



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

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**KANSAS CITY DISTRICT  
CORPS OF ENGINEERS  
and the  
GARDEN OF EDEN DRAINAGE DISTRICT – Section 3**

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

**GARDEN OF EDEN DRAINAGE DISTRICT – SECTION 3,  
ITEM NO. 139S3, NON-FEDERAL,  
EMERGENCY LEVEE REHABILITATION PROJECT**

**Missouri River  
Chariton County, Missouri**

**March 2008**



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

## Finding of No Significant Impact

### Garden of Eden Drainage District – Section 3 (Item 139S3) Levee Rehabilitation Project Chariton County, Missouri

#### Project Summary

The U.S. Army Corps of Engineers, Kansas City District (CENWK), in cooperation with the project sponsor, Garden of Eden Drainage District – Section 3, propose to construct the Garden of Eden Drainage District – Section 3 Levee Rehabilitation Project, under the authority of Public Law 84-99 of the Flood Control Act of 1944. Three alternatives were considered: (1) In-place repairs; (2) Landward levee setback and In-place repairs; and (3) No action. The Corps has identified Alternative 2 – Landward Levee Setback with In-place repairs as the recommended plan. The proposed project would involve repair of a severe breach with a landward levee setback, in-place repairs of a partial breach, repairs to intermittent crown, and landside and riverside erosion areas, along with re-seeding of both landside and riverside levee slopes to repair the agricultural levees damaged by the declared flood event of 6 May 2007. The proposed repairs are located in Chariton County, Missouri, near the town of Triplett, along the left descending bank of the Grand River between River Mile 15.0 and River Mile 7.0, and the right descending bank of Salt Creek.

#### Alternatives

Three alternatives were considered: (1) In-place repairs; (2) Landward levee setbacks with In-place repairs (**RECOMMENDED PLAN**); and (3) No action.

#### Recommended Plan

The recommended plan consists of repair to a severe levee breach (sta. 91+03 to 96+03), with an approximately 2,233-linear-foot-long landward levee setback; and in-place repairs of a partial breach (sta. 266+25 to 267+40); levee crown erosion repairs (sta. 258+00 to 261+00); landside slope erosion repairs (sta. 114+26 to 142+50 and 357+00 to 361+00); riverside erosion repairs (sta. 226+00 to 232+50); re-seeding of riverside levee slopes (sta. 114+26 to 142+50), and re-seeding of both riverside and landside levee slopes (sta. 105+70 to 114+26 and 142+50 to 168+87).

## **Summary of Environmental Impacts**

The flood risk management level achieved by the recommended plan would be returned to the pre-flood condition. 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. Approximately 40 trees including some mast producing trees and tree species that provide potential roost habitat for the Indiana bat would be removed to facilitate the landward levee setback. Approximately 2.5 acres of similar habitat was destroyed by the levee breach. More than 100 acres of similar habitat is located within the vicinity of the project area. The recommended plan will result in minor fill and vegetative impacts to mitigable resources as defined in USACE Planning regulations and under Section 404 of the Clean Water Act. These impacts are associated with minor excavation of sandy materials from farmed wetlands, minor excavation and fill in Natural Resource Conservation Service Wetland Reserve Program lands, and some trees removal. Areas of the existing levee sections damaged by flooding would be temporarily disturbed by the proposed construction activity.

The adverse effects associated with the proposed project are long-term/minor associated with loss of agricultural land and short term/minor associated with project construction. These minor adverse effects would be greatly offset by restoring the flood risk management capability, and its associated social and economic benefits of the existing levee system. Alternative 2, Landward levee setback with 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 three (3) alternatives considered, Alternative 2 –Landward levee setback with in-place repairs is recommended because it has the highest cost/benefit ratio, provides benefits to the aquatic ecosystem, and is consistent with protection of the nation's environment.

## **Mitigation Measures**

The recommended plan will result in minor impacts to mitigable resources as defined in USACE Planning regulations and under Section 404 of the Clean Water Act. These impacts are associated with minor excavation of sandy material from within farmed wetland areas and minor excavation and fill from/in Natural Resource Conservation Service (NRCS) Wetland Reserve Program lands and an existing drainage ditch. General Permit Number NWKGP-41 authorizes these actions. In addition, the project sponsor will consult with the NRCS to obtain a Compatible Use Authorization agreement to ensure that borrow operations do not adversely impact the wetland or easement area.

A mixture of timber within both the WRP and drainage ditch areas, consisting of cottonwoods, willows, silver maple, sycamore, oak, and pecan; less than and greater than 9 inches breast diameter height, will be removed during project construction. CENWK has determined in coordination with the Missouri Department of Conservation and the U.S. Fish and Wildlife Service that natural plant succession should provide adequate re-vegetation of non-mast producing trees. The removal of some hardwood species does not appreciably change the character of available habitat including available Indian bat summer habitat within the vicinity of the project area, and a sufficient seed base and stand of hardwood trees is present adjacent to the

disturbed area to allow natural regeneration of these species. Additionally, with the levee setback, approximately 11 acres of floodplain and newly created wetland habitat will be protected. Therefore, no mitigation measures are 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 March 21, 2008, with a thirty-day comment period ending on April 21, 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 FONSI were available on the CENWK webpage or that they could request a hard copy of the EA and FONSI in order to provide comment.

No 'objection to the project' comments were received.

The USFWS responded by letter on April 17, 2008, that the activity described is not likely to adversely affect federally listed species or designated critical habitat.

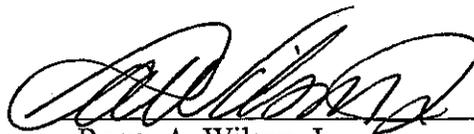
Levee rehabilitation projects completed by the Corps under authority of Public Law 84-99 generally do not require the preparation of an Environmental Impact Statement. These projects typically result in long-term social and economic benefits and the adverse environmental effects are typically minor/long-term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

## Conclusion

After evaluating the anticipated environmental, economic, and social effects of the proposed activity, it is my determination that construction of the proposed Garden of Eden Drainage District – Section 3 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:

13 May 08



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



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

**EXECUTIVE SUMMARY**

The U.S. Army Corps of Engineers, Kansas City District (CENWK), in cooperation with the project sponsor, Garden of Eden Drainage District – Section 3, propose to construct the Garden of Eden Drainage District – Section 3 Levee Rehabilitation Project, under the authority of Public Law 84-99 of the Flood Control Act of 1944. The proposed project would involve a landward levee setback to repair a major breach; in-place repairs of partial breaches, intermittent crown, and landside and riverside erosion areas; and re-seeding of both levee landside and riverside levee slopes to repair the agricultural levees damaged by the declared flood event of 6 May 2007.

The Garden of Eden Drainage District – Section 3 levee segment consists of approximately 43,300 linear feet of earthen flood control works (FCW) on the left descending bank of the Grand River between river mile 15.0 and 7.0, and the right descending bank of Salt Creek in Chariton County, near the town of Triplett, Missouri. The FCW protect approximately 3,500 acres of agricultural lands (3,000 acres in cropland), one residence, three barns, 10 grain bins, approximately eight miles of gravel surfaced roads, numerous unimproved farm to market roads, and approximately two miles of buried water lines. The recommended plan consists of repair to a severe levee breach (sta. 91+03 to 96+03), with an approximately 2,233-linear-foot-long landward levee setback; and in-place repairs of a partial breach (sta. 266+25 to 267+40); levee crown erosion repairs (sta. 258+00 to 261+00); landside slope erosion repairs (sta. 114+26 to 142+50 and 357+00 to 361+00); riverside erosion repairs (sta. 226+00 to 232+50); re-seeding of riverside levee slopes (sta. 114+26 to 142+50, and ), and re-seeding of both riverside and landside levee slopes (sta. 105+70 to 114+26 and 142+50 to 168+87).

Borrow will be obtained by removing sand and silt deposition down to the original ground contours on the adjacent landward agricultural lands; degrading the remaining existing levee segments riverward of the new levee setbacks; degrading of a riverward secondary levee down to original ground contours, excavating the perimeter of a scour feature and the interior and perimeter of farmed wetlands. Excavations would be limited to an approximate 24" depth. All of the designated borrow locations are positioned within previously "environmentally cleared" borrow locations assessed during the 1993 and 1995 repair actions.

The new landward levee setback will traverse through an existing drainage/borrow ditch, which has a narrow, linear fringe of trees >9" diameter breast height (dbh) along its slopes. Approximately 40 trees consisting of pecan, oak, silver maple and sycamore will require removal for the levee footprint. The levee setback will also traverse through Natural Resources Conservation Service (NRCS) Wetland Reserve Program (WRP) lands, which contain a sparse growth of cottonwood and willow <9" dbh along its side slopes. All impacts to WRP lands will be coordinated with the NRCS. The project sponsor will consult with the NRCS to obtain a Compatible Use Authorization agreement to ensure that borrow operations are conducted accordingly and that excavation and fill does not adversely impact the wetland or easement area.

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 and the Missouri Department of Conservation. CENWK has determined in coordination with the Missouri Department of Conservation and the U.S. Fish and Wildlife Service that natural plant succession should provide adequate re-vegetation of non mast producing trees. The removal of some hardwood trees does not appreciably change the character of available habitat including potential Indiana bat roost habitat within the vicinity of the project area, and a sufficient seed base and stand of hardwood trees is present adjacent to the disturbed area to allow natural regeneration of these species. Benefits to the aquatic ecosystem include wetland enhancement and the return of 11 acres of agricultural land to the floodplain to develop into wetland and/or riparian habitat. Therefore, 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 Finding of No Significant Impact (FONSI), dated March 21, 2008, with a thirty-day comment period ending on April 21, 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 FONSI were available on the CENWK webpage or that they could request the EA and FONSI in writing, in order to provide comment.

Additional information concerning this project may be obtained from Mr. Richard A. Skinker, Environmental Resources Specialist, PM-PR, Kansas City District - U.S. Army Corps of Engineers, by writing the above address, or by telephone at 816-389-3134.

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

**PUBLIC LAW 84-99  
GARDEN OF EDEN DRAINAGE DISTRICT  
SECTION 3  
LEVEE REHABILITATION PROJECT  
CHARITON COUNTY, MISSOURI**

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FINDING OF NO SIGNIFICANT IMPACT**

**PUBLIC LAW 84-99  
GARDEN OF EDEN DRAINAGE DISTRICT  
SECTION 3  
LEVEE REHABILITATION PROJECT  
CHARITON COUNTY, MISSOURI**

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**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 Garden of Eden Drainage District – Section 3 Levee Rehabilitation Project.

**Section 2: AUTHORITY**

The Kansas City District – U.S. Army Corps of Engineers (CENWK), in cooperation with the project sponsor, the Garden of Eden Drainage District – Section 3, propose to construct the Garden of Eden Drainage District – Section 3 Levee Rehabilitation Project under the authority of Public Law 84-99 of the Flood Control Act of 1944.

**Section 3: PROJECT LOCATION**

The Garden of Eden Drainage District – Section 3 levee consists of approximately 43,300 linear feet of earthen flood control works (FCW) and is located in Chariton County, near the town of Triplett, Missouri, along the left descending bank of the Grand River between river mile 15.0 and 7.0, and the right descending bank of Salt Creek (See ATT B-1).

**Section 4: EXISTING CONDITION**

The declared flood event on 6 May 2007 caused damages to the Garden of Eden Drainage District – Section 3 flood control works. These damages consist of one severe levee breach at station 91+03 to 96+03; a partial levee breach at station 266+25 to 267+40; levee crown erosion at station 258+00 to 261+00; landside slope erosion at stations 114+26 to 142+50 and 357+00 to 361+00; riverside slope erosion at station 226+00 to 232+50; lost (destroyed) sod cover at riverside slope station 105+70 to 168+87; and lost (destroyed) sod cover at landside slope stations 105+70 to 114+26 and 142+50 to 168+87 (See ATT D-1).

## **Section 5: PURPOSE & NEED FOR ACTION**

The project purpose and need is to rehabilitate the damaged levees and restore the associated social and economic benefits. The Garden of Eden Drainage District – Section 3 received damages to sections of their levees during the 6 May 2007 declared flood event. Prior to the May 2007 event, the Garden of Eden Drainage District – Section 3 levee provided an approximately 10-year level of flood risk management. In its current damaged state, the Garden of Eden Drainage District – Section 3 levee is estimated to provide an approximately two-year level of protection. The existing condition exposes all public and private infrastructure and agricultural croplands to a high level of risk from future flooding. Failure to restore the flood risk management capability of the levee system would keep area residents livelihood and social well-being in turmoil, subject to the continuous threat of flooding until a level of flood protection is restored. Failure to reconstruct the 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 BUT NOT SELECTED**

Two alternatives were considered, but not selected as the recommended plan. One build alternative (Alternative 1 – In-Place Repairs) and the No Action Alternative (Alternative 3).

STATIONS 91+03 to 96+03; SEVERE LEVEE BREACH: In-place repairs were considered in this repair action. The landward levee setback was determined through the Corps' economic analysis to be the most economical and prudent repair action.

STATIONS 105+70 to 168+87, 226+00 to 232+50, 258+00 to 261+00, 266+25 to 267+40, and 357+00 to 361+00 PARTIAL LEVEE BREACH; LANDSIDE, RIVERSIDE, AND CROWN EROSIONS; AND PARTIAL RE-SEEDING OF LANDSIDE AND RIVERSIDE SLOPES: Due to the limited nature of damage at these locations, in-place repairs were considered to be the most economic and prudent repair actions. In addition, allowance of re-vegetation to occur naturally was considered for lost (destroyed) sod cover.

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

## **Section 7: RECOMMENDED PLAN**

The recommended plan consists of repair to a severe levee breach (sta. 91+03 to 96+03), with an approximately 2,233-linear-feet-long landward levee setback (See ATT D-2 and ATT E-3); and in-place repairs of a partial breach (sta. 266+25 to 267+40); levee crown erosion repairs (sta. 258+00 to 261+00); landside slope erosion repairs (sta. 114+26 to 142+50 and 357+00 to 361+00); riverside erosion repairs (sta. 226+00 to 232+50); re-seeding of riverside levee slopes (sta. 114+26 to 142+50), and re-seeding of both riverside and landside levee slopes (sta. 105+70 to 114+26 and 142+50 to 168+87). Borrow material will be obtained for repairs as described below (See Borrow Maps 1 and 2):

Station 83+15 to 105+70: Borrow will be obtained by removing sand deposition materials down to the original ground contours on the adjacent landward agricultural lands; degrading the remaining existing levee segments riverward of the new levee setbacks; degrading of a riverward secondary levee down to original ground contours, and enlarging a present scour feature by sloping perimeter scour face edge. The new landward levee setback will traverse through an existing drainage/borrow ditch, which will require the removal of approximately 40 trees >9 inches diameter breast height (dbh), some mast-producing (pecan and oak), and will also traverse through a NRCS WRP site, which also will require the removal of small woody vegetation consisting of cottonwoods and willows <9 inches dbh .

Station 226+00 to 232+50: Borrow will be obtained from agricultural lands located riverward of the existing levee by shallow excavations.

Station 258+00 to 261+00 and 266+25 to 267+40: Borrow will be obtained from landward agricultural lands adjacent to the repair area.

Station 357+00 to 361+00: Borrow will be obtained from along an existing drainage ditch slope within agricultural lands.

Station 114+26 to 142+50: Borrow material may or may not be required at this location. If borrow is needed, it will be obtained from adjoining landside berm slopes.

All of the above designated borrow locations are positioned within previously "environmentally cleared" borrow locations assessed during the 1993 and 1995 repair actions, with the exception of station 83+15 to 105+70 where the large timber will be impacted. The project sponsor will consult with the NRCS to obtain a Compatible Use Authorization agreement to ensure that borrow operations are conducted accordingly and that excavation and fill does not adversely impact the wetland or easement area.

## **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 Finding of No Significant Impact (FONSI), dated March 21, 2008, with a thirty-day comment period ending on April 21, 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 FONSI were available on the CENWK webpage or that they could request the EA and FONSI in writing, in order to provide comment. The following comments were received and evaluated from coordination of the Notice:

No 'objection to the project' comments were received.

The USFWS responded by letter on April 17, 2008, that the activity described is not likely to adversely affect federally listed species or designated critical habitat.

## **Section 9: AFFECTED ENVIRONMENT**

A wide variety of resources along with the related environmental, economic and social effects were considered during the development and evaluation of project alternatives. These include: atmospheric quality; noise levels; water quality; water supply; soil control; fish and wildlife; threatened and endangered species; vegetation; energy resources; wetlands; geological resources; agricultural activity; employment; tax base; public service; growth patterns; land use; recreation; archaeological and historical resources; flood risk management; esthetics; transportation; health and safety; community service; population density and other items identified through public and agency comments.

The project area consists of agricultural row crop ground and Wetland Reserve Program ground located on the Grand River flood plain between river miles 15.0 and 7.0. The project area disturbance involves approximately 40 acres or less (including borrow locations). The Corps Kansas City District's Standard Operating Procedures for identification and removal of potential borrow sites and material, which was developed in consultation with the resource agencies to avoid/and or minimize adverse environmental effects, would be implemented for this project.

## **Section 10: ENVIRONMENTAL CONSEQUENCES:**

Primary resources of concern identified during the evaluation included: noise levels, water quality, wetlands, vegetation, fish and wildlife, threatened and endangered species, geologic resources, agricultural activity, archeological and historical resources, floodplain and flood risk management, economics and esthetics. Project impacts to other resources were determined to be no effect.

### **Noise**

The recommended plan, Alternative 2, would result in minor short term construction related noise impacts. These impacts are the result of the operation of heavy machinery during project construction. These noise levels would be in addition, but similar to, those produced by agricultural equipment which is routinely operated in the project area. No residences, businesses, churches, park areas or other areas sensitive to increased noise levels were identified in the project area. There is a remote chance that the noise from project construction could disturb the occasional boater on the nearby Grand River or person(s) participating in outdoor recreation on the private land in the project area.

Alternative 1 – Repairs resulting from implementation of this alternative plan would result in noise impacts similar to those described above.

Alternative 3 – The “No Action” alternative would produce no increase in noise levels in the project area.

### **Water quality**

The recommended plan, Alternative 2, could result in minor, temporary, construction related adverse impacts to water quality resulting from site runoff and increased turbidity. Potential minor impacts associated with the recommended plan would be avoided and/or minimized to the

greatest extent possible by the implementation of Best Management Practices and measures required under the National Pollutant Discharge Elimination System (NPDES) permit. 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.

Alternative 1 – Repairs resulting from implementation of this alternative plan could result in minor, temporary, construction related adverse impacts to water quality similar to those describe above. As with the Recommended Alternative, potential impacts 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 permit.

Alternative 3 – In the “No Action” Alternative with the absence of the Federal action addressing levee improvements, a high water event could result in the release of a variety of industrial chemicals and substantially impact the natural and human environment within the project area. Avoiding repair actions could result in adverse impacts to water quality from increased levels of nutrient loading and wastes, including runoff of pollutants from industrial sources, petroleum products, and non-point sources of human and animal wastes.

### **Wetlands**

The recommended plan will have minor temporary impacts on wetlands. These impacts are construction related and associated with the minor excavation of sandy material and sediment from within farmed wetland areas, minor excavation and fill from/in Natural Resource Conservation Service (NRCS) Wetland Reserve Program lands, and minor fill to an existing drainage ditch landward of the existing levee to facilitate construction of the levee setback (See Borrow Maps 1 and 2). A total of approximately 16 acres of wetland habitat will be temporarily impacted. General Permit Number NWKGP-41 authorizes these actions. The project sponsor will consult with the NRCS to obtain a Compatible Use Authorization agreement which states that excavation and fill can not adversely impact the wetland or easement area, and to obtain guidelines on acceptable borrow practices.

After project construction, the recommended plan will result in long-term benefits to wetlands. These benefits will result from borrow operations and through levee setbacks. Borrow operations will increase the depth and enlarge the surface area of existing farmed wetlands and the newly created blew hole by sloping their perimeter faces. This will enhance approximately 16 acres of farmed wetlands within the area of impact that have become degraded due to the deposition of silt as a result of adjacent agricultural runoff. The levee setback will maintain the blew hole, providing it the opportunity to create wetland features, and return approximately 11 acres of land to the river floodplain, which provides increased surface area for floodwater conveyance and wildlife habitat.

Alternative 1 – Repairs resulting from implementation of this alternative plan would place the levee on its original alignment through filling of the blew hole. This alternative would avoid placing borrow in WRP lands and the existing drainage ditch. The borrow operations would still be required and would increase on-site wetland area as described above. However, filling the blew hole would remove the opportunity for this area to mature into a functioning wetland, and without a setback, eleven acres would not be returned to the river floodplain.

Alternative 3 – 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.

### **Vegetation**

The recommended plan, Alternative 2, would result in some borrow taken from NRCS WRP lands and farmed wetlands, and degrading along the secondary levee, which impacts some sparse opportunistic vegetation consisting of willows and cottonwoods < 9 inches dbh. The levee setback impacts a linear fringe of mature trees adjacent to a ditch located just landward of the existing levee. Approximately 40 large trees > 9 inches dbh consisting of silver maple, oak, pecan, and sycamore would be impacted as well as some smaller cottonwoods and willows < 9” dbh from levee setback construction. This strip of trees measures a contiguous distance of about 0.6 miles and cannot be avoided by a practical levee setback alignment. Approximately 11 acres of agricultural land will be removed from production due to the levee setback, but this acreage will be located riverward of the new levee in the floodplain and will revegetate naturally, and

Alternative 1 – Repairs resulting from implementation of this alternative plan would result in less impacts to vegetation as a smaller amount of borrow would be required to facilitate in-place repairs and therefore require less disturbance.

Alternative 3 – 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 high risk of flooding. Over time, successional vegetative growth could result in increased acreages of floodplain forest.

### **Fish and Wildlife**

The recommended plan, Alternative 2, would result in minor, temporary, construction related adverse impacts to 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 adversely impact feeding, spawning, and sheltering for species not accustomed to these conditions.

Alternative 1 – Repairs resulting from implementation of this alternative plan would result in similar impacts as described above due to borrow activity and construction associated with in-place repair.

Alternative 3 – The “No Action” Alternative would have minimal effects on fish and wildlife resources. These impacts would arise from flooding within the now unprotected area. Wetland species may benefit as more frequent flooding could occur in the now unprotected areas. Wetlands would likely recharge more often with a hydraulic connection to the Grand River,

which would benefit fish and wildlife. Other terrestrial organisms could be temporarily displaced or have their habitat degraded by flooding.

### **Threatened and Endangered Species**

Pallid sturgeon (*Scaphirhynchus albus*) are found primarily in the Missouri River and Mississippi River. No work is proposed within the Missouri River and therefore, no impacts to the pallid sturgeon are anticipated as a result of the proposed project. The Indiana bat (*Myotis sodalis*) roosts in trees with exfoliating bark that tend to be greater than 9 inches dbh during the spring and summer, and hibernates in caves during the fall and winter. Construction of the levee setback will impact about 40 trees >9" dbh, which includes pecan, oak, sycamore and silver maple. Trees impacted <9" dbh include cottonwoods and willows. These trees comprise a narrow, linear band of vegetation located adjacent to the existing levee and active agricultural activity. Approximately 2.5 acres of this vegetation was destroyed by the severe levee breach at station 91+03 to 96+03 in addition to acreages of similar habitat landside of the existing levee (Borrow Map 1 of 2). According to the USFWS Columbia, MO Ecological Field Services Office, the clearing of trees to facilitate the construction of the levee setback that meet the criteria for potential Indiana bat habitat would need to occur during their wintering period between October 1 and April 1. If tree clearing could not be conducted within this timeframe, CENWK would coordinate with the USFWS to determine the presence/absence of the Indiana bat prior to the initiation of tree clearing activities.

The removal of these trees to construct the levee setback does not appreciably change the character of the available Indiana bat summer habitat within the vicinity of the project area. There are contiguous tracts of similar tree species totaling >100 ac within the vicinity of the project area located along the Grand River to the west and south, and along the intermittent tributary of the Salt Creek located to the east of the levee setback. A large expanse of WRP land, measuring approximately 350 acres, is located south of the impacted vegetation.

Alternative 1 – Repairs resulting from implementation of this alternative plan would have no adverse effects on any Federally-listed threatened or endangered species or their habitat. The in-place repairs would require farmed wetlands and a small amount of WRP land to be impacted by borrow activities. This activity would require the removal of occasional willows and cottonwoods measuring < 9" dbh and filling in the levee breach, but would not likely impact potential Indiana bat roost trees.

Alternative 3 – The "No Action" alternative would have no adverse effects on the pallid sturgeon. The levee breach destroyed approximately 2.5 acres of potential Indiana bat roost habitat and additional vegetation. Without a federal action to repair the breach, additional existing habitat around the levee breach could be similarly adversely impacted due to a high water event. A levee breach would subject previously protected land to an increased of flooding, which could cause the mortality of existing trees and provide for new successional tree growth, which would eventually provide additional habitat for the Indiana bat.

### **Geologic Resources**

The recommended plan will require borrow material to repair the erosion and breached levee areas. Bedrock is located at least approximately 50 feet below the proposed excavation depth of

24". No impacts to geologic resources are anticipated as a result of borrowing or repairing the levee.

Alternative 1 – Bedrock is located at least approximately 50 feet below the proposed excavation depth of 24". No impacts to geologic resources are anticipated as a result of borrowing or repairing the levee under this alternative.

Alternative 3 – The "No Action" Alternative would have no effect on geologic resources.

### **Agricultural Activity**

The recommended plan, while restoring the pre-flood level of flood risk management, would protect about 3,500 acres of agricultural land from flooding. An adverse impact to agriculture results from the conversion of approximately 11 acres of agricultural land to riverward floodplain habitat due to the landward levee setback.

Alternative 1 – Repairs resulting from implementation of this alternative plan would have no impact on agricultural activity or loss of agricultural lands as in-place repairs would not result in a levee setback. Farmed wetlands and WRP would be impacted by borrow activity to facilitate the in-place repairs.

Alternative 3 – The "No Action" Alternative would adversely impact agricultural activity by exposing approximately 3,500 acres of agricultural lands (3,000 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 one prehistoric archeological site (23CH322) that has been reported as potentially eligible for the NRHP recorded near the proposed project area. The site is believed to be a prehistoric camp site of Late Woodland age (AD 300-800). The site is mapped near a portion of the levee where no work or borrowing is planned. All project borrowing and work will avoid the recorded site location. Instructions to avoid the area will be included in project construction plans.

In a letter to SHPO, the Corps recommended that the project would have no effect on historic properties and that the project should be allowed to proceed. SHPO concurred with this recommendation on November 15, 2007 with the stipulation that project impacts avoid the previously recorded site (Appendix II). 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.

Alternative 1 – Repairs resulting from implementation of the alternative plans would result in no effects to archaeological or historical resources.

Alternative 3 – The "No Action" Alternative would result in no effects to archaeological or historical resources.

### **Floodplain and Flood Risk Management**

The recommended plan would restore an approximately 10-year level of flood protection to the existing Garden of Eden Drainage District – Section 3 levee system, which would equal the level that existed prior to the declared flood event of 6 May 2007. The area is located in the base floodplain and is subject to Executive Order 11988, “Floodplain Management”. In addition, since the proposed levee repair would restore this levee to its near original alignment and pre-flood grade and cross section, no increase in floodwater surface elevations would occur. As the recommended plan would not directly or indirectly support more development in the floodplain or encourage additional occupancy and/or modify of the base floodplain, the Corps has determined that the recommended plan complies with the intent of Executive Order 11988.

Alternative 1 – Repairs resulting from implementation of this alternative plan would result in similar flood protections as described above for the recommended plan.

Alternative 3 – The “No Action” Alternative would continue to expose all public and private infrastructure and agricultural croplands previously protected to a high level risk of future flooding.

### **Economics**

Based on the Corps’ economic analysis, the recommended plan is economically justified with a benefit to cost ratio of 4.0.

Alternative 1 – Based on the Corps’ economic analysis, repairs resulting from implementation of this alternative resulted in a lower benefit to cost ratio of 3.4.

Alternative 3 – 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.

### **Esthetics**

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

Alternative 1 – Repairs resulting from implementation of this alternative plan would result in impacts similar to those described above.

Alternative 3 – The “No Action” Alternative would have virtually no short-term effect on esthetics. Long-term opening of the breach would likely result in scouring adjacent land and altering the landscape.

### **Section 11: SUMMARY OF ENVIRONMENTAL EFFECTS OF THE NON-RECOMMENDED PLANS**

Alternative 1 would result in reduced impacts to farmed wetlands, WRP lands, and trees compared to the recommended plan, and no loss of agriculture producing land or the existing drainage ditch and adjacent trees > 9” dbh as the levee would be placed on its existing alignment and less borrow would be required for in-place repairs. Although Alternative 1 would allow for the enhancement of existing wetland acreage through borrow operations (approximately 10 acres), it would remove the opportunity for the blew hole to develop into a functioning wetland, and would not provide additional surface area to the river floodplain.

The “No Action” Alternative has not been recommended because it would not meet the project purpose and need of rehabilitating the damaged flood damage reduction project to its pre-flood 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, agricultural croplands and other vegetation within the area 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 proposed level of flood protection is restored. Failure to reconstruct 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 State and Federal agencies. As required by NEPA, the Corps has prepared the following assessment of cumulative impacts related to the alternatives being considered in this EA.

Historically, the Missouri River and its floodplain has been altered by bank stabilization, dams on the river and its tributaries, roads/bridges, agricultural and urban levees, channelization, farming, water withdrawal for human and agricultural use, urbanization and other human uses. These activities have substantially altered the terrestrial and aquatic ecosystem within the Missouri River watershed. 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 flood heights or reduced floodplain 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 including tree species that are potential habitat for threatened and endangered species are ever present, and these activities tend to impact these resources. Construction of additional agricultural levees may occur provided land becomes available for this purpose; however, the trend seems to be moving in the opposite direction and towards urban development. The era of major reservoir construction has likely past, thus impacts from this type of project will not likely occur.

The adverse effects associated with the proposed project are long-term/minor associated with the loss of agricultural cropland, and short term/minor associated with project construction. These minor adverse effects would be greatly offset by restoring the flood risk management capability and its associated social and economic benefits of the existing levee system. The PL84-99 Program is designed to merely bring the damaged levees back to pre-existing conditions. 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 will result in minor impacts to mitigable resources as defined in USACE Planning regulations and under Section 404 of the Clean Water Act. These impacts are associated with minor excavation of sand and silt material from within farmed wetland areas and minor excavation and fill from/in Natural Resource Conservation Service (NRCS) Wetland Reserve Program lands and an existing drainage ditch. General Permit Number NWKGP-41 authorizes these actions. In addition, the project sponsor will consult with the NRCS to obtain a Compatible Use Authorization agreement to ensure that borrow operations do not adversely impact the wetland or easement area. Approximately 40 trees within the WRP and drainage ditch areas consisting of cottonwoods, willows, silver maple, sycamore, oak, and pecan; less than and greater than 9 inches breast diameter height, will be removed during project construction. These tree species provide potential Indiana bat roost habitat. The clearing of trees to facilitate landward levee setback construction would preferably occur during the Indiana bat wintering period October 1 through April 1 to avoid impacts to this species. If the clearing of trees to

facilitate the levee setback could not be conducted during this timeframe, these trees would be surveyed for the presence/absence of the Indiana bat. CENWK in cooperation with the Missouri Department of Conservation and the U.S. Fish and Wildlife Service have determined that natural plant succession should provide adequate re-vegetation for non-mast producing trees. For the hardwood species, a sufficient seed base and stand of hardwood trees are present adjacent to the disturbed area to allow natural regeneration of these species. Approximately 2.5 acres of similar habitat was destroyed by the levee breach.

Although the removal of these trees to facilitate the construction of a landward levee setback is considered an adverse impact, the project as proposed provides many benefits to the aquatic ecosystem. The levee setback provides an additional 11 acres of land riverward of the levee that could develop into wetlands and/or timber that would provide additional viable floodplain habitat for fish and wildlife. The scour hole that has formed as a result of flooding would be left to become inundated and develop into a wetland or functioning riparian habitat. The excavation of sand and silt from farmed wetlands and WRP land down to a depth of approximately 24" will provide additional depth to facilitate inundation and the sloping of perimeter faces when borrowing is complete will improve the ability of these areas to capture runoff and increase wetland surface area. The benefits of the proposed project will enhance the values and functions of the aquatic ecosystem that will at a minimum, compensate for the adverse impacts associated with construction. Therefore, no compensatory mitigation is warranted or 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 return to the level of the pre-flood levees. The recommended plan would result in minor impacts to some mast producing trees and tree species that provide potential habitat for the Indiana bat. The recommended plan would result in no impacts to any properties listed, proposed for listing, eligible for listing, or potentially eligible for listing in the National Register of Historic Places. Areas of the existing levee sections damaged by flooding would be temporarily disturbed by the proposed construction activity.

The adverse effects associated with the proposed project are long term/minor associated with the loss of agricultural lands for the landward levee setback and short term/minor associated with project construction and the removal of some trees to facilitate 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 2 – Landward levee setback with 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 three alternatives considered, Alternative 2 – Landward levee setback with in-place repairs is recommended because it has the highest cost/benefit ratio, and is consistent with protection of the Nation's environment.

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

#### **Section 16: PREPARERS**

This EA and the associated FONSI were prepared by Mr. Matthew D. Vandenberg (Environmental Resources Specialist), with relevant sections prepared by Mr. Timothy Meade (Historic and Archeological Resources). The address of the preparers is: U.S. Army Corps of Engineers, Kansas City, District; PM-~~PP~~<sub>PR</sub>, Room 843, 601 E. 12th St, Kansas City, MO 64106.

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

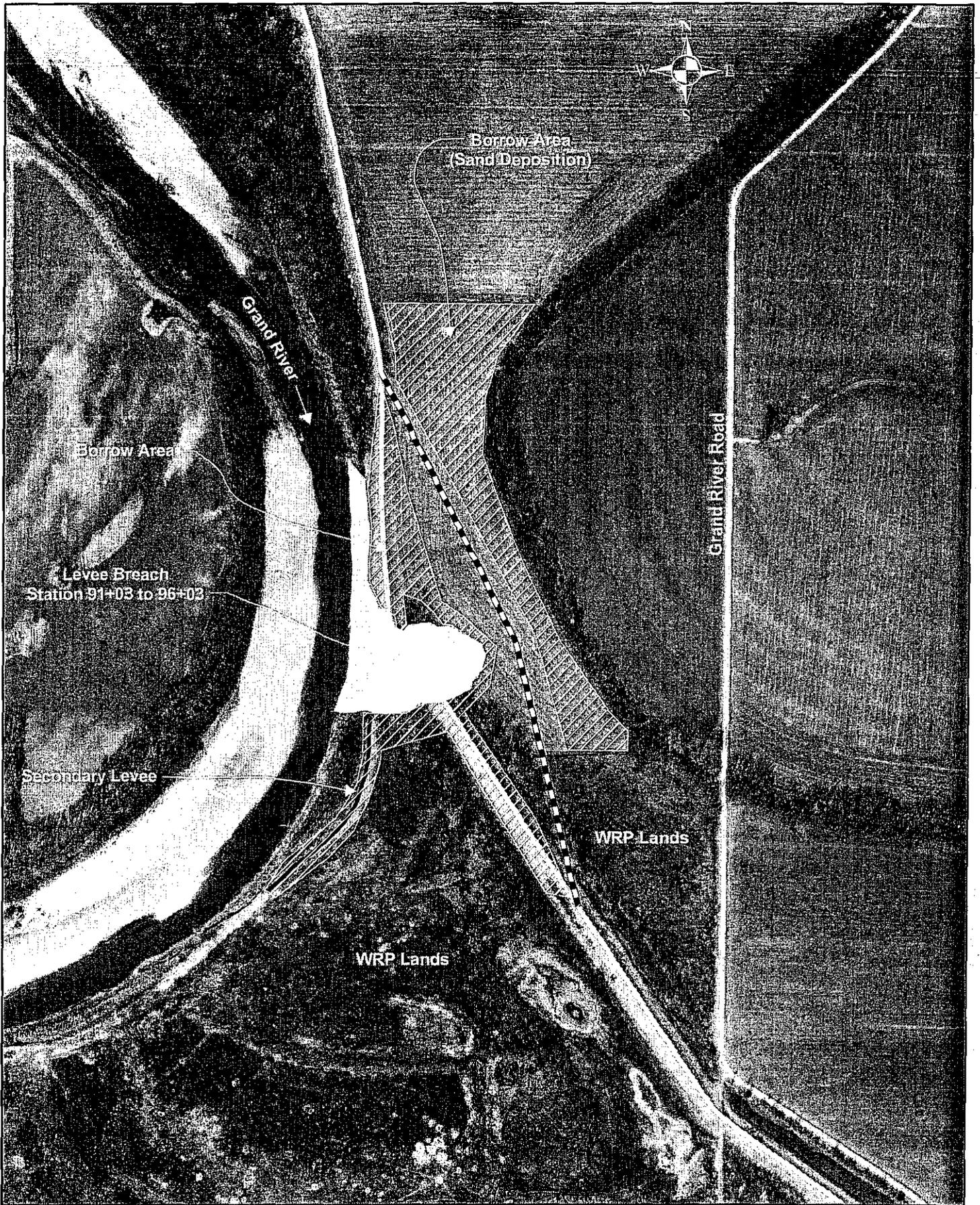
<b>Federal Polices</b>	<b>Compliance</b>
Archeological Resources Protection Act, 16 U.S.C. 470, et seq.	Full Compliance
Clean Air Act, as amended, 42 U.S. C. 7401-7671g, et seq.	Full Compliance
Clean Water Act (Federal Water Pollution Control Act), 33 U.S.C. 1251, et seq.	Full Compliance
Coastal Zone 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.

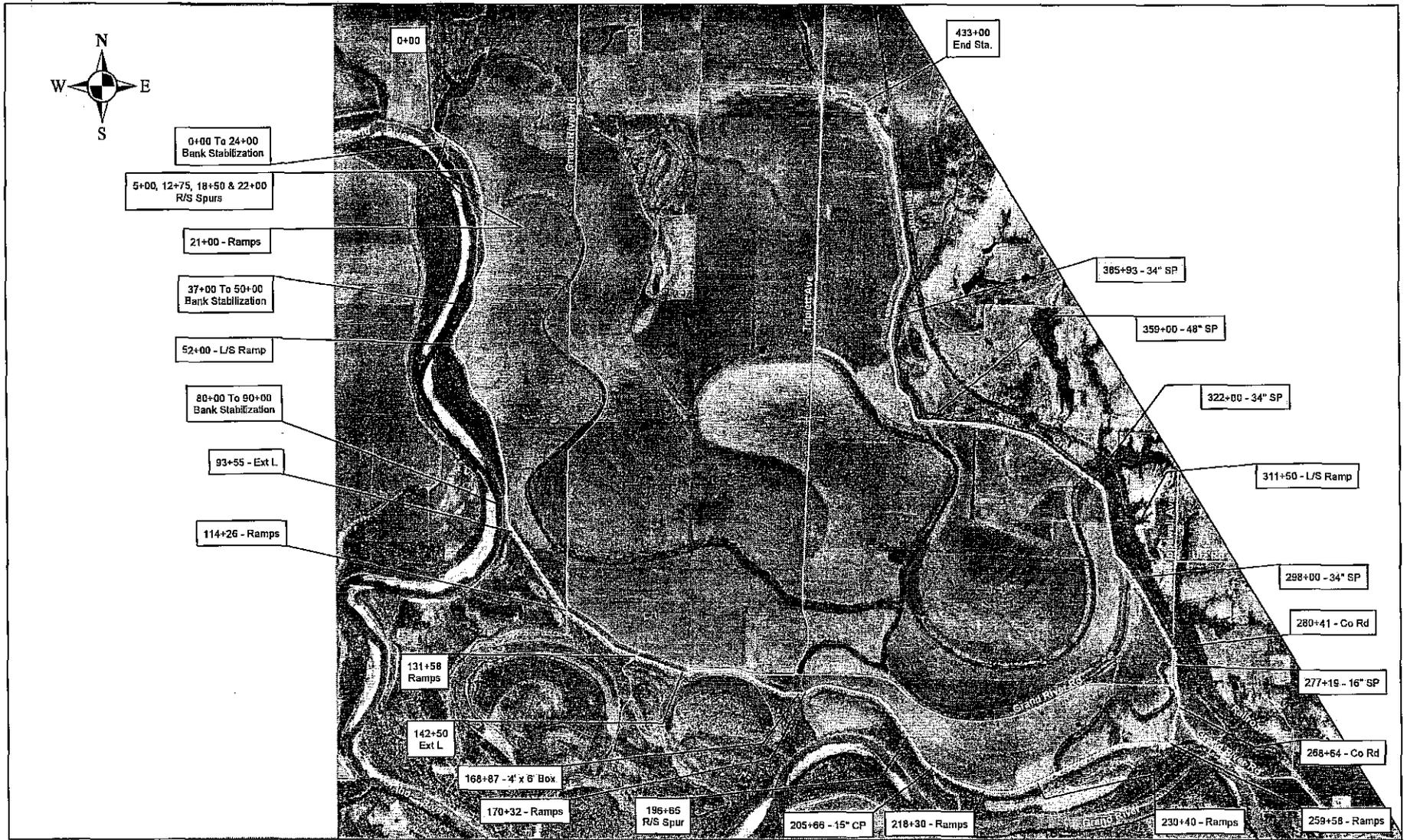
## **APPENDIX I – PROJECT MAPS**

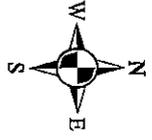
*Garden of Eden Drainage District – Section 3 (Item 139S3)  
P.L. 84-99 Levee Rehabilitation Project  
Chariton County, Missouri  
March 2008*

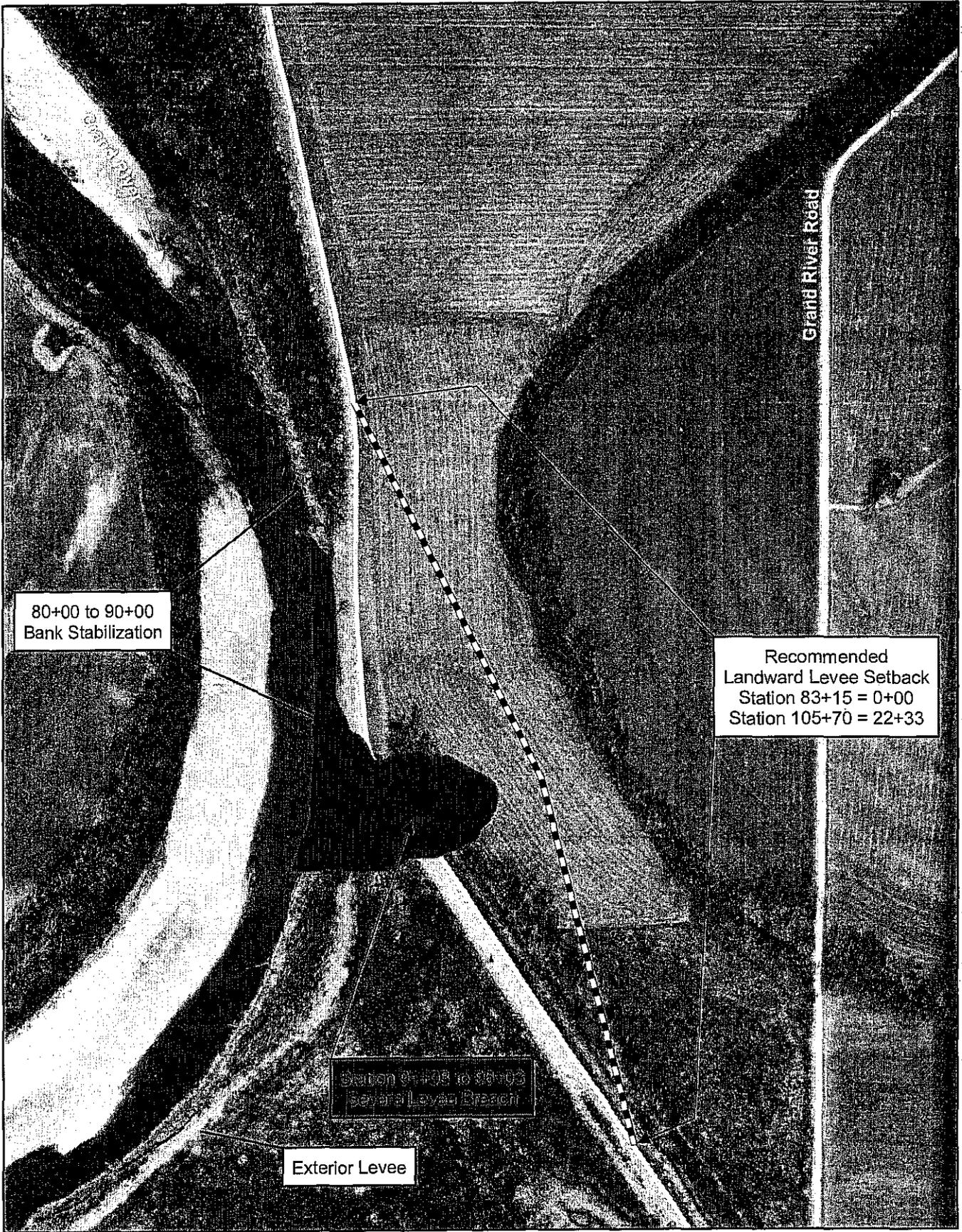


Garden of Eden Drainage District - Section 3

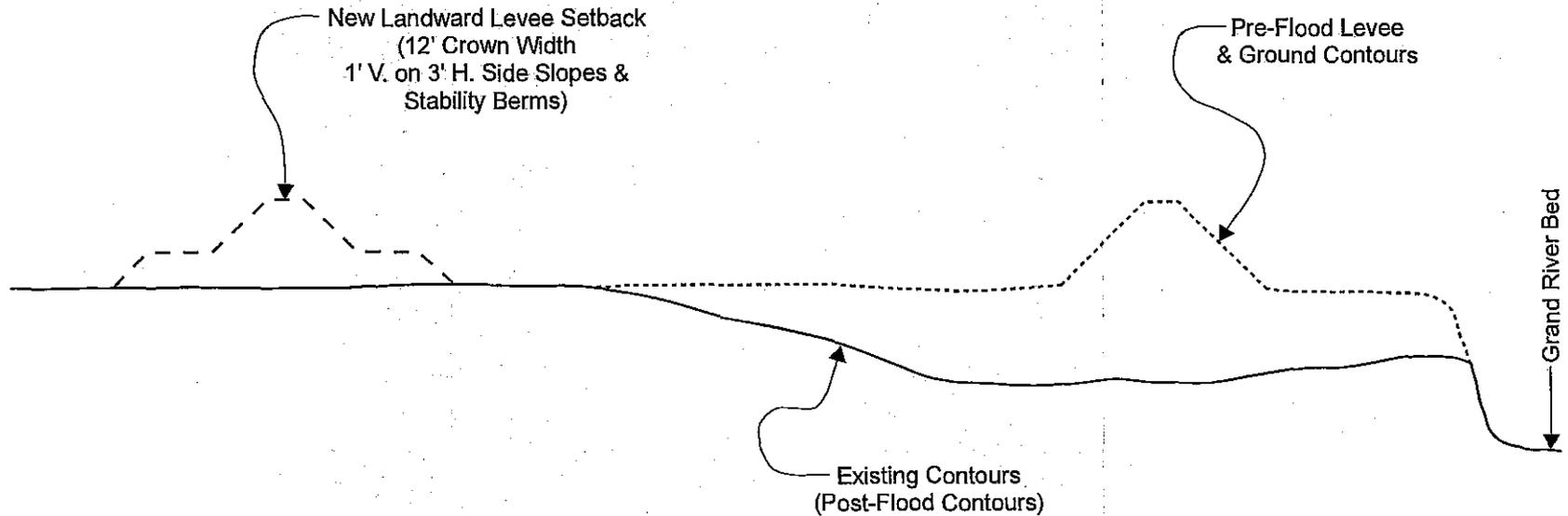








ATTACHMENT D - 2



NOTE: Recommended repair is with landward levee setback.  
 Station 83+15 = 0+00  
 Station 105+70 = 22+33

**Typical Section**

Station 91+03 to 96+03  
 Severe Levee Breach

Drawing Not To Scale

## **APPENDIX II – NEPA REVIEW**

*Garden of Eden Drainage District – Section 3 (Item 139S3)  
P.L. 84-99 Levee Rehabilitation Project  
Chariton County, Missouri  
March 2008*

6

STATE OF MISSOURI  
DEPARTMENT OF NATURAL RESOURCES

Matt Blunt, Governor • Doyle Childers, Director

www.dnr.mo.gov

November 26, 2007

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

Re: Emergency Repairs, Garden of Eden Levee Section 3 (COE) Chariton 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.

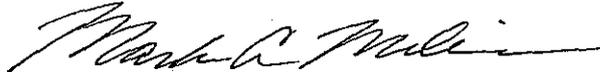
We have reviewed the information provided concerning emergency repairs to the Garden of Eden Levee Section 3. Based on this review we concur with your recommendation that that the project is in areas of low potential as recently accreted land, or areas of previous disturbance and that there will be **no historic properties affected**, with the condition that construction and borrowing activities will avoid previously recorded site 23CH322, which is to be avoided by project activities. 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 **(003-CH-08)** on all future correspondence or inquiries relating to this project.

Sincerely,

STATE HISTORIC PRESERVATION OFFICE

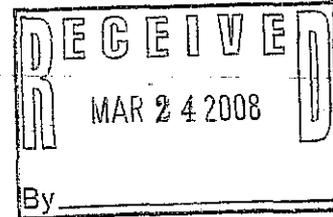


Mark A. Miles  
Director and Deputy  
State Historic Preservation Officer

MAM:jd



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



REPLY TO  
ATTENTION OF:

March 20, 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 Garden of Eden Drainage District – Section 3 Emergency Levee Rehabilitation Project.

The Kansas City District – U.S. Army Corps of Engineers (CENWK), in cooperation with the project sponsor, the Garden of Eden Drainage District – Section 3, propose to construct the Garden of Eden Drainage District – Section 3 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 Garden of Eden Drainage District – Section 3 is located in Chariton County, Missouri, near town of Triplett, along the left descending bank of the Grand River from River Mile 15.0 to River Mile 7.0, and the right descending bank of Salt Creek.

The proposed project would involve repair of a severe breach with a landward levee setback, in-place repairs of a partial breach, repairs to intermittent levee crown, and landside and riverside erosion areas, along with re-seeding of landside and riverside 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 Ms. Lekesha Reynolds, Environmental Resources Specialist, Corps of Engineers, Kansas City District, PM-PR, 601 E. 12<sup>th</sup> Street, Kansas City, Missouri 64106-2896, by email, [lekesha.w.reynolds@usace.army.mil](mailto:lekesha.w.reynolds@usace.army.mil) or by phone at 816-389-3160, no later than 30 days from the date of this letter.

Sincerely,

David L. Combs  
Chief, Planning Branch

“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”

  
for the Field Supervisor

4/17/2008  
Date

# PUBLIC NOTICE



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

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

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**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 5<sup>th</sup> 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](mailto: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.

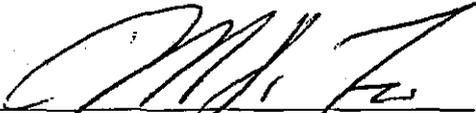
Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

*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/zmbyst.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](http://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 DeVillie Drive, Suite A  
Columbia, Missouri 65203  
(573) 234-2132

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

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 25<sup>th</sup> 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 12<sup>th</sup> Street  
Kansas City, MO 64106-2896  
ATTN: OD-R



Kathleen Sebelius, Governor  
Roderick L. Bremby, Secretary

DEPARTMENT OF HEALTH  
AND ENVIRONMENT

[www.kdheks.gov](http://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](http://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](mailto: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)-A**Wherever 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)-A**Wherever 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](http://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](http://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 Generals 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](http://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/nwpwqppfrm.doc> or  
<http://www.kdheks.gov/nps/resources/nwpwqppfrm.pdf>

\*Kansas Surface Water Register:  
[http://www.kdheks.gov/befs/download/Current\\_Kansas\\_Water\\_Register.pdf](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](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](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](mailto:nps@kdhe.state.ks.us)

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. 12<sup>th</sup> 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.



Recycled Paper

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