair.

The identification of borrow sites was completed in accordance with the SOP for the Selection of Borrow Sites Missouri River and Tributaries 1995 Levee Repair. These guidelines were developed through coordination with the U.S. Fish and Wildlife Service and the Missouri Department of Conservation to avoid and/or minimize adverse impacts to the aquatic ecosystem to the greatest extent practicable, and where possible, take advantage of the borrow acquisition activity to enhance the aquatic ecosystem. Clearing of early successional woody vegetation and excavation which removes accumulated silt from existing wetlands and scours are considered beneficial and will enhance the overall function and value of the aquatic ecosystem. CENWK has determined in coordination with MDC and the USFWS that natural plant succession should provide adequate re-vegetation of non mast producing trees. Borrow activities which expands existing scour holes increases their function and value. Since the proposed borrow activity

within the previously used scour hole/wetland has been designed to enhance the functions and values of the aquatic ecosystem, no compensatory mitigation is proposed.

Section 14: 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.

Section 15: CONCLUSION & RECOMMENDATION

The flood risk management level achieved by the recommended plan would be the same as provided by the pre-flood levee system. 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.

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 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 (2) alternatives considered, Alternative 1 –In-place repairs is recommended over the no action alternative because it has a positive cost/benefit ratio, and is consistent with protection of the human 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 the 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 16: PREPARERS

This EA and the associated FONSI were prepared by Mr. Neil Bass (Environmental Resources Specialist), with relevant sections prepared by Mr. Timothy Meade (Cultural and Archaeological 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.

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, Section 404 and 401

The recommended plan involves activities of excavation in wetlands and those activities are covered under the GP-41 permit (Appendix II).

Clean Water Act, Section 402

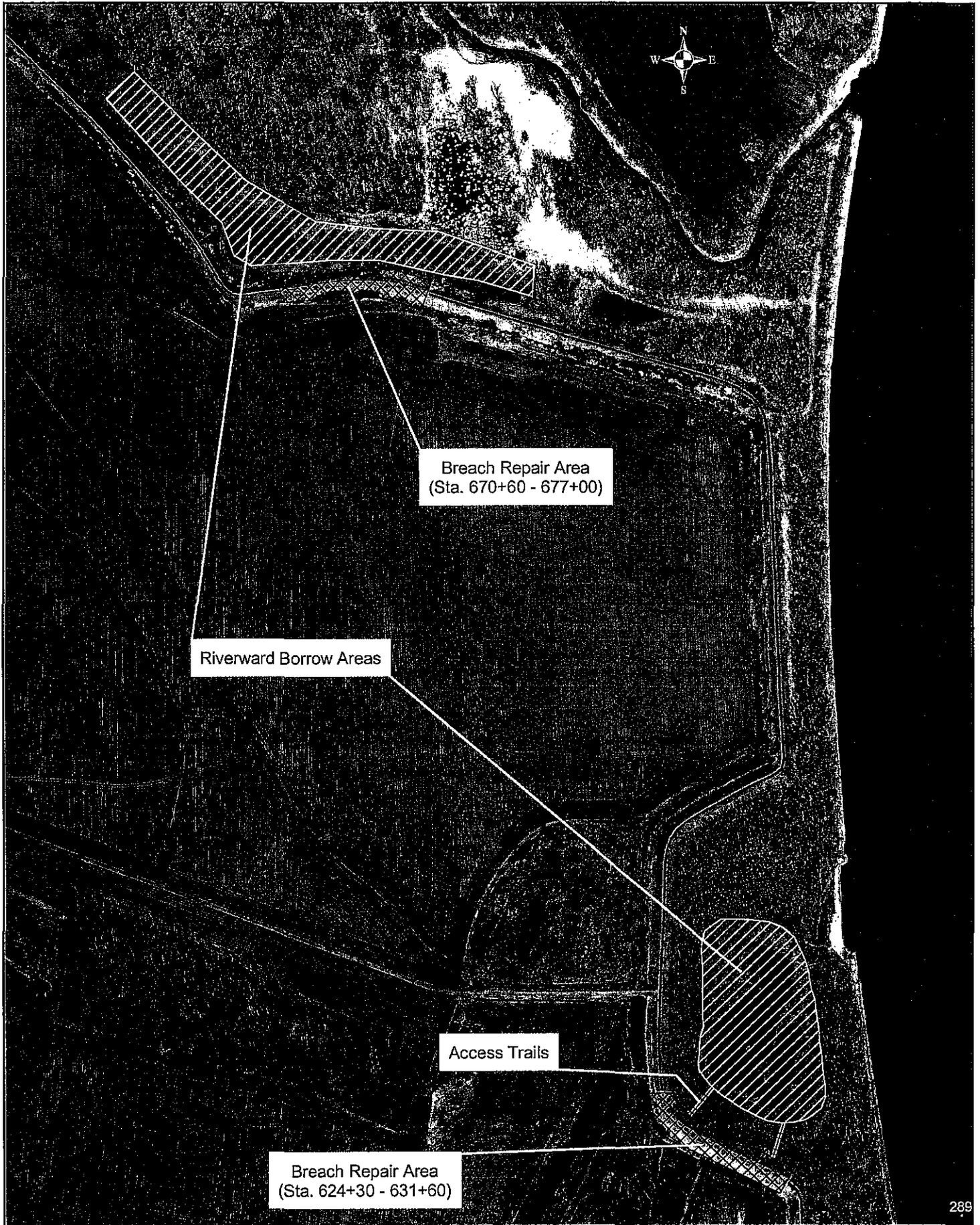
A NPDES permit was obtained and is located in Appendix II.

Endangered Species Act, Section 7

The Corps of Engineers 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

No sites listed on or eligible for listing on the National Register of Historic Places are located within or near the proposed project area. The Missouri State Historic Preservation Office (SHPO) concurred with this recommendation on December 3 and 5, 2007 (Appendix II).



APPENDIX II – NEPA REVIEW

**Missouri SHPO letter
General Permit No. GP-41
Missouri NPDES Permit
Standard Operating Principles for Selection of Borrow
US Fish and Wildlife Service Comment Letter**

***Sugartree Bottom Levee District (Item 68)
P.L. 84-99 Levee Rehabilitation Project
Carroll County, Missouri***



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

December 3, 2007

REPLY TO
ATTENTION OF

Environmental Resources Section
Planning Branch

Mr. Mark Miles
Director and Deputy State Historic Preservation Officer
State Historic Preservation Office
Department of Natural Resources
P. O. Box 176
Jefferson City, Missouri 65102-0176

Dear Mr. Miles:

The U.S. Army Corps of Engineers, Kansas City District (Corps) is planning emergency repairs to the Sugartree Bottom Levee in Carroll County. The repairs are required because of damage to the existing structures during flooding events in May of 2007. The Corps has completed its review of the project in compliance with the terms as described in the 1993 Programmatic Agreement with your office regarding the implementation of emergency repair and restoration of damaged flood control projects as authorized by Public Law 84-99. Attached for your review and comment are project maps showing locations of the proposed work.

The levee damages consist of landside slope erosion at station 60+35 to 137+00; two levee breaches at stations 624+30 to 631+60 and 670+60 to 677+00; and intermittent reaches of lost (destroyed) sod cover on levee embankment slopes at stations 11+15 to 360+90, 433+60 to 624+30, 631+60 to 670+60, 677+00 to 701+60 and 703+00 to 788+00. The recommended repair action consists of in-place repair of landside slope erosion area (sta. 60+35 to 137+00); in-place repair of drainage structure (sta. 593+87); in-place repair of two breach areas (sta. 624+30 to 631+60 and 670+60 to 677+00); re-seeding of landside levee slope (sta. 166+00 to 263+85, 433+60 to 624+30, 631+60 to 670+60, 677+00 to 701+60 and 703+00 to 788+00); and re-seeding of riverside levee slope (sta. 11+15 to 360+90, 434+60 to 624+30, 631+60 to 670+60, 677+00 to 701+60 and 747+00 to 788+00). Two borrow areas, both riverward of the levee, have been selected for the repairs (see attached maps). The borrow would be obtained from the upper 24 inches and will be taken from areas that have been previously borrowed and disturbed by construction of the present levee.

A review of the National Register of Historic Places (NRHP) found no properties listed on the NRHP within or near the repair area. A check of Missouri River topographic site location maps in the Corps District office (Carrollton East, Carrollton West, and Grand Pass, Mo. 7.5 minute topographic quads) found no archeological sites or historic structures recorded within or near the proposed project area. Two Lewis and Clark campsites June 16, 1804 and June 17 and 18, 1804 are mapped near the southern end of the levee. Three shipwrecks, the William Baird (1858), the Tropic (1857), and the Grace Huston (1881) are also recorded south of the proposed project area. No work is planned in the vicinity of the mapped wrecks or camp sites. All of the proposed

(4)

Sugartree Bottom

construction areas have been previously disturbed by levee construction including borrowing activity and agricultural related disturbances.

Given the previous disturbances in the proposed repair and borrow areas and the lack of previously recorded sites, it appears unlikely that the projects will have an effect on sites listed on or eligible for inclusion on the National Register of Historic Places (NRHP). Therefore, we recommend no further work for the project. If in the unlikely event that archeological materials are discovered during project construction, work in the area of discovery will cease and the discovery investigated by a qualified archeologist. The findings on the discovery would be coordinated with your office and appropriate federally recognized Native American tribes.

Thank you for your consideration in this matter. If you have any questions or have need of further information please contact Timothy Meade, USACE Kansas City District Cultural Resource Manager at Timothy.M.Meade@nwk02usace.army.mil or at (816) 389-3138.

Sincerely,



Timothy Meade
District Archeologist

Enclosure

14

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

Matt Blunt, Governor • Doyle Childers, Director

www.dnr.mo.gov

December 5, 2007

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

Re: Emergency Repairs, Sugartree Bottom Levee (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 the Sugartree Bottom Levee. Based on this review we concur with your recommendation that that the project is in areas of low potential or areas of previous disturbance and that there will be **no historic properties affected**. We have no objection to the initiation of project activities.

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 (010-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

PUBLIC NOTICE



US Army Corps
of Engineers
Kansas City District

Permit No. GP-41 (2007-2078)
Issue Date: March 21, 2008

STATES OF MISSOURI AND KANSAS - Including INDIAN COUNTRY
ISSUANCE OF GENERAL PERMIT (GP) 41
FLOOD RECOVERY AND REPAIR ACTIVITIES

The U.S. Army Corps of Engineers, Kansas City District **HAS ISSUED** GP-41 (copy enclosed) for protection and repair of existing flood damaged structures, damaged land areas and damaged fills, under authority of Section 10 of the Rivers and Harbors Act of 1988 (33 USC 403) and Section 404 of the Clean Water Act (33 USC 1344).

Duration of this General Permit: This GP is issued and is in effect for five (5) years, from March 21, 2008 until March 21, 2013, unless revoked or specifically extended.

Notification Procedures (Post and Preconstruction): Preconstruction notification is required by the General Public for all activities involving obtaining borrow from forested wetlands, borrowing material from potential migratory bird nesting areas, clearing trees along stream channels, working in areas with known exotic species, and/or if the proposed repair activity includes restoration of a stream channel back to the original, pre-flood location. Other authorized activities that meet the terms and limits of this GP may proceed without preconstruction notification to the Corps of Engineers. However, post construction reporting is required for all activities undertaken under this GP. See GP Special condition "d" and Appendix I for more information on notification requirements.

APPLICANT: General Public

PROJECT LOCATION: In waters of the United States in the States of Missouri and Kansas, including Indian Country within Kansas boundaries that are declared flood disaster areas by the Governor of either state and/or the President of the United States of America.

AUTHORITY: Section 10 of the Rivers and Harbors Act of 1988 (33 USC 403) and Section 404 of the Clean Water Act (33 USC 1344).

ACTIVITY: Excavation or placement of fill material for protection and/or repair of existing flood damaged structures, damaged land areas and/or damaged fills as follows: a. Repair of levees to existing elevations and cross-section, including breach closures and borrow operations, b. Bridge embankment protection (armoring) and/or repair, c. Repair of pre-existing highway or railroad embankments and the addition or repair of stone (armoring) protection, d. Repair of pre-existing utility protection structures, e. Placement of rock and/or earth materials for stream/ditch bank protection and/or stream/ditch bank restoration, f. Drainage channel/ditch restoration to

pre-flood capacity and flow line unless the flow line must be altered due to other damage associated with the flood event, g. Restoration of creek channels to pre-flooding alignment and capacity, and h. Construction of temporary roads and temporary fills to facilitate the completion of any of the listed activities.

Note: Maintenance of existing flood damaged structures and/or flood damaged fills, which have been previously authorized, may be authorized by Nationwide Permit No. 3 or exempted by Part 323.4 of Federal regulations 33 CFR 320-331. The repair of uplands damaged by storms, floods or other discrete events may be authorized by Nationwide Permit No. 45 upon notification and review by the appropriate Corps of Engineers District, Regulatory Branch.

INDIAN COUNTRY: Work under this permit is not authorized in Indian Country until the applicant obtains individual Section 401 Water Quality Certification from the U.S. Environmental Protection Agency (EPA), Region VII, Watershed Planning and Implementation Branch, 901 North 5th Street, Kansas City, Kansas 66101 (913-551-7003).

EPA may issue programmatic water quality certification during the authorization period of this permit which ends December 31, 2013. If issued, the Corps of Engineers will announce by public notice and post that certification to the Regulatory Program webpage: <http://www.nwk.usace.army.mil/regulatory/regulatory.htm>.

SECTION 401 WATER QUALITY CERTIFICATION: Conditions of any individual or programmatic Section 401 Water Quality Certifications issued by the Missouri Department of Natural Resources (MDNR - for Missouri), Kansas Department of Health and Environment (KDHE - for Kansas), and EPA (for Indian Country) are conditions of this GP. General Condition 5 of the GP states: "If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit."

ADDITIONAL INFORMATION: Additional information about this general permit may be obtained by contacting Mr. Douglas R. Berka, Regulatory Project Manager, Kansas City District Regulatory Branch (ATTN: OD-R) 700 Federal Building, Kansas City, Missouri 64106, at 816-389-3657 or via email at Douglas.R.Berka@usace.army.mil. All inquiries concerning this public notice should be directed to the above address.

Enclosure

DEPARTMENT OF THE ARMY PERMIT

Permittee General Public

Permit No. NWK GP-41

Issuing Office U.S. Army Corps of Engineers, Kansas City District

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: To excavate or place fill material for protection and/or repair of existing flood damaged structures, damaged land areas and/or damaged fills as follows:

- a. Repair of levees to existing elevations and cross-section, including breach closures and borrow operations
- b. Bridge embankment protection (armoring) and/or repair
- c. Repair of pre-existing highway or railroad embankments and the addition or repair of stone (armoring) protection
- d. Repair of pre-existing utility protection structures
- e. Placement of rock and/or earth materials for stream/ditch bank protection and/or stream/ditch bank restoration
- f. Drainage channel/ditch restoration to pre-flood capacity and flow line unless the flow line must be altered due to other damage associated with the flood event
- g. Restoration of creek channels to pre-flooding alignment and capacity
- h. Construction of temporary roads and temporary fills to facilitate the completion of any of the listed activities

Note: Maintenance of existing flood damaged structures and/or flood damaged fills, which have been previously authorized, may be authorized by Nationwide Permit No. 3 or exempted by Part 323.4 of Federal regulations 33 CFR 320-331. The repair of uplands damaged by storms, floods or other discrete events may be authorized by Nationwide Permit No. 45 upon notification and review by the appropriate Corps of Engineers District, Regulatory Branch.

Project Location: In Waters of the United States, (rivers, lakes, streams, and wetlands) within the State of Kansas, including Indian Country, and within the State of Missouri that are declared flood disaster areas by the Governor of either state and/or the President of the United States.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on December 31, 2013. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions:

See continuation sheets, pages 4, 5, and 6 of this document.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

(x) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

(x) Section 404 of the Clean Water Act (33 U.S.C. 1344).

() Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, state, or local authorization required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

- a. You fail to comply with the terms and conditions of this permit.
- b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).
- c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

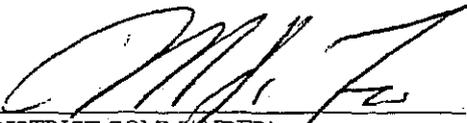
Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

General Public - Signature Not Required

(PERMITTEE)

(DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.



(DISTRICT COMMANDER)

ROGER A. WILSON, JR.
BY: MARK D. FRAZIER
Chief, Regulatory Branch
Operations Division

21 March 2008

(DATE)

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

(TRANSFEREE)

(DATE)

Special Conditions:

- a. You must sign and return the attached "Compliance Certification" after the authorized work and any required mitigation is completed. Your signature will certify that you completed the work in accordance with this permit, including the general and the special conditions, and that any required mitigation was completed in accordance with the permit conditions.
- b. (Activities occurring in navigable waters under Section 10 of the Rivers and Harbors Act of 1899 Only) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.
- c. If any part of the authorized work is performed by a contractor, before starting work you must discuss the terms and conditions of this permit with the contractor; and, you must give a copy of this entire permit to the contractor.
- d. You must contact the Corps of Engineers, submit application materials outlined in Appendix I, and you must submit a mitigation plan prior to completing any flood recovery/repair activity when the repair involves obtaining borrow from forested wetland, borrowing material from potential migratory bird nesting areas, clearing trees along stream channels, working in areas with known exotic species, and/or if the proposed repair activity includes restoration of a stream channel back to the original, pre-flood location. All other flood repair activities, including all repairs supervised by the Corps of Engineers, pursuant to Public Law 84-99 and/or all repairs supervised by the United States Department of Agriculture, pursuant to the Emergency Watershed Protection Program or to the Emergency Conservation Program can be completed without pre-construction notification to the Corps of Engineers. However, all completed flood repair work, authorized by this permit, must be reported to the Corps of Engineers, Regulatory Branch, within 60 days of completing the project. The report must include the location of the work, as-built drawings of the structure(s) and/or fill(s), and a discussion of the avoidance and minimization measures incorporated into the project and mitigation measures employed.
- e. You must NOT dredge or excavate from the Missouri River or from the Kansas River in order to obtain borrow material for any flood repair project authorized by this permit.
- f. You must employ measures to prevent spilled fuels, lubricants, excessive suspended solids including dredged material, and/or wet concrete from entering the waters of the United States and formulate a contingency plan to be effective in the event of a spill.
- g. You must use clean, uncontaminated materials for fill in order to minimize excessive turbidity by leaching of fines, as well as to preclude the entrance of deleterious and/or toxic materials into the waters of the United States by natural runoff or by leaching. Use of small aggregate material less than 20 lbs per aggregate, such as creek gravel, for stabilization and erosion control is prohibited.
- h. You must excavate or fill in the watercourse so as to minimize increases in suspended solids and turbidity which may degrade water quality and damage aquatic life outside the immediate area of operation. Activities should be conducted during low water periods and outside major spawning season for fish, unless a waiver is obtained from the Corps of Engineers. Crossings of waterways and use of construction machinery in waterways should be limited to the minimum extent necessary.
- i. You must immediately remove and properly dispose of all debris during every phase of the project in order to prevent the accumulation of unsightly, deleterious and/or toxic materials in or near the water body. All construction debris must be disposed of in an upland site, outside the floodplain, and in such a manner that it cannot enter into a waterway or into a wetland.
- j. You must store all construction materials, equipment, and/or petroleum products, when not in use, above anticipated high water levels.

Special Conditions (continued):

k. You must restrict the clearing of timber and other vegetation to the absolute minimum required to accomplish the work. You must avoid the removal of mature trees to prevent potential impacts to bald eagle roost sites. Work should be limited to one side of the channel only. However, work from both sides of the channel is permitted if it is demonstrated that it results in minimizing tree clearing. Vegetated riparian buffer areas should be included along both sides of any channel restoration projects. All wooded areas cleared for site access must be allowed to return to forested habitat. Mitigation may be required for other timber clearing.

l. Upon completion of earthwork operations, you must seed, replant or otherwise protect from erosion all fills in the water or on shore, and other areas on shore disturbed during construction. If seeding does not successfully stabilize the disturbed soil areas by the end of the first growing season, you must implement alternate measures, such as placing riprap, slope terracing with untreated railroad ties, gabions or concrete blocks, or additional vegetative plantings, to protect the disturbed areas from further erosion. Clearing, grading, and replanting should be planned and timed so that only the smallest area is in a bare soil condition. You must contact the Corps of Engineers prior to beginning work on any additional erosion control measures so that we can determine if additional authorization is required.

m. You must dispose of excess concrete and wash water from concrete trucks and other concrete mixing equipment in an upland area above the ordinary high water mark and at a location where the concrete and wash water cannot enter the water body or an adjacent wetland area.

n. You must not dispose of any construction debris or waste materials below the ordinary high water mark of any water body, in a wetland area, or at any location where the materials could be introduced into the water body or an adjacent wetland as a result of runoff, flooding, wind, or other natural forces.

o. You must use only graded rock, quarry-run rock and/or clean concrete rubble for riprap. The material must be reasonably well graded, consisting of pieces varying in size from 20 pounds up to and including at least 150 pound pieces. Generally, the maximum weight of any piece should not be more than 500 pounds. Gravel and dirt should not exceed 15% of the total fill volume. If you use concrete rubble, you must break all large slabs to conform to the well graded requirement, and remove all exposed reinforcement rods, trash, asphalt, and other extraneous materials before you place the rubble in the waters of the United States. Size and gradation requirements can be changed provided approval is received from the Corps' Regulatory Branch prior to placement.

p. You must completely remove all temporary fills, including sand bags (to the extent practicable), in the Waters of the United States within 30 days of the end of the flood emergency and disposed of in accordance with special condition "h" above, unless the temporary fill is to be incorporated in the final repair of the structure. If sand bags are needed for a longer duration until permanent repairs are made, you must request a waiver of this condition in writing. Temporary construction of levees to protect agricultural land in areas where no levees previously existed, are not authorized.

q. You must avoid impacts to wetlands to the fullest extent practicable. When wetlands impacts are unavoidable, borrow site selection will be based on the following order of preference: upland (non-wetland) sources, areas riverward of the levee previously used for borrow, open prior converted cropland, farmed wetlands, or other authorized excavation sites. You must mitigate for all unavoidable proposed wetland excavation or fill activities authorized by this permit. You must develop mitigation plans on a case-by-case basis which must be approved by the Corps. This permit does not authorize actions designed to drain or otherwise convert wetlands to other uses, nor actions where a practicable alternative to impacting wetlands is available unless the Corps of Engineers, in consultation with other resource agencies, determine that sediment removal from existing wetlands will restore wetland functions and create valued habitat diversity. All borrow areas should have 5:1 horizontal to vertical side slopes and the water depth should be three feet deep or less under normal circumstances.

r. You must place all fills and structures such that they do not result in stream channel constriction or in redirection of flows in such a way as to cause upstream or downstream erosion. Channelization projects or shortening of waterways, other than restoration of creek channels to pre-flood alignment, are not authorized.

s. You must not undertake actions that are likely to jeopardize the existence of a threatened or endangered species or a species proposed for such designation as defined in the Federal Endangered Species Act, nor actions which are likely to destroy or adversely modify the critical habitat of such species. If the project requires the removal of mature trees along stream channels or from forested wetland you must contact the Corps of Engineers prior to any tree clearing activity.

Special Conditions (continued):

t. You must avoid activity in the proximity of a property listed in or eligible for listing in the National Register of Historic Places unless, after coordination with the State Historic Preservation Office of the affected state and/or the Advisory Council on Historic Preservation, a determination of "no effect" or "no adverse effect" is made in accordance with criteria established by 36 CFR 800. If an inadvertent discovery of any cultural or archaeological resource occurs you must immediately contact this office and you should suspend work in the area until a determination of eligibility for listing on the National Register of Historic Places is completed and any necessary consultation under Section 106 of the National Historic Preservation Act is completed.

u. You must not undertake any activity that results in a new structure or replacement of a previously authorized structure with an increase in scope or design of the original structure. Small changes that do not affect elevations, such as the reconstruction of a levee around a scour hole at pre-existing elevations, and that do not convert wetland to upland (non-wetland) or a different wetland use beyond what is unavoidable such as to go around a scour hole, may be authorized upon notification to the Corps. Levee breach repairs constructed on new alignments must be setback farther from the stream channel than the original alignment.

v. You must contact the Missouri Department of Natural Resources, Water Pollution Control Program, P.O. Box 176, Jefferson City, Missouri 65102-0176, or the Kansas Department of Health and Environment, Bureau of Water, Curtis State Office Building, 1000 Southwest Jackson, Topeka, Kansas 66612, in order to determine the need for a state permit for land disturbance, return water, or other activities that normally require such permits. Use of GP-41 shall not be construed or interpreted to imply the requirements for other permits are replaced or superseded. Any national pollutant discharge elimination system (NPDES) permits, general permits for land disturbance, or other requirements shall be complied with.

w. You must notify the Corps of Engineers if one of the following common exotic species occurs in the project area. The zebra mussel (*Dreissena polymorpha*), Eurasian watermilfoil (*Myriophyllum spicatum*), purple loosestrife (*Lythrum salicaria*), Johnson grass (*Sorghum halepense*), sericia lespedeza (*Lespedeza cuneata*), salt cedar (*Tamarix spp.*), and reed canary grass (*Phalaris arundinacea*). You must take appropriate actions to insure the prevention of the spread of any exotic species. The following best management practice can help prevent the spread of these species. Equipment brought on the project site should be washed to remove dirt, seeds and plant parts. If the equipment has been used in a body of water in the last 30 days it can be washed at a commercial car wash or dried for five or more days before using the equipment in another body of water. In addition, before transporting equipment from the project site visible water, mud, plants and animals should be removed. Waters that the zebra mussel is known to inhabit in Kansas and in Missouri can be found at the following website:

<http://nas.er.usgs.gov/queries/zmbvst.asp>

x. For activities occurring in Indian Country, you must request and obtain individual Section 401 Water Quality Certification from the Environmental Protection Agency (EPA). You may contact the EPA by writing US EPA, Region 7 Tribal Coordinator, 901 North 5th Street, Kansas City, Kansas 66101, or by calling (913) 551-7498. You must receive Section 401 Water Quality Certification, and comply with the conditions of that certification, during performance of any work under this permit. Should EPA issue programmatic certification for this GP during the term of the GP, the Corps will issue a supplemental public notice and General Condition 5 of the permit applies.

APPENDIX I

Criteria for Authorization by General Permit NWKGP-41

1. This general permit authorizes activities proposed by the general public, railroads, transportation departments, pipeline and utility companies, and government agencies.

2. If you propose to work under the authority of this General Permit and the project requires preconstruction notification as outlined in special condition "d" of the permit, you must notify the appropriate Corps of Engineers district within 18 months of the end of the flood emergency (when the nearest river gauge drops below flood stage for two months), and receive authorization prior to starting work in the Corps jurisdiction. You must submit the following information:

a. A completed application form ENG 4345 or a letter which includes all information required by form ENG 4345. The ENG 4345 is available at: www.nwk.usace.army.mil/regulatory/regulatory.htm

b. You must clearly describe the proposed work so we can clearly and readily determine whether or not the proposed work complies with the General Permit.

c. The flood repair activities must be in counties declared disaster areas by the Governor of the State of Kansas, the Governor of the State of Missouri and/or the President of the United States.

d. An 8 1/2" x 11" drawing(s) showing the details of the proposed work.

e. An 8 1/2" x 11" map with the location of the proposed project clearly marked, including the Section, Township, and Range or the Latitude and Longitude location (decidegrees).

f. Discussion of possible alternatives and why they were not selected.

g. Also, as project proponent, you must send copies concurrently to the following addresses, but we will not necessarily solicit comments from these agencies. We will give these agencies an opportunity to request that we take discretionary authority to require that you apply for an individual permit, if a potential significant problem is identified.

1. For projects in Missouri contact:

U.S. Fish and Wildlife Service
Columbia Field Office
101 Park DeVille Drive, Suite A
Columbia, Missouri 65203
(573) 234-2132

Missouri Department of Natural Resources
Water Pollution Control Branch
P.O. Box 176
Jefferson City, Missouri 65102
1-800-361-4827 or (573) 751-1300

U.S. Environmental Protection Agency
Watershed Planning and Implementation Branch
901 North Fifth Street
Kansas City, Kansas 66101.
(913) 551-7003

Missouri Department of Natural Resources
Historic Preservation Program
P.O. Box 176
Jefferson City, Missouri 65102
(573) 751-7958

APPENDIX I (continued)

Missouri Department of Conservation
Policy Coordination
P.O. Box 180
Jefferson City, Missouri 65102-0180
(573) 522- 5115

* Federal Emergency Management Agency
Region VII
9221 Ward Parkway, Suite 300
Kansas City, Missouri 64114-3372
(816) 283-7063

2. For projects in Kansas contact:

U.S. Fish and Wildlife Service
Manhattan Field Office
2609 Anderson Avenue
Manhattan, Kansas 66502
(785) 539-3474

Kansas Department of Health and Environment
Bureau of Water
Curtis State Office Building
1000 Southwest Jackson Street
Topeka, Kansas 66612
(785) 296-1500

Kansas Department of Wildlife and Parks
512 Southeast 25th Avenue
Pratt, Kansas 67124
(620) 672-5911

* Federal Emergency Management Agency
Region VII
9221 Ward Parkway, Suite 300
Kansas City, Missouri 64114-3372
(816) 283-7063

* You must contact FEMA for all proposed development located in the 100-year floodplain of a National Flood Insurance Program (NFIP) participating community in order to comply with local floodplain management regulations and secure a floodplain development permit from that community.

3. For projects not requiring pre-construction notification, a report of the completed repair activities must be submitted that includes the location of the work, as-built drawings of the structure(s) and/or fill(s), and a discussion of the avoidance and minimization measures incorporated into the project and mitigation measures employed.

4. We may reevaluate the cumulative impacts of this general permit at our discretion at any time. We will reevaluate cumulative impacts at least every five (5) years.

5. The following is a list of flood damaged structures, damaged land areas and/or damaged fills authorized to be repaired under this general permit:

- a. Repair of levees to existing elevations, including breach closures and borrow operations
- b. Bridge embankment protection (armoring) or repair
- c. Repair of pre-existing highway and/or railroad embankments and armor protection
- d. Repair of pre-existing utility protection structures
- e. Placement of rock and/or earth materials for emergency bank protection or restoration

APPENDIX I (continued)

- f. Drainage ditch restoration to pre-flood capacity and flow line unless the flow line must be altered due to other damage associated with the flood event
- g. Restoration of creek channels to pre-flooding alignment, capacity and flow line
- h. Construction of temporary haul roads to facilitate any of the above listed activities

6. The District Engineer may require an individual permit on a case-by-case basis for any activity authorized herein.

7. You must complete the authorized work within the five year issuance period of the GP. If you need additional time to complete repairs or if flood damage occurs within the last year of the GP applicants must contact the appropriate Corps District for an extension of the authorization to complete the needed work. Contact should be made at least one month in advance of the GP expiration date.

8. Flood repair activities, supervised by the U. S. Army Corps of Engineers, pursuant to Public Law 84-99, and/or supervised by the United States Department of Agriculture, pursuant to the Emergency Watershed Protection Program or the Emergency Conservation Program, do not require notification to the Corps of Engineers, Regulatory Branch. It is the responsibility of these federal agencies to comply with all environmental laws and Presidential Executive Orders.

COMPLIANCE CERTIFICATION

Special condition "a" of this permit document requires that you submit a signed certification regarding the completed work and any required mitigation. This certification page satisfies this condition if it is provided to the Kansas City District at the address shown at the bottom of this page upon completion of the project.

APPLICATION NUMBER: General Permit No. 41 (NWK 2007-02078)

APPLICANT (Enter name and mailing address):

PROJECT LOCATION (Enter latitude & longitude (decidegrees) or Section, Township and Range, County, State):

- a. I certify that the authorized work was done in accordance with the Corps authorization, including any general or specific conditions.
- b. I certify that any required mitigation was completed in accordance with the permit conditions.
- c. Your signature below, as permittee, indicates that you have completed the authorized project as certified in paragraphs a and b above.

(PERMITTEE)

(DATE)

Return this certification to:

U.S. Army Corps of Engineers
700 Federal Building
601 East 12th Street
Kansas City, MO 64106-2896
ATTN: OD-R

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

Matt Blunt, Governor • Doyle Childers, Director

www.dnr.mo.gov

FEB 25 2008

Colonel Roger A. Wilson, Jr.
U.S. Army Corps of Engineers
Kansas City District
601 E. 12th Street, Suite 700
700 Federal Building
Kansas City, MO 64106-2896

GP-41 Statewide
NWKGP-41/PN07-2078/CEK004650

RE: GP 41, All Districts

Dear Colonel Wilson:

The Missouri Department of Natural Resources' Water Protection Program (department) has reviewed Public Notice General Permit (GP) 41 (PN07-588) CEK004650 in which the applicant proposes to issue regional GP-41 to authorize certain discharges of dredged or fill material in conjunction with the permanent protection and/or repair of flood damaged structures, damaged areas, and/or damaged fills in waters of the United States within the states of Missouri and Kansas.

The proposed General Permit would be applicable to all Army Corps of Engineers' Districts in Missouri (Kansas City - 2007-2078/GP-41; Little Rock - 2008-00066/GP-41, Memphis - 2007-588/GP-41; Rock Island - 2007-2061/GP-35; and St. Louis).

These projects are located along the Missouri River throughout Missouri. The Missouri River is a 303(d) listed water and caution shall be exercised not to negatively impact those sections of the river that are already impaired.

This office certifies that the proposed project will not cause the general or numeric criteria to be exceeded nor impair beneficial uses established in the Water Quality Standards, 10 CSR 20-7.031, provided the following conditions are met:

1. This general permit shall not be used for channelization or channel modification purposes.
2. Only the repair of structures due to flood damage are authorized with this permit. The construction of new structures will need additional review and issuance of a separate water quality certification.
3. Representatives from the department shall be allowed to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the letters and conditions of the permit.

4. Care shall be taken to keep machinery out of the waterway as much as possible. Fuel, oil and other petroleum products, equipment and any solid waste shall not be stored below the ordinary high water mark at any time or in the adjacent floodway beyond normal working hours. All precautions shall be taken to avoid the release of wastes or fuel to streams and other adjacent water bodies as a result of this operation.
5. Petroleum products spilled into any water body or on the banks where the material may enter waters of the state shall be immediately cleaned up and disposed of properly.
6. Only clean, nonpolluting fill shall be used. The following materials are not suitable for bank stabilization and shall not be used due to their potential to cause violations of the general criteria of the Water Quality Standards, 10 CSR 20-7.031 (A) – (H):
 - a. Earthen fill, gravel, broken concrete where the material does not meet the specifications outlined below, and fragmented asphalt, since these materials are usually not substantial enough to withstand erosive flows;
 - b. Concrete with exposed rebar;
 - c. Tires, vehicles or vehicle bodies, construction or demolition debris are solid waste and are excluded from placement in the waters of the state;
 - d. Liquid concrete, including grouted riprap, if not placed as part of an engineered structure; and
 - e. Any material containing chemical pollutants (for example: creosote or pentachlorophenol).

Recycled or broken concrete may be used provided that it is reasonably well graded, consisting of pieces varying in size from 20 pounds up to and including at least 150 pound pieces. Applicants must break all large slabs to conform to the well-graded requirement. Generally, the maximum weight of any piece shall not be more than 500 pounds. Gravel and dirt shall not exceed 15 percent of the total fill volume. All protruding reinforcement rods, trash, asphalt and other extraneous materials must be removed from the broken concrete prior to placement.

Recycled or broken concrete being used simply as fill need not conform to the well-graded requirement. It shall, however, be free from extraneous materials and shall be placed to eliminate voids within the fill.

7. Clearing of vegetation/trees shall be the minimum necessary to accomplish the activity. A vegetated corridor shall be maintained from the high bank on either side of the jurisdictional channel to protect water quality and to provide for long-term stability of the stream channel, unless physical barriers prevent such a corridor.
8. The riparian area, banks, etc., shall be restored to a stable condition to protect water quality as soon as possible. Seeding, mulching and needed fertilization shall be within three days

of final contouring. On-site inspections of these areas shall be conducted as necessary to ensure successful re-vegetation and stabilization, and to ensure that erosion and deposition of soil in waters of the state is not occurring from these projects.

9. Best Management Practices shall be used during construction and/or repair to limit the amount of sedimentation into adjacent water bodies.
10. Temporary fills shall be removed promptly and the fill site restored immediately following construction.
11. The attendant Water Quality Certification for this permit shall not be construed or interpreted to imply the requirements for other permits are replaced or superceded. Any National Pollutant Discharge Elimination System (NPDES) Permits, Land Disturbance General Permits, or other requirements shall be complied with.
12. After avoidance and minimization for projects, impacts must be compensated for. Mitigation for the loss of aquatic stream resources shall be in conformance with the *Missouri Stream Mitigation Method*. This document may be found at the following link:
www.mvs.usace.army.mil/permits/permits.asp.

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 (30) 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.

Water Quality Standards must be met during any operations authorized by these permits. If you have any questions, please contact Ms. Carrie M. Schulte of the NPDES Permits and Engineering Section by phone at (573) 751-7023, by e-mail at carrie.schulte@dnr.mo.gov, or by mail at Missouri Department of Natural Resources, Water Protection Program, P.O. Box 176, Jefferson City, MO 65109.

Sincerely,

WATER PROTECTION PROGRAM



Robert K. Morrison, P.E., Chief
Water Pollution Control Branch

RKM:csp

- c: Mr. Bill Goodwin, Missouri Department of Conservation
- Mr. Doyle Brown, Missouri Department of Conservation
- Ms. Janet Sternburg, Missouri Department of Conservation
- Mr. Mike Smith, Missouri Department of Conservation
- Mr. Stuart Miller, Missouri Department of Conservation
- Mr. Doug Berka, Army Corps of Engineers, Kansas City District
- Mr. Keith McMullen, Army Corps of Engineers, St. Louis District
- Mr. Larry Watson, Army Corps of Engineers, Memphis District
- Mr. Wayne Hannel, Army Corps of Engineers, Rock Island District
- Army Corps of Engineers, Kansas City District, MO State Regulatory Office
- Army Corps of Engineers, Kansas City District, Truman Satellite Office
- Army Corps of Engineers, Little Rock District
- Mr. Carl Stevens, U.S. Environmental Protection Agency
- Mr. Rick Hansen, U.S. Fish and Wildlife Service
- DNR – KCRO, SLRO, NERO, SERO, SWRO

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. Fink".

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

Handwritten signature of Doyle Childers.

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

May 30, 2012

Expiration date

MO 780-1481 (7-94)

Handwritten signature of Edward Galbraith.

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.

APPLICABILITY

1. This general permit authorizes the discharge of storm water and certain non-storm water discharges from land disturbance sites that are performed by or under contract to a city, county, or other governmental jurisdiction that has a storm water control program and/or SWPPP for land disturbance activities that has been approved by the Missouri Department of Natural Resources.
2. If at any time the Missouri Department of Natural Resources determines that the quality of waters of the state may be better protected by requiring the owner/operator of a permitted site to apply for site specific permits, the Department may require a city, county, or other governmental jurisdiction to obtain a site specific operating permit [10 CSR 20-6.010 (13) and 10 CSR 20-6.200(6)].

The Department may require the permittee to apply for and obtain a site specific or different general permit if:

- a. The permittee is not in compliance with the conditions of this general permit;
- b. The discharge no longer qualifies for this general permit due to changed site conditions and regulations; or
- c. Information becomes available that indicates water quality standards have been or may be violated.

The Department will notify the permittee in writing if there is a need to apply for a site-specific permit or a different general permit. When a site specific permit or different general permit is issued to the authorized permittee, the permit that has been replaced will be automatically terminated upon the effective date of the site specific or different general permit, whichever the case may be. The permittee shall submit the appropriate forms to the Department to terminate the permit that has been replaced.

3. Any owner/operator authorized by a general permit may request to be excluded from the coverage of the general permit and apply for a site-specific permit [10 CSR 20-6.010 (13) and 10 CSR 20-6.200(6)].
4. The owner of the property and/or right-of-way on which a land disturbance site is located is responsible for compliance with this permit. This remains true in the event the owner chooses to contract for the design and/or construction of a project.
5. This permit does not authorize land disturbance activities in violation of the Historic Preservation Act or the Endangered Species Act.
6. This permit is not transferable to other owners or operators.

EXEMPTIONS FROM STATE PERMIT REQUIREMENTS

1. Sites that discharge all storm water runoff directly to a combined sewer system are exempt from state storm water permit requirements.
2. Land disturbance activities as identified in 10 CSR 20-6.200(1)(B) are exempt from state storm water permit requirements as long as there is no violation of water quality standards.
3. Sites that disturb less than one acre of total land area that are not part of a common plan or sale are exempt from state storm water requirements as long as there is no violation of water quality standards.
4. Agricultural storm water discharges and irrigation return flows are exempt from state storm water permit requirements as long as there is no violation of water quality standards. Animal Feeding Operations (AFO) are not included in the agricultural exemption.

REQUIREMENTS

1. All water pollution controls on site shall conform to the DNR-approved storm water control program and/or SWPPP of the city, county, or other governmental jurisdiction in which such land disturbance activities are occurring. The requirements of the approved storm water control program and/or SWPPP must be at least as stringent and may be more stringent than those described in this permit and 10 CSR 20-6.200. The requirements of the DNR approved program and/or SWPPP are enforceable under this permit. The permittee must conduct inspections of all land disturbance sites as described under Requirements, 12. of this permit. If the permittee is a regulated MS4, the approved program and/or SWPPP must comply with the Permittee's MS4 permit.
2. The permittee shall provide a list of active land disturbance sites (of one acre or more) to the department on a quarterly bases. The list shall contain the name of the project, location, receiving stream(s) for each outfall, description of the project, number of acres disturbed, and projected date for completion of the project. The permittee shall submit quarterly reports each January, April, July, and October. The reports must be recieved by the end of the specified month.
3. Discharges shall not cause violations of the Water Quality Standards 10 CSR 20-7.031(3), which states, in part, that no water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
 - a. Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
 - b. Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
 - c. Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
 - d. Waters shall be free from substances or conditions in sufficient amounts to have a harmful effect on human, animal or aquatic life.
 - e. There shall be no significant human health hazard from incidental contact with the water;
 - f. There shall be no acute toxicity to livestock or wildlife watering;
 - g. Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
 - h. Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles, or equipment and solid waste as defined in Missouri's Solid Waste Law, Section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to Section 260.200-260.247.
4. Good housekeeping practices shall be maintained by the permittee to keep solid waste from entering waters of the state.
5. The permittee shall comply with all federal and state regulations regarding underground storage, above ground storage, and dispensers of fueling facilities.
6. The permittee shall manage hazardous wastes in accordance with the provisions of the Missouri Hazardous Waste Laws and Regulations. This includes hazardous wastes that are transported, stored, or used for maintenance, cleaning, and repair.
7. The permittee shall designate an individual to be responsible for environmental matters. The individual responsible for environmental matters shall have a thorough and demonstrable knowledge of the site's SWPPP and sediment and erosion control practices in general. The individual responsible for environmental matters or a designated inspector knowledgeable in erosion, sediment, and stormwater control principles, shall inspect all structures that function to prevent pollution of waters of the state.

8. The permittee shall store all paint, solvents, petroleum products and petroleum waste products, and storage containers (such as drums, cans, or cartons) according to best management practices (BMPs). The materials exposed to precipitation shall be stored in watertight, structurally sound, closed containers. All containers shall be inspected for leaks or spillage during the once per week inspection of BMPs.
9. The primary requirement of this permit is the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The permittee must retain a copy of the SWPPP on the construction site during normal working hours and make it available to a department representative upon request.

The SWPPP shall:

- a. Incorporate required practices identified below,
- b. Incorporate erosion control practices specific to site conditions, and
- c. Provide for maintenance and adherence to the plan.

Before any land disturbance activity takes place, the permittee shall develop a SWPPP. This plan must be developed before a permit can be issued and made available as specified under RECORDS

The permittee shall fully implement the provisions of the SWPPP required under this part as a condition of this general permit throughout the term of the land disturbance project.

The purpose of the SWPPP is to ensure the design, implementation, management, and maintenance of Best Management Practices (BMPs) in order to reduce the amount of sediment and other pollutants in storm water discharges associated with the land disturbance activities; comply with the Missouri Water Quality Standards; and ensure compliance with the terms and conditions of this general permit.

The permittee shall select, install, use, operate, and maintain appropriate BMPs for the permitted sites. The following manuals are acceptable resources for the selection of appropriate BMPs.

Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices, (Document number EPA 832-R-92-005) published by the United States Environmental Protection Agency (USEPA) in 1992. **This manual is available at The USEPA internet site <http://cfpub1.epa.gov/npdes/stormwater/swppp.cfm>;**

The latest version of ***Protecting Water Quality: A field guide to erosion, sediment and storm water best management practices for development sites in Missouri***. **This manual is available on the department's internet site at: <http://www.dnr.mo.gov/env/wpp/wpcp-guide.htm>**

The permittee is not limited to the use of these guidance manuals. Other guidance publications may be used to select appropriate BMPs. However, all BMPs should be described and justified in the SWPPP. EPA and DNR continue to update BMP information on their web sites. It is recommended that the permittee review this information when developing a SWPPP.

10. SWPPP Requirements: The following information and practices shall be provided for in the SWPPP.
 - a. **Site Description:** In order to identify the site, the SWPPP shall include the facility and outfall information provided in the application form. The SWPPP shall have sufficient information to be of practical use to contractors and site construction workers to guide the installation and maintenance of BMPs. Site boundaries and outfalls shall be marked on a site map included as part of the SWPPP.
 - b. **Selection of Temporary and Permanent Non-Structural BMPs:** The permittee shall select appropriate non-structural BMPs for use at the site and list them in the SWPPP. The SWPPP shall require existing vegetation to be preserved where practical. The time period for disturbed areas to be without vegetative cover is to be minimized to the maximum extent practicable. For sites that will be inactive six months or more, establishing a vegetative cover is a highly recommended choice for a proper BMP.

Examples of non-structural BMPs which the permittee should consider specifying in the SWPPP include: preservation of trees and mature vegetation, protection of existing vegetation for use as buffer strips (vegetative buffer strips of 50 feet are especially encourage along drainage courses), mulching, sodding, temporary seeding, final seeding, geotextiles, stabilization of disturbed areas, preserving existing stream channels as overflow areas when channel straightening or shortening is allowed, soil stabilizing emulsions and tackifiers, mulch tackifiers, stabilized site entrances/exits, and other appropriate BMPs.

- c. Selection of Temporary and Permanent Structural BMPs: The permittee shall select appropriate structural BMPs for use at the site and list them in the SWPPP. Examples of structural BMPs that the permittee should consider specifying in the SWPPP include: diverting flows from undisturbed areas away from disturbed areas, silt (filter fabric and/or straw bale) fences, earthen diversion dikes, drainage swales, sediment traps, rock check dams, subsurface drains (to gather or transport water for surface discharge elsewhere), pipe slope drains (to carry concentrated flow down a slope face), level spreaders (to distribute concentrated flow into sheet flow), storm drain inlet protection and outlet protection, reinforced soil retaining systems, gabions, temporary or permanent sediment basins, and other appropriate BMPs.
- d. Description of Best Management Practices: The SWPPP shall include a description of both structural and non-structural BMPs that will be used at the site. The SWPPP shall provide the following general information for each BMP which will be used one or more times at the site:
 - i. Physical description of the BMP,
 - ii. Site and physical conditions that must be met for effective use of the BMP,
 - iii. BMP installation/construction procedures, including typical drawings, and
 - iv. Operation and maintenance procedures for the BMP.

The SWPPP shall provide the following information for each specific instance where a BMP is to be installed:

- vi. Whether the BMP is temporary or permanent,
 - vii. Where, in relation to other site features, the BMP is to be located,
 - viii. When the BMP will be installed in relation to each phase of the land disturbance procedures to complete the project, and
 - viiii. What site conditions must be met before removal of the BMP if the BMP is not a permanent BMP.
- e. Discharges to Valuable Resource Waters:

Storm water discharges as described in 10.e.1, 10.e.2, and 10.e.3 shall be considered discharges to "valuable resource waters".

- 1. Storm water discharges within 1000 stream feet of: Streams identified as a losing stream*,
 - i. Streams or lakes listed as an outstanding national or state resource water*,
 - ii. Reservoirs or lakes used for public drinking water supplies*; or
 - iii. Streams, lakes or reservoirs identified as critical habitat for endangered species*;
 - iv. Streams, lakes, or reservoirs listed as impaired for sediment and/or an unknown pollutant by standard MDNR methodology.*
- 2. Storm water discharges:
 - i. Within 100 stream feet of a permanent stream (class P) or major reservoir (class L2)*, or
 - ii. Within two stream miles upstream of biocriteria reference locations*.
- 3. Storm water discharges where:
 - i. Any of the disturbed area is defined as a wetland (Class W), by 10 CSR 20-7.031(1)(F)7*; or
 - ii. The storm water discharges to a sinkhole or other direct conduit to groundwater.

- f. Total Settable Solids from a storm water outfall must not exceed 2.5 ml/L/hr.
- g. If the disturbed area discharges to a valuable resource water, Total Settable Solids shall not exceed 0.5 ml/L/hr,

(For the purpose of this permit, the term "stream feet" shall mean the distance in feet following the nearest drainage channel from the land disturbance to the valuable resource water.)

* Identified or described in 10 CSR 20, Chapter 7. These regulations are available at many libraries and may be purchased from MDNR by calling the Water Pollution Control Program at (573)751-1300. The regulations are also available from the Missouri Secretary of States Office.

- h. Disturbed Areas: Slopes for disturbed areas must be defined in the SWPPP. A site map or maps, defining the sloped areas for all phases of the project, must be included in the SWPPP. Where soil disturbing activities cease in an area for 14 days or more, the permittee shall construct BMPs to establish interim stabilization. Interim stabilization shall consist of well established and maintained BMPs that are reasonably certain to protect waters of the state from sediment pollution. These BMPs may include a combination of sediment basins, check dams, sediment fences, and mulch. The types of BMPs used must be suited to the area disturbed, taking into account the number of acres exposed and the steepness of the slopes. If the slope of the area is greater than 3:1 (3 feet horizontal to 1 foot vertical) or if the slope is greater than 3% and greater than 150 feet in length, then the permittee must establish interim stabilization within 7 days of ceasing operations on that part of the site. Delays in work caused by inclement weather or equipment malfunction are not considered "ceasing operations" for the purpose of this section, as long as work resumes as soon as possible.
- i. Installation: The permittee shall ensure the BMPs are properly installed at the locations and relative times specified in the SWPPP. Peripheral or border BMPs to control runoff from disturbed areas shall be installed or marked for preservation before general site clearing is started. Storm water discharges from disturbed areas, which leave the site, shall pass through an appropriate impediment to sediment movement, such as a sedimentation basin, sediment traps, silt fences, etc. prior to leaving the land disturbance site. A drainage course change shall be clearly marked on a site map and described in the SWPPP. The location of all BMPs must be indicated on a site map, included in the SWPPP.
- j. Sedimentation Basins: The SWPPP shall require a sedimentation basin for each drainage area with 10 or more acres disturbed at one time. The sedimentation basin shall be sized to contain a volume of at least 3600 cubic feet per each disturbed acre draining thereto. Accumulated sediment shall be removed from the basin as needed to ensure the minimum volume of 3600 cubic feet is maintained. Discharges from the basin shall not cause scouring of the banks or bottom of the receiving stream. The SWPPP shall require the basin be maintained until final stabilization of the disturbed area served by the basin.

Where use of a sediment basin of this size is impractical, the SWPPP shall evaluate and specify other similarly effective BMPs to be employed to control erosion and sediment delivery. These similarly effective BMPs shall be selected from appropriate BMP guidance documents authorized by this permit. The BMPs must provide equivalent protection. The SWPPP shall require both temporary and permanent sedimentation basins to have a stabilized spillway to minimize the potential for erosion of the spillway or basin embankment.

- k. Dewatering: The SWPPP shall require a description of any anticipated dewatering methods, including the anticipated volume of water to be discharged and the anticipated maximum flow discharged from these dewatering activities, expressed in gallons per minute. Maximum flow may be stated in the SWPPP as an estimate based on the type and capacity of equipment being used for dewatering. The SWPPP shall call for specific BMPs designed to treat water pumped from excavations and in no case shall this water be pumped off site without being treated by the specified BMPs.
- l. Roadways: Where applicable, upon installation of or connection to roadways, all efforts should be made to prevent the deposition of earth and sediment onto roadways through the use of proper BMPs. Where sediment is present on roadways all storm water curb inlets shall have inlet protection. Where storm water will flow off the end of where a roadway terminates, a sediment catching BMP (ex. gravel berm, silt fence, etc.) shall be provided. Roadways and curb inlets shall be cleaned weekly or following a rainfall that generates a run-off. Stabilized construction entrances shall be used to prevent sediment trackout.

11. **Amending/Updating the SWPPP:** The permittee shall amend and update the SWPPP as appropriate during the term of the land disturbance activity. The permittee shall amend the SWPPP, at a minimum, whenever the:
 - a. Design, operation, or maintenance of BMPs is changed;
 - b. Design of the construction project is changed that could significantly affect the quality of the storm water discharges;
 - c. Permittee's inspections indicate deficiencies in the SWPPP or any BMP;
 - d. MDNR notifies the permittee in writing of deficiencies in the SWPPP;
 - e. SWPPP is determined to be ineffective in significantly minimizing or controlling erosion and sedimentation (e.g., there is visual evidence, such as excessive site erosion or excessive sediment deposits in streams or lakes);
 - f. Total Settleable Solids from a storm water outfall exceed 2.5 mg/L/hr (or 0.5 mg/L/hr if discharged to a valuable resource water);
 - g. MDNR determines violations of Water Quality Standards may occur or have occurred.

12. **Site Inspections Reports:** Regularly scheduled inspections shall be at a minimum once per seven calendar days. These inspections shall be conducted by the person responsible for environmental matters at the site, or a person trained by and directly supervised by the person responsible for environmental matters at the site. For disturbed areas that have not been finally stabilized, all installed BMPs and other pollution control measures shall be inspected for proper installation, operation and maintenance. All storm water outfalls shall be inspected for evidence of erosion or sediment deposition. The receiving stream shall also be inspected for 50 feet downstream of the outfall. Any problems shall be noted in an inspection report and corrected within seven calendar days of the inspection. If a rainfall causes storm water runoff to occur on site, the BMPs must be inspected within a reasonable time period (not to exceed 48 hours). The SWPPP must explain how the person responsible for erosion control, will be notified when storm water runoff occurs. If weather conditions make it impossible to correct the problem within seven days, a detailed report of the problem (including pictures), must be filed with the regular inspection reports. The permittee shall correct BMP malfunctions as soon as weather conditions allow. Parts of the site that have been finally stabilized may be inspected once per month. (A once per month inspection schedule may be implemented for a site with interim stabilization if the permittee makes a written request for the schedule and it is approved by the Department.) A log of each inspection shall be kept. The inspection report is to include the following minimum information: inspector's name, date of inspection, observations relative to the effectiveness of the BMPs, actions taken or necessary to correct problems, and listing of areas where land disturbance operations have permanently or temporarily stopped. The inspection report shall be signed by the permittee or by the person performing the inspection if duly authorized to do so.

13. **Proper Operation and Maintenance:** The permittee shall at all times maintain all pollution control measures and systems in good order to achieve compliance with the terms of this general permit.

14. **Public Notification:** The permittee shall post a copy of the public notification sign described by the department on the information board at the main entrance to the site. The public notification sign must remain posted at the site until the site has been finally stabilized.

OTHER DISCHARGES

1. **Hazardous Substance and Oil Spill Reporting:** Refer to Section B, #14 of Part I of the Standard Conditions that accompany this permit.

2. **Removed substances:** Refer to Section B, #6 of Part I of the Standard Conditions that accompany this permit.

3. **Change in discharge:** In the event soil contamination or hazardous substances are discovered at the site during land disturbance activities, the permittee shall notify the MDNR regional office by telephone as soon as practicable and no later than 24 hours after discovery. The permittee must also notify the MDNR regional office in writing no later than 14 calendar days after discovery.

SAMPLING REQUIREMENTS AND EFFLUENT LIMITATIONS

1. Discharges shall not violate Water Quality Standards 10 CSR 20-7.031(3). Total Settable Solids shall not exceed a maximum of 2.5 ml/L/hr. for each storm water outfall. If there is a discharge to valuable resource waters, Total Settable Solids shall not exceed a maximum of 0.5 ml/L/hr.
2. There are no regular sampling requirements in this permit. However, the Department may require sampling and reporting as a result of illegal discharges, compliance issues, complaint investigations, or other such evidence of off-site contamination from activities at the site. If such an action is needed, the Department will specify in writing any additional sampling requirements, including such information as location, extent, and parameters.

RECORDS

1. The permittee shall retain copies of this general permit, the SWPPP and all amendments for the site named in the State Operating Permit, results of any monitoring and analysis, and all site inspection records required by this general permit. The records shall be accessible during normal business hours. The records shall be retained for a period of at least three years from the date of the Letter of Termination.
2. The permittee shall provide a copy of the SWPPP to MDNR, USEPA, or any local agency or government representative if they request a copy in the performance of their official duties.
3. The permittee shall provide those who are responsible for installation, operation, or maintenance of any BMP a copy of the SWPPP.
4. The permittee, their representative, and/or the contractor(s) responsible for installation, operation, and maintenance of the BMPs shall have a current copy of the SWPPP with them when on the project site.

TERMINATION

This permit may be terminated upon the request of the applicant when all sites have been stabilized. A site is considered to be stabilized when either perennial vegetation, pavement, buildings, or structures using permanent materials cover all areas that have been disturbed. With respect to areas that have been vegetated, vegetative cover shall be at least 70% of fully established plant density over 100% of the disturbed area.

In order to terminate the permit, the permittee shall notify MDNR by submitting Form H,

included with the State Operating Permit. The permittee shall complete Form H and mail it to MDNR at the address noted in the cover letter of this permit.

This general permit will expire five years from the effective date of the permit (see page 1). The issue date is the date the State Operating Permit is issued to the applicant. The expiration date may or may not coincide with the date when the authorized project or development is scheduled for completion.

If the project or development completion date will be after the expiration date of this general permit, then the permittee must reapply to the department for the permit to be re-issued. The permittee will receive notification of the expiration date of the permit before the expiration date listed on page 1 of this permit. In order for the permit to be re-issued, the permittee should submit the appropriate application form(s) at least 180 days before the expiration of the permit if land disturbance activity is expected to continue past the expiration date of this general permit.

If the permittee does not apply for the renewal of this permit, this permit will automatically terminate on the expiration date. Continued discharges from a site that has not been fully stabilized are prohibited beyond the expiration date; unless the permit is reissued or the permittee has filed a timely application for the reissuance of this permit.

DUTY TO COMPLY

The permittee shall comply with all conditions of this general permit. Any noncompliance with this general permit constitutes a violation of Chapter 644, Missouri Clean Water Law, and 10 CSR 20-6.200. Noncompliance may result in enforcement action, termination of this authorization, or denial of the permittee's request for renewal.

MAILING ADDRESS



Kathleen Sebelius, Governor
Roderick L. Bremby, Secretary

DEPARTMENT OF HEALTH
AND ENVIRONMENT

www.kdheks.gov

Division of Environment

January 31, 2008

Mr. Douglas R. Berka
U.S. Army Corps of Engineers
Kansas City Field Office; 700 Federal Building
601 East 12th Street
Kansas City, Missouri 64106-2896

Section 401 Water Quality Certification

RE: (2007-0078) PROPOSED REGIONAL GENERAL PERMIT NO. 41 FOR
EXCAVATION OR PLACEMENT OF FILL MATERIAL FOR THE PERMANENT
PROTECTION AND/OR REPAIR OF FLOOD DAMAGED STRUCTURES, DAMAGED LAND
AREAS AND/OR DAMAGED FILLS IN THE STATES OF KANSAS AND MISSOURI.
PERMITTEES: General Public, Railroads, Transportation Departments, Pipeline and
Utility Companies and Government Agencies

Dear Mr. Berka:

The Kansas Department of Health and Environment has received your request for
Section 401 Water Quality Certification. The KDHE has determined the project has the
following water pollutant discharge sources:

- a. Repair of levees to existing elevations and cross-section, including breach
closures and borrow operations
- b. Bridge embankment protection (armoring) or repair
- c. Repair of pre-existing highway or railroad embankments and the addition or
repair of stone (armoring) protection
- d. Repair of pre-existing utility protection structures
- e. Placement of rock and/or earth materials for stream/ditch bank protection
and/or stream/ditch bank restoration

BUREAU OF WATER – WATERSHED MANAGEMENT SECTION
CURTIS STATE OFFICE BUILDING, 1000 SW JACKSON ST., STE. 420, TOPEKA, KS 66612-1367

Voice 785-296-4195 Fax 785-296-5509

<http://www.kdheks.gov/nps/index.html>

- f. Drainage ditch restoration to pre-flood capacity and flow line unless the flow line must be altered due to other damage associated with the flood event
- g. Restoration of creek channels to pre-flooding alignment and capacity
- h. Construction of temporary haul roads to facilitate the completion of any of the listed activities

Discharges from these sources if not minimized or otherwise controlled may cause violations of the provisions of Kansas Water Quality Standards found at KAR 28-16-28 et seq.

Pursuant to Section 401 and KAR 28-16-28(c) the Kansas Department of Health and Environment finds this project will not result in a violation of Kansas Water Quality Standards and herewith issues a Water Quality Certification for execution and subsequent operation of the project subject to the following conditions:

- I. **Limitations of this Certification:** All Section 404 activities within the borders of Indian owned and operated lands are not covered by this certification. Individuals proposing projects which impact those waters are responsible for contacting the appropriate individual at the following numbers:

Prairie Band Pottawatomie Indians, Planning Department, 785/966-2946

Kickapoo Tribe in Kansas, Environmental Office, 785/486-2601

Iowa of Tribe of Kansas and Nebraska, 785/595-3258

Sac and Fox Tribe of Missouri, 785/742-4707

Environmental Protection Agency Region VII Indian Lands Contact,
913/551-7498

II.

General Conditions

- 1. **Certification Retention:** The applicant shall retain this water quality certification on the project site through the duration of the project to accommodate inspection.
- 2. **Kansas Water Pollution Control General Permit for Stormwater Runoff from Construction Activities:** This certification does not relieve the applicant of the responsibility to determine if the project is subject to the requirements of **General NPDES Permit** and to secure such permit as necessary. Questions and inquiries may be directed to:

Mr. Larry Hook
Kansas Department of Health and Environment
Bureau of Water Industrial Program Section
1000 SW Jackson Street, Suite 420
Topeka, Kansas 66612-1367
Phone 785/296-5549; FAX:785/296-5509
www.kdheks.gov/stormwater

3. **Project Water Quality Protection Plan:** Any person wishing to use a Section 404 GP 41 Permit shall prepare and follow a written project water quality protection plan (PWQPP.) The PWQPP shall identify components of the permitted activity (i.e. solid waste handling, fuel storage and leaks, sediment from construction etc.) which may or will result in the discharge of pollutants to waters of the state. For each component which may discharge pollutants to waters of the state, the plan shall set out the physical, structural and management measures to be implemented to prevent or minimize the discharge of pollutants to waters of the state. (Activities requiring a construction stormwater permit, as described above, also require a stormwater pollution prevention plan which will serve as the PWQPP.)

The permittee is required to submit the PWQPP to KDHE only if the project impacts Outstanding National Resource, Exceptional State or Special Aquatic Life Use Waters per condition #4 below.

- 4 **Outstanding National Resource Waters, Exceptional State and Special Aquatic Life Support Use Waters:** In the event the permitted activity occurs in or within one half (2) mile of an Outstanding National Resource Water as defined pursuant to K.A.R. 28-16-28b(pp) and K.A.R. 28-16-28c(a)B(3), an Exceptional State Water pursuant to K.A.R. 28-16-28b(y) and K.A.R. 28-16-28c(a)B(2), or a Special Aquatic Life Support Use Water designated pursuant to K.A.R. 28-16-28d(b)(2)(A), the person responsible for initiating the activity shall submit a copy of the PWQPP to:

Kansas Department of Health and Environment
Bureau of Water - Watershed Management Section
1000 SW Jackson Street, Suite 420
Topeka, Kansas 66612-1367
nps@kdhe.state.ks.us

A table and state map of **Outstanding National Resource Waters, Exceptional State and Special Aquatic Life Support Use Waters** can be found at:
<http://www.kdheks.gov/nps/resources/specwaterinfo.pdf>.

The permittee should also be aware of the following Kansas water quality protection regulations associated with special waters:

K.A.R. 28-16-28c(a)B(2)-AWherever state surface waters constitute exceptional state waters, discharges shall be allowed only if existing uses and existing water quality are maintained and protected.@

K.A.R. 28-16-28c(a)B(3)-AWherever state surface waters constitute an outstanding national resource water existing uses and existing water quality shall be maintained and protected. New or expanded discharges shall not be allowed into outstanding national resource waters.@

5. **Solid Waste Disposal:** All solid waste materials produced during the execution of the project shall be disposed in accordance with the provisions of Kansas Solid Waste Management Statutes and regulations and applicable local regulations. Direct inquiries to:

KDHE, Bureau of Waste Management
1000 SW Jackson Street, Suite 320
Topeka, Kansas 66612-1366
Phone: 785/296-1600; FAX: 785/296-1592
www.kdhe.state.ks.us/waste/index.html

6. **Equipment Staging Areas and Project Closure:** Upon completion of the project, disturbed areas shall be expeditiously stabilized with temporary and permanent vegetation, bio-artificial ground cover or other appropriate non-polluting material. Fertilizer application to establish and maintain vegetation shall be done in a manner that will not contribute to the current nutrient load to any of the surface waters impacted by the project. The person responsible for the permitted activity shall monitor and maintain cover materials until such time as the site is stabilized. Project closure procedures shall be documented in the Project Water Quality Protection Plan per condition No. II. 3.
7. **Riparian Areas:** Minimize removal or disturbance of riparian areas (areas adjacent to water bodies). KDHE encourages the use of vegetation consistent with adjoining vegetation materials to minimize impacts from improper handling of fertilizers and pesticides.
8. **Discharge of Floatable Materials:** Pursuant to K.A.R. 28-16-28b (uu)(1), (3) and (4), the person responsible for executing the permitted activity shall assure good house keeping is practiced at the site to minimize the discharge of floatable materials such as personal refuse including food containers, packing materials, and other litter. Appropriate measures shall be taken to capture and/or recover any floatable materials discharged to waters of the state originating with the permitted project.

9. **Fuel, Chemical and Materials Storage:** Fuel, chemical and other materials stored at the project site shall be stored in a manner that minimizes the discharge of product to waters of the state. Spill minimization and prevention measures and procedures shall be documented in the Water Quality Protection Plan.
10. **Spill Response and Reporting:**
 - 1.) **Spill response and cleanup:** In the event a spill of fuel, chemical or other water quality degrading materials stored or transported on the site occurs, the permittee shall or with the assistance of professional response personnel, expeditiously control or contain the spill and initiate clean up procedures. The applicant shall immediately contact 911. Spill response and cleanup actions shall be documented in the PWQPP. The applicant should also contact the appropriate Kansas Department of Health and Environment (www.kdhegov/befs/#districts or look in your local phone directory) to confirm cleanup activities. Finally, KDHE strongly encourages the permittee to establish and post a sign that includes phone contact numbers for the appropriate local emergency response unit, KDHE district office, and the project manager/owner.
 - 2.) **Reporting:** The Kansas Department of Health and Environment shall be notified of all fuel spills or unauthorized discharge of pollutants immediately. Contact KDHE at 785/296-1679, anytime for spill reporting requirements. The Kansas Adjutant General's Office should also be contacted (785/296-8013) as well as the National Spill Response Center (1-800-424-8802).
11. **Drinking Water Intakes:** The person responsible for the permitted activity shall avoid adverse impacts on public water supplies. Whenever permitted activities occur within one mile upstream of a public drinking water supply - surface water intake, the applicant shall contact the official in charge of the public drinking water supply to apprise the drinking water supply official of the permitted activity. The person responsible for the permitted activity shall consider the suggestions and recommendations of the public water supply official when preparing the PWQPP.
12. **Treated Wastewater Effluent Mixing Zones:** As a general guideline any Section 404 activity within one-half (2) mile upstream or one-half (2) mile downstream of a permitted wastewater effluent discharge may impact the effluent mixing zone. The person responsible for the permitted activity shall determine if the project will adversely impact the wastewater effluent mixing zones and take appropriate measures to avoid altering or changing the mixing zone. This may include but is not limited to:

- 1) The construction or placement of a recreation oriented facility or structure (i.e. boat ramp, walkway) which may require modification of the beneficial use designation to accommodate contact or non-contact recreation, thereby increasing the effluent limitations for the permit.
- 2) Any activity which may alter or remove the stream channel geometry or natural oxygenation abilities of the stream such as bridge construction, channelization, stream channel substrate modification etc.

The person responsible for the permitted Section 404 activity shall advise and describe to the waste water discharge permittee and KDHE any potential mixing zone impacts and the measures the person responsible for the Section 404 activity will take to minimize adverse impacts on the mixing zone. Inquiries should be directed to:

Kansas Department of Health and Environment
Bureau of Water - Municipal Programs Section
1000 SW Jackson Street, Suite 420
Topeka, Kansas 66612-1367
Phone: 785/296-5527; FAX: 785/296-5509

13. **Total Maximum Daily Load:** Any Section 404 activity within a watershed with a Total Maximum Daily Load (the amount of pollution a water body can receive and maintain its designated uses: see <http://www.kdheks.gov/tmdl/index.htm>) is strongly encouraged to contact the assigned KDHE watershed field coordinator. A service area map for the three watershed field coordinators is attached (see www.kdheks.gov/nps) once construction is started.

III. Special Conditions for Specific Nationwide Permits

1. **Outfall Structures and Maintenance (construction):**
Controls shall be in place to stabilize all areas of the bed and bank around the pipe or adjacent to the outfall structure and associated intake structures that may be affected by outfall or stream flows, respectively.
2. **Maintenance; Utility Line Activities; and -Minor Discharges (pipelines included):**
Hydrostatic tests for pipeline activities shall be approved prior to discharge of water used for the test. Please contact:

Kansas Department of Health and Environment
Bureau of Water - Industrial Program Section
1000 SW Jackson Street, Suite 420
Topeka, Kansas 66612-1367
Phone 785/296-5553; FAX: 785/296-5509

3. **Aquatic Habitat, Restoration, Establishment and Enhancement Activities and Stormwater Management Facilities):** Measures shall be implemented to assure impounded waters, created by activities within the framework of these permits, avoid becoming public health threats, nuisances, generate complaints, and potentially discharge degraded water. The applicant shall prepare and implement an Operations and Maintenance Plan for Facilities and Landscapes (O&M), which at the minimum incorporate the following:
- A. Identify individual and public property owners and their potential for being the source of nonpoint source pollution. This could include but is not limited to: commercial grounds, streets, right-of-ways, parking areas, conservation easement and **proposed** mitigation areas etc.
 - B. For each property as described in item A. above, water quality protection measures for each category of artificial source of pollution identified. The identified water quality protection measure for each category of artificial source of pollution shall be designed to *reduce to the maximum extent practicable, the level of pollution resulting from identified pollutant sources*. Identified water quality protection quality protection measures shall be at least as effective as those set out by the Kansas Nonpoint Source Pollution Management Plan (<http://www.kdheks.gov/nps/resources/2000update.pdf>), prepared and maintained by the Kansas Department of Health and Environment.
 - C. Strategies to assure implementation of the water quality protection measures identified under item II. 3-10 which may include but are not limited to prohibition or restriction of activities, utilization of alternative technologies or products, information and education, financial assistance, technical assistance, enforcement and penalties. Additionally, an in-house reporting form used by staff to document degraded property conditions potentially impacting the property and needs to address them should be developed, if applicable.
 - D. Organizations and individuals responsible for assuring implementation of the identified water quality protection measures.

IV. **Enforcement and Penalties**

This certification does not relieve the applicant of the responsibility for any discharge to waters of the state or allow for any inappropriate discharge to occur. As provided for by K.S.A. 65-171(f), failure to comply with the conditions of this certification may subject the responsible party to fines of \$10,000 per violation with each day the violation occurs constituting a separate violation.

V. Variance

If the applicant believes the conditions of this certification will result in impairment of important widespread social and economic development, the applicant is advised of the variance provisions of KAR 28-16-28b(III) and KAR 28-16-28f(e).

VI. Additional Information

The KDHE website contains the following information to assist the applicant in preparing a project water quality protection plan:

*Construction practices: <http://www.dnr.mo.gov/env/wpp/wpcp-guide.htm>

*Project Water Quality Protection Plan Form and Instructions:
<http://www.kdheks.gov/nps/resources/nwpwqppfm.doc> or
<http://www.kdheks.gov/nps/resources/nwpwqppfm.pdf>

*Kansas Surface Water Register:
http://www.kdheks.gov/befs/download/Current_Kansas_Water_Register.pdf

*Kansas Surface Water Maps:
http://www.kdheks.gov/befs/download/2006_Surface_Water_Register_Maps.pdf

Surface Water Quality Standards- http://www.kdheks.gov/water/28_16_28b_g.pdf

*KDHE District Offices- <http://www.kdheks.gov/directions/index.html>

The Kansas Department of Health and Environment, Bureau of Water-Watershed Management Section at: 785/296-4195 or FAX 785/296-5509. This information can also be obtained by written communication directed to:

Kansas Department of Health and Environment
Bureau of Water - Watershed Management Section
1000 SW Jackson Street, Suite 420
Topeka, Kansas 66612-1367 or email: nps@kdhe.state.ks.us

28 August 1995
CEMRK-FO-MO

**Standard Operating Procedures
for the
Selection of Borrow Sites
Missouri River and Tributaries
1995 Levee Repair**

I. Borrow Area Determination. It is the responsibility of the Corps of Engineers (Corps) to design and implement Public Law 84-99 levee repair projects that protect jurisdictional wetlands, Federally listed threatened and endangered species and their habitats (i.e., bald eagle, Indiana bat, and pallid sturgeon), and other important riverine and floodplain habitats. It is also the Corps' responsibility to complete levee repairs in a timely and economical fashion without placing undue hardship on landowners and local levee districts.

These Standard Operating Procedures (SOP) are not intended to be absolute. This document should be viewed as a flexible guideline which field personnel and borrow negotiators may apply to meet landowners, levee districts, and environmental concerns and objectives.

a. Riverward borrow areas in open prior converted croplands or farmed wetlands (within 1,000 feet of a levee break) and old borrow areas and scour holes that are filled with sediment are preferred borrow locations. Tree clearing will generally be avoided; however, riverward areas with woody vegetative cover of less than 9 inches diameter at breast height (dbh) may be used if prior converted croplands, farmed wetlands, or old borrow areas and scour holes are not available. Selective clearing in these wooded areas may be accomplished ~~to maintain or enhance riparian habitat. At least an 80-100 foot wide band of timber should~~ be maintained between the levee and the river bank. Riverward areas with stands of timber that died as a result of the 1993 flood event may be used as borrow sources. In these borrow areas, if possible, some large potential cavity nesting or den trees should be preserved on the edge of the borrow site, especially in localities adjacent to live forested areas. Wooded areas may be classified as wetlands and environmental regulations may apply (see Paragraph-8 - Wetlands Protection). Use of mature or dense timbered areas as borrow sites may be cost prohibitive because of the additional expense incurred to clear and grub the timber, the large amount of borrow material that would be unusable because of the undesirable woody material (roots, stumps, etc.) contained in the borrow, and the larger borrow area needed to obtain the required amount of usable material.

Riverward borrow will be used to lessen disruption to flood-protected agricultural lands; however, the levee district should be informed that use of riverward borrow may delay levee repairs because the riverward borrow areas are often wet and difficult to access. To avoid delays in awarding construction contracts, alternate landward borrow areas should also

be identified and made available for use if the riverward borrow areas are too wet immediately and prior to construction.

b. Landward borrow areas in open agricultural fields will be used as an alternative to suitable riverward areas. Landowners should be informed that the planting or presence of crops will not eliminate an area from consideration as a potential borrow site. The removal of any vegetation on the landward side to repair the levee will be subject to the same guidelines as previously outlined.

Borrow will not be taken from within 30 feet of the levee toe unless taken to repair minor sidewash damage. Borrow will not be taken from within 30 feet of the high bank of the river. The cut slopes of borrow areas in landward prior converted croplands will not be steeper than 1 vertical (V) to 3 horizontal (H) measurement unit. Riverward borrow areas should generally have steeper side slopes and be excavated to the maximum depth practical to reduce the area of disturbance and to maximize the potential for creating aquatic habitat (see Paragraph 8 - Wetlands Protection).

c. In unusual cases, levee repairs may not be feasible without the removal of trees larger than 9 inches dbh. In these situations, the borrow areas will be delineated by Corps regulatory personnel or field biologists to lessen adverse impacts and reduce the number of trees removed. Decisions concerning proposed levee repairs or borrow areas affecting one-half acre or more of timber averaging in excess of 9 inches dbh will be made in consultation with the U.S. Fish and Wildlife Service (FWS) and the Missouri Department of Conservation (MDC). The following actions will be considered during borrow negotiations to lessen impacts.

~~1. Levees repaired along the original alignment. Borrow sites in wooded areas will be small in size and scattered randomly. The size of the borrow area should remain small in relation to the size of the existing timber stand (approximately 20 percent). The depth of the borrow pit should be as deep as possible to minimize timber clearing. Where the existing riparian timber resources are narrow, borrow areas would be a minimum of 200 to 300 feet apart. A minimum band of timber 80-100 feet wide from the high bank should be maintained. Every effort will be made to avoid any dominant trees, large cavity nesting or den trees, or trees greater than 9 inches dbh. In most cases, destroyed timber mitigation will be through natural succession of borrow areas or through non-forested buffer areas around scour features or setbacks. However, if mast-producing trees are removed, replacement plantings will be considered.~~

2. Levees repaired with landward realignments. Where scour features were created by the flood event and the proposed remedy is a landward realignment,

landowners should be encouraged to maintain the scour feature. If the scour feature created or expanded is considered a water of the U.S., landowners will be informed that filling of the scour feature (in most cases holes) would be an adverse action and a Clean Water Act regulatory violation. However, the natural filling of the scour feature when caused by river sedimentation would not be considered a regulatory violation. Borrow material may be taken from the scour feature to create shallow water habitat. A 100 foot (average) buffer strip will be maintained between the scour feature and the reconstructed levee. Riverward borrow areas will be hydraulically connected to the scour feature if located in the immediate vicinity of the scour feature but not necessarily connected to the river.

d. The preferred borrow area for repair of minor topwash and sidewash will be agricultural fields adjacent to the levee where the damage has occurred. Borrow for severe topwash and sidewash will be designated and negotiated in the same manner as outlined above.

2. **Borrow Negotiations.** The levee district has the responsibility to furnish the borrow areas and easements required for the levee repairs. If the Levee District chooses to use the Corps recommended borrow areas, the amount of time required to negotiate and repair the levee should be reduced. The borrow site identification and negotiation process will begin during the first on-site contact with the levee district representative(s). This contact should be made prior to the borrow area assessment conducted by a Corps field biologist or borrow negotiator. An on-site meeting will take place to provide the landowners with a set of written criteria that will be used for identifying borrow (see attached **BORROW SITE SELECTION CRITERIA**). All landowners where damage occurred will be requested to be present. The criteria will be discussed and the landowners will be requested to delineate, on a map, the borrow areas they prefer. When the damage survey and field assessments are complete, a second meeting will take place with the levee district representative(s) to discuss proposed borrow areas. Again, it will be the responsibility of the levee districts' to obtain borrow area easements from landowners. The landowners that sign borrow easements will be informed by letter of any mitigation requirements (e.g., not filling scour features or borrow sites, maintaining designated buffers around borrow areas). After borrow negotiations are completed, a detailed map will be prepared defining specific borrow areas based upon the volume of material required for repairs and the criteria contained in this SOP.

3. **Damage Surveys.** Survey crews will follow a standard reporting procedure to provide data on the location of reported damage. The survey data will provide an estimate of the damage, stationing, yardage, and alternate methods of repair. Survey crews will not be responsible for any negotiations on borrow sources with the sponsor. Landowners will undoubtedly ask survey crews questions about the source of borrow, but they should be told to contact their levee district point-of-contact representative.

4. **Cultural Surveys.** The 1993 Midwest flood event Programmatic Agreement for cultural resources compliance for Public Law 84-99 projects is still in effect and will be followed for repair of projects damaged by the 1995 flood event. Many areas were surveyed for cultural resources and cleared with the Missouri State Historic Preservation Officer (SHPO) during the 1993 flood event levee repair effort. Maps/cultural resource assessments prepared for 1993 levee repairs will be utilized to the greatest extent possible.

Cultural resources field work/surveys will not be required in proposed construction work areas or borrow sites if no known sites are present and any of the following apply: (1) excavation depth in agricultural fields is not greater than 8 inches; (2) the subject sites were cleared for cultural resources for the 1993 flood event repair work; (3) subject sites are located within the boundaries of old river channels as shown on Corps' maps of the historic Missouri River channel; or, (4) borrow and/or construction activity remains 150 feet away from any visible structure or building remains.

Cultural resources surveys will be required if there is a potential for cultural resources, such as, but not limited to, areas where the above conditions do not apply, where construction or borrow activities are adjacent to or on the bluff, if there is a known archeological site nearby, or the area was not surveyed in 1993.

However, coordination with the SHPO will be conducted for every levee, as required by the Programmatic Agreement. In those instances where cultural field work is required, the ground surface must be visible, i.e., not inundated, before the area may be surveyed for cultural resources materials.

5. **Field Survey.** Potential borrow areas (both landward and riverward) within 1,000 feet of levee damage and scour features, and any landowner-identified "preferred" borrow areas outside this band, will be evaluated and mapped during the initial site visit. Significant environmental and cultural resources features, including mature trees, wooded wetlands, farmed wetlands, and potential cultural resource sites, will be accurately outlined and labeled on the map.

6. **Fish and Wildlife Agency Coordination.** This SOP was coordinated with the FWS and the MDC prior to any borrow designation or negotiation. The FWS and MDC have been provided with a list of levees to be repaired and a set of floodplain maps with highlighted levees. Further coordination will take place on a case-by-case basis if mitigation for the loss of mast-producing trees is warranted or when proposed actions would impact one-half acre or more of trees averaging greater than 9 inches dbh. The agencies will be contacted to discuss appropriate mitigation and/or a proposed mitigation action. The FWS and the MDC will also

be invited to assist and advise the Corps in periodic management and field reviews of the application of this SOP.

7. **Toxic and/or Hazardous Substances.** The Environmental Protection Agency (EPA) provided a database list of known releases, storage, and/or disposal of toxic and/or hazardous substances (Toxic Release Inventory, National Priorities, etc.) within the State of Missouri. In the application for assistance or the initial site visit, the levee district representative (usually the president) will be asked to provide a list (with addresses) of known businesses, factories, feedlots, etc., where spills may have occurred. This information will be used, along with field surveys, to verify the presence of hazardous substances. The presence of toxic and/or hazardous substances will eliminate a site from borrow consideration.

8. **Wetlands Protection.** Most wetland borrow areas will be located in prior converted croplands, farmed wetlands, and adjacent to riparian habitat. Naturally vegetated wetlands will be avoided. If naturally vegetated wetlands or riparian timber are impacted, appropriate mitigation will follow. The following is a list of conditions/stipulations that will be used for borrow activities in wetlands and in riparian habitat with wetland potential.

a. Farmed wetlands riverward of the levee should be dug as deep as possible, and, where applicable, connected to scour features, if present. The borrow areas should be configured so that one side has a slope of 1V:4H; the other slopes may be as steep as 1V:1.5H. Landward farmed wetlands can be dug to any depth and must have 1V:5H maximum side slopes. Farmed wetlands used for borrow should not be back filled.

b. Any uniform stand of timber that died as a result of the 1993 flood event may be used for borrow without mitigation for loss of riparian timber. However, riverward areas ~~with stands of timber that died as a result of the 1993 flood event may be used as borrow~~ sources. In these borrow areas, if possible, some large potential cavity nesting or den trees should be preserved on the edge of the borrow site in localities generally adjacent to live forested areas. Riverward borrow areas should be dug as deep as possible. Depths of 5 feet or more are preferred. The borrow areas should be constructed so that one side that has a slope of 1V:4H, the other slopes may be as steep as 1V:1.5H. The borrow areas should be allowed to revegetate naturally.

c. Riparian timbered areas with trees greater than 9 inches dbh may be used for borrow if cost effective and if old borrow areas, or wooded areas with trees less than 9 inches dbh, and riverward agricultural fields are not available. When riparian areas are used for borrow, regardless of timber size, they should be dug as deep as possible to minimize the amount of timber clearing. The borrow areas should be constructed so that one side that has a slope of 1V:4H, the other slopes may be as steep as 1V:1.5H. Borrow areas should be

allowed to revegetate through natural succession unless significant mast-producing trees are lost, then replacement plantings will be considered.

d. Levee repairs will be authorized under the 1995 Corps' General Permit (MRKGP-33M) which is currently under preparation (Permanent Protection and/or Repair of Flood Damaged Structures and/or Fills in the state of Missouri). The General Permit is expected to be finalized by early September 1995, i.e., before construction would begin on any levee repairs. Until finalized, any construction work involving waters of the U.S. must be authorized by individual permit. The 1995 General Permit will be in effect for 5 years.

e. Currently, agricultural land wetland delineations are the responsibility of the Natural Resources Conservation Service (NRCS). The Corps is responsible for wetland delineations on non-agricultural lands (e.g., areas that haven't been farmed in 5 years or more). When damage survey reports are complete, the NRCS will be sent aerial photographs with the locations of levee damage shown on them. The NRCS will delineate agricultural wetlands on the photographs. They will also identify any potential conflicts with land enrolled in the Conservation Reserve Program (CRP), Emergency Wetlands Reserve Program (EWRP), Wetlands Reserve Program (WRP), "minimal effects with mitigation", or other U.S. Department of Agriculture Programs. The marked-up photographs and U.S. Department of Agriculture Program information will be provided to the Corps. Final wetland delineations for all utilized agricultural and non-agricultural borrow sites will be drawn on aerial photographs and furnished to the NRCS.

f. Non-agricultural land wetland delineations will be performed by Corps regulatory personnel or field biologists. Off-site wetland screening will be performed using maps, photographs, and historical records to narrow the area of potential wetlands on non-agricultural lands. ~~The findings of this off-site screening will be verified on-site prior to finalizing borrow negotiations.~~ A short on-site observation report documenting the on-site delineations and a photo/map containing wetland delineations for both agricultural and non-agricultural land will be attached to the Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) and/or placed in the official project files. Landowners will be informed by letter if borrow will be taken from a designated wetland and any potential Food Security Act or Swampbuster Program implications of using wetland borrow sites.

Attachment

BORROW SITE SELECTION CRITERIA

The Corps of Engineers has prepared a list of factors to be used in the selection of borrow sites for levee repairs. Please consider these when recommending sites so that approval can be accomplished as quickly as possible.

- Borrow sites consisting of clay, sandy clay and silty loam are the most desirable.
 - Riverward borrow areas located in open agricultural fields will be used when available.
 - Tree clearing, especially involving mature trees, will be avoided. However, areas with small to medium size trees may be used for borrow if riverward agricultural fields are not available. Old borrow sites will also be considered for use. The borrow areas will be dug as deep as possible to minimize tree clearing.
 - Riverward areas which are frequently wet should be avoided because the selection of these areas may result in construction delays. If wet areas are proposed as borrow sites, drier alternate areas should also be proposed. In most cases, special restrictions may apply if borrow areas have been delineated as wetlands.
 - Agricultural lands which are selected for borrow should not be planted to crop, if the crop can not be harvested before construction begins. No compensation for crop damage due to levee repair construction activities will be paid by the Government.
 - Borrow will not be taken within 30 feet of the levee toe unless the borrow is taken to repair minor sidewash and/or topwash.
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- No borrow will be taken within 30 feet of the high bank of the river.
 - Borrow sites should be located within 1,000 feet of the repair. Borrow for minor topwash and sidewash should be within 200 feet adjacent to the levee where the damage has occurred.
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- Borrow and/or construction activity should remain 150 feet away from any visible structure or building remains.
 - Cultural resource surveys will be required where there are known or potential archeological sites.
 - Borrow sites with known or suspected to have hazardous substance contamination will not be considered for use.

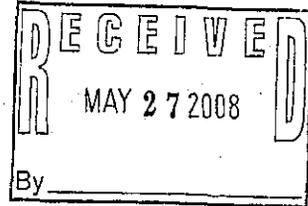
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DEPARTMENT OF THE ARMY
KANSAS CITY DISTRICT, CORPS OF ENGINEERS
700 FEDERAL BUILDING
KANSAS CITY, MISSOURI 64106-2896



REPLY TO
ATTENTION OF: May 22, 2008
Planning, Programs and Project Management Division
Planning Branch

Charlie Scott
US Fish and Wildlife Service
101 Park DeVille Drive, Suite A
Columbia, Missouri 65203

In accordance with provisions of the National Environmental Policy Act of 1969 (NEPA), enclosed for your review and comment is the Environmental Assessment (EA) and Draft Finding of No Significant Impacts (FONSI) for the Sugartree Bottom Levee District Emergency Levee Rehabilitation Project.

The Kansas City District – U.S. Army Corps of Engineers, in cooperation with the project sponsor, the Sugartree Bottom Levee District, propose to construct the Sugartree Bottom Levee District Emergency 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.

The Sugartree Bottom Levee District is located in Carroll County, Missouri, a few miles south of Carrollton, along the left descending bank of the Missouri River from River Mile 288.5 to River Mile 298.5, the left descending bank of Dirt Slough, and the right descending bank of Moss Creek.

The proposed project would involve in-place repairs to landside slope erosion areas, levee breaches, drainage structures, and re-seeding of both levee landside and riverside levee slopes. Repairs are required as a result of the flood event declared on 6 May 2007.

Written comments on the EA and Draft FONSI should be mailed to Mr. Neil Bass, Environmental Resources Specialist, Corps of Engineers, Kansas City District, PM-PR, 601 E. 12th Street, Kansas City, Missouri 64106-2896, or by phone at (816) 389-3667, or by email at neil.bass@usace.army.mil. The public review and comment period for the EA and draft FONSI will end 30 days from the date of this letter.

Sincerely,

Mr. Allen Covington

vid R. Hibbs
ting Chief, Environmental Resource Section

“The U.S. Fish and Wildlife Service has reviewed the subject proposal and accompanying information and determined that the activity as described is not likely to adversely affect federally listed species or designated critical habitat. Consequently, this concludes section 7 consultation. Please contact the Missouri Department of Conservation (573/522-4115) for state listed species of concern”

[Signature]
Field Supervisor

ce/po/c8
Date