US Army Corps of Engineers
Kansas City District

U.S. Army Corps of Engineers - Kansas City District

NEPA Review
Environmental Assessment & Finding of No Significant Impact

STUCTURAL REPAIR AND MODIFICATIONS FOR EMERGENCY NAVIGATION CHANNEL REPAIR, DIKE 41.4, MISSOURI RIVER BANK STABILIZATION AND NAVIGATION PROJECT

St. Louis County, Missouri

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

Finding of No Significant Impact

STUCTURAL REPAIR AND MODIFICATIONS FOR EMERGENCY NAVIGATION CHANNEL REPAIR, DIKE 41.4, MISSOURI RIVER BANK STABILIZATION AND NAVIGATION PROJECT

October 2012

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Summary

The U.S. Army Corps of Engineers - Kansas City District (USACE), proposes to repair Dike 41.4 and modify it to correct a deficiency. Dike 41.4 is located in St. Louis County along the right descending bank of the Missouri River at approximately river mile 41. Dike 41.4 is part of the Missouri River Bank Stabilization and Navigation Project which was first authorized in the Rivers and Harbors Act of 1912 and subsequent authorizations in 1925, 1927, and 1945. The structures such as Dike 41.4 are designed to direct water into a 9 foot deep by 300 foot wide self scouring navigation channel. Dike 41.4 is currently not performing as designed. The Missouri River flood of 2011 washed a sandbar away that used to lie between the dike and the near side riverbank. This cut a new channel where the sandbar was and has subsequently caused shoaling in the main navigation channel causing navigation and safety issues. The proposed action would repair the dike to the original specifications of 200 feet long and then modify the structure by adding an additional 150 wide sill landward to direct water back into the navigation channel.

Alternatives

A total of three alternatives were initially considered, however only two were determined feasible and evaluated in terms of individual and cumulative effects for the proposed project, which are addressed below:

Alternative 1 - “No-Action” Alternative: Under the “No-Action” Alternative, Dike 41.4 would remain unrepaired. Water would continue to flow in a newly formed channel

between the dike and the riverbank which would divert water from the navigation channel which adversely affects one of the authorized purposes of the Missouri River.

Alternative 2 – Repair and Modification (Recommended Plan): This alternative would repair Dike 41.4 to the original specification of 200 feet long by adding 80 feet of rock landward at construction reference plane (CRP) elevation of 435.3 feet mean sea level (msl). It would also fix a design deficiency that was created by the 2011 Missouri River flood that washed away a sandbar that occurred between the rootless dike and the riverbank, by adding an addition 150 feet of rock to the dike landward at an elevation of 433.3 feet msl to create a sill to direct water back to the navigation channel.

Alternatives Considered but rejected from detailed evaluation

Repair Only: This alternative would repair Dike 41.4 back to the original specification of 200 feet long by placing 80 feet of rock at elevation 435.3 msl. This alternative was considered unfeasible because it would still cause shoaling in the main navigation channel as water would still flow between the dike and the riverbank in the newly formed cut. This would continue to pose safety hazards to boaters and commercial navigators because of the shallow water depth in the channel.

Summary of Environmental Impacts

The Recommended Plan would help to restore the navigation channel to the pre-flood condition. The Recommended Plan would not likely adversely affect any Federally-listed threatened or endangered species or their habitat. Placement of rock will result in less than 0.5 acre of direct impacts to open water habitat. This will also result in a net benefit to aquatic habitat by creating shallow water/sandbar habitat behind the structure benefitting pallid sturgeon and other aquatic organisms. There will be a positive impact to safety and economics from decreasing the shoaling and maintain the self-maintaining feature of the navigation channel. There will be temporary construction-related impacts to noise, fish and wildlife, and water quality, which will subside after construction is complete. There will likely be no impact to cultural or historic resources.

Mitigation Measures

The Recommended Plan would result in a minor amount of new clean quarried limestone rock being placed within the Missouri River at Dike 41.4. As described above in the Summary of Environmental Impacts section, the overall environmental benefits associated with this project outweigh the minor and temporary construction-related impacts of the project. Therefore, no mitigation measures are warranted or proposed.

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Public Availability

Prior to a decision on whether to prepare an Environmental Impact Statement, the USACE is circulating a Notice of Availability (Notice) of the Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI), dated November 6, 2012, with a thirty-day comment period ending on December 6, 2012, to the public and resource agencies. The Notice is being e-mailed to individuals/agencies/businesses listed on the USACE Regulatory e-mail mailing list. The Notice informs these individuals that the EA and Draft FONSI are available on the USACE webpage or that they can request a hard copy of the EA and Draft FONSI in order to provide comment.

Conclusion

After evaluating the anticipated environmental, economic, and social effects of the proposed activity, it is my determination that construction of the proposed emergency repair and modification to Dike 41.4 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: _____ _____

Anthony J. Hofmann
Colonel, Corps of Engineers
District Commander

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1.0 Introduction

The U.S. Army Corps of Engineers - Kansas City District (USACE), propose to repair Dike 41.4 to original specifications and modify the dike by adding an addition 150 foot sill to correct a design deficiency that is causing shoaling in the main navigation channel. Dike 41.4 is one of many structures that are a part of the Missouri River Bank Stabilization and Navigation Project (BSNP) that was originally authorized in the Rivers and Harbors Act of 1912 and then subsequent authorizations in 1925, 1927, and 1945. These series of dikes and revetments are designed to direct water into a self scouring 9 foot deep by 300 feet wide navigation channel. This Environmental Assessment (EA) provides the necessary information to fully address the potential environmental impacts of the proposed project as required under the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code [USC] 4321 et seq.); the President's Council of Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] 1500 – 1508); and the US Army Corps of Engineers (USACE) ER 200-2-2 (33 CFR 230) (USACE, 2008).

1.1 Purpose and Need for Action

The purpose of this project is to repair and modify Dike 41.4 to direct water into the navigation channel to restore the self-scouring ability, thus preventing shoaling of the navigation channel during low flows.

Prior to the Missouri River flood of 2011, a large sandbar extended from the riverbank to the rootless Dike 41.4. That sand bar directed flow into the navigation channel and allowed the navigation channel to self scour to maintain the needed depth for navigation. As a result of the 2011 flood, much of that sandbar was washed away and a channel formed landward of the dike. This allowed greater flow between the dike structure and the riverbank and resulted in shoaling within the navigation channel during low flow periods. This project is needed to restore the structure and modify it to divert water back into the navigation channel to prevent shoaling and maintain the navigation channels self scouring abilities. Navigation is one of the congressionally authorized purposes of the Missouri River.

1.2 Project Location

Dike 41.4 is located along the right descending bank of the Missouri River at approximately river mile 41 in St. Louis County near the city of Chesterfield, Missouri (Figure 1 & 2). The land adjacent the rootless dike is Johnson Island and is a part of the Big Muddy National Wildlife Refuge (NWR). The dike is rootless and oriented perpendicular to the riverbank.

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Figure 1. General Vicinity Map

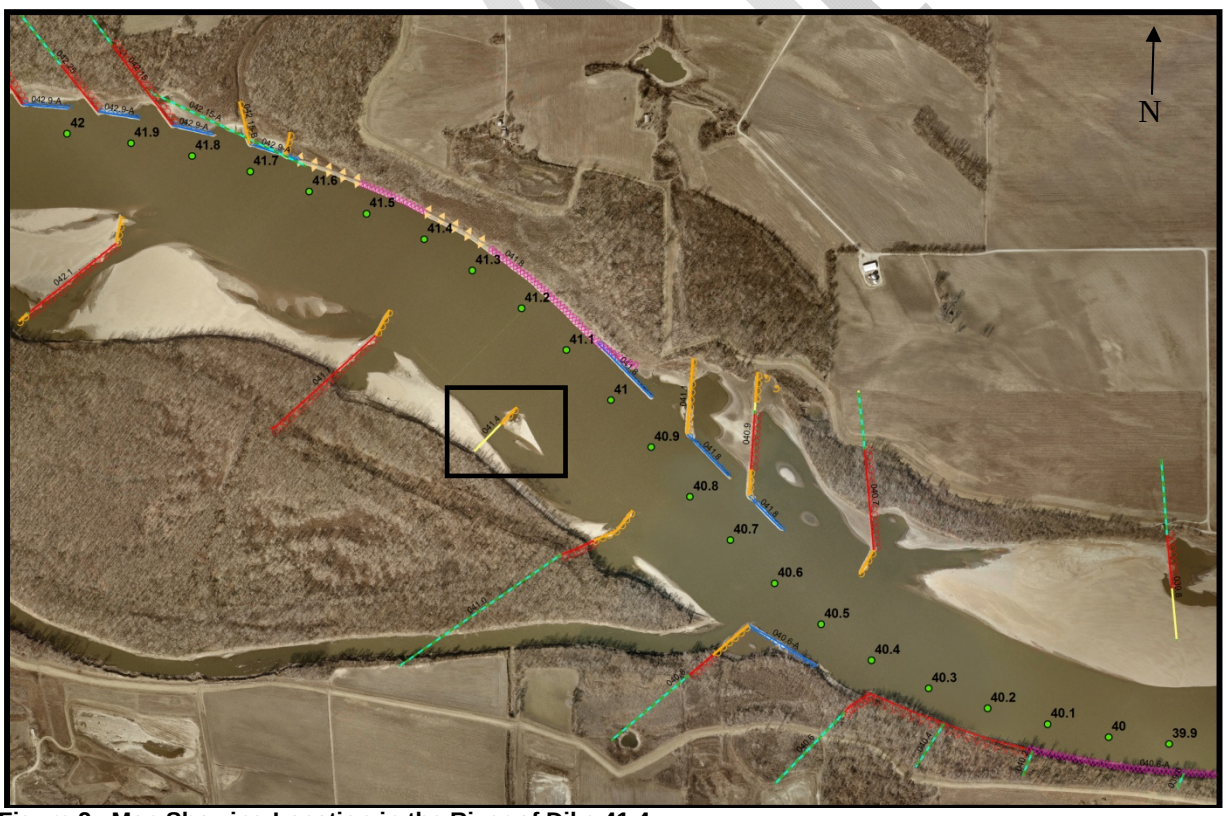

Figure 2. Map Showing Location in the River of Dike 41.4

2.0 Recommended Plan and Alternatives

2.1 Alternative 1 - "No-Action" Alternative:

Under the "No-Action" Alternative, Dike 41.4 would remain unrepaired. Water would continue to flow in a newly formed channel between the dike and the riverbank which would divert water from the navigation channel which would continue to cause shoaling in the navigation channel and not meet the congressionally authorized project purpose of navigation.

2.2 Alternative 2 - Repair and Modification (Recommended Plan):

This alternative would repair Dike 41.4 to the original specification of 200 feet long by adding 80 feet of rock landward at an elevation of 435.3 feet msl. It would also fix a design deficiency that was created by the 2011 flood that washed away a sandbar that occurred between the rootless dike and the riverbank, by adding an addition 150 feet of rock to the dike landward at an elevation of 433.3 feet msl to create a sill to direct water back to the navigation channel (Figure 3). The amount of rock needed is approximately 2,500 cubic yards (3,200 tons), less than 0.5 acre footprint to complete the repairs. Rock for the repairs would be obtained from a commercial source.

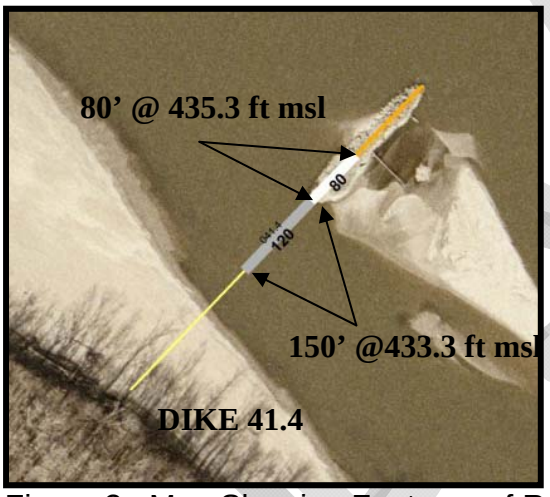

Figure 3. Map Showing Features of Recommended Plan

2.3 Alternative Considered but Rejected from Detailed Analysis

2.3.1 Repair Only:

This alternative would repair Dike 41.4 back to the original specification of 200 feet long by placing 80 feet of rock at 435.3 feet msl elevation. This alternative was considered unfeasible because it would still cause shoaling in the main navigation channel as water

would still flow between the dike and the riverbank in the newly formed cut. This would continue to pose safety hazards to boaters and commercial navigators.

3.0 Affected Environment

The project area is located in the Missouri River in St. Louis County, Missouri. Dike 41.4 is part of a series of dikes and revetments known as the BSNP that direct water to a 9 foot deep and 300 feet wide navigation channel to maintain a navigable waterway to support commercial barge traffic during the navigation season of April through November. The BSNP extends 735 miles from Sioux City, Iowa to the mouth near St. Louis, Missouri.

The Missouri River prior to channelization was characterized by a meandering channel and a wide, unconstrained floodplain. There were frequent changes in the channel that resulted from the continuous processes of erosion and deposition. The dynamics of the Missouri River created the diverse habitats that included shallow and deep water, sandbars, wetlands, willow thickets and riparian woodlands. The BSNP changed the ecosystem of the Missouri River. The river is generally limited to a confined channel with deep water with relatively fast currents, with very limited amounts of shallow water and sand bar habitat. Lower velocities are found behind dikes and in the channel margins. Dike 41.4 is adjacent to Johnson Island which is part of the Big Muddy NWR. This island contains a relatively large contiguous stand of bottomland forest. Prior to the flood of 2011, there was a large sandbar that connected Dike 41.4 to Johnson Island. The flood washed away most of the sandbar and created a channel between the sandbar and the riverbank. This channel is approximately 8-11 feet below the top of the dike and approximately 250 feet wide. As this channel diverts water from the navigation channel, during low flows it has allowed deposition within the navigation channel causing shoaling to occur. This has posed a safety threat to boating and blocked the channel to commercial navigation.

The Missouri River in St. Louis County is on the 303(d) list of impaired water bodies for the pollutant ‘bacteria’. Historically the Missouri River carried large sediment loads and accounted for the majority of the sediment within the Mississippi River Drainage (USACE, 1981). Many reservoirs were built on the mainstem and tributaries from the 1930s through the 1980s, which limited the amount of sediment that could proceed downstream. That along with the channelization has drastically decreased the sediment load and turbidity of the lower Missouri River.

Wildlife in the project area are primarily shorebirds, wading birds and waterfowl, along with semi-aquatic mammals such as beaver, raccoon, and mink. The fish assemblage in the project area is typical of large river species. Principal fish species include the emerald shiner, river carpsucker, channel catfish, gizzard shad, red shiner, shorthead redhorse, carp, and goldeye. Pallid and shovelnose sturgeon and paddlefish are also found in the lower Missouri River. Reptiles would include softshell and snapping turtles, sliders, mud and map turtles, and river cooters. The Federally-listed threatened and endangered species for St. Louis County can be found in Table1.

Table 1 Federally-listed Threatened and Endangered Species St. Louis County, Missouri		
Species	**Status**	**Habitat**
Gray bat (*Myotis grisescens*)	Endangered	Caves
Indiana bat (*Myotis sodalis)*	Endangered	Hibernacula: Caves and mines; Maternity and foraging habitat: small stream corridors with well developed riparian woods; upland forests
Pallid sturgeon (*Scaphirhynchus albus*)	Endangered	Mississippi and Missouri Rivers
Pink mucket (*Lampsilis abrupta*)	Endangered	Rivers
Scaleshell *(Leptodea leptodon)*	Endangered	Bourbeuse and Meramec Rivers
Sheepnose (*Plethobasus cyphyus*)	Endangered	Shallow areas in larger rivers and streams
Snuffbox (*Epioblasma triquetra*)	Endangered	Small to medium-sized creeks with a swift current
Spectaclecase (*Cumberlandia monodonta*)	Endangered	Meramec River
Decurrent false aster (*Boltonia decurrens*)	Threatened	Disturbed alluvial soils
Mead's milkweed (*Asclepias meadii*)	Threatened	Virgin prairies
Running buffalo clover (*Trifolium stolonifereum*)	Endangered	Disturbed bottomland meadows

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As this project occurs wholly within the Missouri River, the project would have no effect on the terrestrial species such as the two bat species and the plants. The substrate of the river in the project area is not stable, with a shifting bottom surface, thus making it not a suitable habitat for the endangered muscle species. The endangered pallid sturgeon could potentially inhabit the project area.

Primary resources of concern identified during the evaluation included: water quality, aquatic habitat including wetlands, fish and wildlife, threatened and endangered species, noise, safety, economics, and cultural resources.

4.0 Environmental Consequences (Impacts)

4.1 Water Quality

Alternative 1 - “No-Action” Alternative: In the no action alternative, the water quality would remain the same. The river would continue to shoal in the navigation channel during low flow periods and then would likely have a flush of those sediments during high flow events. This would lead to short term impacts to the turbidity and suspended solids during the high flow events and returning to relatively lower level turbidity and suspended solids as the flow levels decrease.

Alternative 2 - Repair and Modification (Recommended Plan): This alternative may result in potentially minor, temporary, construction-related adverse impacts to water quality resulting in increased turbidity and suspended sediments from the dredging and placement of rocks disturbing the sediments. These impacts would subside following construction. No long-term impact to water quality would be anticipated from this alternative.

4.2 Aquatic Habitat including Wetlands

Alternative 1 - “No-Action” Alternative: The “No-Action” Alternative would likely result in the main navigation channel continuing to shoal during periods of low flow, and the newly cut channel between the dike and the near side river bank continuing to expand. This would cause a shift in the overall channel location. There may be a net benefit in aquatic habitat in the main channel due to the increased diversity of bottom elevations and flow velocities.

Alternative 2 - Repair and Modification (Recommended Plan): This alternative would place 80 linear feet of rock landward of the existing Dike 41.4 structure at elevation 435.3 feet msl to repair the dike to the original design specifications. It would also add an additional 150 linear feet of rock structure landward at elevation 433.3 feet msl to modify the structure from a design deficiency created when the sandbar connecting the existing structure to the river bank washed away. The rock would be placed in a newly formed channel that ranges in depth from 8 to 11 feet below the top of the dike. This

would still maintain a “notch” between the end of the structure and the existing riverbank but would direct much of the flow back into the main navigation channel. This would result in a less that 0.5 acre direct impacts from the placement of rock fill to open water habitiat. This would indirectly result in the main navigation channel in this area returning to its self-maintaining design, but would also allow for more deposition immediately upstream and downstream from the structure creating additional shallow water habitat which would benefit the pallid sturgeon and other aquatic organisms. A draft 404(b)(1) analysis has been performed and can be found in appendix II.

4.3 Fish and Wildlife

Alternative 1 - “No-Action” Alternative: Under the no-action alternative, no impacts to fish and wildlife would be expected.

Alternative 2 - Repair and Modification (Recommended Plan): Fish and wildlife species would be temporarily disturbed during construction activities and would also result in the loss of less than 0.5 acres of deepwater river habitat from placement of the rock structure. There would be a minor increase in the amount of shallow water and/or sandbar habitat from deposition above and below the rock structure once construction is complete resulting in a minor beneficial impact to fish and wildlife.

4.4 Threatened or Endangered Species

Alternative 1 - “No-Action” Alternative: The “No Action” Alternative would not likely affect any Federally-listed threatened or endangered species.

Alternative 2 - Repair and Modification (Recommended Plan): The project location is within the range of the Federally endangered pallid sturgeon. The U.S. Fish and Wildlife Service, Columbia Ecological Services Office was consulted on this project and it was determined that the project may effect, but not likely to adversely affect the endangered pallid sturgeon. A copy of the correspondence can be found in Appendix I.

4.5 Noise

Alternative 1 - “No-Action” Alternative: The “No Action” Alternative would not result in any impact to noise.

Alternative 2 - Repair and Modification (Recommended Plan): The area on the river bank adjacent the project area is part of the Big Muddy National Wildlife Refuge and consists of a relatively large stand of bottomland hardwood. The area receives a moderate amount of visitation from hunters. The other receptors near the project area would include boaters. No residences are located near the proposed project. There would be some temporary minor noise related impacts during construction to refuge visitors and boaters in the immediate project area, however that impact will be short-term and subside once construction is completed.

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4.6 Safety

Alternative 1 - “No-Action” Alternative: The “No-Action” Alternative would result in the continued shoaling in the navigation channel during periods of low flow. This creates navigational hazards to deep draft navigation and can result in vessel groundings. During extended periods of low flow conditions, shoaling may pose a risk to some of the larger recreational boats.

Alternative 2 - Repair and Modification (Recommended Plan): The Recommended Plan would shift the flow of water to aid in the self-scouring design of the navigation channel. This would alleviate the shoaling within the navigation channel and have a positive benefit to commercial navigation vessels and crew. The increase of the length of rock structure landward could have a slight increase in risk to boaters during periods of high flow when water is flowing over the top of the structure if they are unfamiliar with the structure location.

4.7 Economics

Alternative 1 - “No-Action” Alternative: This alternative would result in continued shoaling, particularly during low flow periods resulting in shallow navigation channel depths. This could lead to a blockage of the river to commercial barge traffic. This would result in a negative financial impact to barge operators and those that depend on the barge industry to transport their goods.

Alternative 2 - Repair and Modification (Recommended Plan): This alternative would restore the self-maintaining design of the navigation channel to prevent shoaling from occurring in the navigation channel. This would result in an economic benefit to barge operators and those that ship their freight using barges, which would also meet the congressionally authorized project purposes.

4.8 Cultural Resources

Alternative 1 - “No-Action” Alternative: No known historic or archeological resources are known to occur in the project area, therefore there would likely be no impact to cultural resources.

Alternative 2 - Repair and Modification (Recommended Plan): This alternative would also likely have no impact to cultural resources. A letter was sent to the State Historic Preservation Officer on August 29, 2012 and can be found in Appendix I. The SHPO concurred that there would be no impact to cultural resources.

5.0 Cumulative Impacts

The Council on Environmental Quality Regulations defines cumulative impacts as “the impact on the environment which results from the incremental impact of the action when

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added to other past, present, and reasonably foreseeable future actions, regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time" (CEQ, 1997).

The cumulative impacts addressed in this document consist of the impacts of multiple actions that each affects the human environment including those that affect the Missouri River channel and off-channel habitats. The geographical areas of consideration are actions located within/along the Missouri River.

The Missouri River and its floodplain has been altered by past actions such as 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. In 1912, the Corps of Engineer's started constructing the Missouri River Bank Stabilization and Navigation Project (BSNP) which channelized and stabilized the Missouri River. It is estimated that 522,000 acres of aquatic and terrestrial habitat was lost in and along the Missouri River, between 1912 and 2003, due to the construction and operation of the BSNP (USACE, 1981). The Corps is authorized in the Water Resources Development Acts of 1986 and 1999 to mitigate for these impacts by purchasing and developing fish and wildlife habitat on 166,750 acres of land. To date, approximately 60,000 acres have been purchased and 40,000 acres of habitat developed.

The proposed project would involve repairs and modification to Dike 41.4 in St. Louis County, Missouri. The dike would be repaired to original specification of 200 feet long by adding 80 feet of rock to the landward side of the dike at elevation 435.3 and then modifying the design to add an addition 150 feet of rock landward at elevation 433.3 msl to create a sill to divert water into the navigation channel. These deficiencies are the result of a 2011 flood event. Relatively minor short-term impacts to the water quality and noise are anticipated during construction. Long-term, the project would have a minor loss of less than 0.5 acres of open water aquatic habitat. The project would benefit safety and the socio-economic environment by restoring the navigability of the river channel to allow for commercial navigation.

Approximately 400 structures (dikes and revetments) between River Mile 0 and River Mile 500 were damaged during the flood of 2011. The majority of these projects are located upstream of River Mile 226. To maintain the authorized purposes of the BSNP, USACE will continue to maintain and repair these structures. Typically these structures are repaired to original design specification, however, when situations dictate a modification of design, alterations may be undertaken to correct the deficiency. These structures provide an area of decreased current velocity downstream of the structures and create an area relatively shallower than the more homogenous navigation channel. These structures help provide habitat for fish and aquatic invertebrates. These projects typically result in minor short-term construction related impacts to water quality, fish and wildlife, and noise. However, cumulatively, these minor adverse affects are out-

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weighed by the long-term beneficial effects of restoring the navigation channel capability as congressionally authorized.

The USACE, 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. Commercial sand and gravel dredging was reauthorized by a 2011 section 404 permit on the lower Missouri River, which locally alters bed elevation and channel and off channel characteristics. Substantial, environmental restoration efforts are occurring on the Missouri River and structures that provide flood risk management have been removed and natural floodplain and chute (shallow water) habitat restored, in some areas. No new major reservoir construction is likely on the Missouri River or its' tributaries in the foreseeable future.

The cumulative impacts of the proposed action when added to other present and future actions does not result in a significant impact to the natural or human environment. Instead, they are merely a form of maintenance of the existing BSNP.

6.0 Conclusion

The navigation capability level achieved by the Recommended Plan would be the same as the original pre-flood condition. The Recommended Plan would not likely result in any impacts to Federally-listed threatened or endangered species or their designated critical habitat. Water quality, fish and wildlife, and noise levels would be temporarily disturbed by the proposed construction activity. The proposed action would have no impact to sites listed on or eligible for inclusion on the National Register of Historic Places. There would be a minor loss of open water aquatic habitat from the placement of the rock structure. These minor adverse effects would be greatly offset by restoring the navigation channel capability and its associated safety and economic benefits. Of the two alternatives considered, the Recommended Plan is economically justified, and is consistent with the protection of the human environment.

7.0 Coordination and Comments

This draft EA and FONSI will be e-mailed to individuals, agencies, and businesses contained on the USACE Regulatory public notice list. They are also available on the USACE Regulatory webpage at:
http://www.nwk.usace.army.mil/Media/PublicNotices.aspx. Hard copies are available upon request.

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8.0 Agency Compliance with Other Environmental Laws

Compliance with other environmental laws is listed below.

Federal Polices	Compliance
Archeological Resources Protection Act, 16 U.S.C. 470, et seq.	Not Applicable
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
Migratory Bird Treaty Act, 16 U.S.C 703-712	Full Compliance
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 post authorization).
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.

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9.0 References

CEQ. 1997. January, 1997. Considering Cumulative Effects Under the National Environmental Policy Act. Executive Office of the President, Washington, D.C. pp ix-x, 28-29 and 49-57.

USACE. 1981. Missouri River Bank Stabilization and Navigation Project Final Feasibility Report and Final EIS for the Fish and Wildlife Mitigation Plan.

USACE. 2008. Procedures for Implementing the National Environmental Policy Act. Engineer Regulations (ER) 200-2-2. 33 CFR 230.

10.0 List of Preparers

This draft EA and draft FONSI were prepared by Mr. Curtis Hoagland, Environmental Resources Specialist, with cultural resource assistance provided by Mr. Timothy Meade, District Archeologist. The address of the preparers is: U.S. Army Corps of Engineers, Kansas City, District; PM-PR, Room 529, 601 E. 12th Street, Kansas City, Missouri 64106.

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11.0 Appendices

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APPENDIX I - Agency Coordination and Public Comments

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Hoagland, Curtis R NWK

From: Hoagland, Curtis R NWK
Sent: Tuesday, August 28, 2012 3:52 PM
To: Hoagland, Curtis R NWK
Subject: FW: Emergency Maintenance Dredging and Structure Repair - RM41 (UNCLASSIFIED)
Attachments: Emergency Dredging- RM 41.docx

Classification: UNCLASSIFIED
Caveats: NONE

-----Original Message-----
From: Hoagland, Curtis R NWK
Sent: Tuesday, August 28, 2012 3:51 PM
To: 'Jane_Ledwin@fws.gov'
Subject: Emergency Maintenance Dredging and Structure Repair - RM41 (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Jane,

I am sending you additional information about the emergency maintenance dredging and structure repair and modification at approximately River Mile 41. The Navigation Channel is shoaling along the left bank of the river with depths of 7-8 feet being observed along the designed sailing line. There is a rootless dike that used to have a sandbar between it and the river bank. Last year's flooding washed away that sandbar and cut a channel between the dike and the near side river bank which is likely causing the shoaling in the main river channel. I have attached an aerial photo detailing the location of the dike and two images of recent surveys that were conducted on the channel. A this is on Johnson Island which is part of Big Muddy NWR, I have also contacted Tom Bell to give him a heads up about the project. A brief description of the action is as follows:

Emergency Maintenance dredging would be performed to open the channel up to a depth and width that would allow for commercial navigation. To my understanding that would not be the full 300 feet wide 9 foot deep authorized channel but only to the width that would allow for safe barge traffic. Yesterday they estimated that would be about 40K tons, it has since opened itself up some so that amount of dredging may not be needed now. Maintenance will be performed on Dike 41.4 to restore it to its design length of 200 feet by adding an estimated 80 feet of rock on the landward side of the dike at an elevation of CRP. In addition the structure will be modified by extending the rootless dike landward an additional 150 feet at an elevation of -2 CRP. This will not completely tie the rootless dike to the bank but will redirect the majority of the flow back into the channel. Based on field observations this would leave a 70 foot notch between an existing sandbar on the right bank and the lengthened structure. Prior to the 2011 Flood, the area between the rootless dike and the bank was fully obstructed by a sandbar that served to force the flow at low stages back into the channel. The extension of the dike landward will help replace some of the function of the now absent sandbar. Repair and modification are estimated to require approximately 3,500 tons of rock.

Please let me know if you have any concerns about the project. If you have any questions about the shoaling or rock dike repair please feel free to call Mr. Michael Gossenauer at 816-389-3162 or you can call me at 816-389-3401.

Thanks,

Curtis Hoagland
Environmental Resources Specialist
US Army Corps of Engineers
Kansas City District
601 E 12th St.
Kansas City, MO 64106
Phone: 816-389-3401

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Hoagland, Curtis R NWK

From: Jane_Ledwin@fws.gov
Sent: Wednesday, August 29, 2012 8:43 AM
To: Hoagland, Curtis R NWK
Cc: Amy_Salveter@fws.gov; Tom_Bell@fws.gov
Subject: Re: Sec 7 - Emergency Dredging and Structure Repair - RM 41 (UNCLASSIFIED)

Curtis -

Thank you for the information in your 8/28/2012 emails and diagrams of the proposed channel maintenance at RM 41. The Service has reviewed that information and has determined the work may affect, but is not likely to adversely affect the pallid sturgeon. We support the proposed approach that would leave a notch between the bank and the rootless dike, while including a sill feature to redirect water back into the navigation channel. Please continue to keep us apprised of the river's response to these adjustments. Hopefully Isaac will bring us some rain that may help wash out the shoal in the channel.

Thank you for coordinating this work with us. If you need additional assistance, or conditions change, please don't hesitate to contact us.

Best regards -

Jane Ledwin
****
Jane Ledwin
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
101 Park DeVille Drive
Columbia, Missouri 65203
Phone 573/234-2132, extension 109
email jane_ledwin@fws.gov
****

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Hoagland, Curtis R NWK

From: Meade, Timothy M NWK
Sent: Thursday, August 30, 2012 9:02 AM
To: Hoagland, Curtis R NWK
Subject: FW: Emergency Dredging at Missouri River Mile 41 between St Louis and St. Charles Counties (UNCLASSIFIED)
Attachments: Emergency Dredging letter to SHPO 8.29.2012.pdf

Classification: UNCLASSIFIED
Caveats: NONE

Curtis,

Attached is my letter to SHPO on the emergency dredging and their response.

Tim

-----Original Message-----
From: Deel, Judith [mailto:judith.deel@dnr.mo.gov]
Sent: Thursday, August 30, 2012 5:32 AM
To: Meade, Timothy M NWK
Subject: RE: Emergency Dredging at Missouri River Mile 41 between St Louis and St. Charles Counties (UNCLASSIFIED)

The Missouri SHPO concurs with the Kansas City District, Corps of Engineers, that the emergency dredging at Missouri River Mile 41 between St. Louis and St. Charles Counties, Missouri, will be "no historic properties affected."

Judith Deel
Compliance Coordinator
State Historic Preservation Office
P.O. Box 176
Jefferson City, Missouri 65102
judith.deel@dnr.mo.gov
573/751-7862 (phone)

-----Original Message-----
From: Meade, Timothy M NWK [mailto:Timothy.M.Meade@usace.army.mil]
Sent: Wednesday, August 29, 2012 12:21 PM
To: Deel, Judith
Subject: Emergency Dredging at Missouri River Mile 41 between St Louis and St. Charles Counties (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Hi Judith,

We have an emergency dredging project that needs immediate turn around. Attached is the letter. In short, there aren't any cultural resource issues.

Thanks for your help,

Tim

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Timothy Meade
Cultural Resource Manager/ Tribal Liaison US Army Corps of Engineers Kansas City District Rm 529
601 E. 12th Street
Kansas City, MO
64106
Office: 816 - 389 - 3138
Cell: 816 - 519 - 4186
Fax: 816 - 389 - 2025

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

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

August 29, 2012

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 emergency maintenance dredging and structure repair and modifications at approximately Missouri River Mile 41 between St Charles and St. Louis Counties. This letter initiates Section 106 coordination for the proposed emergency dredging and repairs.

The proposed dredging and repairs are required because the navigation channel is shoaling along the left bank of the river with depths of 7-8 feet being observed along the designed sailing line. Flooding in 2011 washed away a sandbar and cut a channel between the existing dike and the near side river bank which is likely causing the shoaling in the main river channel.

Emergency Maintenance dredging would be performed to open the channel up to a depth and width that would allow for commercial navigation. Maintenance would be performed on Dike 41.4 to restore it to its design length of 200 feet by adding an estimated 80 feet of rock on the landward side of the dike. In addition the structure will be modified by extending the rootless dike landward an additional 150 feet. Repair and modification are estimated to require approximately 3,500 tons of rock.

An archeological background review of the project area was conducted that included an examination of the National Register of Historic Places on-line (NRHP); the Missouri Department of Natural Resources Archeological Viewer; shipwreck location maps (Chittenden 1897 and Trail 1858-1965); and Lewis and Clark camp site maps.

The background review found no historic properties, archeological sites, or shipwrecks within or near the proposed project area. Because of lack of recorded sites or shipwrecks and because the proposed work is located in the river channel; the project area has little to no potential of impacting historic properties. Therefore, we recommend and request your concurrence that the project will have no impact on Historic Properties.

-2-

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@usace.army.mil or at (816) 389-3138.

Sincerely,

Timothy Meade

Timothy Meade
District Archeologist

Enclosure

APPENDIX II - Section 404(b)(1) Evaluation

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Structural Repair and Modifications for Emergency Navigation Channel Repair, Dike 41.4 Missouri River Bank Stabilization and Navigation Project, St. Louis County, Missouri

Section 404(b)(1) Evaluation

1. Introduction

This Section 404(b)(1) Evaluation is for the repairs and modifications to Dike 41.4 in St. Louis County, Missouri. This evaluation meets the requirements found in 40 CFR 230, Section 404(b)(1): Guidelines for Specification of Disposal Sites for Dredged and Fill Material.

2. Project Description

a. **Location:** Dike 41.4 is located along the right descending bank of the Missouri River at approximately river mile 41.1 in St. Louis County near the city of Chesterfield, Missouri. The land adjacent the rootless dike is Johnson Island and is part of Big Muddy National Wildlife Refuge (NWR). The dike is rootless and oriented perpendicular to the river bank.

b. **General Description:** The U.S. Army Corps of Engineers - Kansas City District (USACE), propose to repair Dike 41.4 to original specifications and modify the dike by adding an addition 150 foot sill to correct a design deficiency that is causing shoaling in the main navigation channel. Dike 41.4 is one of many structures that are a part of the Missouri River Bank Stabilization and Navigation Project (BSNP) that was originally authorized in the Rivers and Harbors Act of 1912 and then subsequent authorizations in 1925, 1927, and 1945. These series of dikes and revetments are designed to direct water into a self scouring 9 foot deep by 300 feet wide navigation channel.

Direct project impact would be less than 0.5 acres from the placement of approximately 3,200 tons of new quarry run limestone rock. This impact would be to open water habitat of the newly formed channel area. This repair and modification is meant to prevent future shoaling in the main navigation channel and directing the flow back into the navigation channel to regain the self-maintaining design of the channel. As this will slow water immediately upstream and downstream of the dike, deposition should occur in those areas leading to an increase in shallow water/sandbar habitat to benefit the federally-endangered pallid sturgeon and other aquatic species.

As the increase in shallow water habitat far outweighs the minor negative impact to open water habitat, no additional mitigation measures are proposed.

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c. Authority: This activity is undertaken by the U.S. Army Corps of Engineers under the Missouri River Bank Stabilization and Navigation Program first authorized in the Rivers and Harbors Act of 1912 and subsequent authorizations in 1925, 1927, and 1945, and Section 404 of the Clean Water Act (33 USC 1344).

3. Review of Compliance (§ 230.10 a-d)

a. No practicable alternative to the proposed project would have a less adverse impact on the aquatic ecosystem while providing a flow in the navigation channel that alleviates the shoaling which is posing a safety and navigation hazard. Additional information on the impacts of various alternatives to waters of the U.S. can be found in Section 4 of the draft EA.

b. The proposed project does not appear to violate any applicable state water quality standards, or applicable toxic effluent standard or prohibition under Section 307 of the Clean Water Act. The proposed project is not likely to jeopardize the continued existence of species listed as endangered or threatened under the Endangered Species Act of 1973, as amended, to result in the likelihood of the destruction or adverse modification of critical habitat. Furthermore, the proposed project would not violate the requirements of any Federally-designated marine sanctuary.

c. The proposed project would not cause or contribute to significant degradation of waters of the U.S. This includes no adverse effects on human health, life stages of organisms' dependant on the aquatic ecosystem, ecosystem diversity, productivity and stability, and recreational, aesthetic, and economic values.

d. Appropriate and practical steps have been taken which will minimize potential adverse impacts on the aquatic ecosystem.

4. Technical Evaluation Factors (Subparts C-F)

a. Potential Impacts on Physical and Chemical Characteristics of the Aquatic Ecosystem (Subpart C)

1) **Substrate:** Placement of new quarry run limestone rock will cover less than 0.5 acre of existing alluvial sediments. This is needed to repair the rootless dike to original design specifications and to fix a deficiency that is allowing shoaling in the navigation channel. This will create an indirect impact to river substrate by the self-scouring of the navigation channel and also will slow flow immediately upstream and downstream of the structure which will allow sediments to build downstream of the dike and to a lesser extent upstream of the dike.

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2) **Suspended particulates/turbidity:** The proposed plan would result in minor short-term impacts to suspended particulates and an increase in turbidity during project construction. This would result from disturbing the existing sand/silt substrate near the construction location. Long-term, the self-scouring nature of the channel would maintain conveyance of suspended sediments in the main channel, however water along the channel margins near the dike would have flow conditions that would allow sediments to settle out up and downstream of the dike creating sandbar/shallow water habitat. Overall there would be minimal long-term impact to the suspended particulates/turbidity within the Missouri River.

3) **Water:** The project would not result in any long-term negative impacts to water quality. The project may result in minor short-term construction related impacts to water quality due to activities taking place within the channel. These activities would result in increased suspended particulates and increased turbidity. These impacts would be short-term in nature and localized to the area around the project site.

4) **Current patterns and water circulation:** Clean rock fill would be used to repair the dike and create a sill to redirect the flow of water into the navigation channel. These action are meant to comply with the Congressionally authorized Missouri River BSNP and correct a deficiency created by the 2011 flood. This would create more diversity in the off channel flow and habitat characteristics however it will create a more homogeneous main navigation channel flow.

5) **Normal water fluctuations:** There are no anticipated changes to normal water fluctuations that would result from the proposed project. The project would not result in any changes to inundation periods or water level modifications during flood events, or during periods of baseflow.

6) **Salinity Gradients:** The proposed project would not impact any salinity gradients.

b. Potential Impacts to the Biological Characteristics of the Aquatic Ecosystem (Subpart D)

1) **Threatened and endangered species:** A number of Federally-listed threatened or endangered species are listed for St. Louis County, Missouri including the endangered pallid sturgeon (*Scaphirhyncus albus*). A list of the Federally-listed species in St. Louis County, Missouri, can be found in section 3 of the EA. Coordination with the U.S. Fish and Wildlife Service indicated that the proposed project may effect, but not likely to adversely affect the pallid sturgeon or any other threatened or endangered species. By increasing the shallow water/sandbar habitat, the proposed project would have a small benefit to pallid sturgeon.

2) **Fish, crustaceans, mollusks, and other aquatic organisms in the food web:** The project would not result in significant adverse impacts to aquatic organisms. Minor short-term impacts to the aquatic community may result from the smothering of immobile organisms, direct displacement of organisms, and an increase in turbidity, during project construction. The impacts may affect individual organisms in a small area surrounding the proposed project, but would be unlikely to have a significant impact on the overall population of any particular species within the waterbody. Long-term, there would be a positive impact to the aquatic community by increasing the shallow water/sandbar habitat**.** No significant adverse long-term impacts are anticipated.

3) **Other wildlife:** As the project is almost entirely aquatic in nature, it would have minimal impact to other wildlife species. Noise from construction equipment may also create a minor short-term negative impact to wildlife, these impact would cease once construction is complete. No significant adverse long-term impacts are anticipated.

c. Potential Impacts on Special Aquatic Sites (Subpart E)

1) **Sanctuaries and Refuges:** The proposed project is located adjacent to Johnson Island which is part of the Big Muddy NWR. There may be some minor short term construction related noise impacts. These impacts would be short-term in nature and would cease once construction activities ended. No long-term adverse impacts to refuges and sanctuaries are anticipated.

2) **Wetlands:** No wetlands were identified in or adjacent to the project area.

3) **Mud flats:** No mud flats would be impacted by the proposed project.

4) **Vegetated shallows:** No vegetated shallows would be impacted by the proposed project. No rooted aquatic vegetation is located within the project area.

5) **Coral reefs:** The project area does not provide the necessary environmental conditions to support corals.

6) **Riffle and pool complexes:** Missouri River is a large river ecosystem and isn't conducive to riffle pool complexes, therefore no affect.

d. Potential Effects on Human Use Characteristics (Subpart F):

1) **Municipal and private water supplies:** The project would not impact any municipal or private water supplies.

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2) **Recreational and commercial fisheries:** The project would not negatively affect the suitably of any recreational or commercial fisheries. The proposed project may have a minor beneficial impact to fish habitat.

3) **Water-related recreation:** The project would have a beneficial impact to water-related recreation by eliminating a safety hazard created from the shoaling in the navigation channel.

4) **Aesthetics:** The project may result in minimal impacts to the aesthetics of the area as a result of using rock to construct the dike structure. However, there are hundreds of rock dikes and revetments located along the Missouri River so it would not alter the aesthetic features of the river.

5) **Parks, national and historic monuments, national seashores, wilderness areas, research sites, and similar preserves:** The project would not impact any of the above mentioned property types.

5. EVALUATION OF DREDGED OR FILL MATERIAL (Subpart G)

a. **General evaluation of dredged or fill material:** Fill material placed below the ordinary high water mark would consist of clean rock fill with minimal fines obtained from a commercial source. Prior experience indicates that commercially available rock fill would be free from chemical, biological, or other pollutants.

b. **Chemical, biological, and physical evaluation and testing:** The fill material meets the testing exclusion based on the fact that it would consist of clean rock fill obtained from a commercial source. There is no reason to believe that the clean rock fill would be a carrier of harmful contaminants.

6. DISPOSAL SITE DELINEATION (§230.11 f)

The fill locations would consist of a newly formed channel within the Missouri River. Clean rock fill with minimal fines would be used to repair the existing dike to original design specifications and modify the structure to correct a design deficiency. The amount of fill that would be used has been determined to be the minimum amount necessary to provide the desired performance. The depth of the water, the current velocity, direction, and variability, the degree of turbulence, and the rate of discharge at the disposal site has been considered in determining the acceptability of the mixing zone.

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7. ACTIONS TO MINIMIZE ADVERSE EFFECTS (SUBPART H)

Best Management Practices (BMPs) would be used to minimize the incidental fallback of material into the waterway and to minimize the introduction of fuel, petroleum products, or other deleterious material from entering the waterway. Such measures could include 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. Additional measures to minimize adverse effects would include using clean rock fill with minimal fines, using appropriate construction equipment, and not placing fill in the river during unusual high water events.

8. FACTUAL DETERMINATIONS (§230.11)

A review of the information in items 4 through 7 of this report indicates that there is minimal potential for long-term environmental effects of the proposed discharge. Additionally, there are not expected to be any cumulative or long-term secondary impacts as a result of the project.

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9. FINDINGS (§230.12)

The proposed emergency structural repairs and modifications to dike 41.4 Project has been evaluated and determined to be in compliance with Clean Water Act Section 404(b)(1) guidelines, with the inclusion of appropriate and practical conditions to minimize pollution and adverse effects on the aquatic ecosystem. Furthermore, the project would result in an overall net benefit to the aquatic ecosystem.

Prepared by: _____ _____
Mr. Curtis Hoagland Date
Biologist
Planning Branch

Reviewed by: _____ _____
Mr. Jeffry Tripe Date
Chief, Environmental Resources Section
Planning Branch

Approved by: _____ _____
Anthony J. Hofmann Date
Colonel, Corps of Engineers
District Commander

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PUBLIC NOTICE

US Army Corps

of Engineers
Kansas City District

Permit No. 2012-1340
Issue Date: November 6, 2012
Expiration Date: December 6, 2012

30-Day Notice

JOINT PUBLIC NOTICE: This public notice is issued jointly with the Missouri Department of Natural Resources, Water Pollution Control Program. The Department of Natural Resources will use the comments to this notice in deciding whether to grant Section 401 water quality certification. Commenters are requested to furnish a copy of their comments to the Missouri Department of Natural Resources, P.O. Box 176, Jefferson City, Missouri 65102.

APPLICANT: Kansas City District, Corps of Engineers
700 Federal Building
Kansas City, Missouri 64106-2896

PROJECT LOCATION (As shown on the attached drawings)**:** The project is located along the right descending bank of the Missouri River at approximately river mile 41.1 in St. Louis County near the city of Chesterfield, Missouri. The land adjacent the rootless dike is Johnson Island and is a part of the Big Muddy National Wildlife Refuge (NWR). The dike is rootless and oriented perpendicular to the riverbank. It is in Section 25 of Township 11 South, Range 8 East. A map of the project area is included in the Draft Environmental Assessment.

AUTHORITY: Missouri River Bank Stabilization and Navigation Project (BSNP) that was originally authorized in the Rivers and Harbors Act of 1912 and then subsequent authorizations in 1925, 1927, and 1945, and Section 404 of the Clean Water Act (33 USC 1344).

ACTIVITY (As shown on the attached drawings)**:** The U.S. Army Corps of Engineers - Kansas City District (USACE), propose to repair Dike 41.4 to original specifications and modify the dike by adding an addition 150 foot sill to correct a design deficiency that is causing shoaling in the main navigation channel. Dike 41.4 is one of many structures that are a part of the Missouri River BSNP. These series of dikes and revetments are designed to direct water into a self scouring 9 foot deep by 300 feet wide navigation channel. The purpose of this project is to repair and modify Dike 41.4 to direct water into the navigation channel to restore the self-scouring ability, thus preventing shoaling of the navigation channel during low flows.

Prior to the Missouri River flood of 2011, a large sandbar extended from the riverbank to the rootless Dike 41.4. That sand bar directed flow into the navigation channel and allowed the

navigation channel to self scour to maintain the needed depth. As a result of the 2011 flood, much of that sandbar was washed away and a channel formed landward of the dike. This allowed greater flow between the dike structure in the riverbank and resulted in shoaling within the navigation channel during low flow periods. This project is needed to restore the structure and modify it to divert water back into the navigation channel to prevent shoaling and maintain the navigations channels self scouring abilities.

Direct project related impacts to waters of the U.S. would result from placing clean rock fill landward from the existing rootless dike structure an additional 80 feet at construction reference plane (CRP) elevation, and another 150 feet landward at elevation CRP-2. Approximately 30,000 tons of rock fill would be used as fill. Project maps are included in the Draft Environmental Assessment.

WETLANDS/AQUATIC HABITAT: There were no wetlands identified within or adjacent to the project area. Approximately less than 0.5 acres of open water habitat would be directly impacted due to placement of clean rock fill. This will also divert flow into the main navigation channel and allow it to maintain its self-scouring design. This will indirectly provide for a benefit to shallow water/sandbar habitat by slowing water immediately upstream and downstream of the dike to allow for sedimentation to occur and sandbar formation to occur. A DRAFT Section 404 (b)(1) Evaluation (40 CFR 230) has been prepared (See Appendix IV in Draft Environmental Assessment).

STATEMENT OF AVOIDANCE, MINIMIZATION, AND COMPENSATORY MITIGATION FOR UNAVOIDABLE IMPACTS TO AQUATIC RESOURCES: Impacts would be minimized by maintaining an un-diked area between the rootless dike and the bank which will allow for a mixture of flow velocities and depths. Unavoidable impacts of the project will be off-set by the total net benefit of the project from the shallow water/sandbar habitat creation.

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) OF 1968, as amended: The Corps has made a preliminary determination that the proposed project would not result in significant degradation of the human environment and therefore the proposed project would support a Finding of No Significant Impact (FONSI). The Corps has prepared a Draft Environmental Assessment (EA) for the project; this draft document may be requested as described below under "Additional Information" and is available for review at the Corps of Engineers office and online at the Corps' web page at: http://www.nwk.usace.army.mil/Media/PublicNotices.aspx. The Corps will utilize comments received in response to this Public Notice and the Draft EA to complete our evaluation of the project for compliance with the requirements of NEPA, and other Federal, state, and local regulations, including this review for project compliance with the requirements of Section 404 of the Clean Water Act. The Corps has made a preliminary determination that the project as proposed would not be contrary to the public interest and is in compliance with the Section 404(b)(1) Guidelines (Appendix IV of Draft Environmental Assessment).

ADDITIONAL INFORMATION: Additional information about this application may be obtained by contacting Mr. Curtis Hoagland, (816) 389-3401 or

curtis.r.hoagland@usace.army.mil. All comments to this public notice should be directed to the above address.

CULTURAL RESOURCES: The proposed project has been reviewed in compliance with the National Historic Preservation Act of 1966 (Public Law 89-665) including a check of the National Register of Historic Places and supplements thereto. No sites were identified within the project area. The results of the research were coordinated by letter with State Historic Preservation Officer (SHPO). In that letter, the Corps requested concurrence that any proposed work in the project area would have no effect on historical properties and that any work could proceed without any further coordination, unless in the unlikely event that archeological materials were discover during construction. SHPO concurred with this recommendation.

ENDANGERED SPECIES: The endangered pallid sturgeon is known to occur in the lower Missouri River. After coordination with the U.S. Fish and Wildlife Service, a preliminary determination has been made that the described work may affect, but not likely to adversely affect the pallid sturgeon or any species designated as threatened or endangered, or adversely affect critical habitat.

FLOODPLAINS: This activity is being reviewed in accordance with Executive Order 11988, Floodplain Management, which discourages direct or indirect support of floodplain development whenever there is a practicable alternative. By this public notice, comments are requested from individuals and agencies that believe the described work will adversely impact the floodplain.

WATER QUALITY CERTIFICATION: Section 401 of the Clean Water Act (33 USC 1341) requires that all discharges of dredged or fill material must be certified by the appropriate state agency as complying with applicable effluent limitations and water quality standards. This public notice serves as an application to the state in which the discharge site is located for certification of the discharge. The discharge must be certified before Department of the Army authorization can be issued. Certification, if issued, expresses the state's opinion that the discharge will not violate applicable water quality standards.

PUBLIC INTEREST REVIEW: The decision to issue authorization will be based on an evaluation of the probable impact including the cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs and, in general, the needs and welfare of the people. The evaluation of the impact of the activity on the public interest will include application of the guidelines promulgated by the Administrator, Environmental Protection Agency under authority of Section 404(b) of the Clean Water Act (33 USC 1344). The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the

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impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny an authorization for this proposal. To make this decision, comments are used to address impacts on endangered species, historic properties, water quality, general environmental effects, and other public interest factors listed above. Comments are used in preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

COMMENTS: This notice is provided to outline details of the above-described activity so this District may consider all pertinent comments prior to determining if issuance of an authorization would be in the public interest. Any interested party is invited to submit to this office written facts or objections relative to the activity on or before the public notice expiration date. Comments both favorable and unfavorable will be accepted and made a part of the record and will receive full consideration in determining whether it would be in the public interest to issue the Department of the Army authorization. Copies of all comments, including names and addresses of commenters, may be provided to the applicant. Comments should be mailed to the address shown on page 1 of this public notice.

PUBLIC HEARING: Any person may request, in writing, prior to the expiration date of this public notice, that a public hearing be held to consider this application. Such requests shall state, with particularity, the reasons for holding a public hearing.

NOTE: This public notice is posted on the Kansas City District Regulatory web page and can be viewed at the following address:

http://www.nwk.usace.army.mil/Media/PublicNotices.aspx

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