



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

OAKLAND LEVEE UNIT



Supplemental Environmental Assessment I
to
Final Revised Environmental
Assessment
City of Topeka Flood
Risk Management Study
Topeka, Kansas

AUGUST 2015

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DEPARTMENT OF THE ARMY
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FINDING OF NO SIGNIFICANT IMPACT

Oakland Levee Unit - Supplemental Environmental Assessment to the *Final Revised Environmental Assessment City of Topeka Flood Risk Management Study Topeka, Kansas*

Project Summary

The Oakland Levee Project is a U.S. Army Corps of Engineers' (USACE) flood risk management project located in Topeka, Kansas. An Environmental Assessment and Finding of No Significant Impact for the project were prepared in 2008. Since that time, several modifications have been proposed to the design to improve structural weaknesses, correct levee underseepage safety concerns, and prevent a pump station failure. Additionally, the locations and areas proposed for borrow material has been modified. The project is anticipated to begin construction in 2015 and be completed in 2016.

Alternatives

In addition to the No-Action Alternative, two other alternative plans were considered. These consist of implementing the project as described in the 2008 Environmental Assessment, Alternative 2, and a new alternative, Alternative 3.

Alternative 1 – No Action: The No Action Alternative would consist of not modifying structural weakness in the Oakland Levee Unit and not installing rock anchors to East Oakland pump plant, leaving portions of Topeka, Kansas prone to socioeconomic damages during large storm events from the Kansas River. There would also be an increase risk to life due to the dense population within the protected area. This alternative would not meet the purpose and need of the project as described in the 2008 Environmental Assessment.

Alternative 2 – Maintain previously approved levee improvements: Alternative 2 would result in modifications to the Oakland Levee Unit being constructed as proposed in Section 7.0 of the 2008 Environmental Assessment. Sometime after the 2008 Environmental Assessment was approved an examination of the Oakland Levee discovered a 1,200 foot section the levee also had underseepage safety issues. Modifications as described in the 2008 Environmental Assessment would not resolve all geotechnical and structural weaknesses in the levee or solve current interior drainage issues resulting from implementation of the project. Alternative 2 was not considered for the recommended plan because it would not resolve all underseepage safety concerns for the Oakland Levee system.

Alternative 3 – Modify previously approved levee improvements (Recommended Plan): This alternative would consist of modifying the Oakland Levee Unit by constructing

underseepage berms, improving interior surface drainage, installing rock anchors to East Oakland pump station, and using borrow material from previously unidentified locations. The primary borrow area would be located on city property directly north of the project and the secondary borrow area would be located to the northeast of the project on privately owned agricultural land. Underseepage improvements would be constructed at the landward toe of the levee on city waste water treatment plant property. The combined underseepage berm area is approximately 4.6 acres and would require approximately 21,000 cubic yards of borrow material. Borrow material would be hauled by truck using a designated haul route(s). The borrow area(s) and haul route(s) would be returned to approximate preconstruction grades and contours. If used, the secondary borrow area would be restored to its pre-construction agricultural capabilities. Topsoil would be removed and stockpiled within the borrow area(s) boundary to be returned to its original location once borrow material has been obtained. The project sponsor, county, and/or contractor would be responsible for issuing safety considerations associated with operation of heavy construction equipment in relation to recreational activities associated with the All-Terrain Vehicle (ATV) Park. Other features related to the underseepage berm include interior drainage improvements to prevent surface water runoff ponding at the landward toe of the levee. The East Oakland pump station would have rock anchors installed to stabilize the structure from floodwaters and prevent the pump station from failure during flood events. The supporting rock anchors would be located around the exterior perimeter of the building and are secured by drilling into the existing bedrock. Native grasses, and forbs, including milkweed to benefit insect pollinators, would be planted in all disturbed areas of the construction footprint for erosion and invasive species control. If used, secondary borrow area would not receive erosion control plantings and would likely returned to privately owned agricultural practices.

Summary of Environmental Impacts

Following an evaluation of environmental consequences, Alternative 3 has been identified as the Recommended Plan. This alternative best meets the purpose and need of the project as described in this document and in the 2008 Environmental Assessment. The Recommended Plan would not result in any significant adverse impacts, either directly, indirectly, or cumulatively to the human environment. If the secondary borrow area was used, minor impacts could result from the removal of approximately 0.1 acres of tree habitat. This could have minor, although not significant, impacts on local wildlife resources. Actions are incorporated into the plan to avoid any take of migratory birds. This plan may, but would not likely adversely affect any threatened or endangered species such as the northern long-eared bat. No wetlands would be impacted by this alternative. The Recommended Plan would likely have no affect on cultural resources. The plan would not significantly impact any Waters of the United States and the project sponsor or contractor would be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit from KDHE and/or other state and local permits if applicable.

Mitigation Measures

The Recommended Plan would not result in any significant adverse impacts to the human environment. If the secondary borrow area was used, the clearing approximately 0.1 acres of treed habitat would be scheduled during winter, a time of the year when most migratory birds are not present to minimize impacts to migratory birds. Also, removing these trees during the winter

would serve as a precaution and conservation measure to avoid any take of northern long-eared bat, a species that is protected as threatened under the Endangered Species Act. No additional efforts to avoid, minimize, or mitigate for project impacts are proposed.

Public Availability

On June 22, 2015, a Notice of Availability was distributed by USACE announcing the availability of the draft Supplemental Environmental Assessment for a 30-day public comment period. Since that time, another borrow area was identified that is more desirable because of its location and the quality of material. On August 14, 2015, a revised Notice of Availability was distributed for a 15-day public comment period that includes updated information regarding the changes to the draft Supplemental Environmental Assessment. Information concerning the revised Notice of Availability and updated draft Supplemental Environmental Assessment is being e-mailed to entities on the Kansas City District Regulatory Branch distribution list. Hardcopies are available upon request. During this 15-day public comment period all agencies included in the previous 30-day Notice of Availability would be included in the 15-day notice. The updated draft Supplemental Environmental Assessment is available on the Kansas City District Public Notice website at: <http://www.nwk.usace.army.mil/Media/PublicNotices/PlanningPublicNotices.aspx>. Comments from the 30-day comment period were received from the U.S. Environmental Protection Agency, the Osage Nation, and Kansas Department of Health and Environment and are included in Appendix B of the Environmental Assessment.

Conclusion

After evaluating the anticipated effects of the Recommended Plan for the Oakland Levee Project, as described in the Supplemental Environmental Assessment, I have determined that this plan does not constitute a major Federal action that would significantly affect the quality of the human environment; and therefore, preparation of an Environmental Impact Statement is not required.

Date

Andrew D. Sexton
Colonel, Corps of Engineers
District Commander

Oakland Levee Unit – Supplemental Environmental Assessment to the *Final Revised Environmental Assessment City of Topeka Flood Risk Management Study Topeka, Kansas*

Table of Contents

1.0	Introduction.....	3
1.1	Purpose and Need	3
1.2	Location and Existing Site Characteristics	3
1.3	Agency and Public Coordination.....	4
2.0	Alternatives.....	5
3.0	Affected Environment.....	8
3.1	Water Quality.....	8
3.2	Prime and Unique Farmlands.....	8
3.3	Wetlands	8
3.4	Forested/Wildlife Resources.....	8
3.5	Threatened and Endangered Species	9
3.6	Invasive Species.....	9
3.7	Cultural Resources.....	9
3.8	Visual Quality	10
3.9	Noise	10
3.10	Air Quality	10
3.11	Socioeconomics	11
3.12	Recreation	11
3.13	Hazardous, Toxic, and Radioactive Wastes (HTRW).....	11
4.0	Environmental Consequences.....	11
4.1	Water Quality.....	11
4.2	Prime and Unique Farmlands.....	12
4.3	Wetlands	13
4.4	Forested/Wildlife Resources.....	13
4.5	Threatened and Endangered Species	14
4.6	Invasive Species.....	14
4.7	Cultural Resources.....	15
4.8	Visual Quality	15
4.9	Noise	16
4.10	Air Quality	16
4.11	Socioeconomics	17
4.12	Recreation	17
4.13	Hazardous, Toxic, and Radioactive Wastes (HTRW).....	18
5.0	Cumulative Impacts	18
6.0	Compliance with Environmental Quality Statutes.....	20
7.0	Conclusion	21
8.0	List of Preparers	21
9.0	References.....	22

Appendices

APPENDIX A – Agency Coordination

APPENDIX B – Notices of Availability and Public Comments

APPENDIX C – Hazardous, Toxic, and Radioactive Waste (HTRW) Report

APPENDIX D – Cultural Resources Coordination

1.0 Introduction

The U.S. Army Corps of Engineers, Kansas City District (USACE) in partnership with the City of Topeka, Kansas propose a flood risk reduction project located in Topeka, Kansas within the Kansas River Basin. The Oakland Levee project is authorized under Section 216 of the 1970 Flood Control Act. An Environmental Assessment for three levee units in Topeka, Kansas was prepared and a Finding of No Significant Impact was signed in December 2008. Since that time, modifications have been proposed to the Oakland Levee Unit project design. These include under seepage berm modifications, improvements to interior drainage structures, adding rock anchors to the East Oakland pump station, and identification of new borrow locations.

This document serves as a supplement to the *Final Revised Environmental Assessment City of Topeka Flood Risk Management Study Topeka, Kansas* (2008 Environmental Assessment) that was prepared in 2008 (USACE, 2008). Because this document is a supplement to an existing Environmental Assessment, the focus of the analysis is limited to those features that differ from what was previously evaluated. This Supplemental Environmental Assessment provides the necessary information to properly and fully assess the proposed modifications to the Oakland Levee Unit project as required by the National Environmental Policy Act (NEPA) of 1969, as amended (41 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 USACE Engineering Regulation (ER) 200-2-2. For reference, the projects feasibility study and 2008 Environmental Assessment with Finding of No Significant Impact can be found at <http://www.nwk.usace.army.mil/Missions/CivilWorks/CivilWorksProgramsAndProjects/Topeka,KanFloodRiskManagement.aspx>.

1.1 Purpose and Need

The overall purpose of the Oakland Levee project is to increase the reliability of the flood risk management system for the City of Topeka by improving structural weaknesses and correcting levee underseepage safety concerns. The recommended plan is needed to reduce the risk to the local population from flooding due to levee geotechnical and structural weaknesses while maintaining the performance of the system as originally authorized and intended by Congress. The Oakland Levee has a history of severely flooding the local community, resulting in severe socioeconomic impacts. Additionally, the East Oakland pump station currently does not meet the safety requirements and is expected to fail when flood stages reach seven feet from the top of the pump station walls. Failure of the pump station would allow floodwaters to enter the protected area, therefore preventing interior drainage from being discharged into the river. This Supplemental Environmental Assessment has been prepared to evaluate potential impacts to the human environment for proposed modifications to the design of certain features that were described in the 2008 Environmental Assessment and Finding of No Significant Impact.

1.2 Location and Existing Site Characteristics

Oakland Levee project is located directly east of downstream of downtown Topeka, KS along the right bank of the Kansas River. The levee is approximately ten miles long and protects roughly 7,241 people. The levee protects approximately 3,000 residential homes, nearly 231

businesses, approximately 1,000 acres of agricultural fields, Philip Billard Municipal Airport, a BNSF rail yard, schools, churches, and various city infrastructures such as the city waste water treatment plant among others. The Oakland Levee ties into the Shunganunga Creek levee system. The project area can be seen on Figure 1.

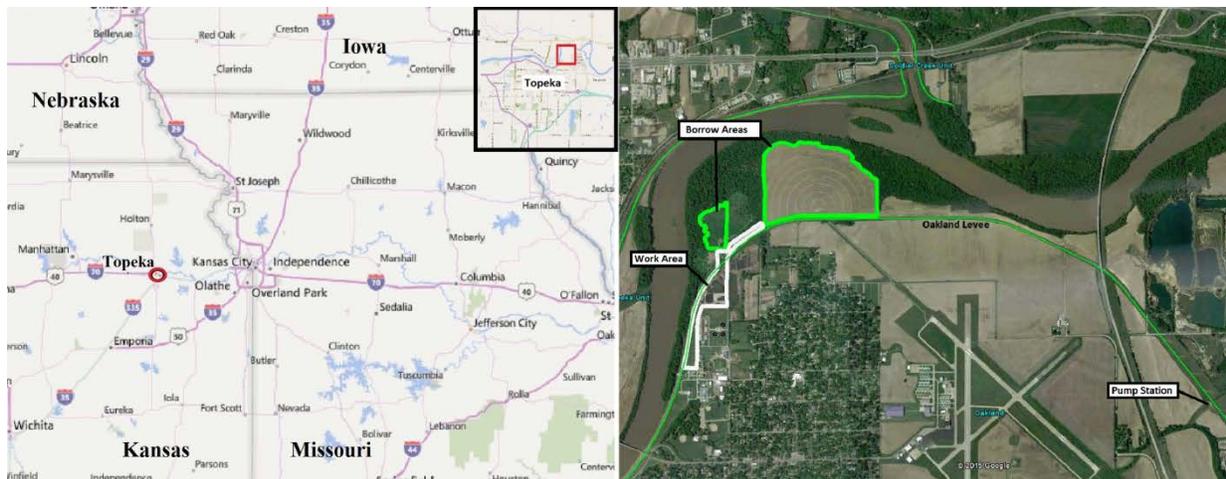


Figure 1: Location of project area located in Topeka, Kansas.

1.3 Agency and Public Coordination

The currently proposed modifications to the project have been coordinated with the U.S. Fish and Wildlife Service (USFWS) and Kansas Department of Wildlife, Parks and Tourism (KDWPT). See Sections 5.0 and 16.0 of the 2008 Environmental Assessment for previous details regarding agency and public coordination. USFWS indicated that the project lies within the range of the northern long-eared bat, a species recently listed as federally threatened. Interim survey guidance protocols for this species were provided, as was information concerning the Migratory Bird Treaty Act. See Appendix A – Agency Coordination. A response letter from KDWPT regarding proposed project modifications was received on April 25, 2015. Additional coordination with USFWS took place after a 30-day public comment period to address any concerns regarding the addition of the primary borrow area. See Appendix A for coordination letters.

On June 22, 2015, a Notice of Availability was issued by USACE announcing the availability of the draft supplemental EA for a 30-day public comment period. Since that time, another borrow area was identified that became the primary borrow location for the project. On August 14, 2015, a revised Notice of Availability is being issued for a 15-day public comment period that includes updated information regarding the changes to the draft supplemental EA. Information concerning the revised Notice of Availability and updated draft supplemental EA is being e-mailed to entities on the Kansas City District Regulatory Branch distribution list. Hardcopies are available upon request. During this 15-day public comment period, the updated draft supplemental EA is available on the Kansas City District Public Notice website at: <http://www.nwk.usace.army.mil/Media/PublicNotices/PlanningPublicNotices.aspx>. Comments from the 30-day comment period were received from the U.S. Environmental Protection Agency

(USEPA), the Osage Nation, and Kansas Department of Health and Environment (KDHE) and are included in Appendix B of the Environmental Assessment.

Comments from the USEPA concurred that the project would not result in any significant impacts, but recommended additional information concerning the removal of borrow material from the secondary borrow area be included in this Final Supplemental Environmental Assessment. Additional information has been added to Section 4.2 as a result of this recommendation. Comments from the Osage Nation stated that the project “most likely will not adversely affect any sacred properties and/or properties of cultural significance to the Osage Nation”. Comments from KDHE included guidance on measures to protect water quality during project construction. These measures will be incorporated into the project as part of the National Pollutant Discharge Elimination System permit that will be obtained by the construction contractor. A copy of the 30-day Notice of Availability and associated comment letters are included in Appendix B of the Environmental Assessment.

2.0 Alternatives

This section describes the alternatives considered in detail for the Supplemental Environmental Assessment. In addition to the No-Action Alternative, two other alternative plans were considered. These consist of implementing the project as described in the 2008 Environmental Assessment, Alternative 2, and a new alternative, Alternative 3. The alternatives were evaluated in detail in Section 4 before identifying a Recommended Plan.

Alternative 1 – No Action: The No Action Alternative would consist of not modifying structural weakness in the Oakland Levee Unit and not installing rock anchors to East Oakland pump plant, leaving portions of Topeka, Kansas prone to socioeconomic damages during large storm events from the Kansas River. There would also be an increase risk to life due to the dense population within the protected area. This alternative would not meet the purpose and need of the project as described in the 2008 Environmental Assessment.

Alternative 2 – Maintain previously approved levee improvements: Alternative 2 would result in modifications to the Oakland Levee Unit being constructed as proposed in Section 7.0 of the 2008 Environmental Assessment. Sometime after the 2008 Environmental Assessment was approved an examination of the Oakland Levee discovered a 1,200 foot section the levee also had underseepage safety issues. Modifications as described in the 2008 Environmental Assessment would not resolve all geotechnical and structural weaknesses in the levee or solve current interior drainage issues resulting from implementation of the project. Alternative 2 was not considered for the recommended plan because it would not resolve all underseepage safety concerns for the Oakland Levee system.

Alternative 3 – Modify previously approved levee improvements (Recommended Plan): This alternative would consist of modifying the Oakland Levee Unit by constructing underseepage berms (Figure 2), improving interior surface drainage, installing rock anchors to East Oakland pump station, and using borrow material from the approximately 10 acre primarily borrow location shown on Figure 3. If additional material is needed, it would be obtained from the secondary location shown in Figure 3. The secondary borrow location is approximately 86

acres. Approximately 4-5 acres in either borrow location would be needed based on soil types. The primary borrow area is located on city property and has the shortest haul route, 250 feet, to the work area. The secondary borrow location is located on a private agricultural field and has a haul route of approximately 1700 feet. Underseepage improvements would be constructed at the landward toe of the levee on city waste water treatment plant property. The combined underseepage berm area is approximately 4.6 acres and would require approximately 21,000 cubic yards of borrow material. Borrow would be hauled by truck using the primary haul route from city property and a secondary route is available if additional borrow material is needed. Both haul routes are shown on Figure 3. The borrow area(s) and haul route(s) would be returned to approximate preconstruction grades and contours. If used, the secondary borrow area would be restored to its pre-construction agricultural capabilities. Topsoil would be removed and stockpiled within the borrow area(s) boundary to be returned to its original location once borrow material has been obtained. The project sponsor, county, and/or contractor would be responsible for issuing safety considerations associated with operation of heavy construction equipment in relation to recreational activities associated with the All-Terrain Vehicle (ATV) Park. Other features related to the underseepage berm include interior drainage improvements to prevent surface water runoff ponding at the landward toe of the levee. The East Oakland pump station would have rock anchors installed to stabilize the structure from floodwaters and prevent the pump station from failure during flood events. The supporting rock anchors would be located around the exterior perimeter of the building and are secured by drilling into the existing bedrock. Native grasses, and forbs, including milkweed to benefit insect pollinators, would be planted in all disturbed areas of the construction footprint for erosion and invasive species control. If used, secondary borrow area would not receive erosion control plantings and would likely return to privately owned agricultural practices.



Figure 2: Underseepage Berm Areas.

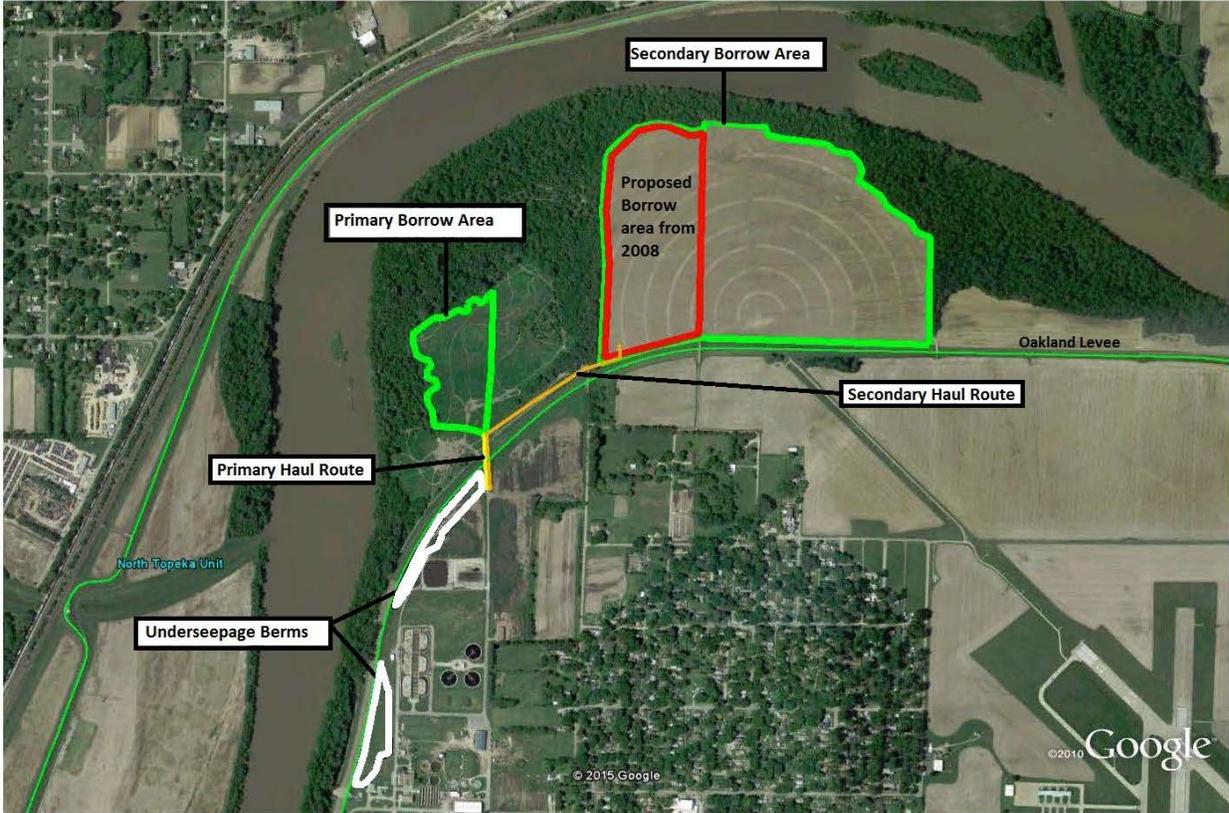


Figure 3: Borrow Areas and Haul Routes.

3.0 Affected Environment

This chapter presents the affected environment within and surrounding the project footprint. It only includes those resources that could be impacted by one of the proposed alternatives. Existing conditions within the project footprint appear to have only a few minor changes since the 2008 Environmental Assessment was prepared. Information included in this section was obtained from site visits, geographic information systems data, literature searches, review of maps and aerial photography, agency coordination, and previous reports. See Section 10 in the 2008 Environmental Assessment for affected environmental conditions previously assessed.

3.1 Water Quality

A 2014 KDHE 303(d) List of Impaired Waters indicates that the Kansas River adjacent to the project footprint has multiple impairments (KDHE 2014). These include impacts to aquatic life from total phosphorus and total suspended solids, water supply impairments from sulfate, and recreation impairments from E. coli and Fecal Coli from Topeka to Ogden, Kansas. For additional water quality and aquatic resources information refer to Section 10.1 of the 2008 Environmental Assessment.

3.2 Prime and Unique Farmlands

These resources are institutionally important because of the Food Security Act of 1985, as amended, and the Farmland Protection Policy Act of 1981. They are technically important because they provide habitat for open and forest-dwelling wildlife, and the provision or potential for provision of forest products and human and livestock food products. These resources are publicly important because of their present economic value or potential for future economic value. The secondary borrow area, shown in Figure 3, is considered prime and unique farmland.

3.3 Wetlands

There are no wetlands within or adjacent to the project footprint. Because of this, a Clean Water Act Section 404 and 401 authorizations would not be required. For additional information regarding wetlands refer to Section 10.2 of the 2008 Environmental Assessment.

3.4 Forested/Wildlife Resources

Most of the forest and woodland in the study area has been greatly impacted by urban development. However, approximately 135 acres of forested habitat is located adjacent to the project work area along the Kansas River. Small patches of trees do exist within and next to the project footprint. A list of typical wildlife species found in the area is located in Appendix C of the 2008 Environmental Assessment.

3.5 Threatened and Endangered Species

USFWS and KDWPT were contacted to request information regarding federal- and state-listed threatened, endangered, candidate species, or species of special concern that have potential to occur in the project area (Appendix A). Species in these categories that may potentially occur in the area are identified in Table 1.

Table 1: Threatened and endangered species.

Common Name	Scientific Name	Status
Northern Long-Eared Bat	<i>Myotis septentrionalis</i>	Threatened

The federally protected northern long-eared bat is listed as a threatened species under the Endangered Species Act. Northern long-eared bats have been experiencing rapidly declining populations due to white nose syndrome, a fungal pathogen (USFWS 2015). During winter this species of bat is known to hibernate in caves and abandoned mines. Summer habitat is currently not well defined, but it is believed that roosting habitat includes dead or live trees and snags with cavities, peeling or exfoliating bark, split tree trunk and/or branches. Foraging habitat includes upland and lowland woodlots and tree lined corridors. Occasionally, they may roost in structures like barns and sheds. Coordination with USFWS determined that potential habitat for northern long-eared bat is within the project area. Trees located along the proposed haul route have the potential to provide suitable habitat for the northern long-eared bat.

3.6 Invasive Species

Invasive species have the potential to displace native plants and animals. According to Executive Order 13122, federal agencies may not authorize, fund, or carry out actions that are likely to cause or promote the introduction or spread of invasive species. Invasive aquatic species that are a concern in Kansas which have the potential to be introduced into new water bodies as a result of contaminated construction equipment include zebra mussels, purple loosestrife, and Eurasian water-milfoil, among others. Invasive terrestrial species often flourish on land that has recently been disturbed. They may also be transported to new locations on construction equipment. Examples of invasive terrestrial species of concern in Kansas include johnsongrass, reed canary grass, sericea lespedeza, and Japanese honeysuckle, among others. Invasive plant species are common on disturbed lands in the general project area.

3.7 Cultural Resources

Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, requires federal agencies to take into account the effects of their undertakings on historic properties. By definition, historic properties are properties eligible for or listed on the National Register of Historic Places (NRHP). Federal undertakings refer to any federal involvement including funding, permitting, licensing, or approval. Federal agencies are required to define and document the Area of Potential Effect (APE) for undertakings. The APE is defined as the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if such properties exist.

A background review of the projects secondary borrow area was conducted using the Kansas Historical Society Archeological Map viewer on-line. No sites were identified within the project area. The results of the background review were coordinated by letter with State Historic Preservation Officer (SHPO) on June 1st, 2015 (Appendix D). USACE requested concurrence that any proposed work in the project area would have no effect on historical properties and that work could proceed without further coordination, unless archeological materials were discovered during construction. SHPO concurred with this recommendation in a letter dated June 8th, 2015 (Appendix D). The same online review was conducted for the primary borrow area and no sites were identified. The SHPO concurred with this determination in letter dated August 04th, 2015. (Appendix D)

3.8 Visual Quality

The Kansas River adjacent to the project area contains floodplain forest, sand bars, islands, and bluffs, which provide natural diversity to the river corridor landscapes. Cropland, grassland, and forested land are established in portions of the river's floodplains. Existing levees and flood risk management mechanisms that have been installed to prevent bank or levee erosion interrupt the natural character of the river systems. However, flood risk management features have been in place for many years and in many instances may blend in with the adjacent natural landscape. The residential and industrial areas near the project footprint are also part of the present visual quality.

3.9 Noise

Existing sound levels throughout the Topeka metropolitan area are highly variable depending on location. Sound levels range from relatively loud noises associated with urban and industrial activities to very quiet rural environments. Noise sources within the project area include agricultural and industrial activities, traffic on roads, aircraft over-flights, and natural sounds such as wind through trees and water falling over rocks. Ambient noise levels are generally dependent upon the level of urban development and associated activities conducted within a given area. For further details see Section 10.8 of the 2008 Environmental Assessment.

3.10 Air Quality

In accordance with the Clean Air Act, the U.S. Environmental Protection Agency set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to the environment and public health. The six principal pollutants, also known as "criteria" pollutants, are: ozone, lead, particulate matter, carbon monoxide, nitrogen dioxide, and sulfur dioxide. The proposed project is located in Shawnee County, Kansas. Shawnee County and its surrounding counties are all in full attainment of all NAAQS. The surrounding counties in Kansas are rural and air emissions are not monitored.

3.11 Socioeconomics

Approximately 7,241 people live within the area protected by the levee. The levee protects approximately 3,000 residential homes, nearly 231 businesses, approximately 1,000 acres of agricultural fields, Philip Billard Municipal Airport, a BNSF rail yard, schools, churches, and various city infrastructures such as the city waste water treatment plant among others. For further detail see section 10.10 of the 2008 Environmental Assessment.

3.12 Recreation

A county owned and managed ATV Park is located directly east of the primary borrow area. No fences or barriers exist between city and county park property boundaries. ATV users have been using most of both properties.

3.13 Hazardous, Toxic, and Radioactive Wastes (HTRW)

The HTRW investigations consisted of a records search of past and present environmental activities and enforcement actions near the project site. A previous investigation was conducted during the 2008 Environmental Assessment. Information regarding the results of the previous HTRW investigation of the project area can be found in Section 11.0 of the 2008 Environmental Assessment. To address any potential HTRW concerns regarding proposed project modifications an updated investigation was conducted by USACE in April, 2015. The updated investigation covered the entire project and adjacent areas, which encompassed both the primary and secondary borrow locations. No new HTRW sites were identified. Detailed locations of concern are included on a map in Appendix C – Hazardous, Toxic, and Radioactive Waste (HTRW).

4.0 Environmental Consequences

This section presents the evaluation of direct and indirect impacts of the alternatives on the human environment. The significance of an action depends on both context and intensity. Context is related to any short or long-term impacts in a specific location. Intensity is related to the severity of the impact, either beneficial or adverse. Refer to 40 CFR Section 1508.27 for a detailed description of context and intensity. Alternatives considered in this document would not require mitigation; therefore mitigation will not be discussed in further detail in this section. No wetlands are located in the project area as discussed in See Section 10.2 of the 2008 Environmental Assessment. Additionally, Environmental Justice is discussed in the 2008 Environmental Assessment and is applicable to all alternatives considered in this document. There are no Environmental Justice concerns for any of the proposed alternatives and Environmental Justice will not be discussed further in this document. See Section 12.0 in the 2008 Environmental Assessment for further details regarding Environmental Justice.

4.1 Water Quality

Alternative 1 – No Action: Alternative 1 would not result in any changes to the existing condition of water quality in the project area. See Section 10.1 of the 2008 Environmental

Assessment for further details regarding the No Action alternative and water quality. In the unlikely event a large flood was to occur and breach the levee, short-term temporary impacts to water quality would result from inundation. Inundated areas would transport urban non-point source pollutants into the river and mix with other flooded waters of the river system.

Alternative 2 – Maintain previously approved levee improvements: Alternative 2 would not result in any direct or indirect significant impacts to water quality as determined in Section 10.1 of the 2008 Environmental Assessment. Negligible short-term impacts could result from construction activities adjacent to the Kansas River from increased turbidity of surface water runoff. These impacts would cease once construction was complete. The project sponsor or contractor would be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit from KDHE and/or other state and local permits if applicable. They would be required to comply with KDHE Best Management Practices and formatting requirements. A NPDES permit and Best Management Practices would be implemented during all aspects of construction to minimize any potential construction related impacts to water quality. It is not expected that Alternative 2 would contribute or improve water quality as it pertains to the KDHE 303(d) list. Additionally, Section 17.0 of the 2008 Environmental Assessment indicates that 401 and 404(b) permits are not required for this project.

Alternative 3 – Modify previously approved levee improvements (Recommended Plan): All impacts to water quality would be similar to Alternative 2. The project sponsor or contractor would be required comply with KDHE and/or other state and local permits or regulations if applicable as described in Alternative 2. The Recommended Plan would not contribute or improve water quality as it pertains to the KDHE 303(d) list. Section 17.0 of the 2008 Environmental Assessment indicates that 401 and 404(b) permits are not required for this project. Impacts to the Kansas River from the use of either borrow area would be negligible. Disturbed areas from construction would be reseeded with native grasses and forbs to prevent erosion. The contractor would be required to use best management practices in disturbed areas. The secondary borrow area is an agricultural field that has seasonal crops and is exposed for much of the year. If flooding would occur, project activities would not contribute to the addition to sediment to the river system. It is more likely that the Kansas River would deposit sediments from the river onto the borrow areas because the borrow areas are located on the inside bend of the river and is mostly forested around edges.

4.2 Prime and Unique Farmlands

Alternative 1 – No Action: The No Action Alternative would not result in any direct or indirect impacts to prime and unique farmland. See Section 10.3 of the 2008 Environmental Assessment for details regarding prime farmland.

Alternative 2 – Maintain previously approved levee improvements: The secondary borrow area considered for underseepage improvements for Alternative 2 is considered prime farmland. If used, impacts to prime farmland at this location would be short term and temporary. No significant impacts to prime farmland would result from Alternative 2. The secondary borrow area would be restored to its original farm use capabilities. See Section 10.3 of the 2008

Environmental Assessment for details regarding prime farmland impacts resulting from Alternative 2.

Alternative 3 – Modify previously approved levee improvements (Recommended Plan):

The secondary borrow area for Alternative 3 is considered prime farmland as indicated in Section 10.3 of the 2008 Environmental Assessment. If used, removing roughly 21,000 cubic yards of material from the borrow area would result in an approximately one to two foot change in elevation. However, the borrow area would be graded to drain and minimize the potential for any underseepage problems to develop. The likelihood of increased underseepage is minimal and is not expected to impact future crop production. This area would be restored to a condition suitable for its existing use for agricultural crops. If borrow is taken during the growing season, compensation for agricultural or financial losses would be addressed in agreements between the landowner and the project sponsor, who is responsible for obtaining all lands needed for the project. No significant impacts to prime farmlands would result from the Recommended Plan.

4.3 Wetlands

Alternative 1 – No Action: The No Action Alternative would not result in any direct or indirect impacts to wetlands. No wetlands exist within the project area.

Alternative 2 – Maintain previously approved levee improvements: Alternative 2 would not result in any direct or indirect impacts to wetlands. No wetlands exist within the project area.

Alternative 3 – Modify previously approved levee improvements (Recommended Plan): Alternative 3 would not result in any direct or indirect impacts to wetlands. No wetlands exist within the project area.

4.4 Forested/Wildlife Resources

Alternative 1 – No Action: The No Action alternative would not result in any direct or indirect impacts to forested or wildlife resources within or adjacent to the project area. Though unlikely, if flooding resulted from levee failure as a result of the No Action alternative, it is expected that forested areas and wildlife resources living in the floodplain would be adapted for flood conditions or move to non flooded areas. No construction related impacts to forested or wildlife resources would occur.

Alternative 2 – Maintain previously approved levee improvements: This plan would not result in any direct or indirect significant impacts to forested or wildlife resources. No trees were anticipated to be cleared for construction of Alternative 2. Forested areas and wildlife resources living in the floodplain would likely be adapted for flood conditions and it's expected that little to no impacts to these resources would occur. All other forested and wildlife resource impacts would be same as describe in Section 10.4 of the 2008 Environmental Assessment.

Alternative 3 – Modify previously approved levee improvements (Recommended Plan): The Recommended Plan could have minor negative impacts to forested resources if the secondary borrow location is used. Less than 0.1 acres of trees may be removed to construct a secondary

haul route. These trees are located near the Northeast Chester Avenue and Northeast North Avenue. If this haul route is required, trees would be cleared during the winter months to avoid any potential direct impacts to northern long-eared bats. The riparian corridor adjacent to the project area is well forested and would provide enough habitat for any wildlife displaced or negatively impacted. Additionally, if borrow material is taken during the planting season, wildlife in the area could utilize adjacent agricultural fields for foraging. Removal of trees during the winter months, as stated in Section 5 below, would avoid any direct impacts to migratory birds. No significant impacts to forested or wildlife resources are anticipated.

4.5 Threatened and Endangered Species

Alternative 1 – “No Action”: The “No-Action” alternative would not result in any impacts to federal or state listed threatened or endangered species. There would not be any impacts to northern long-eared bat protected under the Endangered Species Act.

Alternative 2 – Maintain previously approved levee improvements: This alternative may, but is not likely to adversely affect any federally-listed threatened or endangered species that are currently protected under the Endangered Species Act. Federally protected northern long-eared bats could be found in the project area. However, as a precaution to avoid any take of this species, removal of any trees and snags that may provide habitat for this species would occur during the winter of November 2015 through February 2016, a time of the year when northern long-eared bats would not be present. This alternative is not likely to adversely affect northern long-eared bats. See Section 10.5 of the 2008 Environmental Assessment for further impact details regarding threatened and endangered species.

Alternative 3 – Modify previously approved levee improvements (Recommended Plan): The Recommended Plan may, but is not likely to adversely affect any federally-listed threatened or endangered species currently protected under the Endangered Species Act. The primary borrow area would not result the clearing of any trees and would have fewer potential impacts to threatened and endangered species than the secondary borrow area. If the secondary borrow area is required, trees and snags would be removed during the winter of November 2015 to February 2016. These precautions would avoid any take of northern long-eared bats as previously described in Alternative 2. This alternative would not likely adversely affect northern long-eared bats.

4.6 Invasive Species

Alternative 1 – “No Action”: The “No-Action” alternative would not likely result in the introduction of any invasive species. Levee failure could result of implementing the No Action alternative and it is possible that flood waters would carry and spread invasive species throughout the floodplain.

Alternative 2 – Maintain previously approved levee improvements: Alternative 2 is not likely to transfer any invasive species to or from the project site. The construction contractor would be required to wash their equipment prior to entering and leaving the construction site to avoid the spread of both terrestrial and aquatic invasive species by their equipment. Disturbed

land areas would be replanted with native grass and forbs species to minimize the likelihood that invasive plants would become established. All plant materials would be free from any federal or state listed noxious weeds. Any straw or mulch used for erosion control would also be certified weed free.

Alternative 3 – Modify previously approved levee improvements (Recommended Plan): The Recommended Plan is not expected to transfer any invasive species to or from the project site. Precautions to prevent the introduction of invasive species as described for Alternative 2 would also be used for this alternative.

4.7 Cultural Resources

Alternative 1 – “No Action” Alternative: The “No Action” Alternative would have no effect on any cultural resources within or adjacent to the project area.

Alternative 2 – Maintain previously approved levee improvements: It was determined in 2008 that this plan would likely have no affect on cultural resources. At that time, the Kansas State Historic Preservation Officer (SHPO) concurred with the determination. In the unlikely event that archeological material is discovered during project construction, work in the area of discovery would cease until the discovery is investigated by a qualified archeologist, and coordinated with the SHPO and federally recognized Native American tribes. See Section 10.6 of the 2008 Environmental Assessment for further impact details regarding cultural resources.

Alternative 3 – Modify previously approved levee improvements (Recommended Plan): The Recommended Plan would likely have no affect on cultural resources. The Recommended Plan was coordinated with the Kansas SHPO in a letter dated June 1st, 2015 (Appendix D). The SHPO concurred with this determination in a letter on June 8th, 2015 (Appendix D). On July 31st, 2015 an additional letter was sent to the SHPO discussing the updated information of the primary borrow site (Appendix D). The SHPO concurred with this updated determination that the Recommended Plan would not likely have no affect on cultural resources in a letter dated August 04th, 2015 (Appendix D). Federally recognized Native American Tribes with ties to the area are notified of the proposed project through the standard draft Environmental Assessment notification process during 30 day public comment period and the 15 day public comment period regarding the updated primary borrow location. If in the unlikely event that archeological material is discovered during project construction, work in the area of discovery would cease until the discovery is investigated by a qualified archeologist and coordinated with the SHPO and federally recognized Native American tribes.

4.8 Visual Quality

Alternative 1 – “No Action”: Under the No-Action Alternative, there would be no modifications to the existing flood risk management system. In the absence of federal action addressing levee improvements, a high water event could result in widespread aesthetic impacts including deposits of debris, dead trees and property damage.

Alternative 2 – Maintain previously approved levee improvements: Alternative 2 would not result in significant impacts to the visual quality. All impacts would be short term and temporary. Failure of the levee would result in possible visual quality impacts as indicated under the No Action alternative. Additional visual quality impact details are discussed in Section 10.7 of the 2008 Environmental Assessment.

Alternative 3 – Modify previously approved levee improvements (Recommended Plan): Alternative 3 impacts to visual quality would be short term and temporary. Impacts associated to visual quality would be construction related. Also, the levees would be seeded with native grasses and forbs on completion of construction. No significant impacts to visual quality would be anticipated.

4.9 Noise

Alternative 1 – “No Action”: Under the No-Action Alternative, there would be no modifications to the existing flood risk management system and no noise impacts

Alternative 2 – Maintain previously approved levee improvements: No significant noise impacts are expected to result from implementing Alternative 2. Additional noise impact details are discussed in Section 10.8 of the 2008 Environmental Assessment.

Alternative 3 – Modify previously approved levee improvements (Recommended Plan): No significant noise impacts are expected to result from implementing the Recommended Plan. Impacts would be the same as the Future Conditions with Recommended Plan in Section 10.8 of the 2008 Environmental Assessment.

4.10 Air Quality

Alternative 1 – “No Action”: No significant impacts to air quality are anticipated from the No Action alternative. See Section 10.9 of the 2008 Environmental Assessment for further details regarding air quality.

Alternative 2 – Maintain previously approved levee improvements: No significant air quality impacts are expected to result from implementing Alternative 2. The project is located in an attainment area, which is an area wherein the concentrations of all criteria pollutants meet the NAAQS (EPA, 2015). Failure of the levee would result in possible air quality impacts as indicated under the No Action alternative. Additional air quality impact details are discussed in Section 10.9 of the 2008 Environmental Assessment.

Alternative 3 – Modify previously approved levee improvements (Recommended Plan): No significant air quality impacts are expected to result from implementing the Recommended Plan. The project is located in an attainment area, which is an area wherein the concentrations of all criteria pollutants meet the NAAQS (EPA, 2015). Impacts would be the same the Future Conditions with Recommended Plan in Section 10.9 of the 2008 Environmental Assessment.

4.11 Socioeconomics

Alternative 1 – “No Action”: No Action alternative could result in severe flood damage to things like urban neighborhoods, schools, local businesses, industrial areas, city infrastructure/utilities, and an airport from levee failure. Business owners and residents would likely incur large premium increases for flood insurance. Insurance requirements would discourage new business development and the entry of large private employers. The Topeka sewage treatment facilities would likely be damaged and their operations interrupted periodically. Also, Topeka would also likely lose opportunities for development in parcels located in the Oakland area. Additional No Action socioeconomic impact details see Section 10.10 of the 2008 Environmental Assessment.

Alternative 2 – Maintain previously approved levee improvements: Failure of the levee would result in possible socioeconomic impacts as described under the No Action alternative. For additional Alternative 2 socioeconomic impacts see Section 10.10 of the 2008 Environmental Assessment. Alternative 2 is not expected to result in any significant impacts to socioeconomics.

Alternative 3 – Modify previously approved levee improvements (Recommended Plan): Alternative 3 would address all structural weaknesses in the Oakland levee system and protect everything within the levee to a one-percent annual exceedance probability of flood risk management. Alternative 3 impacts to socioeconomics would be similar to the impacts of the Future Conditions with the Recommended Plan in Section 10.10 of the 2008 Environmental Assessment. No significant impacts to socioeconomics are expected from Alternative 3.

4.12 Recreation

Alternative 1 – “No Action”: The No Action alternative would have no direct impacts to recreation. The recreational ATV Park is located on the riverward side of the levee and would be subject periodic flooding.

Alternative 2 – Maintain previously approved levee improvements: Alternative 2 would not likely impact recreation. Project designs as described in the 2008 Environmental Assessment would not impact the ATV Park or other recreational activities in the area.

Alternative 3 – Modify previously approved levee improvements (Recommended Plan): The primary borrow area and haul route is not located on the county owned ATV Park. The project sponsor and/or contractor would be responsible for safety precautions and developing a safety plan to prevent ATV and other recreational users from entering the primary borrow area during construction. If the secondary borrow area is used the ATV park could have temporary restrictions or be closed during construction. Temporary restrictions and/or closure would be decided by the project sponsor, the county, and/or project contractor. If the secondary borrow area is used, limited access or closure would have minor impacts to ATV Park users. These impacts would be short term and temporary and recreational use would resume once construction is complete.

4.13 Hazardous, Toxic, and Radioactive Wastes (HTRW)

Alternative 1 – No Action Alternative: The No Action Alternative would have no effect on any HTRW within or adjacent to the project area. See Section 11.0 in the 2008 Environmental Assessment for further details.

Alternative 2 – Maintain previously approved levee improvements: Former city dumps were identified at the southwest corners of both borrow locations. The primary borrow area is recorded as having concrete, rubble, and wooded debris. The secondary borrow location was described as having debris from a 1968 tornado. The limits of the disposal cells are unknown. The project sponsor would be responsible for costs of handling and removing any HTRW in the event any is discovered. If HTRW is discovered the contractor would resume work only at such a time as directed and agreed to by the USACE and project sponsor. By taking the necessary precautions described herein, it is not expected that Alternative 2 would result in any direct or indirect significant impact to known HTRW sites. See Section 11.0 in the 2008 Environmental Assessment for further details.

Alternative 3 – Modify previously approved levee improvements (Recommended Plan): The Recommended Plan would have identical concerns relative to HTRW concerns as described for Alternative 2. The Recommended Plan would implement the same precautions to avoid any direct or indirect significant impacts to known HTRW sites. Though the borrow areas would be located as seen on Figure 3, no HTRW sites or concerns were identified by USACE during April 2015 investigations.

5.0 Cumulative Impacts

The Council on Environmental Quality (CEQ) Regulations defines cumulative impacts as “the impact on the environment which results from the incremental impact of the action when 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 result in similar effects on the natural resources. The geographical areas of consideration are actions located within/along the Oakland Levee system. For reference, the cumulative impacts discussed in Section 14.0 of the 2008 Environmental Assessment would be similar to alternatives in this document. Mitigation, as discussed Section 14.0 of the 2008 Environmental Assessment, does not apply to this document because proposed alternatives herein do not require mitigation.

Cumulative impacts of the proposed action, consists of relatively minor adverse impacts to the natural environment and aesthetics, with overall positive benefits to the socio-economic environment based on an improved level of protection to the local infrastructure. The project action is not expected to induce development since this plan would result in modifications to an existing levee system. The proposed action would not involve a levee raise or additional levees, but would only correct existing geotechnical and structural weaknesses to increase the reliability of the flood risk management system for the Oakland Levee system in Topeka, KS.

Implementation of the project would involve temporary impacts to prime farmland, if the secondary borrow area is used, aesthetics, wildlife resources, recreation, and human environment thru construction- related noise and minor traffic disruptions. In addition, to reduce impacts to nesting birds, no construction activities in woodland areas would occur during April 1 to July 15. If the secondary borrow area is used, all trees would be removed during November to February to reduce impacts to northern long-eared bats.

If the secondary borrow area is used, the project induced impacts to agricultural areas would be considered minor because steps would be taken to allow these areas to return to agricultural use after borrow and construction operations. Such measures would likely include preservation of the top layer of soil, which would be returned to the site, minimizing excavation depths to reduce impacts to the drainage of fields, and excavating prior to or after the harvest season to minimize impacts to crops. The borrow area would be graded to drain and minimize the potential for any underseepage problems to develop. In addition, no adverse direct or indirect impacts to aquatic resources or water quality are anticipated to occur from project construction activities. For all construction activities, Best Management Practices would be used to minimize the introduction of fuel, petroleum products, or other deleterious material from entering into the waterway and adjacent resources. Control measures would include use of erosion control fences; storing equipment, solid waste, and petroleum products above the ordinary high water mark and away from areas prone to runoff; and requiring that all equipment be clean and free of leaks. In addition, no disproportionate impacts to minorities and low-income groups, and sensitive populations are anticipated to occur from project-related activities.

Past actions such as the clearing of forest for timber and urban and industrial development, flood control, as well as the conversion of forest to agriculture have contributed to substantial adverse impacts to the Kansas River ecosystem. Loss of floodplains and wetlands to agriculture and development has caused loss of biodiversity over the last 100 years. In general, flood risk management reservoirs, dams and weirs have lead to ecological deterioration, increases in contamination, disruption of sediment transfer, and hindrances to fish passage to upstream reaches (Merritt and Cooper, 2000; Mant and Janes, 2006). However, the city water control structure on the Kansas River has positively helped by preventing the spread of invasive species, such as Asian carp upstream from its confluence with the Missouri River.

As the City of Topeka continues to grow and expand through residential development, transportation projects, and commercial development among other activities additional loss of woodland and other habitat types could occur. Other land changes have resulted from construction of levee systems and major changes in transportation over the past several decades (e.g. highway construction and improvements, bridge replacements and rehabilitations). Federal flood risk management involvement within the Kansas River levee units was initiated between the 1940's and the early 1950's, and again after the 1951 flood. The 1951 flood contributed to the support for building flood control reservoirs and improving levee systems throughout eastern Kansas. In Topeka, Federal flood risk management projects consisted of the construction of floodwalls, earthen levees, channel improvements and drainage structures for various levee units. Additional improvements to the levee system were completed in the late 1970s. Today, most of the project area is developed with residential, commercial and industrial development. No

known actions have occurred in the project vicinity that would contribute the cumulative impacts associated with this project.

The impacts resulting from proposed modifications to the existing levee system consist of minor and short term impacts on the human environment and agriculture areas impacted from the project; as well as best management practices to avoid impacts to aquatic resources and water quality. Therefore, these project impacts are considered minor and insignificant when added to other past, present or future actions.

6.0 Compliance with Environmental Quality Statutes

Compliance with environmental laws is listed in Table 1.

Table 1: Compliance with environmental quality statutes.

Federal Policy	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
Environmental Justice (Executive Order 12898)	Full Compliance
Estuary Protection Act, 16 U.S.C. 1221, et seq.	Not Applicable
Farmland Protection Policy Act, 7 U.S.C. 4201, et. seq.	Full Compliance
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
Floodplain Management (Executive Order 11988)	Full Compliance
Invasive Species (Executive Order 13122)	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, as amended, 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
Protection & Enhancement of the Cultural Environment (Executive Order 11593)	Full Compliance
Protection of Wetlands (Executive Order 11990)	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

- 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.

7.0 Conclusion

Following an evaluation of environmental consequences, Alternative 3 has been identified as the Recommended Plan. This alternative best meets the purpose and need of the project as described in this document and in the 2008 Environmental Assessment. The Recommended Plan would not result in any significant adverse impacts, either directly, indirectly, or cumulatively to the human environment. Minor impacts could result from the removal of approximately 0.1 acres of treed habitat. This could have minor, although not significant, impacts on wildlife resources. Actions are incorporated into the plan to avoid any take of migratory birds. This plan would not likely adversely affect any threatened or endangered species. No wetlands would be impacted by this alternative. The Recommended Plan would likely have no affect on cultural resources. The plan would not significantly impact any Waters of the United States and the project sponsor or contractor would be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit from KDHE and/or other state and local permits if applicable.

8.0 List of Preparers

Mr. Chris Name, Biologist, Environmental Resources Section, U.S. Army Corps of Engineers, Kansas City District

Mr. Paul Speckin, Lead Civil Engineer, Geotechnical/Process Engineering Section, U.S. Army Corps of Engineers, Kansas City District

Mr. Tim Meade, Archaeologist, Environmental Resources Section, U.S. Army Corps of Engineers, Kansas City District

Mr. Jesse Granet, Environmental Resources Specialist, Environmental Resources Section, U.S. Army Corps of Engineers, Kansas City District

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.
- EPA. 2015. The Green Book Nonattainment Areas for Criteria Pollutants. As of January 30, 2015. Accessed April 17, 2015. <http://www.epa.gov/airquality/greenbook/>
- KDHE. 2014. Kansas 303(d) List of Impaired Waters, Public Hearing Information and Methodology. As of March 25, 2014. Accessed April 17, 2015. <http://www.kdheks.gov/tmdl/methodology.htm>
- Mant, J., and M. Janes. 2006. *Restoration of Rivers and Floodplains*. Restoration Ecology. pp. 141-157. Eds. Jelte Van Andel and James Aronson. Blackwell Publishing.
- Merritt, David M. and David J. Cooper. 2000. *Riparian vegetation and channel change in response to river regulation: a comparative study of regulated and unregulated streams in the Green River Basin, USA*. *Regulated Rivers. Research & Management*: 16(6). pp 543-564. John Wiley & Sons, Ltd.
- USACE. 2008. Procedures for Implementing the National Environmental Policy Act. Engineer Regulations (ER) 200-2-2. 33 CFR 230.
- USFWS. 2015. Northern Long-eared bat. Accessed May 28, 2015. <http://www.fws.gov/midwest/endangered/mammals/nlba/index.html>.

Appendix A
Agency Coordination



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Kansas Ecological Services Office
2609 Anderson Avenue
Manhattan, Kansas 66502-2801

May 20, 2015

Chris Name, Biologist PM-PR
Corps of Engineers, Kansas City District
601 East 12th Street
Kansas City, Missouri 64106-2896

FWS Tracking # 2015-CPA-0480

Dear Mr. Name`:

We have reviewed the information for the Supplemental Environmental Assessment City of Topeka Flood Risk Management Study Topeka, Kansas. The proposed alterations are to the Oakland Levee Unit, Topeka, Kansas. Your email of April 17, 2015 states that minor changes to the project design include a larger seepage berm area, larger borrow area, minor interior drainage improvements adjacent to the underseepage berm, and rock anchors to a pump station located at Lat 39.069002°N, Long -95.605136°W. A haul route has been identified which may require the removal of less than 0.1 acres of trees which would be removed during the winter months.

We previously provided comments on the Draft Environmental Assessment (EA) and Draft Feasibility Report for the Topeka, Kansas, Flood Risk Management Study in a letter dated October 28, 2008.

Federal Threatened and Endangered Species

On May 4, 2015 the northern long-eared bat (NLEB) was listed as a threatened species under the Endangered Species Act (ESA) with a special rule under section 4(d) of the ESA that provides flexibility to landowners, land managers, government agencies and others as they conduct activities in areas that could be NLEB habitat.

The Service has identified a buffer zone consisting of such area as those counties within 150 miles of the boundaries of U.S. counties or Canadian districts where the White-nose Syndrome has been detected. For illustrative purposes, the most recent map of such areas can be viewed at the website www.fws.gov/midwest/nleb. The map will be updated regularly. Although WNS has not yet been detected in Kansas, portions are included in the buffer zone, **including all of Shawnee County**. Neither our agency nor KDWP has specific information at this time

identifying known maternity roosting trees or hibernacula near the project area.

For more information about the northern long-eared bat, the final listing as threatened, the interim 4(d) rule and related information, visit the Service's web site at www.fws.gov/midwest/endangered/mammals/nleb.

Aerial photography indicates that suitable habitat for the NLEB exists on the project site. Any tree clearing associated with the proposed project should comply with acreage and date conditions established in the interim 4(d) rule. If those acreage and date conditions can't be met, then summer surveys should be conducted to document the presence or likely absence of the northern long-eared bat within the project area during the summer. The survey must be conducted by an approved surveyor and be designed and conducted in coordination with the Endangered Species Coordinator for the U.S. Fish and Wildlife Service, Ecological Services, Kansas Field Office. If it is found, and a "may affect" determination is warranted, formal consultation may be necessary with the Service pursuant to section 7 of the Endangered Species Act (16 U.S.C. 1531 et seq.)

General Comments

Many pollinators, including monarch butterflies, are experiencing significant declines in populations. We encourage you to include native plants that support pollinators in the areas that will be replanted/revegetated. Native milkweeds are especially important to support monarch butterflies. You find more information on monarch butterflies and their conservation at: <http://www.fws.gov/savethemonarch/>.

We recommend a vegetated buffer of a minimum 500-foot wide be maintained along the riverward side of the borrow area. This will inhibit the river from cutting a new channel through the borrow area during times of overbank flows.

The Service appreciates the coordination between the Service and the U.S. Army Corps of Engineers (Corps) throughout the development of this project and values the efforts made to address our concerns.

Thank you for the opportunity to comment on this project. If you have any questions, please contact me or Susan Blackford of my staff at (785) 539-3474.

Sincerely,



Dan Mulhern
Acting Field Supervisor

cc: EPA, Kansas City, KS (Wetland Protection Section)
KDWPT, Pratt, KS (Environmental Services)
KDHE, Topeka, KS (Bureau of Water)

From: [Hofmeier, Jordan](#)
To: [Name, Chris NWK](#)
Cc: [Susan Blackford](#)
Subject: [EXTERNAL] KDWPT Review: Topeka Levee Flood Risk Management Study Design Changes - Oakland Unit (Track #20070264)
Date: Saturday, April 25, 2015 4:06:17 PM

Dear Mr. Name,

We have reviewed the information for the proposed alterations to the Oakland Levee Unit, Topeka, KS. The project was reviewed for potential impacts on crucial wildlife habitats, current state-listed threatened and endangered species and species in need of conservation, and Kansas Department of Wildlife, Parks, and Tourism managed areas for which this agency has administrative authority.

We provide the following comments and general recommendations, when applicable:

- * Re-locate the proposed borrow area to location that is less likely to be flooded during high flows in the Kansas River. The proposed area is very near to and on the inside bend of the Kansas River and has a higher likelihood of flooding, and thus increasing sediment input into the river.
- * Implement and maintain standard erosion-control Best-Management-Practices during all aspects of construction by installing sediment barriers across the entire construction area to prevent sediment and spoil from entering aquatic systems. Silt fences used in conjunction with sandbags is the preferred barrier, but hay bales can be used if properly staked. Barriers should be maintained at high functioning capacity until construction is completed and vegetation is established.
- * Reseed disturbed areas with native warm-season grasses, forbs, and trees.

Results of our review indicate there will be no significant impacts to crucial wildlife habitats; therefore, no special mitigation measures are recommended. The project will not impact any public recreational areas, nor could we document any potential impacts to currently-listed threatened or endangered species or species in need of conservation. No Department of Wildlife, Parks, and Tourism permits or special authorizations will be needed if construction is started within one year, and no design changes are made in the project plans.

Since the Department's recreational land obligations and the State's species listings periodically change, if construction has not started within one year of this date, or if design changes are made in the project plans, the project sponsor must contact this office to verify continued applicability of this assessment report. For our purposes, we consider construction started when advertisements for bids are distributed.

Please consider this email our official review for this project. Thank you for the opportunity to provide these comments and recommendations. Please let me know if you have any questions or concerns about the preceding information.

Please direct all review materials electronically to ess@ksoutdoors.com to streamline the review process

for all parties.

Jordan Hofmeier
Aquatic Ecologist, Ecological Services
Kansas Dept. of Wildlife, Parks, and Tourism
Pratt, KS 67124

Office: (620) 672-0798
Cell: (785) 249-0874

Fax: (620) 672-2972

Appendix B

Notice of Availability and Public Comments



DEPARTMENT OF THE ARMY
KANSAS CITY DISTRICT, CORPS OF ENGINEERS
635 FEDERAL BUILDING
601 E. 12TH STREET
KANSAS CITY MISSOURI 64106-2824

REPLY TO
ATTENTION OF

Project Management
Planning Branch

NOTICE OF AVAILABILITY

The U.S. Army Corps of Engineers, Kansas City District, has prepared a revised draft Supplemental Environmental Assessment and a Finding of No Significant Impact (FONSI) that are available for public review. These documents were prepared in accordance with the National Environmental Policy Act.

The Oakland Levee Unit Project is a flood risk management project located in Topeka, Kansas. An Environmental Assessment and Finding of No Significant Impact for the project were prepared in 2008. Since that time, several modifications have been proposed to the design to improve structural weaknesses, correct levee underseepage safety concerns, and prevent a pump station failure. Additionally, the locations and areas proposed for borrow material has been modified. The project is anticipated to begin construction in 2015 and be completed by 2016.

Previously, a draft version of the Supplemental Environmental Assessment was put on a 30-day public comment period on June 22, 2015. Due to a proposed change to the borrow location after the Notice of Ability was posted, a revised draft Supplemental Environmental Assessment is being provided for an additional 15-day public review period. The Corps is soliciting public comments on the revised draft Supplemental Environmental Assessment and FONSI during an additional 15-day review period that opens August 14, 2015 and will close August 28, 2015. These documents are available for review on the Corps' website at <http://www.nwk.usace.army.mil/Media/PublicNotices/PlanningPublicNotices.aspx>. The reports may also be obtained by contacting Mr. Chris Name, Environmental Resources Specialist, U.S. Army Corps of Engineers, Kansas City District, ATTN: Environmental Resources Section, 601 East 12th Street, Kansas City, Missouri 64106, by telephone at (816) 389-3829 or by email at chris.name@usace.army.mil. All comments should be directed to the above address or email. For an alternate point of contact, please call Mr. Jesse Granet at (816) 389-3470 or email at Jesse.J.Granet@usace.army.mil.

Sincerely,

A handwritten signature in black ink, appearing to read "Jason Farmer", written over a white background.

Jason Farmer
Chief, Environmental Resources Section



DEPARTMENT OF THE ARMY
KANSAS CITY DISTRICT, CORPS OF ENGINEERS
635 FEDERAL BUILDING
601 E. 12TH STREET
KANSAS CITY MISSOURI 64106-2824

REPLY TO
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The Corps is soliciting public comments on the draft Supplemental Environmental Assessment and FONSI during a 30-day review period that opens June 22, 2015 and will close July 22, 2014. These documents are available for review on the Corps' website at www.nwk.usace.army.mil/Media/PublicNotices.aspx. The reports may also be obtained by contacting Mr. Chris Name, Environmental Resources Specialist, U.S. Army Corps of Engineers, Kansas City District, ATTN: Environmental Resources Section, 601 East 12th Street, Kansas City, Missouri 64106, by telephone at (816) 389-3829 or by email at chris.name@usace.army.mil. All comments should be directed to the above address or email. For an alternate point of contact, please call Mr. Jesse Granet at (816) 389-3470.

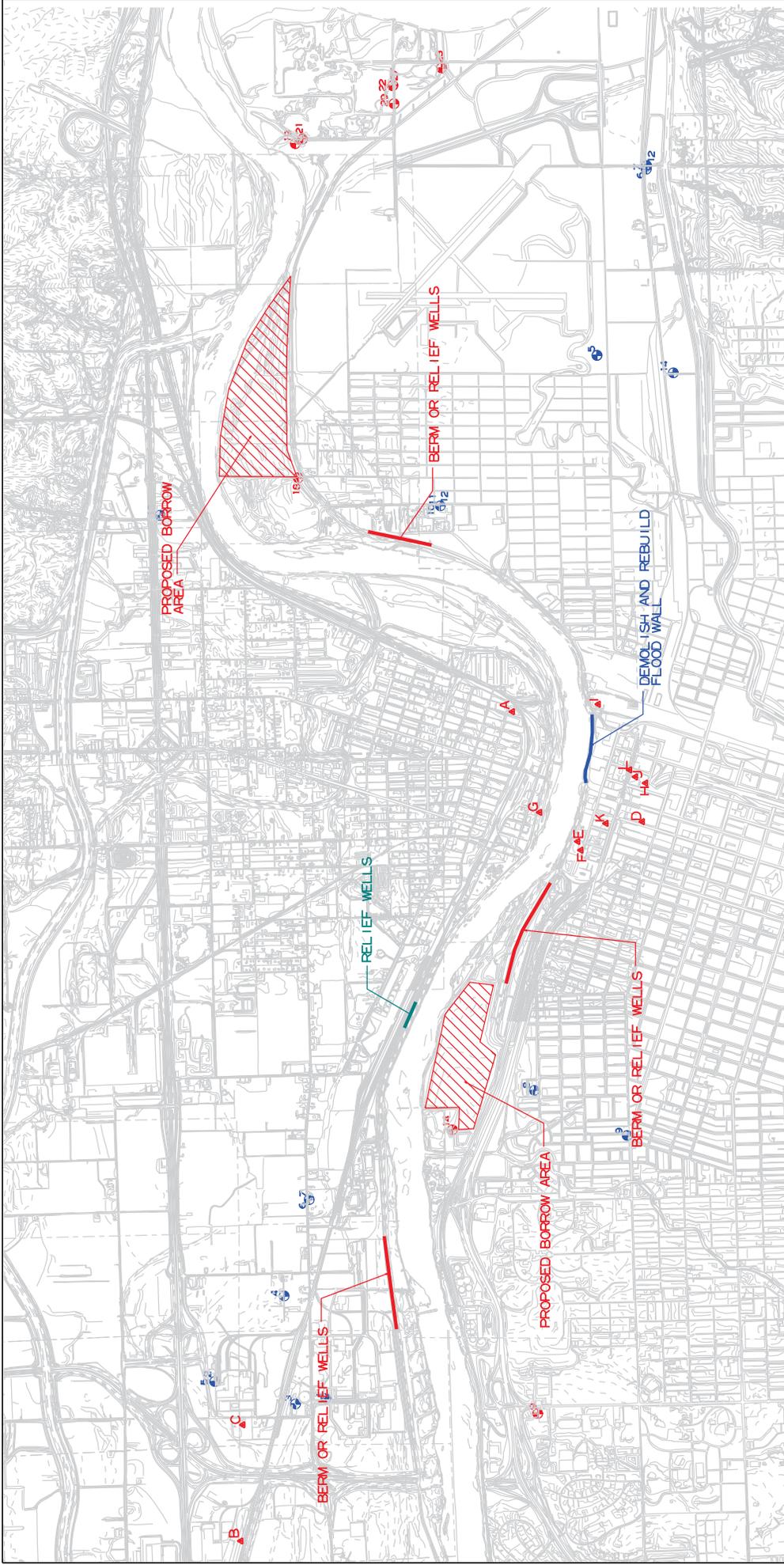
Sincerely,

A handwritten signature in black ink, appearing to read "Jason Farmer", written over a white background.

Jason Farmer
Chief, Environmental Resources Section

Appendix C

HTRW



• UNDERGROUND AND ABOVE GROUND STORAGE TANK CLOSURE LOCATIONS

• SOLID WASTE UNITS

▲ KNOWN CONTAMINATED SITES

ENVIRONMENTAL SITE ASSESSMENT

POTENTIAL CONTAMINATED SITE LOCATIONS

Appendix D
Cultural Resources Coordination

KSR&C No. 06-07-001

August 4, 2015

Timothy Meade
District Archeologist/Tribal Liaison
U.S. Army Corps of Engineers
Kansas City District
600 Federal Building
601 E. 12th Street
Kansas City, Missouri 64106-2896

Via E-Mail

RE: Additional Borrow Area Location
Oakland Levee Unit
Shawnee County

Dear Mr. Meade:

In accordance with 36 CFR 800, the Kansas State Historic Preservation Office has reviewed your letter and attached documentation dated July 31, 2015. It describes plans for an additional borrow area associated with improvements to the Oakland Levee Unit in Topeka and North Topeka in Shawnee County. According to our records, we have already reviewed two borrow areas a short distance to the east. As with those locations, the additional borrow area is situated between the existing levees and the Kansas River. As you noted, it has little potential for archeological sites and has been subjected to considerable recent disturbance (particularly in the form of Kansas River channel movement). We therefore concur that use of the additional borrow area will have no effect on historic properties as defined in 36 CFR 800. This office has no objection to use of the additional borrow location.

This information is provided at your request to assist you in identifying historic properties, as specified in 36 CFR 800 for Section 106 consultation procedures. If you have questions or need additional information regarding these comments, please contact Tim Weston at 785-272-8681 (ext. 214).

Sincerely,

Jennie Chinn, Executive Director and
State Historic Preservation Officer



Patrick Zollner
Deputy SHPO



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

July 31, 2015

REPLY TO
ATTENTION OF

Environmental Resources Section
Planning Branch

Ms. Jennie A. Chinn
Executive Director, State Historic Preservation Officer
Kansas State Historical Society
6425 S. W. 6th Avenue
Topeka, Kansas 66615-1099

Dear Ms. Chinn:

The U.S. Army Corps of Engineers, Kansas City District (Corps) and the City of Topeka are partnering on improvements to the Oakland Levee unit. The proposed improvements are a modification to overall improvements to the levee units in Topeka and North Topeka that were coordinated with your office in August 2006 (KSR&C 06-07-001). A borrow area expansion was coordinated with your office on June 1, 2015. Since the June 1 coordination an additional borrow area has been identified by the project team. This letter continues Section 106 coordination for the project.

The Oakland Levee project is located directly east and downstream of downtown Topeka, along the right bank of the Kansas River. The levee is approximately ten miles long and protects residential homes, businesses, agricultural fields, the Philip Billard Municipal Airport, a BNSF rail yard, schools, churches, and various city infrastructures such as the city waste water treatment plant among others. The Oakland Levee also ties into the Shunganunga Creek levee system (Figures 1 and 2).

A new 10-acre possible borrow area has been recently identified that could be used as better source material for the construction of the underseepage berm. The area is located on City of Topeka property immediately to the west of the previously coordinated borrow locations (Figures 1 and 2). The area is a former borrow area and currently serves as a storage area for debris and rubble. The entire 10 acre area would not likely be used and borrow location would be approximately 4-5 acres within the area under consideration. Top soil and clays would be stockpiled and put back in place once the desired sandy material is taken. The borrow material would be excavated to a depth of approximately 10 feet below the current ground surface.

A background cultural resource literature review was conducted of the project vicinity utilizing the Kansas State Historical Society's Archeological Data Viewer. No sites have been identified within or near the proposed new borrow area (Figure 3). As mentioned, nearby potential borrow areas previously coordinated with your office in 2006 and in

June 2015. At that time the Corps noted that the proposed borrow locations had been entirely crossed by the historic Kansas River channel since 1885 and had little potential for buried archeological deposits. Your office concurred with this recommendation in a letter dated August 25, 2006. The proposed additional borrow area likewise is depicted as having been crossed by the Kansas River channel since 1885 (Figure 4).

Because the possible new borrow location is situated on land that has been crossed by the Kansas River channel since 1885 and has been previously utilized as a borrow location by the City of Topeka, it is unlikely that the proposed project or additional borrow area would impact any sites listed on or eligible for listing on the National Register of Historic Places. At this time we request your concurrence that the project as described would have no effect on historic properties. In the unlikely event that archeological materials are discovered during 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 me at timothy.m.meade@usace.army.mil or at (816) 389-3138.

Sincerely,

Timothy Meade
District Archeologist

Enclosures

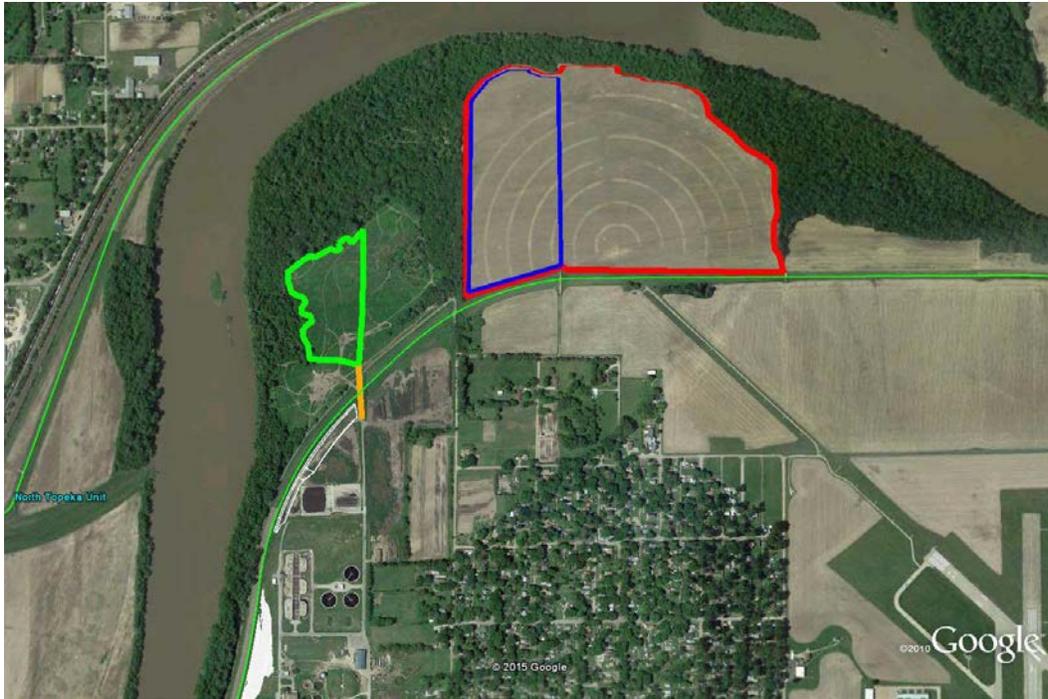


Figure 1. Proposed new borrow location area (outlined in green).

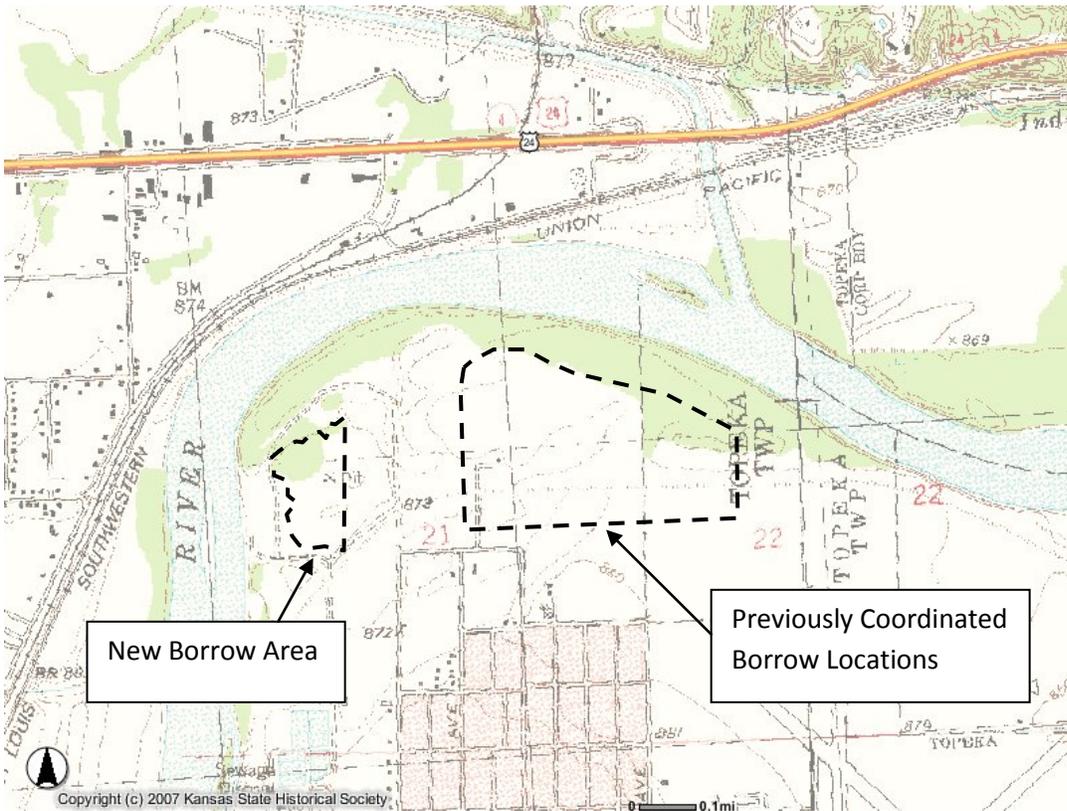


Figure 2. Proposed new borrow area on topographic map.

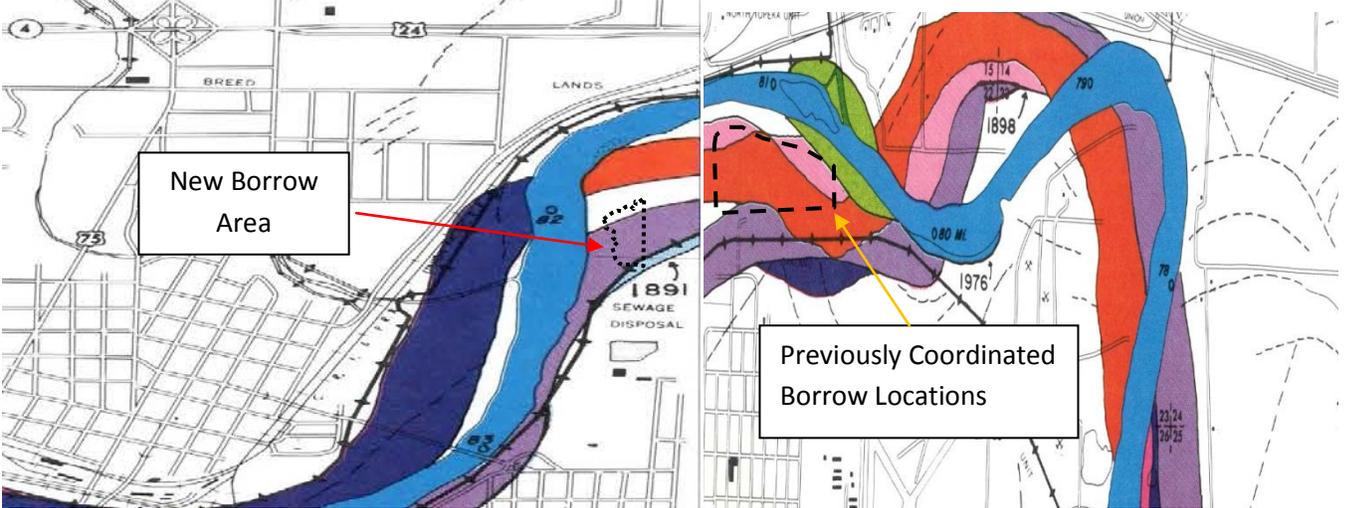


Figure 4. Proposed borrow areas on map of former Kansas River channels.

6425 SW 6th Avenue
Topeka, KS 66615



phone: 785-272-8681
fax: 785-272-8682
cultural_resources@kshs.org

Kansas Historical Society

Sam Brownback, Governor
Jennie Chinn, Executive Director

KSR&C No. 06-07-001

June 8, 2015

Timothy Meade
District Archeologist/Tribal Liaison
U.S. Army Corps of Engineers
Kansas City District
600 Federal Building
601 E. 12th Street
Kansas City, Missouri 64106-2896

Via E-Mail

RE: Revised Borrow Area Location
Oakland Levee Unit
Shawnee County

Dear Mr. Meade:

In accordance with 36 CFR 800, the Kansas State Historic Preservation Office has examined its cultural resources files and has reviewed your letter (dated June 1, 2015) describing plans for a revised borrow area location associated with improvements to the Oakland Levee Unit in Topeka and North Topeka in Shawnee County. The revised location is adjacent to an area reviewed during an earlier phase of the overall levee upgrade project and is situated between the existing levees and the Kansas River. It has little potential for archeological sites and, as you have pointed out, has been subjected to considerable recent disturbance (particularly in the form of Kansas River channel movement). We therefore concur with the conclusion that use of the revised borrow area location during the levee construction project will have no effect on historic properties as defined in 36 CFR 800. This office has no objection to use of the proposed borrow area.

Any changes to the project, which include additional ground disturbing activities, will need to be reviewed by this office prior to beginning construction. If construction work uncovers buried archeological materials, work should cease in the area of the discovery and this office should be notified immediately.

This information is provided at your request to assist you in identifying historic properties, as specified in 36 CFR 800 for Section 106 consultation procedures. If you have questions or need additional information regarding these comments, please contact Tim Weston at 785-272-8681 (ext. 214).

Sincerely,

Jennie Chinn, Executive Director and
State Historic Preservation Officer

Patrick Zollner
Deputy SHPO



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

June 1, 2015

REPLY TO
ATTENTION OF

Environmental Resources Section
Planning Branch

Ms. Jennie A. Chinn
Executive Director, State Historic Preservation Officer
Kansas State Historical Society
6425 S. W. 6th Avenue
Topeka, Kansas 66615-1099

Dear Ms. Chinn:

The U.S. Army Corps of Engineers, Kansas City District (Corps) and the City of Topeka are partnering on improvements to the Oakland Levee unit. The proposed improvements are a modification to overall improvements to the levee units in Topeka and North Topeka that were coordinated with your office in August 2006 (KSR&C 06-07-001). This letter continues Section 106 coordination for the project.

The Oakland Levee project is located directly east and downstream of downtown Topeka, along the right bank of the Kansas River. The levee is approximately ten miles long and protects residential homes, businesses, agricultural fields, the Philip Billard Municipal Airport, a BNSF rail yard, schools, churches, and various city infrastructures such as the city waste water treatment plant among others. The Oakland Levee also ties into the Shunganunga Creek levee system (Figure 1)

This proposed project would consist of modifying the Oakland Levee Unit by constructing under seepage berms, improving interior surface drainage, installing rock anchors to the East Oakland pump station, and expanding the borrow area (Figure 2). Underseepage improvements would be constructed at the landward toe of the levee on city waste water treatment plant property. The combined underseepage berm area is approximately 4.6 acres. The additional borrow would be acquired in the agricultural field immediately to the east of the borrow area coordinated with your office in 2006 (Figure 3a-b). The borrow material would be excavated to a depth of approximately five feet below the current ground surface.

A background cultural resource literature review was conducted of the project vicinity utilizing the Kansas State Historical Society's Archeological Data Viewer. No sites have been identified within or near the proposed project or borrow areas (Figure 4). As mentioned, the project was previously coordinated with your office in 2006. At that time the Corps noted that the proposed borrow location had been entirely crossed by the historic Kansas River channel since 1885 and had little potential for buried archeological

deposits. Your office concurred with this recommendation in a letter dated August 25, 2006. The proposed additional borrow area likewise is depicted as having been crossed by the Kansas River channel since 1885 (Figure 5). The proposed levee improvements would be conducted within the heavily disturbed existing levee corridor.

Because of the above mentioned conditions, it is unlikely that the proposed project or additional borrow area would impact any sites listed on or eligible for listing on the National Register of Historic Places. At this time we request your concurrence that the project as described would have no effect on historic properties. In the unlikely event that archeological materials are discovered during 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 me at timothy.m.meade@usace.army.mil or at (816) 389-3138.

Sincerely,

A handwritten signature in black ink that reads "Timothy Meade". The signature is written in a cursive, flowing style.

Timothy Meade
District Archeologist

Enclosures

KANSAS

Kansas State Historical Society
Jennie Chinn, *Executive Director*

KATHLEEN SEBELIUS, GOVERNOR

August 25, 2006

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

RE: Possible Borrow Locations
Levee Construction Along the Kansas River
Shawnee County

Dear Mr. Meade:

In accordance with 36 CFR 800, the Kansas State Historic Preservation Office has examined its cultural resources files and has reviewed your letter (dated August 2, 2006) describing plans for borrow areas associated with improvements to the levee system in Topeka and North Topeka in Shawnee and Jefferson Counties. The proposed borrow areas are all situated between the existing levees and the Kansas River. This area has little potential for archeological sites and as you have pointed out, has been subjected to considerable recent disturbance. We therefore concur with the conclusion that use of the proposed borrow areas during the levee construction project will have no effect on historic properties as defined in 36 CFR 800. This office has no objection to use of the proposed borrow areas.

Any changes to the project, which include additional ground disturbing activities, will need to be reviewed by this office prior to beginning construction. If construction work uncovers buried archeological materials, work should cease in the area of the discovery and this office should be notified immediately.

This information is provided at your request to assist you in identifying historic properties, as specified in 36 CFR 800 for Section 106 consultation procedures. If you have questions or need additional information regarding these comments, please contact Tim Weston at 785-272-8681 (ext. 214).

Sincerely,

Jennie Chinn, Executive Director and
State Historic Preservation Officer

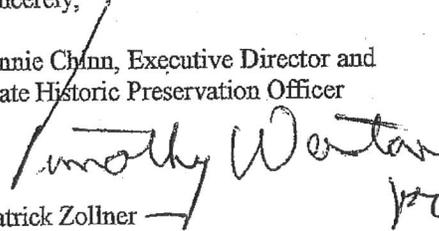

Patrick Zollner
Deputy SHPO



Figure 1. Proposed project and borrow location area.

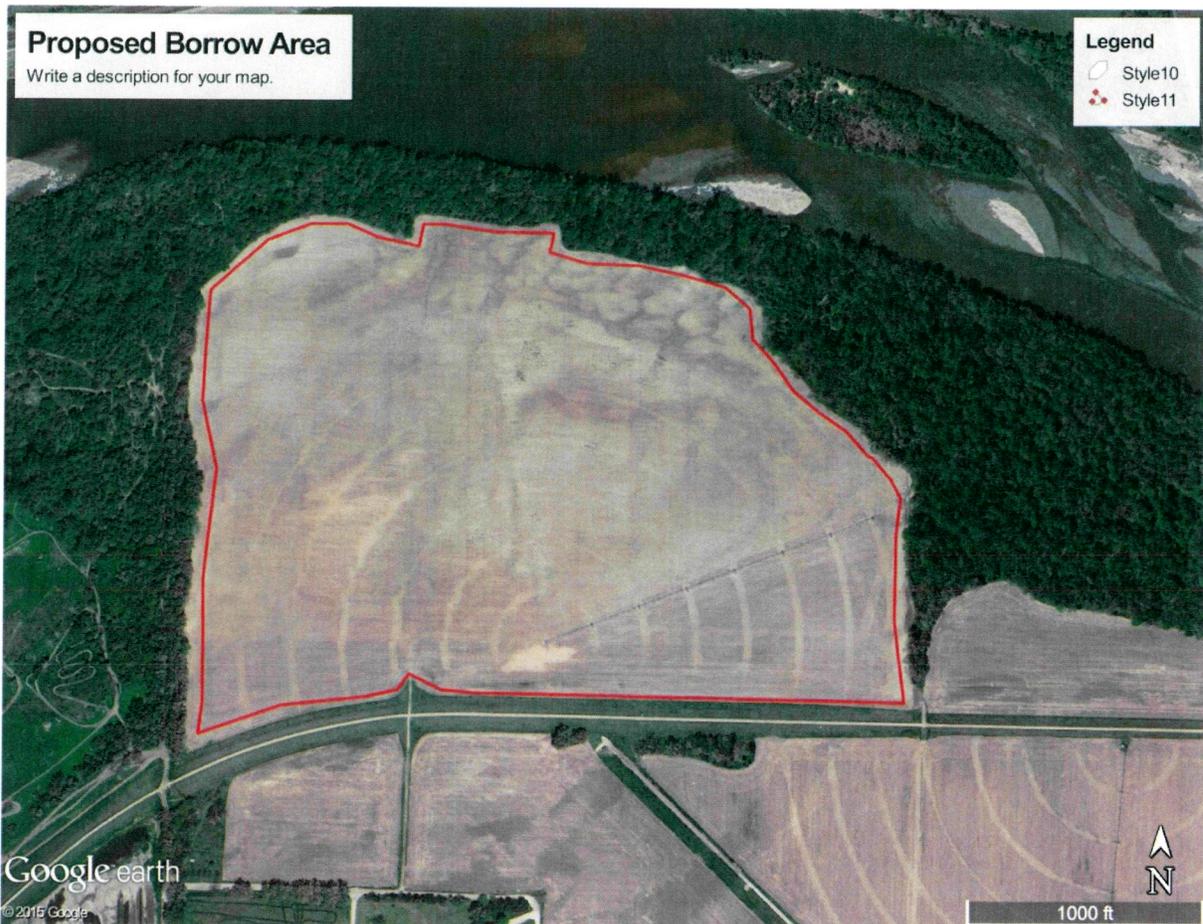


Figure 2. Proposed new borrow area.

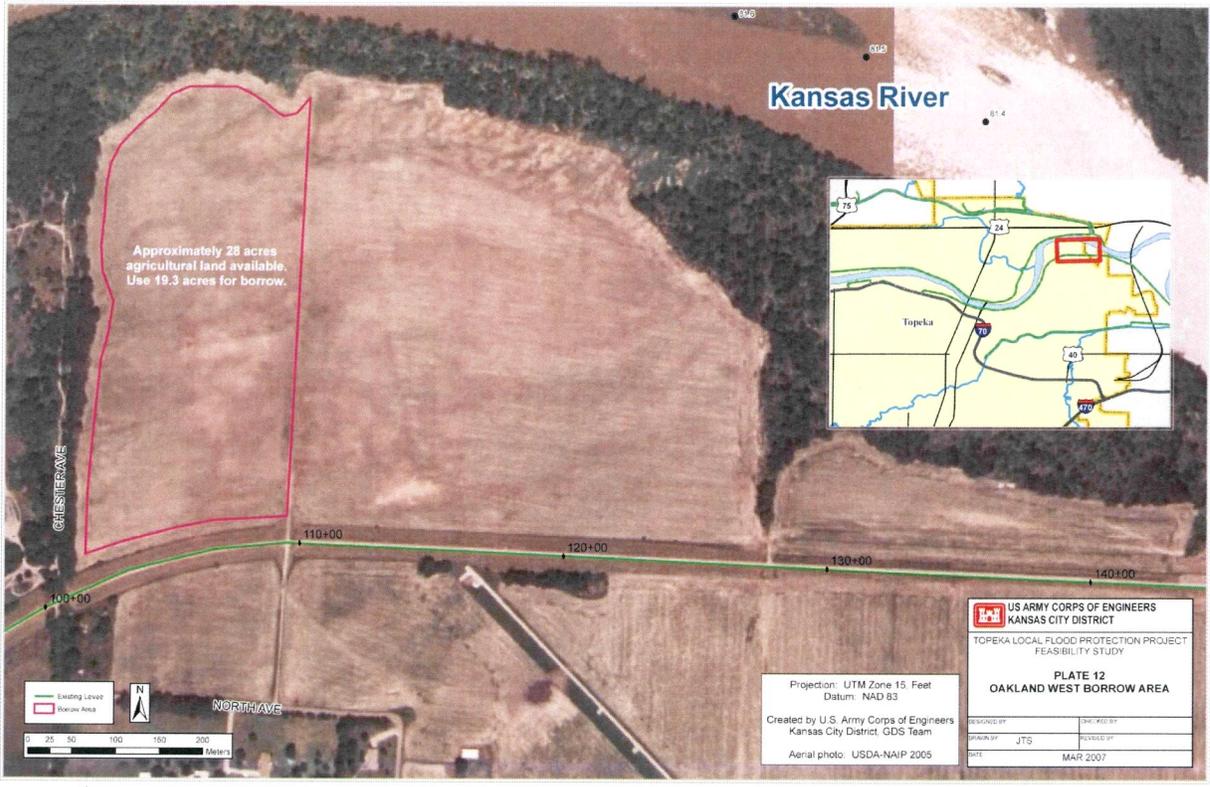


Figure 3a. Former proposed borrow area

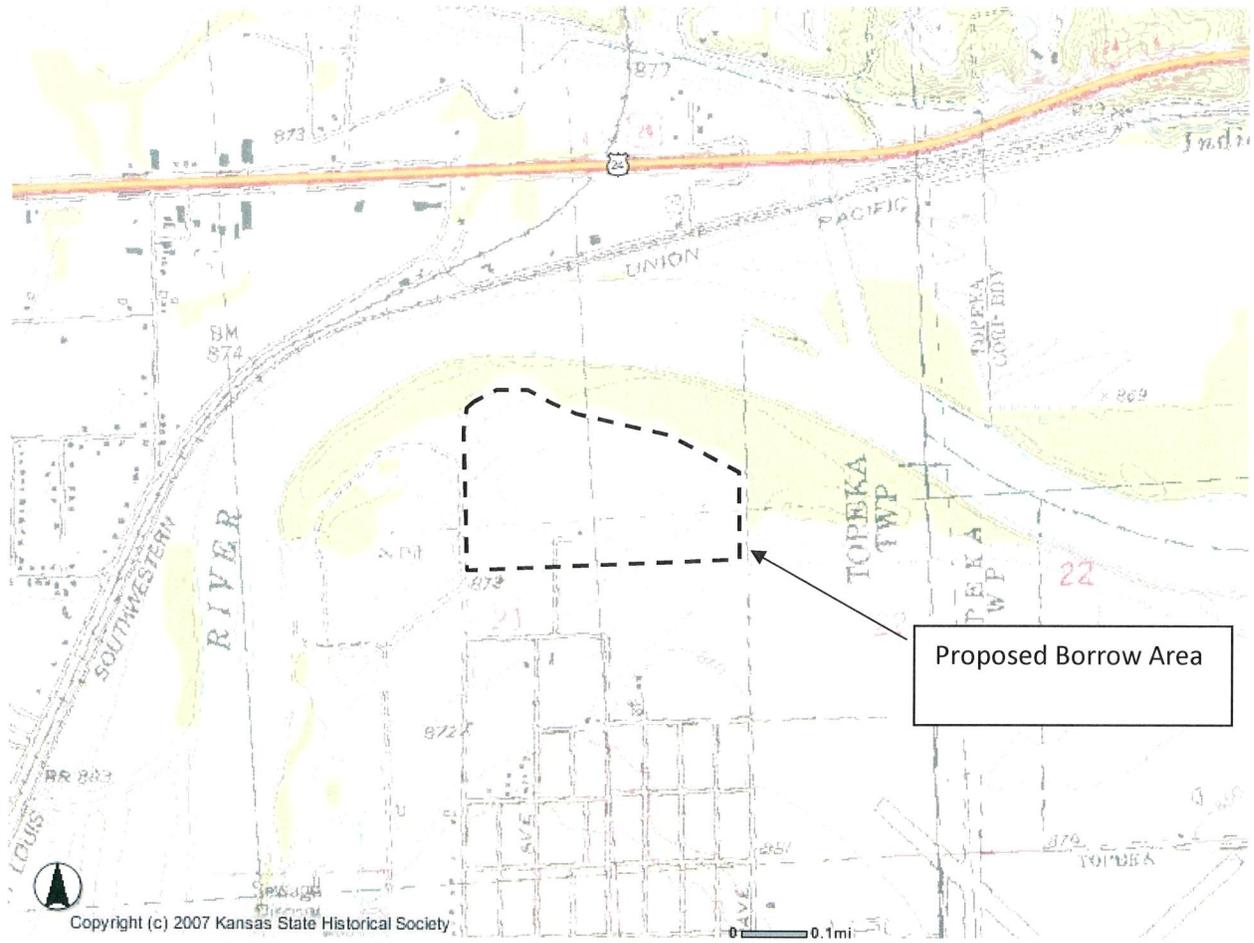


Figure 3b. Proposed Borrow Area

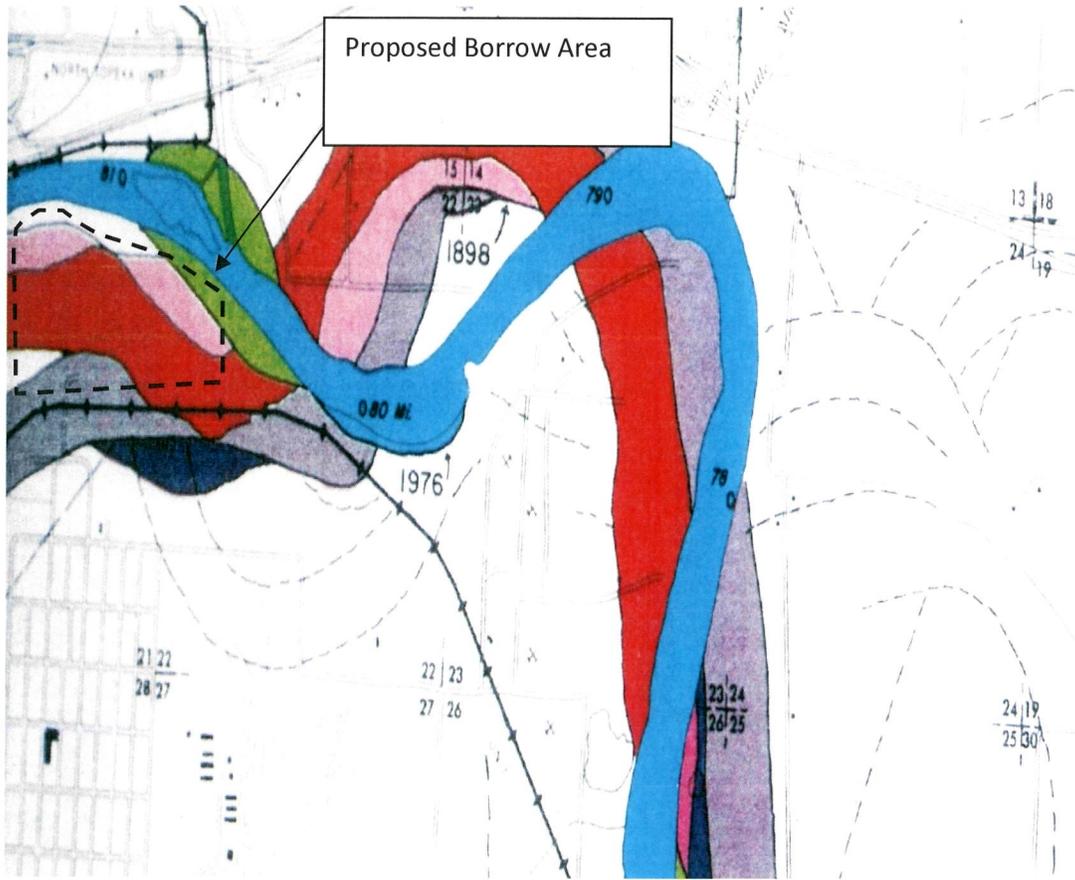


Figure 5. Borrow area location on historic Kansas River channels map.