



US Army Corps
of Engineers
Kansas City District

**KANSAS CITY DISTRICT
CORPS OF ENGINEERS
and the
HOWARD COUNTY DRAINAGE DISTRICT NO. 3 - SECTION 2,
HOWARD COUNTY DRAINAGE DISTRICT NO. 7 - SECTION 4, AND
HOWARD COUNTY LEVEE DISTRICT NO. 2**

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

**HOWARD COUNTY DRAINAGE DISTRICT NO. 3 - SECTION 2,
HOWARD COUNTY DRAINAGE DISTRICT NO. 7 - SECTION 4 (ITEM
50), AND HOWARD COUNTY LEVEE DISTRICT NO. 2 (ITEM 49),
NON-FEDERAL,
EMERGENCY LEVEE REHABILITATION PROJECT**

**Missouri River
Howard County, Missouri**

February 2008



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

Finding of No Significant Impact

Howard County Drainage District No. 3 - Section 2, Howard County Drainage District No. 7 - Section 4 (Item 50), and Howard County Levee District No. 2 (Item 49) Levee Rehabilitation Project Howard County, Missouri

Project Summary

The U.S. Army Corps of Engineers, Kansas City District (CENWK), in cooperation with the project sponsor, the Howard County Drainage District No. 3 - Section 2, Howard County Drainage District No. 7 - Section 4, and Howard County Levee District No. 2, propose to construct the Howard County Drainage District No. 3 - Section 2, Howard County Drainage District No. 7 - Section 4, and Howard County Levee District No. 2 Levee Rehabilitation Project, under the authority of Public Law 84-99 of the Flood Control Act of 1944. Two alternatives were considered: (1) Re-seeding and (2) No action. The Corps has identified Alternative 1 – Re-seeding as the recommended plan. The proposed project would involve the re-seeding of riverside levee slopes to repair the agricultural levees damaged by the declared flood event of 6 May 2007. The proposed repairs are located in Howard County, Missouri, near the towns of Boonville and Arrow Rock, along the left descending bank of the Missouri River from River Mile 211.7 to River Mile 198.0, and the right descending bank of the Salt Creek.

Alternatives

Due to the limited damage along the levee, two alternatives were considered: (1) Re-seeding (**RECOMMENDED PLAN**) and (2) No action.

Recommended Plan

Howard County Drainage District No. 3 – Section 2 The recommended repair action consists of re-seeding the riverside levee slopes (sta. 44+16 to 140+00).

Howard County Drainage District No. 7 – Section 4 The recommended repair action consists of re-seeding the riverside levee slopes (sta. 50+00 to 165+72).

Howard County Levee District No. 2 The recommended repair action consists of re-seeding the riverside levee slopes (sta. 62+50 to 104+00, 135+00 to 202+00, and 258+00 to 463+50).

Summary of Environmental Impacts

The flood risk management level achieved by the recommended plan would be the same as the original pre-flood condition. The recommended plan would result in no impacts to any

Federally-listed threatened or endangered species or their habitat. The recommended plan would result in no impacts to any properties listed, proposed for listing, eligible for listing, or potentially eligible for listing in the National Register of Historic Places. The recommended plan will result in no impacts to mitigable resources as defined in USACE Planning regulations or under Section 404 of the Clean Water Act. Areas of the existing levee sections damaged by flooding would be temporarily disturbed by the proposed re-seeding activity. The adverse effects associated with the proposed project are short term/minor associated with project implementation. These minor adverse effects would be greatly offset by restoring the flood risk management capability, and its associated social and economic benefits of the existing levee system. Alternative 1, Re-seeding, meets the project purpose and need of rehabilitating the flood risk management capability, and its associated social and economic benefits of the existing levee system. Of the two (2) alternatives considered, Alternative 1 –Re-seeding is recommended because it has a positive cost/benefit ratio and is consistent with protection of the nation's environment.

Mitigation Measures

The recommended plan would result in no impacts to mitigable resources as defined in USACE Planning regulations or under Section 404 of the Clean Water Act. Therefore, no mitigation measures are warranted or proposed.

Public Availability

Prior to a decision on whether to prepare an Environmental Impact Statement, CENWK circulated a Notice of Availability (Notice) of the Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI), dated January 25, 2008, with a thirty-day comment period ending on February 24, 2008 to the public and resource agencies. The Notice was e-mailed to individuals/agencies/businesses listed on CENWK-Regulatory Branch's e-mail mailing list. The Notice informed these individuals that the EA and Draft FONSI were available on the CENWK webpage or that they could request a hard copy of the EA and Draft FONSI in order to provide comment.

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 re-seeding of the proposed Howard County Drainage District No. 3 - Section 2, Howard County Drainage District No. 7 - Section 4, and Howard County Levee District No. 2 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: 6 Mar 03



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



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

EXECUTIVE SUMMARY

The U.S. Army Corps of Engineers, Kansas City District (CENWK), in cooperation with the project sponsors, the Howard County Drainage District No. 3 - Section 2, the Howard County Drainage District No. 7 - Section 4, and the Howard County Levee District No. 2, propose to construct the Howard County Drainage District No. 3 - Section 2, Howard County Drainage District No. 7 - Section 4, and Howard County Levee District No. 2 Levee Rehabilitation Project, under the authority of Public Law 84-99 of the Flood Control Act of 1944. The proposed project would involve the re-seeding of riverside levee slopes to repair the agricultural levees damaged by the declared flood event of 6 May 2007.

The Howard County Drainage District No. 3 - Section 2 levee segment consists of approximately 19,275 linear feet of earthen flood control works (FCW) along the left descending bank of the Missouri River from River Mile 211.7 to River Mile 209.0 and the right descending bank of Salt Creek in Howard County, near the towns of Booneville and Arrow Rock, Missouri. The FCW protects approximately 13,861 acres of agricultural lands (13,400 acres in cropland), the community of Petersburg, 31 barns, 2 machine sheds, 14 irrigation systems, 49 grain bins, approximately 4 miles of State Highway Route Z, approximately 30 miles of gravel surfaced County Roads, approximately 21 miles of unimproved farm to market roads, a portion of Panhandle Eastern Pipeline, and numerous miles of overhead power lines. The recommended repair action consists of re-seeding the riverside levee slopes (sta. 44+16 to 140+00).

The Howard County Drainage District No. 7 - Section 4 levee segment consists of approximately 24,000 linear feet of earthen flood control works (FCW) along the left descending bank of the Missouri River from River Mile 209.0 to River Mile 204.5 in Howard County, near the towns of Booneville and Arrow Rock, Missouri. This levee segment adjoins the Howard County Drainage District No. 3 - Section 2 levee and works in concert with that levee to protect the same assets as described above. The recommended repair action consists of re-seeding the riverside levee slopes (sta. 50+00 to 165+72).

The Howard County Levee District No. 2 levee segment consists of approximately 51,550 linear feet of earthen flood control works (FCW) along the left descending bank of the Missouri River from River Mile 204.5 to River Mile 198.0 in Howard County, near the towns of Booneville and Arrow Rock, Missouri. This levee segment adjoins the Howard County Drainage District No. 7 - Section 4 levee and works in concert with that levee to protect the same assets as described above. The recommended repair action consists of re-seeding the riverside levee slopes (sta. 62+50 to 104+00, 135+00 to 202+00, and 258+00 to 463+50).

The three levee segments described above form one complete levee project and work in concert to protect the same assets.

Prior to a decision on whether to prepare an Environmental Impact Statement, CENWK circulated a Notice of Availability (Notice) of the Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI), dated January 25, 2008, with a thirty-day comment period ending on February 24, 2008 to the public and resource agencies. The Notice was e-mailed to individuals/agencies/businesses listed on CENWK-Regulatory Branch's e-mail mailing list. The Notice informed these individuals that the EA and Draft FONSI were available on the

CENWK webpage for review or that they could request the EA and Draft FONSI in writing, in order to provide comment.

Additional information concerning this project may be obtained from Mr. Matthew D. Vandenberg, Environmental Resources Specialist, PM-PR, Kansas City District - U.S. Army Corps of Engineers, by writing the above address, or by telephone at 816-389-3146.

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

**PUBLIC LAW 84-99
HOWARD COUNTY DRAINAGE DISTRICT NO. 3 - SECTION 2,
HOWARD COUNTY DRAINAGE DISTRICT NO. 7 - SECTION 4, AND
HOWARD COUNTY LEVEE DISTRICT NO. 2
LEVEE REHABILITATION PROJECT
HOWARD COUNTY, MISSOURI**

TABLE OF CONTENTS

FINDING OF NO SIGNIFICANT IMPACT

EXECUTIVE SUMMARY

TABLE OF CONTENTS

SECTION 1: INTRODUCTION

SECTION 2: AUTHORITY

SECTION 3: PROJECT LOCATION

SECTION 4: EXISTING CONDITION

SECTION 5: PURPOSE AND NEED FOR ACTION

SECTION 6: ALTERNATIVES CONSIDERED

SECTION 7: RECOMMENDED ALTERNATIVES

SECTION 8: NATIONAL ENVIRONMENTAL POLICY ACT REVIEW

SECTION 9: AFFECTED ENVIRONMENT

SECTION 10: ENVIRONMENTAL CONSEQUENCES

**SECTION 11: SUMMARY OF ENVIRONMENTAL EFFECTS OF THE NON-
RECOMMENED PLANS**

SECTION 12: CUMULATIVE IMPACTS

SECTION 13: MITIGATION MEASURES

SECTION 14: COMPLIANCE WITH ENVIRONMENTAL QUALITY STATUTES

Continued.....

SECTION 15: CONCLUSION & RECOMMENDATION

SECTION 16: PREPARERS

TABLE

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

APPENDICES

APPENDIX I - PROJECT MAPS

APPENDIX II - NEPA REVIEW

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

**PUBLIC LAW 84-99
HOWARD COUNTY DRAINAGE DISTRICT NO. 3 - SECTION 2,
HOWARD COUNTY DRAINAGE DISTRICT NO. 7 - SECTION 4, AND
HOWARD COUNTY LEVEE DISTRICT NO. 2
LEVEE REHABILITATION PROJECT
HOWARD COUNTY, MISSOURI**

Section 1: INTRODUCTION

This Environmental Assessment provides information that was developed during the National Environmental Policy Act (NEPA) public interest review of the proposed Public Law 84-99 Howard County Drainage District No. 3 - Section 2, Howard County Drainage District No. 7 - Section 4, and Howard County Levee District No. 2 Levee Rehabilitation Project.

Section 2: AUTHORITY

The Kansas City District – U.S. Army Corps of Engineers (CENWK), in cooperation with the project sponsors, the Howard County Drainage District No. 3 - Section 2, the Howard County Drainage District No. 7 - Section 4, and the Howard County Levee District No. 2, propose to construct the Howard County Drainage District No. 3 - Section 2, Howard County Drainage District No. 7 - Section 4, and Howard County Levee District No. 2 Levee Rehabilitation Project under the authority of Public Law 84-99 of the Flood Control Act of 1944.

Section 3: PROJECT LOCATION

The Howard County Drainage District No. 3 - Section 2, Howard County Drainage District No. 7 - Section 4, and Howard County Levee District No. 2 levee consists of approximately 94,825 linear feet of earthen flood control works (FCW) and is located in Howard County, near the towns of Booneville and Arrow Rock, Missouri, along the left descending bank of the Missouri River between river mile 211.7 and 198.0 and the right descending bank of the Salt Creek.

Section 4: EXISTING CONDITION

The declared flood event on 6 May 2007 caused damages to the Howard County Drainage District No. 3 - Section 2, Howard County Drainage District No. 7 - Section 4, and Howard County Levee District No. 2 flood control works. These damages consist of intermittent reaches of lost (destroyed) sod cover on the riverside levee embankment slope at stations 44+16 to 140+00; sta. 50+00 to 165+72; and sta. 62+50 to 104+00, 135+00 to 202+00, and 258+00 to 463+50, respectively.

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 Howard County Drainage District No. 3 - Section 2, Howard County Drainage District No. 7 - Section 4, and Howard County Levee District No. 2 received damages to sections of their levees during the 6 May 2007 declared flood event. Prior to the May 2007 event, the Howard County Drainage District No. 3 - Section 2 and the Howard County Levee District No. 2 levees provided an approximately 10-year level of flood risk management, while the Howard County Drainage District No. 7 - Section 4 provided an approximately 25-year level of flood risk management. In their current damaged state, the Howard County Drainage District No. 3 - Section 2 and Howard County Levee District No. 2 levees are estimated to provide an approximately 8-year level of protection, while the Howard County Drainage District No. 7 - Section 4 levee provides an approximately 23-year level of protection. The existing conditions expose all public and private infrastructure and agricultural croplands to a higher level of risk from future flooding. Failure to restore the flood risk management capability of the levee system would keep area residents livelihood and social well-being in turmoil, subject to the continuous threat of flooding until a level of flood protection is restored. Failure to reconstruct the levees 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

One alternative was considered and not selected: the No Action Alternative (Alternative 2).

“No Action” Alternative

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

Section 7: RECOMMENDED ALTERNATIVE

Howard County Drainage District No. 3 – Section 2

The recommended repair action consists of re-seeding riverside slope (sta. 44+16 to 140+00).

Howard County Drainage District No. 7 – Section 4

The recommended repair action consists of re-seeding riverside slope (sta. 50+00 to 165+72).

Howard County Levee District No. 2

The recommended repair action consists of re-seeding riverside slope (sta. 62+50 to 104+00, 135+00 to 202+00, and 258+00 to 463+50).

Section 8: NATIONAL ENVIRONMENTAL POLICY ACT REVIEW

As part of the NEPA review for the proposed project, CENWK circulated a Notice of Availability (Notice) of the Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI), dated January 25, 2008, with a thirty-day comment period ending on February 24, 2008 to the public and resource agencies. The Notice was e-mailed to individuals/agencies/businesses listed on CENWK-Regulatory Branch’s e-mail mailing list. The Notice informed these individuals that the EA and Draft FONSI were available on the CENWK

webpage or that they could request the EA and Draft FONSI in writing, in order to provide comment. The following comments were received and evaluated from coordination of the Notice:

No comments were received.

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; vegetation; energy resources; wetlands; geological resources; agricultural activity; employment; tax base; public service; growth patterns; land use; recreation; archaeological and historical resources; flood control; esthetics; navigation; 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 located on the Missouri River flood plain between river miles 211.7 and 198.0. The project area disturbance at Howard County Drainage District No. 3 – Section 2 is approximately 6 acres, at Howard County Drainage District No. 7 – Section 4 is approximately 7 acres, and at Howard County Levee District No. 2 is approximately 20 acres. The total land area disturbance for the entire project is approximately 33 acres.

Section 10: ENVIRONMENTAL CONSEQUENCES:

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

Noise levels

The recommended plan, Alternative 1, would result in minor short term construction related noise impacts. These impacts are the result of the operation of heavy machinery during project re-seeding. 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 re-seeding could disturb the occasional boater on the nearby Missouri River or person(s) participating in outdoor recreation on the private land in the project area.

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

Water quality

The recommended plan, Alternative 1, would use a no-till method of re-seeding. As such, no impacts to water quality would be expected.

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 erosion and increased levels

of nutrient loading and wastes, including runoff of pollutants from industrial sources, petroleum products, and non-point sources of human and animal wastes.

Fish and wildlife

The recommended plan, Alternative 1, would result in minor, temporary, project related adverse impacts to wildlife resources. The impacts to wildlife resources would be related to noise and visual disturbance during the re-seeding activity. No impacts to fishery resources would be expected to occur as a result of the project.

The "No Action" Alternative would have no effects on fish and wildlife resources.

Threatened and Endangered Species

The recommended plan would have no adverse effects on any Federally-listed threatened or endangered species or their habitat. Pallid sturgeon (*Scaphirhynchus albus*) are found primarily in the Missouri River and Mississippi River. No work is proposed within these rivers. Indiana bat (*Myotis sodalis*) roost in trees that tend to be greater than 9 inches diameter breast height during the spring and summer, and hibernate in caves during the fall and winter. Levee work would not impact any potential bat habitat. No impacts to any state listed threatened or endangered species or their habitat were identified.

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

Vegetation

The recommended plan, Alternative 1, would restore the grassed-levee slopes that existed prior to the declared flood event of 2007.

The "No Action" Alternative would likely result in undesirable vegetative species colonizing the levee. If allowed to grow, these species could force the levee district out of the PL84-99 Program due to un-properly maintained levees. If the levee is not brought back up to standards, increases to the floodplain and to floodplain vegetation could occur if lands are abandoned from farming due to the higher risk of flooding. Overtime, successional vegetative growth could result in large expanses of floodplain forest.

Wetlands

The recommended plan would have no effects on wetlands.

The "No Action" Alternative would have no effects on wetlands.

Geologic resources

The recommended plan will result in no impacts to geologic resources.

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

Agricultural activity

The recommended plan would have no adverse impact on agricultural production. Restoring the levees to pre-flood damage levee will allow agricultural practices to continue as previously conducted.

The "No Action" Alternative could adversely impact agricultural activity through increased risk of future flooding and further deterioration of the levee. Overtime, this could expose approximately 13,861 acres of agricultural lands (13,400 acres of croplands) to increased flooding. The loss of agricultural production would have related impacts such as lost income, lower tax base, and decreased land value.

Archeological and Historical Resources

The recommended plan would have no impact to sites listed on or eligible for inclusion on the National Register of Historic Places (NRHP). A background check of the NRHP and site location maps identified no previously recorded sites within or near the proposed project areas. In a letter to State Historic Preservation Officer (SHPO), the Corps recommended that the project would have no effect on historic properties and that the project should be allowed to proceed. SHPO concurred with this recommendation on December 5, 2007 (Appendix II). The project will be coordinated with appropriate federally recognized Native American tribes (Tribes). If in the unlikely event that archeological material is discovered during project implementation, work in the area of discovery will cease, the discovery would be investigated by a qualified archeologist, and the find would be coordinated with SHPO and the Tribes.

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

Flood control

The recommended plan would restore an approximately 10+-year level of flood protection to the existing Howard County Drainage District No. 7 - Section 4, and an approximately 25+-year level of protection to the Howard County Drainage District No. 3 - Section 2, Howard County Levee District No. 2 levee system, which would equal the levels 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 repairs would restore these levees to their original pre-flood grade and cross section, no increase in floodwater surface elevations would occur. As the recommended plan would not directly or indirectly support more development in the floodplain or encourage additional occupancy and/or modify of the base floodplain, the Corps has determined that the recommended plan complies with the intent of Executive Order 11988.

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

Economics

With the implementation of the recommended plan, the levees would be restored to a 10+- year and 25+-year level of flood protection. Public and private infrastructure and agricultural croplands protected by the levee prior to the flood damage would continue to be protected against a 10+-year and 25+-year flood event. Economic conditions are unlikely to change from those of pre-damage levee conditions with the repair of this levee system. Based on the Corps' economic analysis, the recommended plan is economically justified with a benefit to cost ratio of 6.0.

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 higher level risk of future flooding. People's livelihood and social well-being would remain in turmoil, subject to the continuous threat of flooding until the 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 re-seeding activity. The human population that could potentially be affected by the activity would be expected to be very low, restricted to the occasional boater on the Missouri River or person(s) participating in outdoor recreation on the private land in the project area. Upon completion of the project, esthetic impact of the project would be the same as the original levee.

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

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

The Alternative Plan, 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 original condition and therefore restoring its associated social and economic benefits. The "No Action" alternative would have no permanent or temporary construction related impacts. The "No Action" alternative would continue to expose all public and private infrastructure and agricultural croplands previously protected by the levee to a higher level risk of future flooding. People's livelihood and social well-being would remain in turmoil, subject to the continuous threat of flooding until the proposed level of flood protection is restored. Failure to 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.

Currently, the Corps is undertaking studies of the Federal levees along the Missouri River to determine if measures to improve the reliability of these existing flood risk management projects are warranted. In addition, the Corps, which administers Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act, has issued and will continue to evaluate permits authorizing the placement of fill material in the Waters of the United States and/or work on, in, over or under a navigable water of the United States including the Missouri River and its

tributaries. These levee repair projects typically result in minor impacts to the aquatic ecosystem. The Corps, under the authority of the Public Law 84-99 Levee Rehabilitation and Inspection Program, has and will continue to provide rehabilitation assistance to Federal and non-Federal levee sponsors along the Missouri River which participate in the Public Law 84-99 Program. These projects typically result in minor short term construction related impacts to fish and wildlife and the habitats upon which they depend. Resources typically affected by this type of project generally include, but are not limited to, wetlands, flood plain values, water quality, and fish and wildlife habitat. It should be noted that these projects do not result in an addition to flood heights or reduced flood plain area but are merely a form of maintenance to that which had previously existed.

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

The adverse effects associated with the proposed project are short term/minor associated with project implementation. These minor adverse effects would be greatly offset by restoring the flood risk management capability and its associated social and economic benefits of the existing levee system. The PL84-99 Program is designed to merely bring the damaged levees back to pre-existing conditions (i.e., the status quo). Thus, no significant cumulative impacts associated with the proposed rehabilitation of the existing levee system have been identified.

Section 13: MITIGATION MEASURES

The recommended plan would result in no impacts to mitigable resources as defined in USACE Planning regulations or under Section 404 of the Clean Water Act. Therefore, no mitigation measures are 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 be the same as the original pre-flood levees. The recommended plan would result in no impacts to any Federally-listed threatened or endangered species or their habitat. The recommended plan would result in no impacts to any properties listed, proposed for listing, eligible for listing, or potentially eligible for listing in the National Register of Historic Places. Areas of the existing levee sections damaged by flooding would be temporarily disturbed by the proposed construction activity. The adverse effects associated with the proposed project are short term/minor associated with project construction. These minor adverse effects would be greatly offset by restoring the flood risk management capability and its associated social and economic benefits of the existing levee system. Alternative 1 – Re-seeding meets the project purpose and need of rehabilitating the flood damage reduction capability and its associated social and economic benefits of the existing

levee system. Of the two (2) alternatives considered, Alternative 1 –Re-seeding is recommended because it has a positive cost/benefit ratio, would re-establish the sod using vegetation suitable for levee slopes, would re-establish the levee to the pre-flood level of protection, 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 Resource Specialist), with relevant sections prepared by Mr. Timothy Meade (Cultural Resources). The address of the preparers is: U.S. Army Corps of Engineers, Kansas City, District; PM-RP, Room 843, 601 E. 12th St, Kansas City, MO 64106.

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

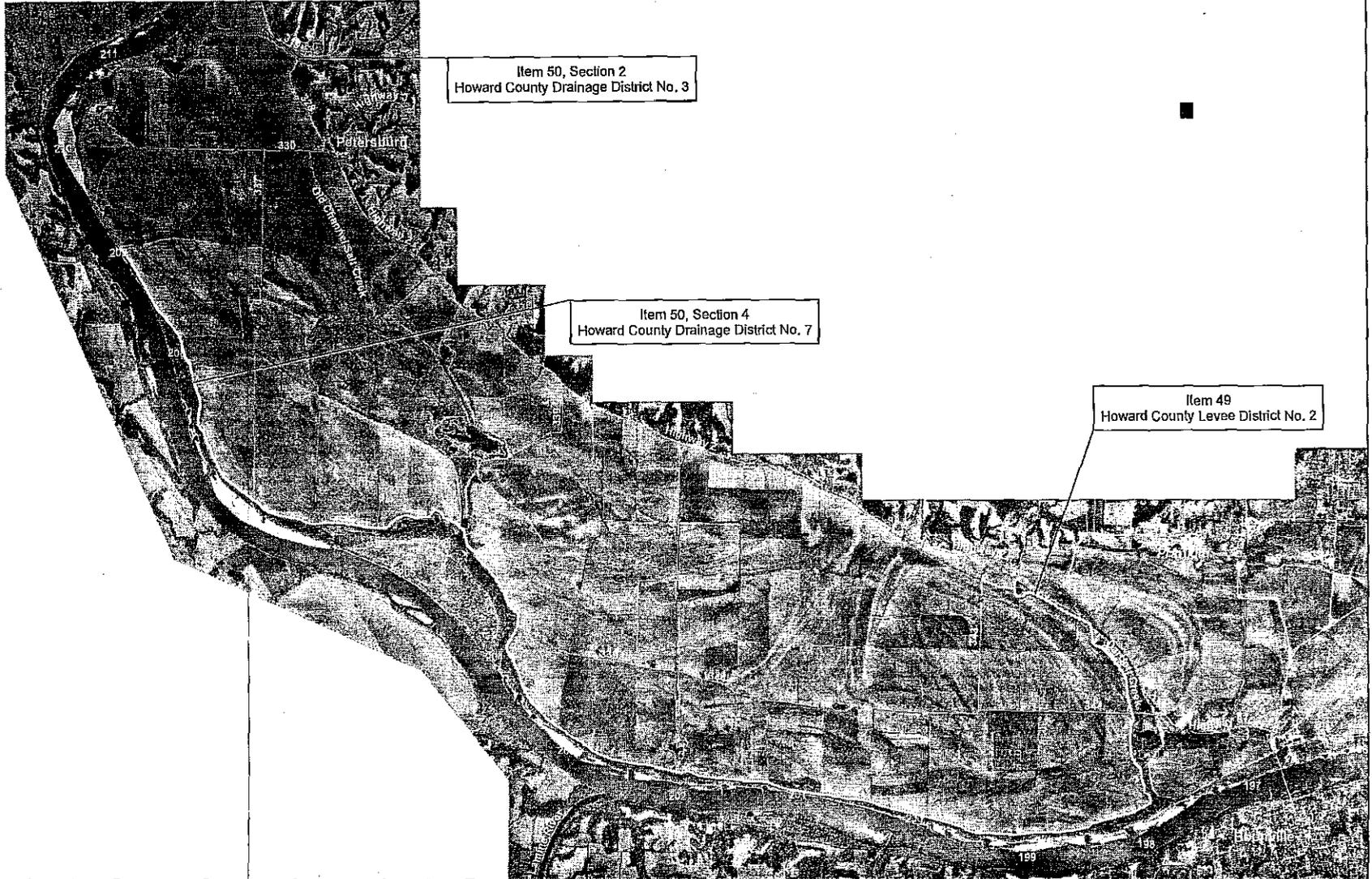
Federal Polices	Compliance
Archeological Resources Protection Act, 16 U.S.C. 470, et seq.	Full Compliance
Clean Air Act, as amended, 42 U.S. C. 7401-7671g, et seq.	Full Compliance
Clean Water Act (Federal Water Pollution Control Act), 33 U.S.C. 1251, et seq.	Full Compliance
Coastal Zone Management Act,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

*Howard County Drainage District No. 3 - Section 2,
Howard County Drainage District No. 7 - Section 4 (ITEM 50), and
Howard County Levee District No. 2 (Item 49)
P.L. 84-99 Levee Rehabilitation Project
Howard County, Missouri
February 2008*



Item 50, Section 2
Howard County Drainage District No. 3

Item 50, Section 4
Howard County Drainage District No. 7

Item 49
Howard County Levee District No. 2

**Complete Flood Control Work
Item 50 Section 2, 50 Section 4 & 49**

APPENDIX II – NEPA REVIEW

*Howard County Drainage District No. 3 - Section 2,
Howard County Drainage District No. 7 - Section 4 (ITEM 50), and
Howard County Levee District No. 2 (Item 49)
P.L. 84-99 Levee Rehabilitation Project
Howard County, Missouri
February 2008*



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

December 3, 2007

REPLY TO
ATTENTION OF

Environmental Resources Section
Planning Branch

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

Dear Mr. Miles:

The U.S. Army Corps of Engineers, Kansas City District (Corps) is planning emergency repairs to the Howard County No.3-Section 2, Howard County No.7-Section 4, and Howard County Levee No. 2 levee in Howard County. The repairs are required because of damage to the existing structures during flooding events in May of 2007. The Corps has completed its review of the project in compliance with the terms as described in the 1993 Programmatic Agreement with your office regarding the implementation of emergency repair and restoration of damaged flood control projects as authorized by Public Law 84-99. Attached for your review and comment are project maps showing locations of the proposed work.

The damages at each of the three levee segments consist of intermittent reaches of lost (destroyed) sod cover on the riverside levee embankment slope. The recommended repair action consists of re-seeding riverside levee slopes. No borrow is required for the project.

A review of the National Register of Historic Places (NRHP) found no properties listed on the NRHP within or near the repair areas. A check of Missouri River topographic site location maps in the Corps District office (Billingsville, Franklin, and Arrow Rock, Mo. 7.5 minute topographic quad maps) found no sites within or near the project location. Two Lewis and Clark campsites-- June 7, 1804; June 8, 1804; and September 18, 1806--are recorded in the area of the three levee segments. Eight shipwrecks--the Plowboy No. 2 (1877), Tom Rogers (1887), Benton No. 2 (1895); Sam Gatty (1867 or 68), T. L. Crawford (1857), Radnor (1846), Sacramento (1849), George Washington (1826) -- are recorded near the levee alignment. However, no work is planned in the vicinity of the mapped wrecks or camp sites. All of the proposed undertaking will be conducted on the existing levee and will not impact previously undisturbed areas. The project area west of the confluence northwest west of the confluence was surveyed in 1993. No sites were recorded in this area during the 1993 survey.

Given the project is limited to the existing levee, it is unlikely that the projects will have an effect on sites listed on or eligible for inclusion on the National Register of Historic Places (NRHP). Therefore, we recommend no further work for the project. If in the unlikely event that archeological materials are discovered during project construction, work in the area of discovery will cease and the discovery investigated by a qualified archeologist. The findings on the

discovery would be coordinated with your office and appropriate federally recognized Native American tribes.

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

Sincerely,

Timothy Meade
District Archeologist

Enclosure

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

Matt Blunt, Governor • Doyle Childers, Director

www.dnr.mo.gov

December 14, 2007

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

Re: Emergency Repairs, Howard County No. 3 Levee (COE) Howard 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 Howard County No. 3 Levee. 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**. 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-HD-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

Vandenberg, Matthew D NWK

From: Judith Deel [judith.deel@dnr.mo.gov]
Sent: Wednesday, December 05, 2007 8:51 AM
To: Meade, Timothy M NWK
Subject: Re: Emergency Levee Repair: Howard County No.3-Section 2, Howard County No.7-Section 4, and Howard County Levee No. 2 levee in Howard County

Tim, we have reviewed the information submitted for the emergency repairs to the Howard County No. 3, Section 2 Levee in Howard County. Based on this review we concur with your recommendation that the project are in areas of low potential or areas of previous disturbance and that there will be no historic properties affected. We have no objection to the initiation of project activities. A hard copy letter will follow.

Judith Deel
State Historic Preservation Office
Missouri Department of Natural Resources P.O. Box 176 Jefferson City, MO 65102
573/751-7862
judith.deel@dnr.mo.gov

"Meade, Timothy M NWK" <Timothy.M.Meade@usace.army.mil>

12/03/2007 02:47 PM To
"Deel, Judith MVS External Stakeholder" <Judith.Deel@dnr.mo.gov> cc Subject Emergency Levee Repair: Howard County No.3-Section 2, Howard County No.7-Section 4, and Howard County Levee No. 2 levee in Howard County

Hi Judith,

The attached is letter and attachment is for the Howard County No.3-Section 2, Howard County No.7-Section 4, and Howard County Levee No. 2 levee in Howard County. We will also be forwarding a hard copy of the letter and attachments for your records. Let me know if you have any questions.

Thanks!

Tim
[attachment "AR-M350_20071203_144049.pdf" deleted by Judith Deel/DSP/MODNR] [attachment "Howard County #'s 3, 7, and No.2 Repair SHPO letter 12.3. 2007.doc" deleted by Judith Deel/DSP/MODNR]



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

REPLY TO
ATTENTION OF:

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 Howard County Drainage District No. 3 - Section 2, Howard County Drainage District No. 7 - Section 4 (Item 50), and Howard County Levee District No. 2 (Item 49) Emergency Levee Rehabilitation Project.

The Kansas City District - U.S. Army Corps of Engineers (CENWK), in cooperation with the project sponsor, the Howard County Drainage District No. 3 - Section 2, Howard County Drainage District No. 7 - Section 4, and Howard County Levee District No. 2, propose to construct the Howard County Drainage District No. 3 - Section 2, Howard County Drainage District No. 7 - Section 4, and Howard County Levee District No. 2 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 Howard County Drainage District No. 3 - Section 2, Howard County Drainage District No. 7 - Section 4, and Howard County Levee District No. 2 is located in Howard County, Missouri, near towns of Booneville and Arrow Rock, along the left descending bank of the Missouri River from River Mile 211.7 to River Mile 198.0, and the right descending bank of Salt Creek.

The proposed project would involve the re-seeding of riverside levee slopes. Repairs are required as a result of the flood event declared on 6 May 2007.

Written comments on the EA and Draft FONSI should be mailed to Mr. Matthew Vandenberg, Environmental Resources Specialist, Corps of Engineers, Kansas City District, PM-PR, 601 E. 12th Street, Kansas City, Missouri 64106-2896, no later than 30 days from the date of this letter.

Sincerely,

David L. Combs
Chief, Planning Branch

Encls.



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

REPLY TO
ATTENTION OF:

Planning, Programs and Project Management Division
Planning Branch

January 25, 2008

NOTICE OF AVAILABILITY

An Environmental Assessment titled, Howard County Drainage District No. 3 - Section 2, Howard County Drainage District No. 7 - Section 4 (Item 50), and Howard County Levee District No. 2 (Item 49), Non -Federal, Emergency Levee Rehabilitation Project, and a draft Finding of No Significant Impact (FONSI) prepared by the U.S. Army Corps of Engineers, Kansas City, are available for your review on the project's website at: <http://www.nwk.usace.army.mil>.

The Kansas City District - U.S. Army Corps of Engineers (CENWK), in cooperation with the project sponsor, the Howard County Drainage District No. 3 - Section 2, Howard County Drainage District No. 7 - Section 4, and Howard County Levee District No. 2, propose to construct the Howard County Drainage District No. 3 - Section 2, Howard County Drainage District No. 7 - Section 4, and Howard County Levee District No. 2 Levee Rehabilitation Project under the authority of Public Law 84-99, of the Flood Control Act of 1944. Under this authority, the Corps of Engineers can provide assistance to public agencies in responding to flood emergencies such as the rehabilitation of flood control works damaged or destroyed by floods.

The project area is located in Howard County, Missouri along the left descending bank of the Missouri River, between river miles 211.7 and 198.0, and the right descending bank of Salt Creek. The proposed project would involve re-seeding of riverside levee slopes. Repairs are required as a result of the flood event declared on 6 May 2007.

Copies of the EA and the draft FONSI are also available by contacting Mr. Matthew D. Vandenberg; U.S. Army Corps of Engineers; PM-PR, 601 E. 12th St, Kansas City, Missouri, 64106; to request a copy in writing, at (816-) 389-3146 to request a copy by phone, or at matthew.d.vandenberg@usace.army.mil to request a copy by e-mail.

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

Sincerely,

David L. Combs
Chief, Planning Branch