



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, ST. LOUIS DISTRICT
1222 SPRUCE STREET
ST. LOUIS, MISSOURI 63103-2833

22 April 2020

Reply to:

U.S. Army Corps of Engineers
St. Louis District
Environmental Compliance Section (PD-C)
1222 Spruce Street
St. Louis, MO 63103-2833

Dear Sir or Madam:

The St. Louis District, U.S. Army Corps of Engineers has prepared a draft Environmental Assessment (EA) with unsigned Finding of No Significant Impact (FONSI) to evaluate the repairs to the Elsberry/King's Lake Levee System, Lincoln and Pike Counties, Missouri.

Under the National Environmental Policy Act of 1969, as amended, the St. Louis District is distributing this letter to notify concerned agencies, interest groups, and individuals of the proposed project and to solicit comments from those persons or organizations who may be interested in or affected by the project. The FONSI is unsigned and will only be signed after comments received as a result of this public review have been considered. The electronic version of draft EA and unsigned FONSI are available online at:

<https://www.mvs.usace.army.mil/Portals/54/docs/pm/Reports/EA/ElsberryKingsLakePL84992019PublicReview.pdf>

The St. Louis District of the U.S. Army Corps of Engineers is proposing to repair the damages associated with the 2019 flood event. The Elsberry/King's Lake Levee System is active in the USACE Rehabilitation and Inspection Program, which makes them eligible for Flood Control and Coastal Emergency funding under Public Law 84-99 to make repairs to levees damaged during flood events. The proposed repairs would restore the levee system to its pre-disaster condition. Environmental impacts associated with the proposed repairs and associated borrow material sources are outlined in the draft EA.

Please provide any comments you may have regarding this project to Evan Hill of the Environmental Compliance Section, at **telephone** 314-925-5004 or **e-mail** at evan.b.hill@usace.army.mil. Please send any comments to the phone or email contact above, ATTN: Environmental and Planning Branch (PD-C, Hill). In order for comments to be considered prior to a final decision being made, they must be received by this office by close of business on 21 May 2020.

Sincerely,

Teri C. Allen, Ph.D.
Chief, Environmental Compliance Section

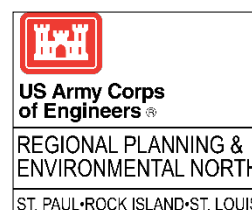
**ENVIRONMENTAL ASSESSMENT
AND
FINDING OF NO SIGNIFICANT IMPACT**

**PUBLIC LAW 84-99
EMERGENCY FLOOD DAMAGE REPAIR FOR THE
ELSBERRY DRAINAGE AND LEVEE DISTRICT
AND
KING'S LAKE DRAINAGE DISTRICT
LINCOLN AND PIKE COUNTIES, MISSOURI
MISSISSIPPI RIVER, MILES 251 TO 260**



22 April 2020

**Regional Planning and Environmental Division North
Environmental Compliance Section
U.S. Army Corps of Engineers
St. Louis District
1222 Spruce Street
St. Louis Missouri 63103-2833**



Contents

1.0	INTRODUCTION	4
1.1	Project Authorization	4
1.2	Project Location and Scope	4
1.3	Project Purpose and Need	5
1.4	Classification of Damage	6
1.5	Damages.....	7
1.5.1	Elsberry D&LD Damages	7
1.5.2	King’s Lake Drainage District Damages	11
2.0	PROJECT ALTERNATIVES CONSIDERED	15
2.1	Alternative 1 - No Action (Future without Project)	15
2.2	Alternative 2 - Nonstructural Measures	15
2.3	Alternative 3 – Structural Repair of Levees with Federal Assistance	16
2.3.1	Erosion Type I	16
2.3.2	Erosion Type II and III	17
2.3.3	Embankment Slides.....	17
2.3.4	Creek bank erosion	17
2.3.5	Levee Breaches	17
2.3.6	Borrow Material	18
2.3.7	Environmental Protection Measures	20
2.4	Tentatively Selected Plan-Structural Repair of Levee Segment with Federal Assistance	21
3.0	AFFECTED ENVIRONMENT AND ENVIRONMENTAL IMPACTS	26
3.1	Physical Resources	26
3.1.1	Land Use/Land Cover	26
3.1.2	Noise	27
3.1.3	Water Quality.....	28
3.1.4	Air Quality	29
3.2	Biological Resources.....	29
3.2.1	Fish and Wildlife.....	29
3.2.2	Bald Eagle.....	30
3.3	Federally Threatened and Endangered Species Assessment.....	32
3.3.1.	Indiana Bat	32

3.3.2.	Northern Long-Eared Bat	33
3.3.3.	Gray Bat.....	34
3.3.4.	Pallid Sturgeon	34
3.3.5.	Higgins Eye	35
3.4	Socioeconomic Resources.....	35
3.4.1	Economic.....	35
3.4.2	Cultural Resources (Historic and Archaeological).....	36
3.4.3	Tribal Coordination	37
3.4.4	Environmental Justice	38
3.4.5	HTRW	39
3.4.6.	Permits	40
3.5	Summary Comparison of Project Alternatives.....	41
4.0	CUMULATIVE IMPACTS	42
4.1	Relationship of Tentatively Selected Plan to Environmental Requirements	43
5.0	COORDINATION, PUBLIC VIEWS, AND RESPONSES	44
6.0	ENVIRONMENTAL ASSESSMENT PREPARERS.....	51
7.0	REFERENCES	52
8.0	FINDING OF NO SIGNIFICANT IMPACT	54

1.0 INTRODUCTION

This document is an Environmental Assessment (EA) with an attached unsigned Finding of No Significant Impact (FONSI) for levee repairs to the Elsberry/King’s Lake System in Lincoln and Pike counties, Missouri. The purpose of this EA is to evaluate potential environmental impacts of proposed levee repairs, determine if the environmental impacts rise to the level of significant, and to serve as a record of interagency coordination for the emergency rehabilitation actions.

1.1 Project Authorization

Emergency actions undertaken by USACE to repair flood control works damaged or destroyed by flooding are authorized by Public Law 84-99, as amended by Section 206 of the Flood Control Act of 1962 (hereafter referred to as P.L. 84-99). USACE regulations covering these and other emergency rehabilitation activities are contained in the Rehabilitation Code 910-300 of ER 500-1-1 (33 C.F.R. 203). The Code states that actions taken to *restore facilities to pre-disaster conditions* under P.L. 84-99 will not be construed to be either major federal actions or as having significant effects. However, the effect of rehabilitation on the environment must be considered. This includes the effects of construction on endangered species (P.L. 93-205 and Appendix B of ER 1105-2-50) and archeological and historic properties (Chapter 3 of ER 1105-2-50). Since the Elsberry/King’s Lake System is active in the USACE Rehabilitation and Inspection Program, they are eligible for Flood Control and Coastal Emergency funding authorized by P.L. 84-99.

1.2 Project Location and Scope

The Elsberry-Kings Lake Levee System is located in Lincoln and Pike counties, Missouri, and is adjacent to the right descending bank of the Mississippi River at river miles (RM) 251 to 260. (Figure 1). The Elsberry segment and the King’s Lake segment are hydrologically dependent upon one another and a levee failure in either of the districts would result in the inundation of the entire leveed area. The Elsberry/King’s Lake System reduces the risk of flooding from the Mississippi River to agricultural bottomland and a portion of the town of Elsberry, Missouri. The combined system was privately constructed and is locally operated and maintained by the nonfederal Sponsors: Elsberry Drainage and Levee District (D&LD) and King’s Lake Drainage District (DD), each responsible for individual segments that together comprise the 28 mile system. The combined levee system consists of earthen embankment along the Mississippi River, Lost Creek, and Bryant’s Creek. The system provides protection up to a 14-year flood event. The levee was constructed with a 10-foot crown width and 1 on 3 side slopes on the landside and riverside. Within the approximately 22,189 acre leveed area are MO HWY 79, agriculture, residential, commercial, and industrial properties including a grain elevator and

agricultural service center. The BK Leach Conservation Area, owned and operated by the Missouri Department of Conservation (MDC), also lies wholly within the protected area. This combined system provides benefits to over 500 residents and employees and approximately \$73.7 million in property value.

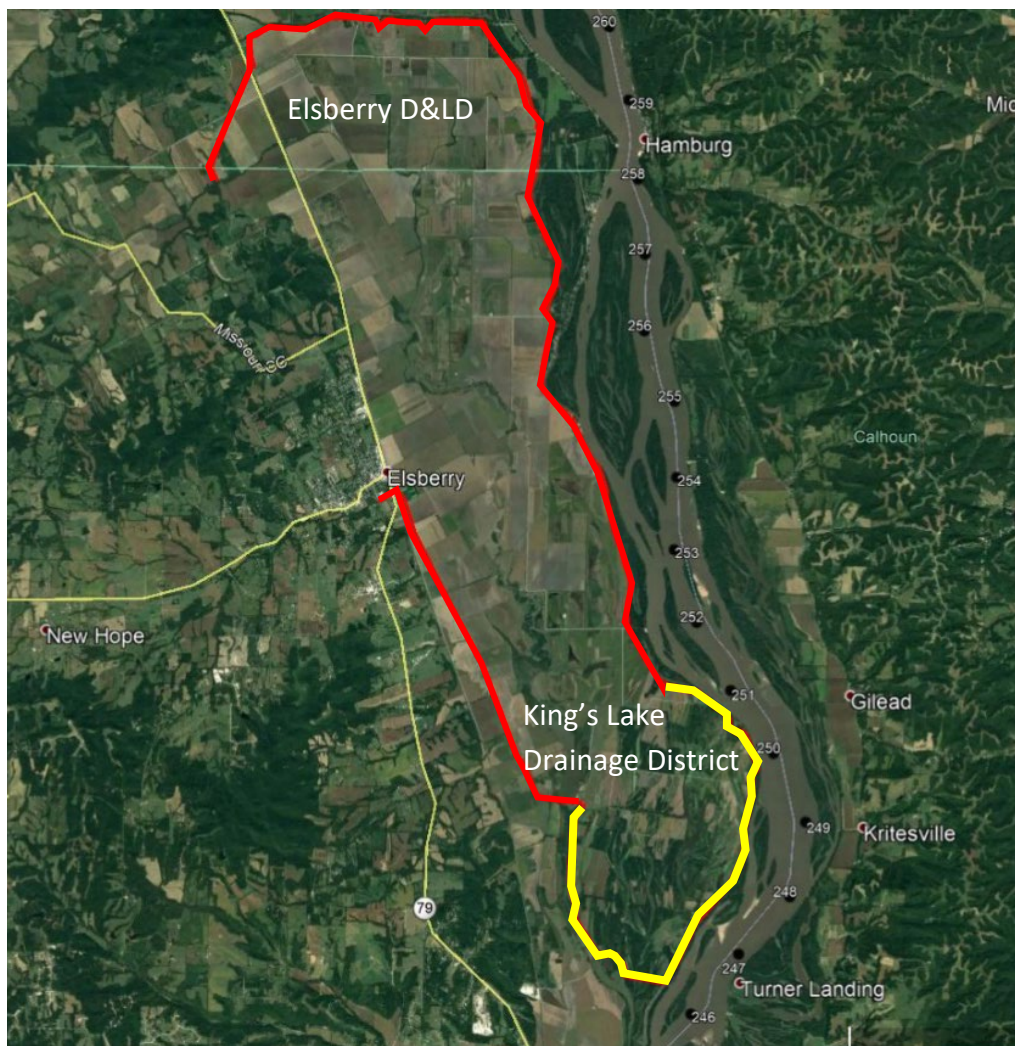


Figure 1. General Location Map of the Elsberry D&LD and King’s Lake DD, which form the Elsberry/King’s Lake System, located in Lincoln and Pike counties, Missouri, USA.

1.3 Project Purpose and Need

The purpose of this proposed federal action is to restore the level of flood protection to that which existed prior to the 2019 flood events. The Elsberry/King’s Lake System sustained damages as a result of high water events during the spring of 2019. There is a need for repairs, because damages reduced protection from a 14 year to a 2 year frequency of flood protection, making the district vulnerable to frequent flooding. Without federal involvement through the

P.L. 84-99 program, it is unlikely that the Elsberry/King’s Lake System has the financial ability to restore the level of protection according to Corps of Engineers standards. If repairs are not made, there would be significant risk to agricultural productivity from fields protected by the levee system which would negatively impact the livelihood of some 500 residents and employees using the leveed areas. Transportation infrastructure would likewise be threatened. In addition, the BK Leach Conservation Area would be significantly impacted by the degradation of the levee system because the wetland management strategies currently employed to create wildlife habitat on the area would need to be reconsidered.

1.4 Classification of Damage

Damages to levee systems are generally classified into seven types: levee breaches, embankment slides, rutting, turf damage, and erosion types I, II, and III (Table 1). The damages sustained in the spring flood event of 2019 included levee breaches, embankment slides, rutting, turf damage, and erosion types I, II, and III (see section 1.6). Levee breaches refer to any break in the levee continuity as a result of flood damages. Breaches typically result in scour holes on either side of the levee and are repaired by filling in the scour holes and the missing section of the levee. Embankment slides can occur on either side of the levee, and are repaired by removing the sliding soil and replacing it with compact substrate. Rutting and turf damage are relatively superficial damage to the levee structure that are repaired by filling with soil and reseeding. Erosion types are categorized based on their severity, from type I to III and are repaired similar to embankment slides.

Table 1. Description of each damage type sustained by the Elsberry/King’s Lake System and the methods by which these damage types are typically repaired.

Damage Type	Damage Description	Repair Method
Breach	A rupture, break, or gap in the levee system, measured in yards ³ .	Stripping, preparing, placing embankment, and compacting in lifts.
Slide	A movement of soil down the levee slope where the levee cannot support its own saturated weight.	Excavation of damaged area, and replacement of embankment in compacted lifts.
Erosion Type I	Wave wash / minor erosion less than 12 inches deep, measured in linear feet.	Disking and compacting.
Erosion Type II	Moderate erosion between 12 and 18 inches deep, measured in yards ³ .	Stripping, disking, filling, and compacting.
Erosion Type III	Major erosion greater than 18 inches deep, measured in yards ³ .	Stripping, preparing, placing embankment, and compacting in lifts.
Rutting	Depressions, ruts, or pot holes that are located along the levee crown, embankments, and access roads unrelated to levee settlement that will pond water.	Filling in the eroded areas using embankment material from designated borrow area(s) or material from the adjacent undamaged levee section.
Turf Damage	The upper layer of ground made up of grass and plant roots has been damaged due to long-standing water inundation.	Disking and seeding.

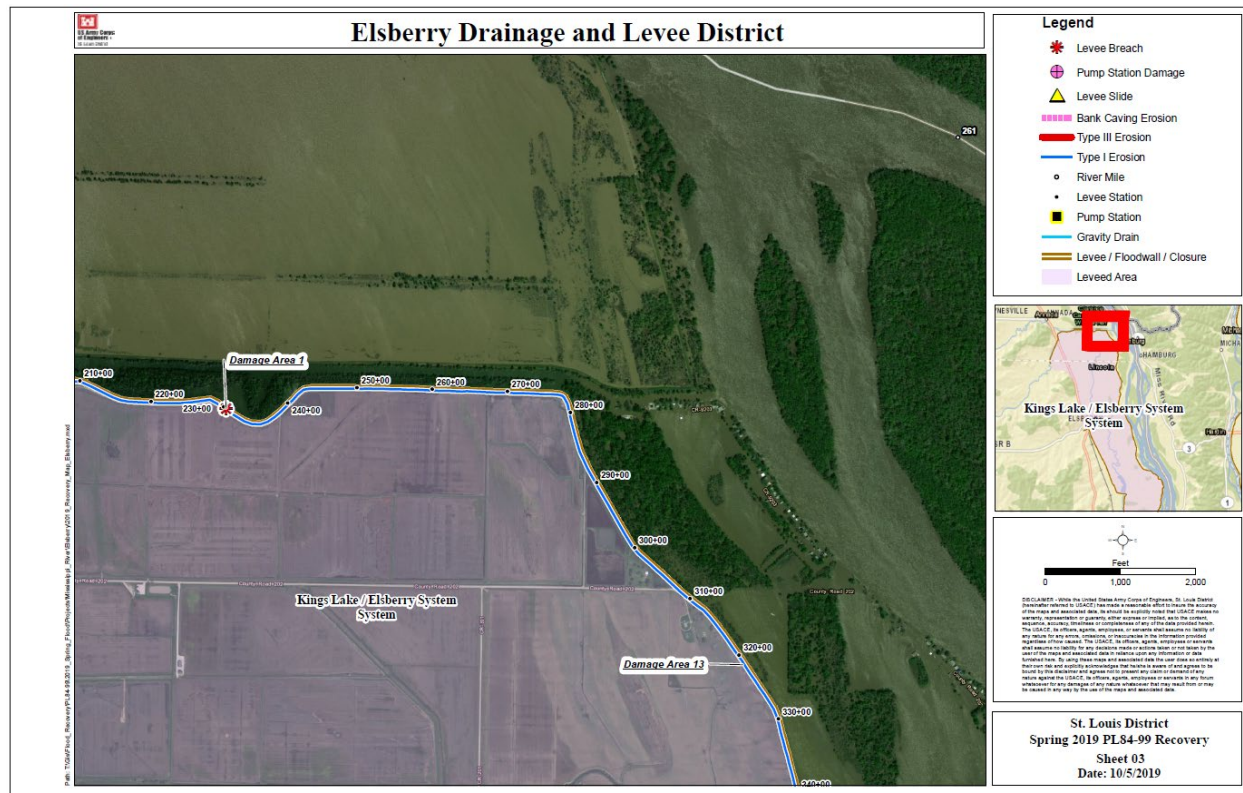
1.5 Damages

1.5.1 Elsberry D&LD Damages

The Elsberry D&LD suffered a variety of damage types, including two breaches, Erosion Type I and III, embankment slides, and creek bank erosion (Table 2). The first breach (damage area 1) has a length of approximately 260 feet and a levee-side scour hole that extends approximately 520 feet from the levee toe and an unprotected side scour hole that extends 260 feet from the levee toe. The second breach (damage area 6) has a length of approximately 420 feet and has a leveed side scour hole that extends approximately 1200 feet from the levee toe. Erosion Type I was found at damage area 10 for 350 feet. Damage area 13 represents all of the rest of the scattered Type I erosion present on the levee crown. Erosion Type III was found at damage areas 3, 4, 5, 8, and 9, totaling to approximately 63 yards³. An embankment slide (damage area 2) approximately 225 feet long is located on the unprotected side of the levee. The pump station (damage area 12) in the southwest corner of the levee district also sustained damages. The damage area locations are illustrated in Figures 2 to 6.

Table 2. Damages sustained by the Elsberry D&LD during the flood events of the spring of 2019.

Area	Damage Type	Extent	Leveed side or unprotected side
1	Breach	260ft wide	Leveed side scour hole extends 520 feet from the levee toe and an unprotected side scour hole that extends 260 feet from the levee toe.
2	Slide	225ft long	Unprotected side
3	Erosion Type III	6 yards ³	Leveed side
4	Erosion Type III	3 yards ³	Leveed side
5	Erosion Type III	27 yards ³	Leveed side
6	Breach	420ft long	The breach has a leveed side scour hole that extends approximately 1200 feet from levee toe.
7	Creek erosion	2234 yards ³	Unprotected side
8	Erosion Type III	10 yards ³	Levee crown at road crossing
9	Erosion Type III	17 yards ³	Leveed side
10	Erosion Type I	350ft long	Leveed side
11	Creek erosion	3014 yards ³	Unprotected side
12	Pump station*		This damage area is representative of all damages to the pump station.
13	Erosion Type I	entire length	Leveed side

**Figure 2.** Map of damage area 1 and 13 in the Elsberry D&LD

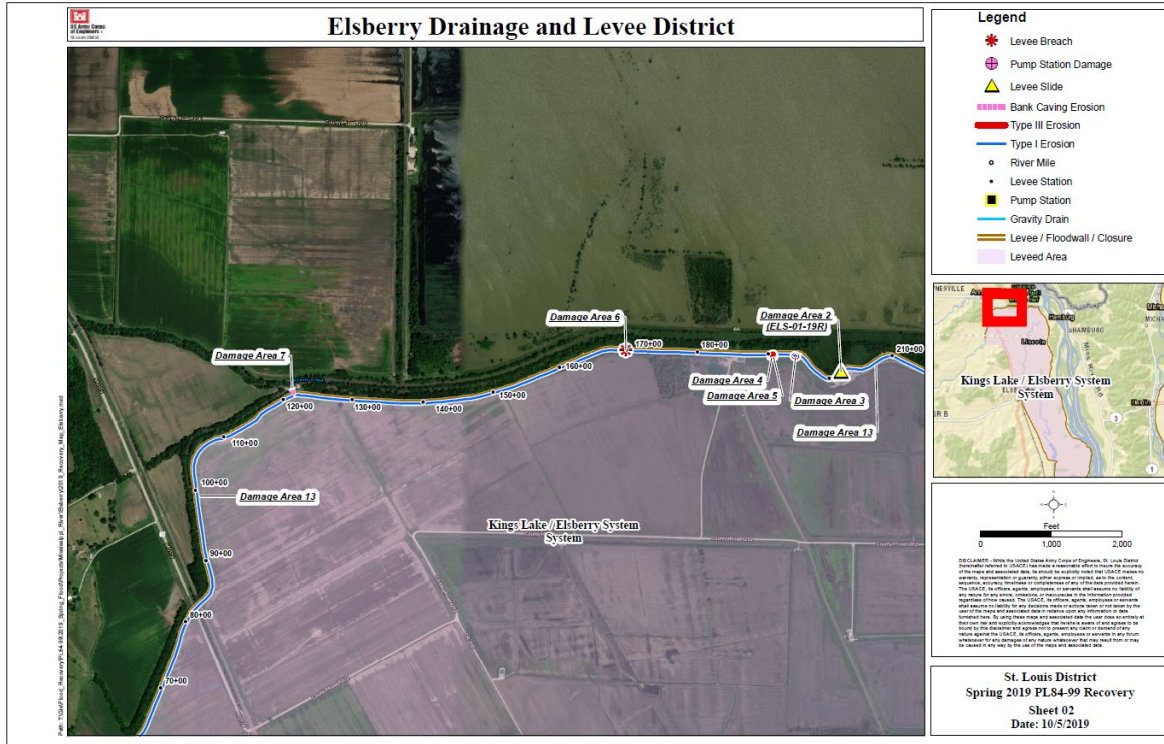


Figure 3. Map of damage areas 2, 3, 4, 5, 6, 7, and 13.

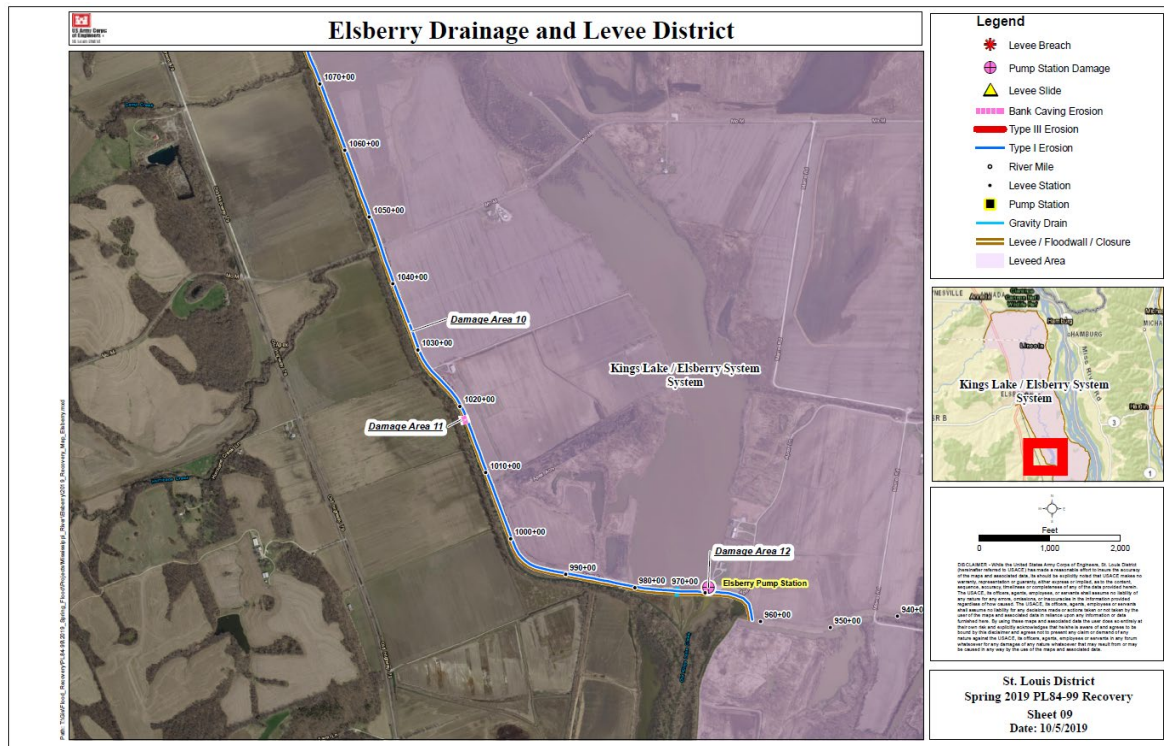


Figure 4. Map of damage areas 10, 11, and 12.

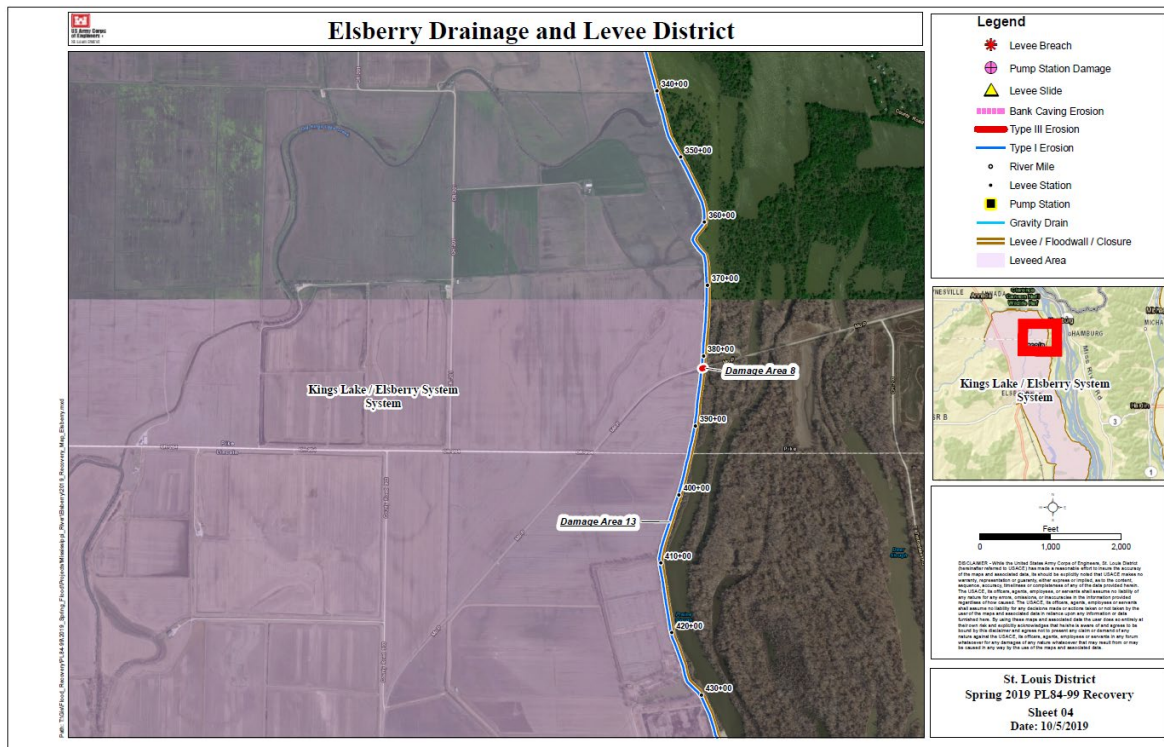


Figure 5. Location of damage area 8 and 13.

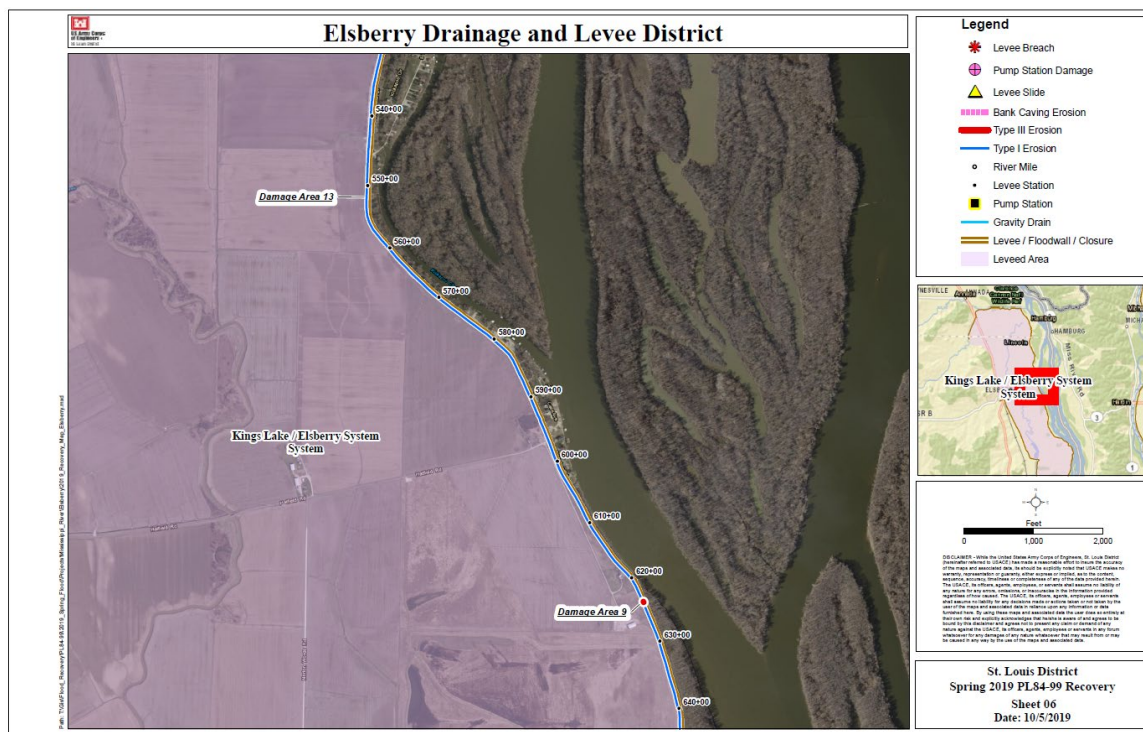


Figure 6. Location of damage area 9 and 13.

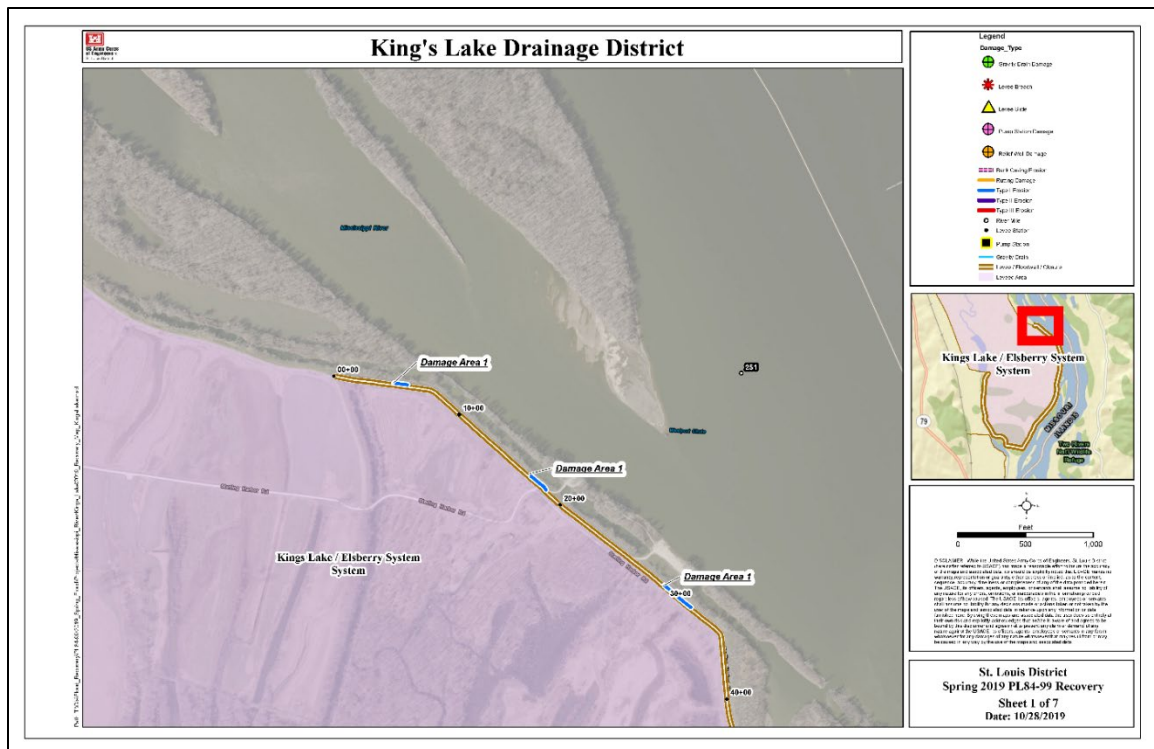


Figure 8. Map of damage area 1 at King’s Lake DD.

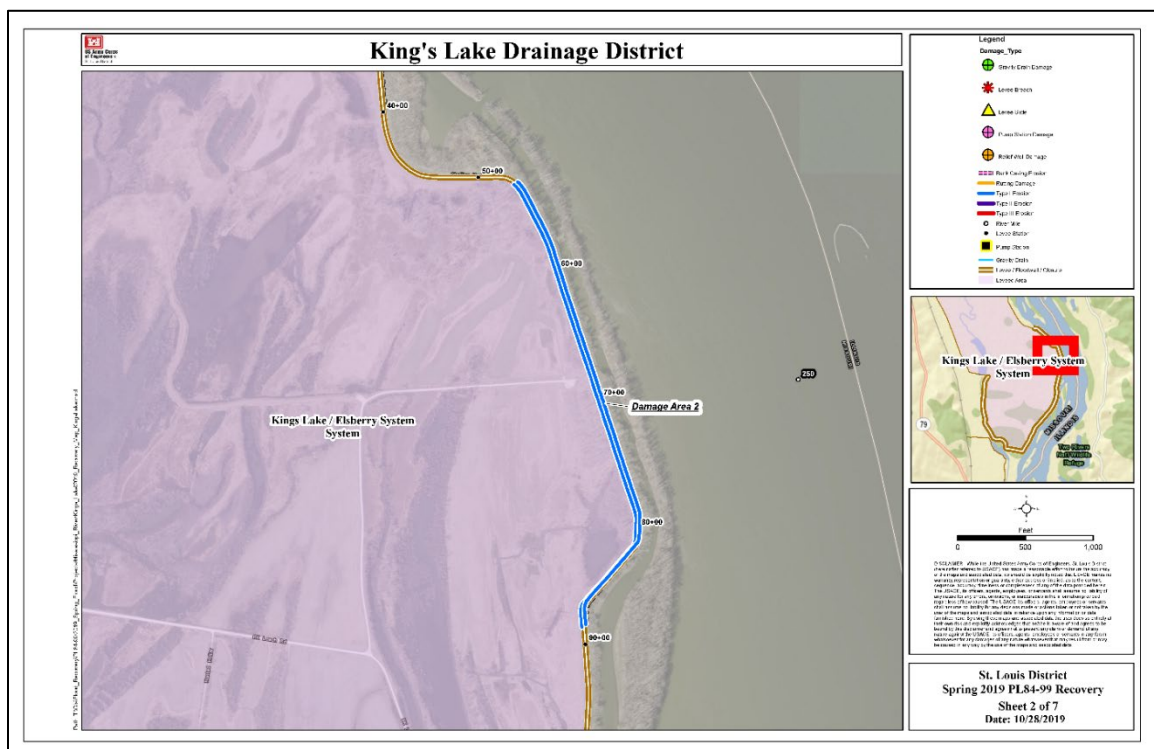


Figure 9. Map of damage area 2 at King’s Lake DD.

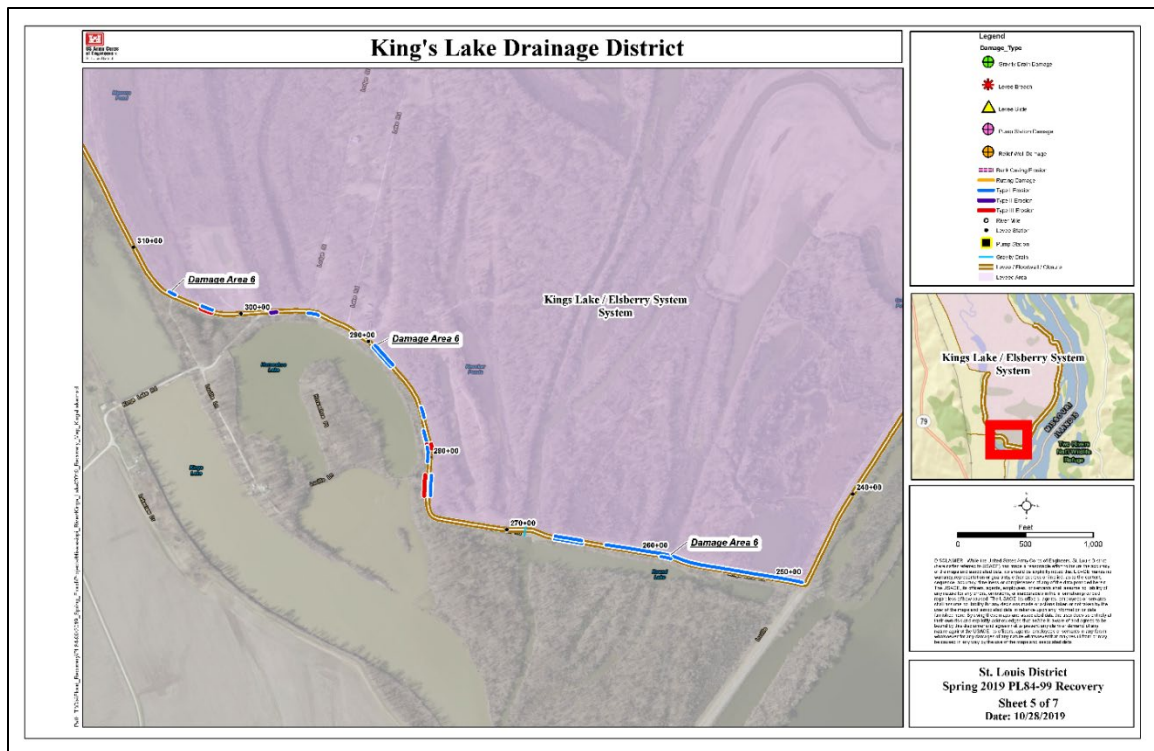


Figure 10. Map of damage area 6 at King’s Lake DD.

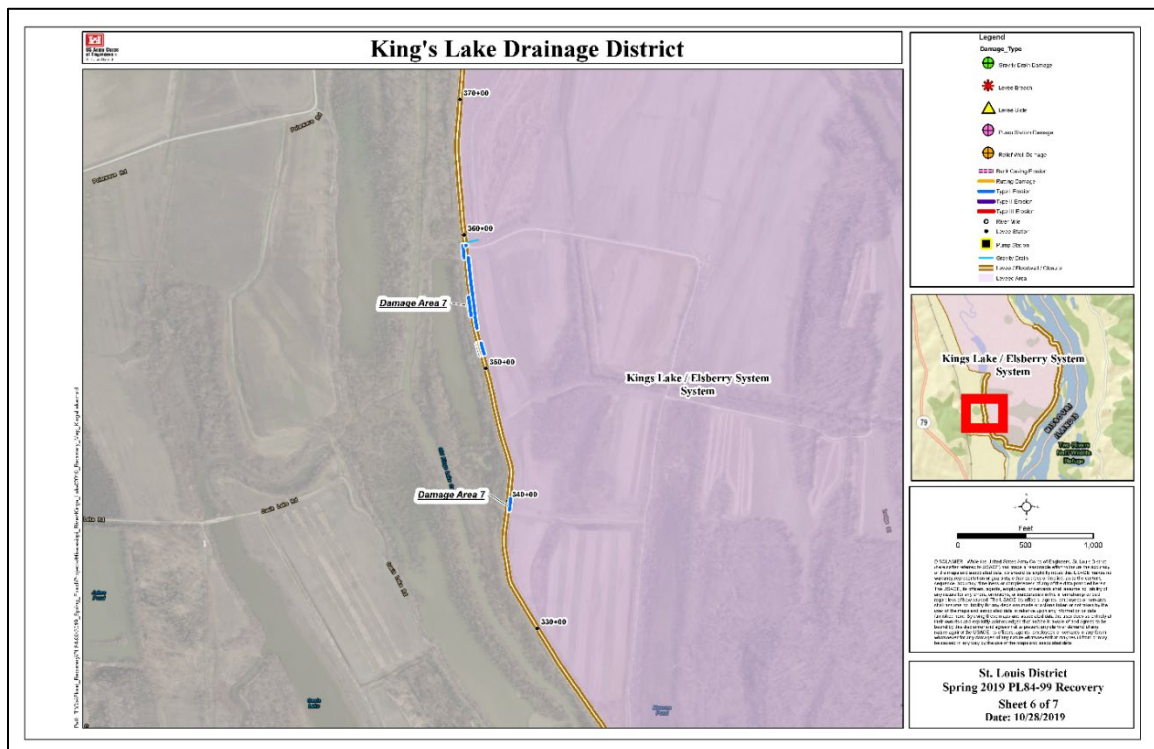
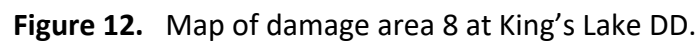


Figure 11. Map of damage area 7 at King’s Lake DD.



2.0 PROJECT ALTERNATIVES CONSIDERED

This section describes and compares the alternatives based on their geotechnical, engineering design, economic, and environmental impact and achievement of project objectives for the damaged Elsberry/King’s Lake System. NEPA requires that in analyzing alternatives to a proposed action, a federal agency must consider an alternative of “No Action.” Likewise, Section 73 of the WRDA of 1974 (P.L. 93-251) requires federal agencies to give consideration to nonstructural measures to reduce or prevent flood damage.

2.1 Alternative 1 - No Action (Future without Project)

Under the No Action Alternative, the federal government would not repair the damages to the Elsberry/King’s Lake System. It is possible that the non-federal sponsor would make repairs without federal assistance. Environmental impacts of repairs made by the non-federal sponsor would be similar to the tentatively selected alternative, except that the repair duration may differ and the environmental protections may be reduced. **Therefore, due to the uncertainty of the non-federal sponsor making all necessary repairs, the environmental impacts of allowing the damage to remain unrepaired are regarded as the No Action Alternative.** This would presumably perpetuate a state of reduced levee structural integrity because the breaches would not likely be repaired to the federal standard. The levee would be susceptible to further erosion at the damaged sites. The current damages would decrease flood protection, thereby increasing risks to individuals, structures, businesses, property, and agricultural activities within the leveed areas.

2.2 Alternative 2 - Nonstructural Measures

Section 73 of the WRDA of 1974 (P.L. 93-251) requires federal agencies to give consideration to non-structural measures to reduce or prevent flood damage. Nonstructural measures reduce flood damages without significantly altering the nature or extent of flooding. Damage reduction from nonstructural measures is accomplished by changing the land use within the floodplains, or by accommodating existing uses to the flood hazard. Examples include flood proofing, relocation of structures such as levees, flood warning and preparedness systems, and regulation of floodplain uses. A flood warning system would do little to reduce structural and agricultural damages. Flood proofing or relocation is not desirable to the non-federal sponsors of the Elsberry/King’s Lake System, would have large costs, and result in loss of numerous acres of prime farmland.

Under P.L. 84-99, the Corps has the authority to pursue a non-structural alternative only if the project sponsor requests such an alternative.

*“There is hereby authorized an emergency fund to be expended in preparation for emergency response to any natural disaster, in flood fighting and rescue operations, or in the repair or restoration of any flood control work threatened or destroyed by flood, including the strengthening, raising, extending, or other modification thereof as may be necessary in the discretion of the Chief of Engineers for the adequate functioning of the work for flood control, or in implementation of **nonstructural alternatives to the repair or restoration of such flood control work if requested by the non-federal sponsor.**”*

Additionally, ER 500-1-1, dated 30 September 2001, states that:

*“Under P.L. 84-99, the Chief of Engineers is authorized, **when requested by the non-Federal public sponsor**, to implement nonstructural alternatives (NSA’s) to the rehabilitation, repair, or restoration of flood control works damaged by floods or coastal storms. The option of implementing an NSA project (NSAP) in lieu of a structural repair or restoration is available only to non-Federal public sponsors of flood control works (FCW’s) eligible for Rehabilitation Assistance in accordance with this regulation, and **only upon the written request of such non-Federal public sponsors. The principal purposes of an NSAP are for floodplain restoration, provision or restoration of floodways; and/or reduction of future flood damages and associated (FCW) repair costs.**” [NOTE: Habitat restoration is recognized as being a significant benefit that can be achieved with an NSAP, and may be a significant component of an NSAP, **but is not considered to be a principal purpose under this authority.**]*

The non-federal sponsors of the Elsberry/King’s Lake System declined to request the pursuit of a non-structural alternative; therefore, this alternative was eliminated from further analysis in this EA.

2.3 Alternative 3 – Structural Repair of Levees with Federal Assistance

Under this alternative, at the request of the non-federal sponsors of the Elsberry/King’s Lake System, the federal government would repair the damaged areas to the pre-flood level of protection. Since the Elsberry/King’s Lake System is active in the USACE Rehabilitation and Inspection Program, it is eligible for Flood Control and Coastal Emergency funding authorized by P.L.84-99.

2.3.1 Erosion Type I

Erosion Type I would be repaired by re-grading the eroded areas using embankment material from the adjacent undamaged levee section, and then compacted. After compaction, the repaired areas would be restored by spreading seed, fertilizer, and mulch on the disturbed

areas. The areas would be watered as needed. This is the recommended repair method for Elsberry damage areas 10, and 13, and King's Lake damage areas 1, 2, 5, 6, 7 and 8.

2.3.2 Erosion Type II and III

Erosion Types II and III would be repaired by filling in the eroded areas using embankment material from designated borrow areas. Material would be excavated from borrow areas, hauled to the damaged locations, placed in the eroded areas, and then compacted. After compaction, the repaired areas would be restored by spreading seed, fertilizer, and mulch on the disturbed areas. The areas would be watered as needed. This is the recommended repair method for Elsberry damage areas 3, 4, 5, 8, and 9, and King's Lake damage areas 3 and 6.

2.3.3 Embankment Slides

Embankment Slides would be repaired by excavating the damage section of levee to the failure plane and stockpiling the excavated material in designated areas. The excavated material would be treated with hydrated lime if necessary. The lime treated embankment material or non-treated material from slide repair not requiring lime treatment would be placed back in the levee section and compacted. After compaction, the repaired areas would be restored by spreading seed, fertilizer, and mulch on the repaired areas. The seeded areas would be watered as needed. Pre-flood areas which previously had a crushed stone surface would be re-surfaced with crushed stone in lieu of seeding. A geotextile material would be placed on the area to be repaired, covered in crushed stone, and compacted. This is the recommended repair method for Elsberry damage area 2.

2.3.4 Creek bank erosion

The creek bank erosion at Elsberry would be repaired by setting-back the net levee section to an alignment where the net levee section is no longer impacted by the creek bank erosion. The offset distance will be the minimum distance required to construct a full levee section. The erosion would be repaired using impervious material, utilizing designated borrow areas and compaction methods used for Erosion Type III. The slope would be protected with stone revetment of adequate size placed on top of geotextile. The existing levee would be degraded to match natural ground surface, and the material from the degraded levee utilized to construct the new levee section. Additional borrow would be required to complete construction of the new levee section. This is the recommended repair method for Elsberry damage areas 7 and 11.

2.3.5 Levee Breaches

Levee Breaches would be repaired by filling in the scour holes using pervious material from designated borrow areas. Unlike the creek bank erosion, these breach repairs would be made

to the damaged levee in the original alignment. Pervious and impervious material would be excavated from borrow areas and hauled to the breached area on designated haul roads. The materials would be placed in the eroded areas and capped with an impervious material. The placed material would be compacted and the disturbed areas would be restored by spreading seed, fertilizer, and mulch on the disturbed area. The areas would be watered as needed. The Elsberry/King’s Lake System includes a crushed stone road midway up the landside levee slope. The repair would be graded to include the road and crushed stone would be spread over geotextile and compacted. This is the recommended repair method for Elsberry damage areas 1 and 6, and King’s Lake damage area 4.

2.3.6 Borrow Material

All repair impervious borrow material would be excavated from seven borrow sites (Figures 13-15) within the levee districts. No tree clearing is required, but the topsoil would need to be stripped off, stockpiled, and then re-deposited as top dress on the disturbed area. After borrow material is removed, the sites would return to agricultural production. However, the borrow site at BK Leach CA (Figure 14, Site 3) would, instead, continue to be used in accordance with the moist-soil management strategies employed by area managers after borrow material is taken from the site. Conservation Area managers have allowed some borrow to be removed parallel to a ditch at this site.

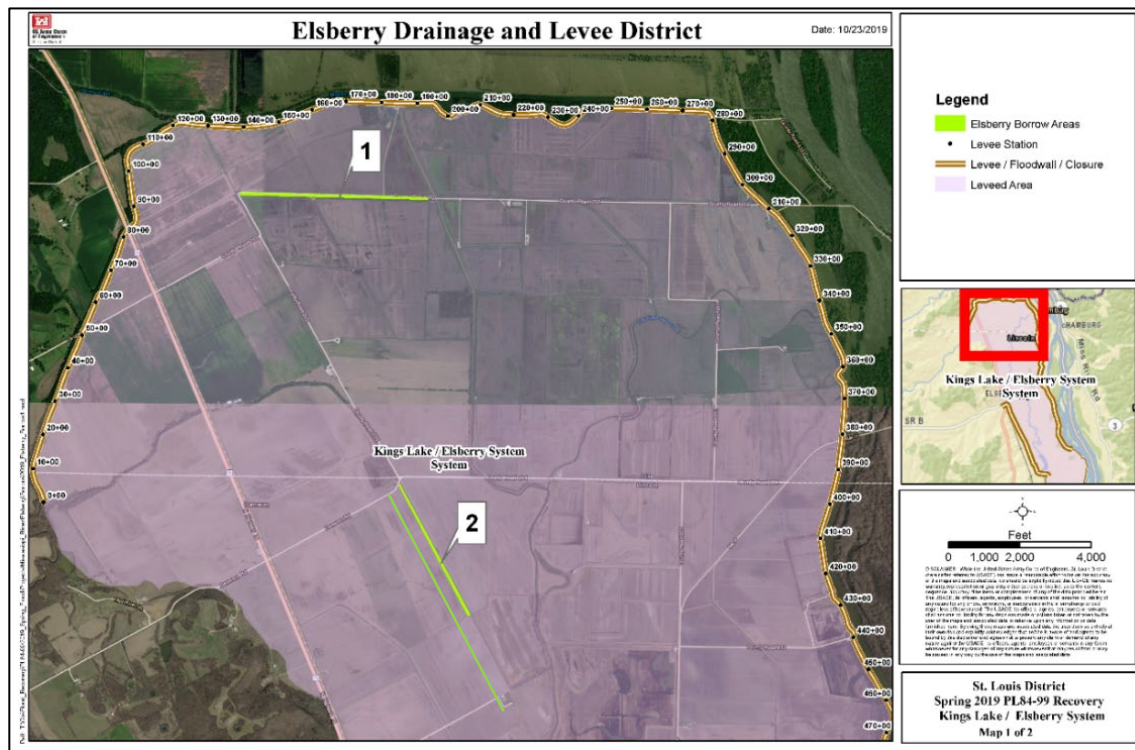


Figure 13. Location of borrow sites 1 and 2 for the Elsberry D&LD damages.

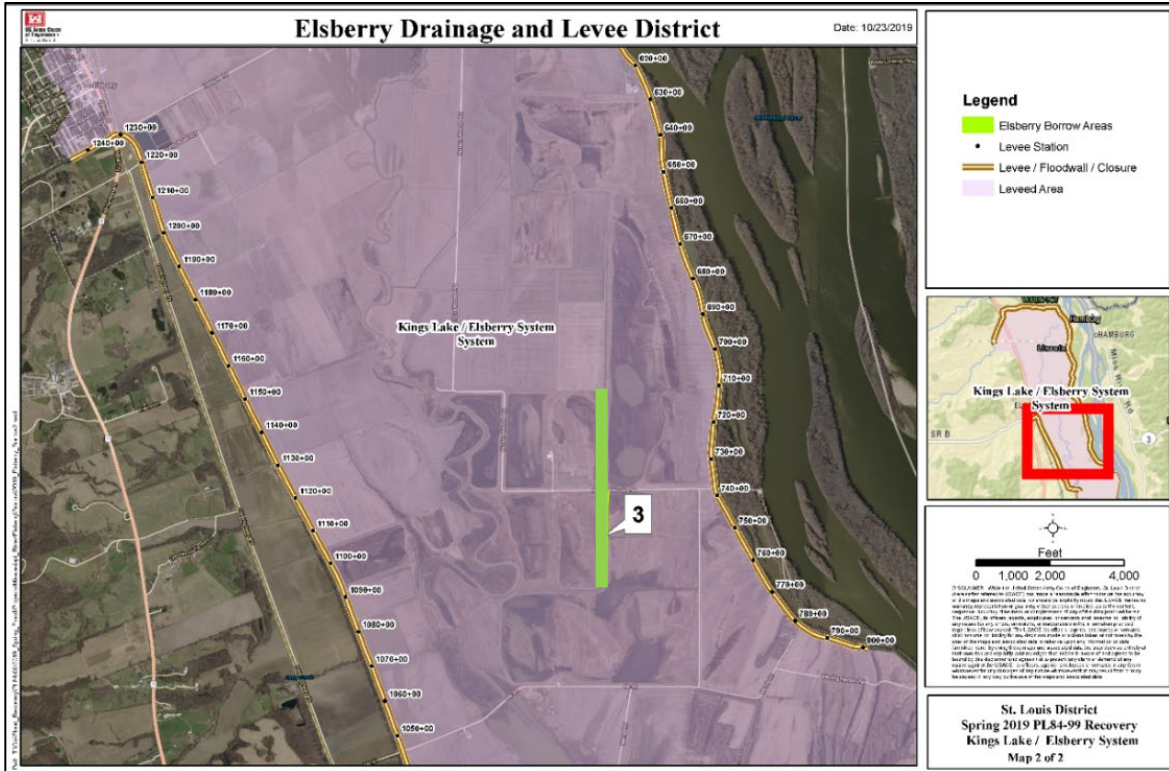


Figure 14. Location of the borrow site 3 for the Elsberry D&LD damages on BK Leach CA.

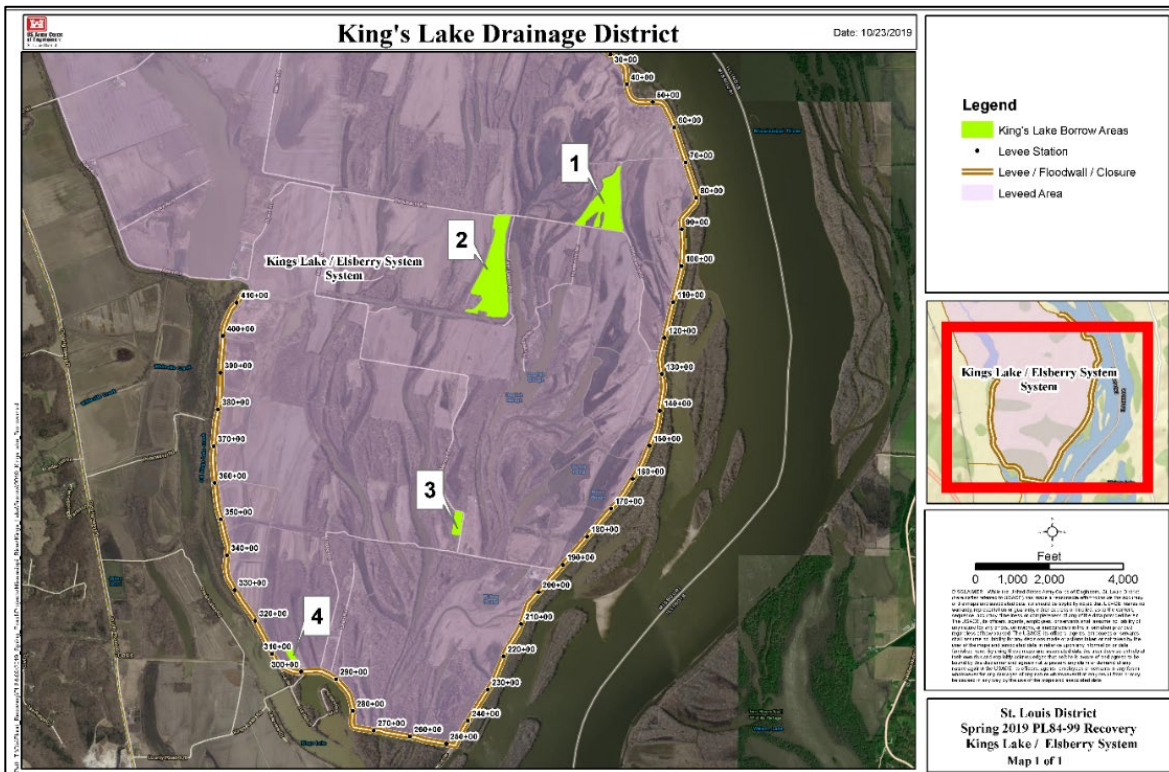


Figure 15. Location of borrow sites 1-4 for the King’s Lake Drainage District damages.

Construction Limits

Construction limits have been established in the immediate vicinity of the erosion, turf repair or breach repair areas. No emergent or forested wetlands exist within the construction limits.

Access and Staging Areas

Staging areas and access routes to the repair sites would be established to avoid and minimize environmental impacts. Existing access points such as roads, rights of way, and levees located within a reasonable distance to the construction sites would be utilized. Haul road locations and staging areas would be restored to their pre-project condition after project completion.

Final Plans and Specifications

Following review of comments and the signing of the FONSI (should that be the decision), plans & specs would be modified if necessary. Due to the emergency declaration and the nature of the levee repairs, construction has commenced and should be completed within one construction season.

2.3.7 Environmental Protection Measures

The Contractor shall submit an Environmental Protection Plan for review and acceptance by the USACE Contracting Officer, which shall include: a list of state and local laws and regulations; a Spill Control Plan; a Recycling and Waste Minimization Plan; a Contaminant Prevention Plan; a Storm Water Pollution Prevention Plan; an Environmental Protection Plan, and an Environmental Monitoring Plan.

- The Contractor shall provide environmental protective measures and procedures to prevent and control pollution, limit habitat disruption, and correct environmental damage that occurs during construction.
- No fill shall be excavated or permanently placed except where required for erosion.
- There shall be no removal of existing vegetation outside of the construction area.
- All earthwork shall be planned and conducted to minimize the duration of exposure of unprotected soils; and all contractor work areas shall be re-vegetated with fast germinating grass mixtures to reduce any further erosion.
- Thoroughly clean all construction equipment at the prior job site in a manner that ensures all residual soil is removed and that seed deposits from plant pests are not present.
- The Contractor shall comply with any special environmental requirements, which are an outgrowth of environmental commitments made by the Government during the project development.
- Proper disposal of solid waste and debris and storage and use of fuels and lubricants.
- Protection of water resources to avoid pollution of surface and ground waters.

- Construct or install temporary and permanent erosion and sedimentation control features such as berms, dikes, drains, grassing and mulching, silt screens, or hay bales.
- Maintain all excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, disposal sites, and all other work areas free from airborne dust which would cause a hazard or nuisance.
- Hydrocarbons and carbon monoxide emissions from equipment shall be controlled to Federal and State allowable limits at all times.

2.4 Tentatively Selected Plan-Structural Repair of Levee Segment with Federal Assistance

A team including members of the St. Louis District’s Engineering Design Branch and Geotechnical Engineering Branch were involved with developing the most economical and efficient design for repair. Alternative 3, structural repair of the existing levee segment along the original alignment to the pre-flood condition, is the Tentatively Selected Plan. Repairs for the Elsberry/King’s Lake System consists of restoring protection along the previous alignment in the areas of the breaches (versus establishing a new alignment), with the exception of a levee setback for the creekbank slide at the Elsberry D&LD. Structural repair would reconstruct the levee to pre-flood grade at the location of the breaches and slide. Figures 16-24 illustrate typical cross-sections indicating methods of repair for breaches, slides, Erosion Types II and III, turfing, gravity drain, stone protection key, creek scour repair and gravity drain scour repair.

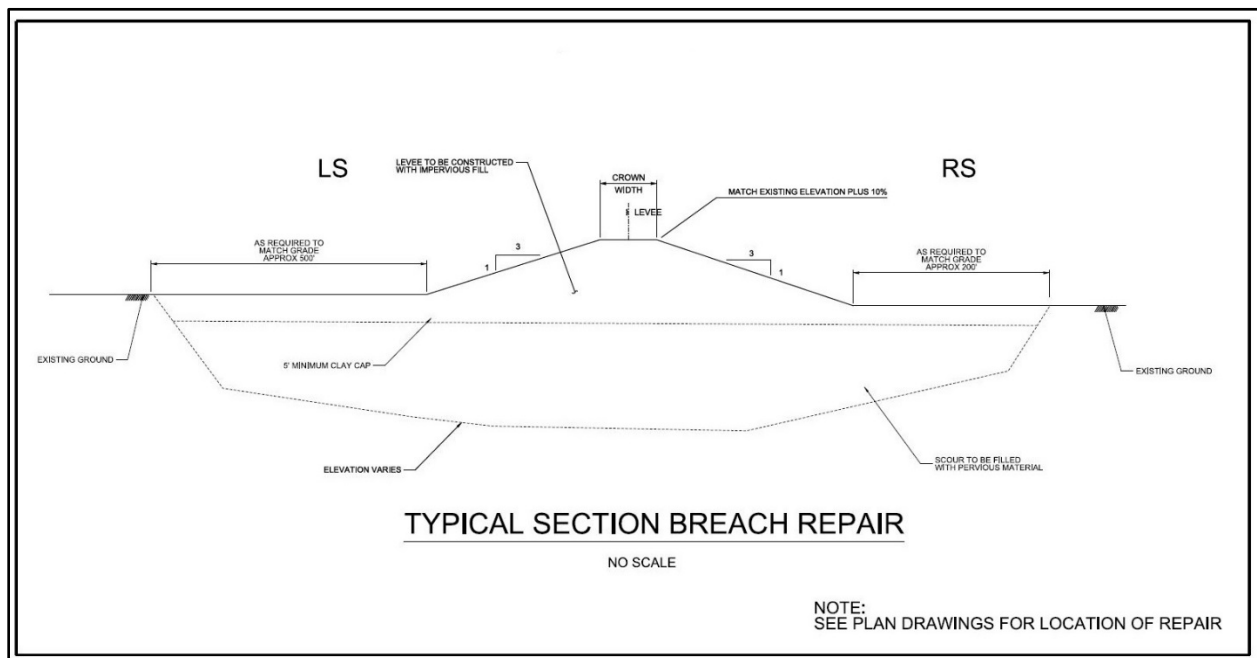


Figure 16. Illustration of a typical breach repair.

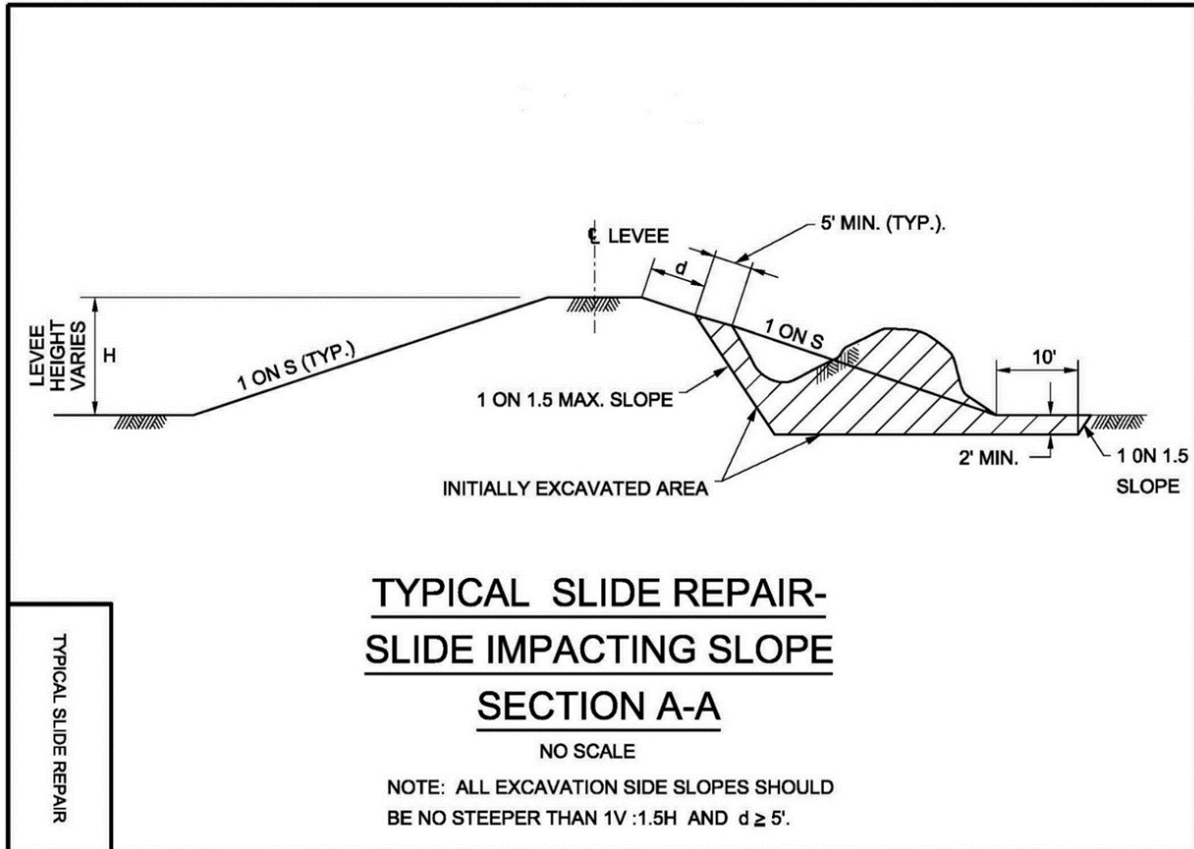


Figure 17. Illustration of a typical levee slide repair.

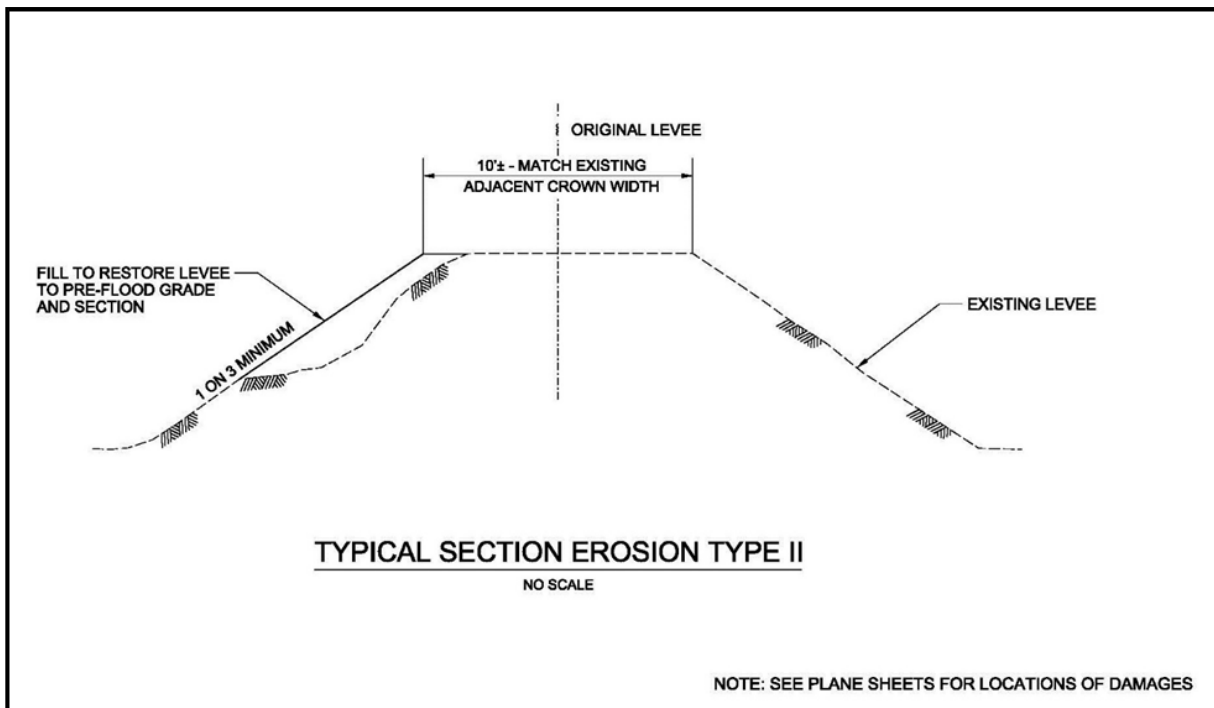


Figure 18. Illustration of a typical erosion type II repair.

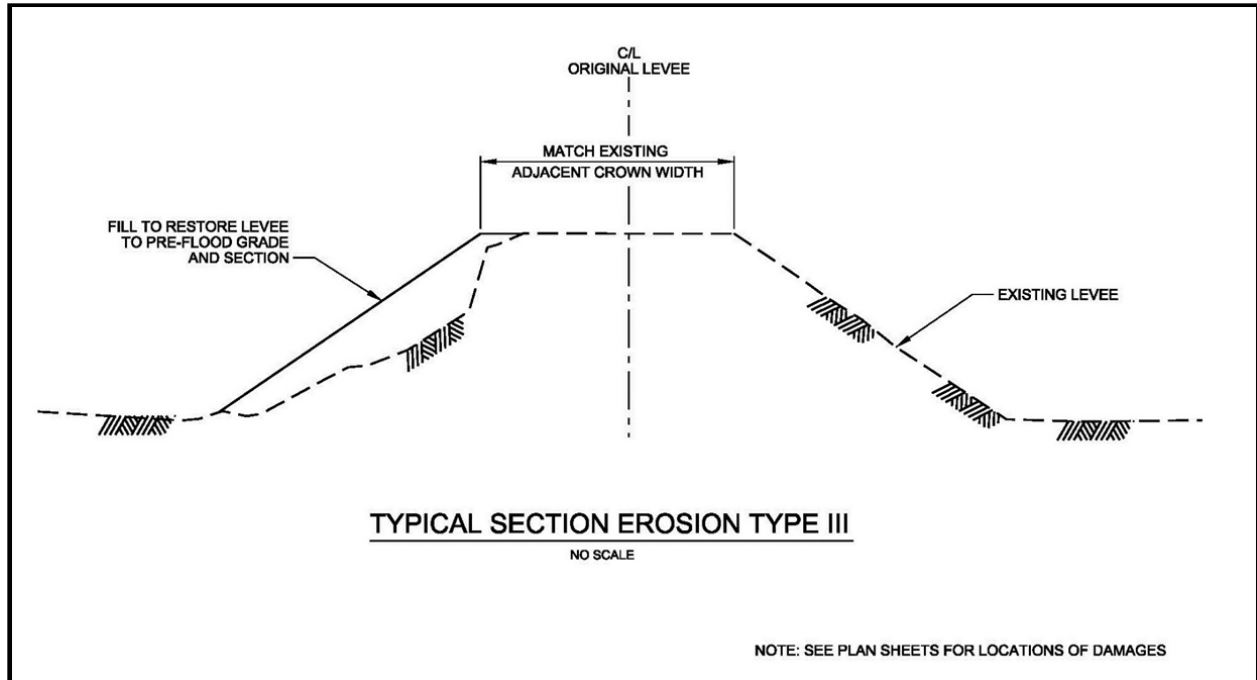


Figure 19. Illustration of a typical erosion type III repair.

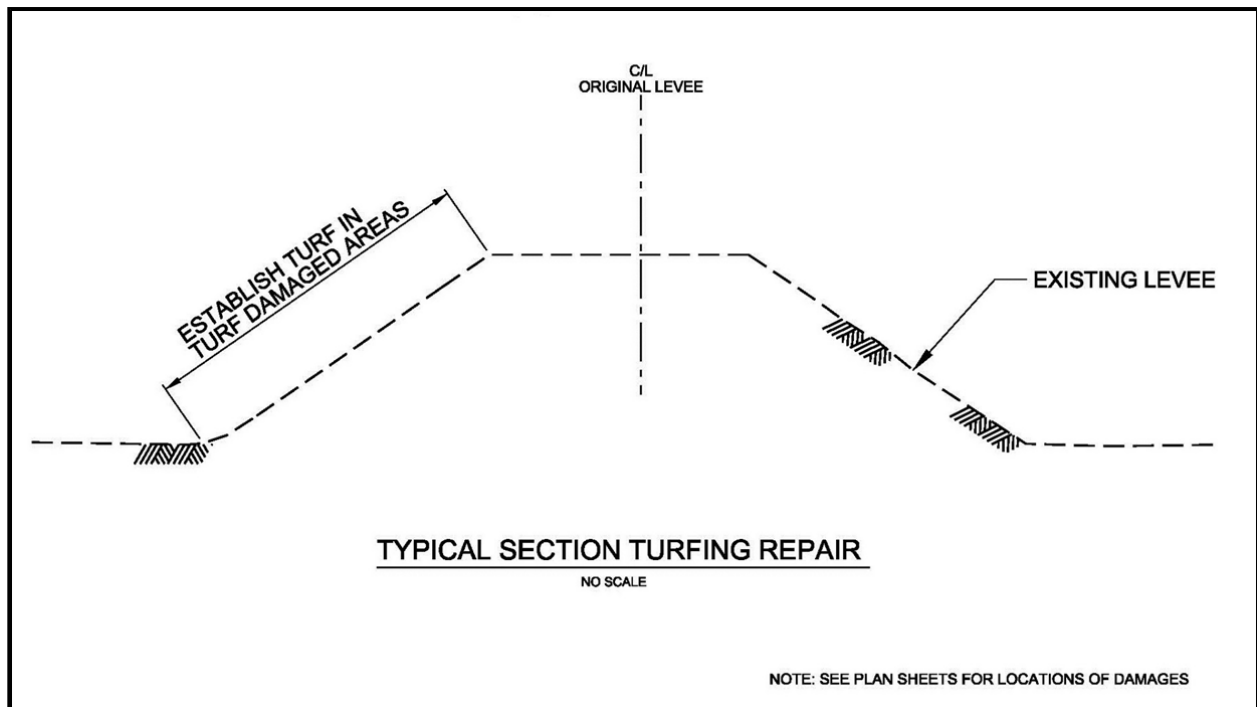


Figure 20. Illustration of a typical turf repair.

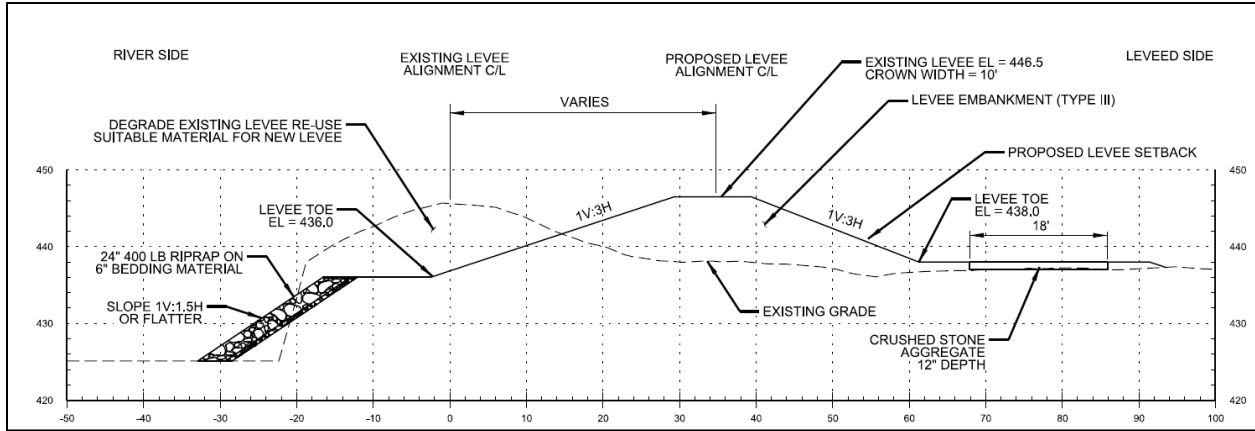


Figure 21. Illustration of typical creekbank erosion repair for Elsberry D&LD damage areas 7 and 11.

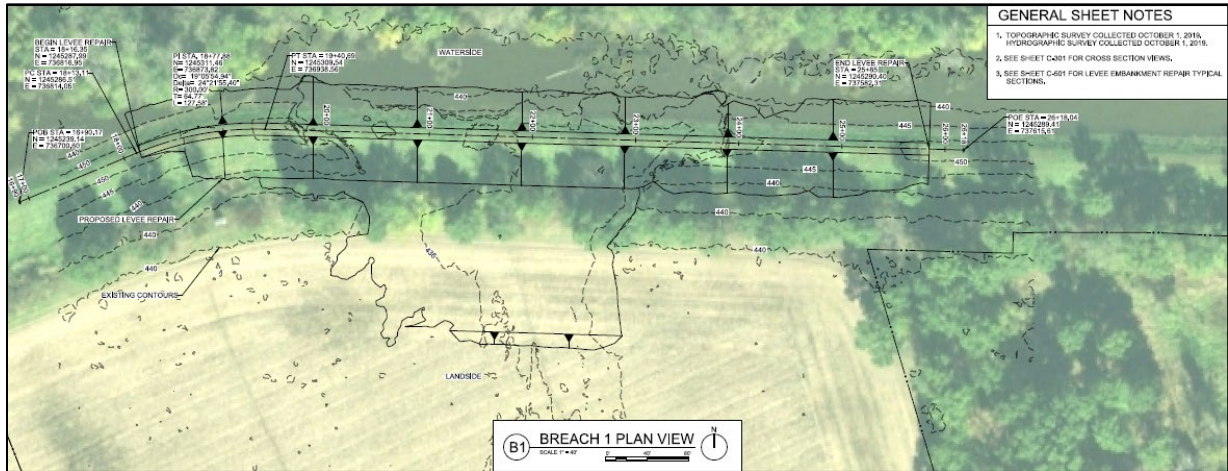


Figure 22. Proposed repair of Elsberry D&LD breach 1 (damage area 6).

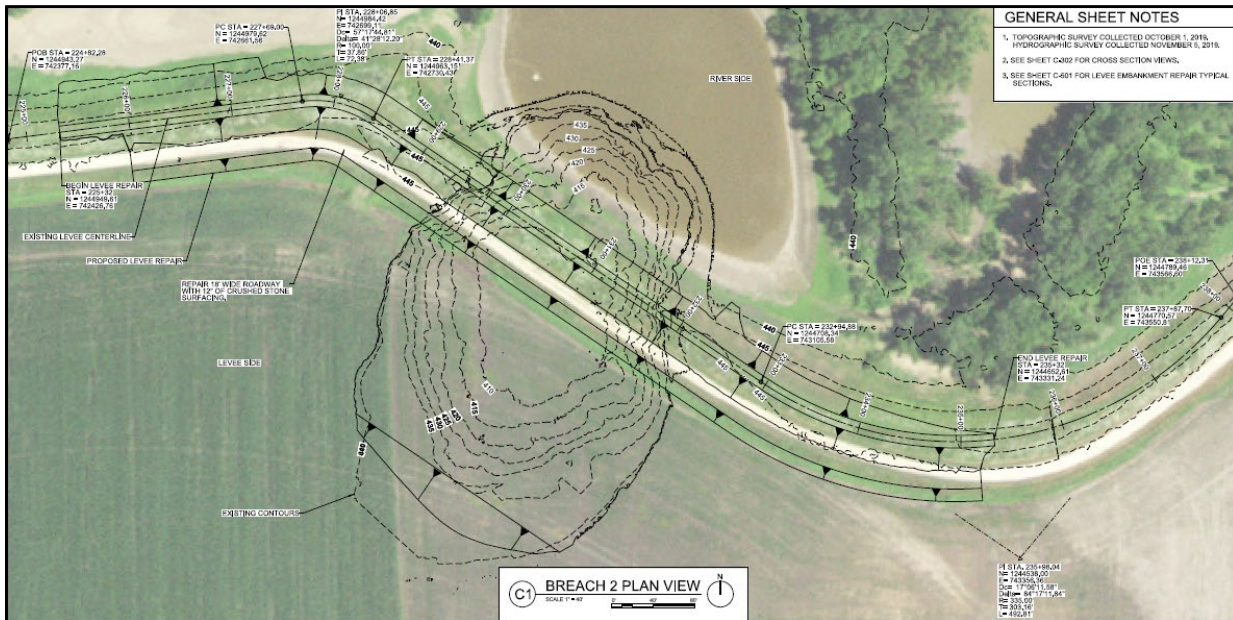
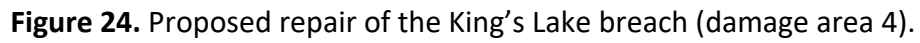


Figure 23. Proposed repair of Elsberry D&LD breach 2 (damage area 1)



3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL IMPACTS

3.1 Physical Resources

3.1.1 Land Use/Land Cover

The Elsberry/King’s Lake System is located on the floodplain of the Mississippi River. Because of the fertility of the soil and moisture, the land is prized for its agricultural productivity. Levees have been constructed to the federal standard to reduce the likelihood of inundation within the leveed area to a 14-year return period; and to provide a reasonable amount of certainty of producing crops in most years. A survey of the 2010 Land Use Cover map revealed that the majority of the area is in agriculture (Figure 25). Non-agriculture land use includes wet forest, wet meadow, and shallow marsh.

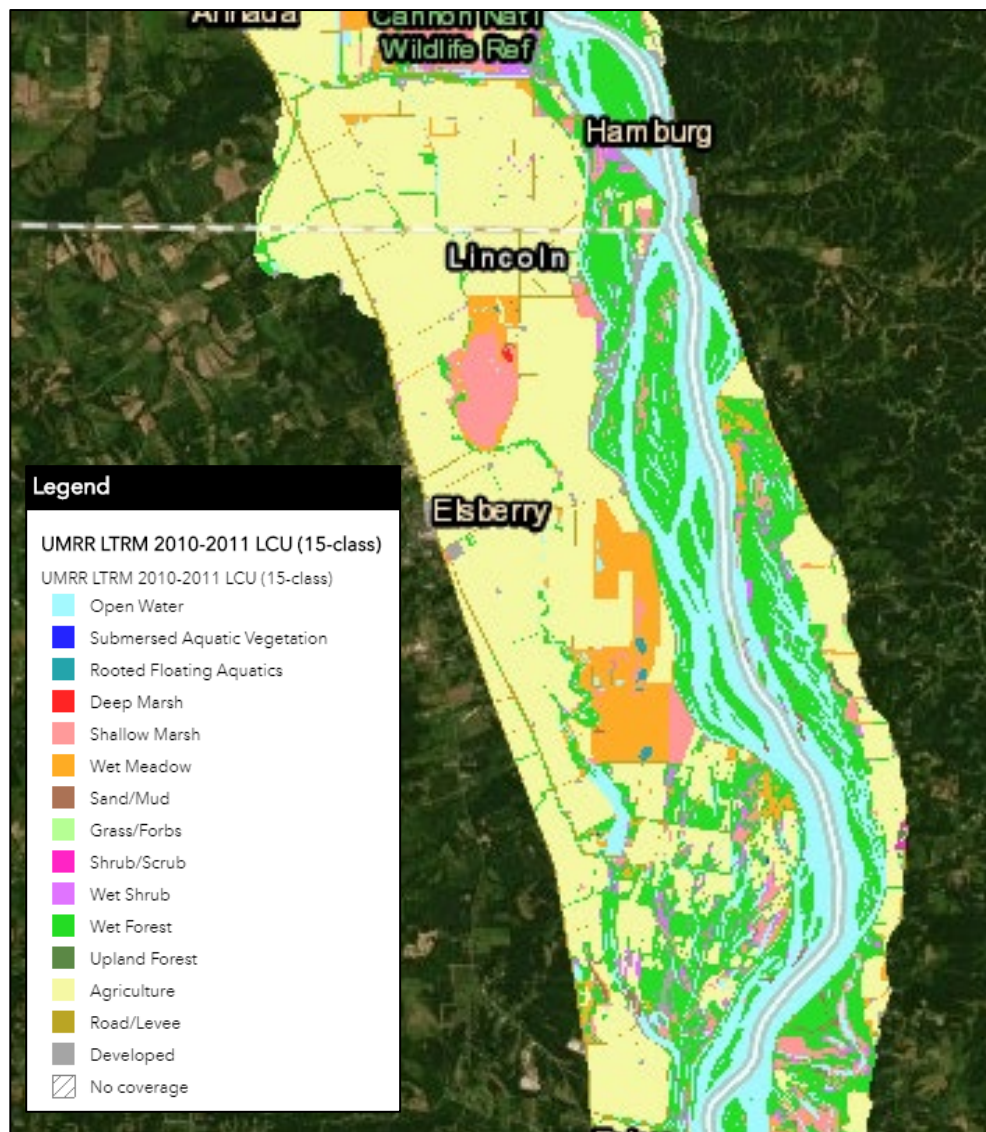


Figure 25. Map of the land cover use as of 2010 in the Elsberry/King’s Lake System.

Alternative 1 - No Action (Future without Project) – If no action is taken, the subsequent flood events may compromise the Elsberry/King’s Lake System, resulting in less available land suitable for agriculture. In addition, the changes in hydrology brought about by the compromised levee system may alter the land management strategies employed by BK Leach Conservation Area land managers. It is likely that agricultural land would eventually be replaced with wetland land types, including open water, semi-permanent emergent wetland, wet meadow, bottomland forest, and shrub-scrub wetland.

Alternative 3 - Repair of Levees with Federal Assistance – If the Elsberry/King’s Lake System is repaired to the pre-2019 flood condition, the leveed area would have reduced inundation risk into the future. Therefore, the land usage would likely remain the same as the pre-flood uses.

3.1.2 Noise

The area in the vicinity of the proposed project includes transportation, recreation, and agricultural zones. Agricultural and open space areas can reach noise levels similar to busy city traffic, up to 70 decibels (dB; a measure of loudness), depending on their proximity to transportation arteries (Figure 26). Noise associated with transportation arteries such as highways, railroads, airports etc., would be greater than those in rural areas. Agriculture, traffic, and recreation-related noise, such as that created by vehicles, machinery, and recreationists, are the main sources of noise within the study area. In general, urban noise emissions do not typically exceed about 60 dB, but may attain 90 dB or greater in busier urban areas or near high volume transportation arteries. Ambient noise in the study area is generated by wildlife, human activities, agricultural activities, and vehicular traffic.

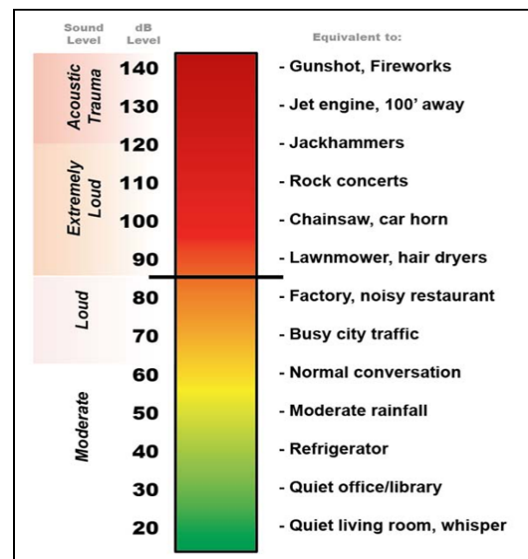


Figure 26. Examples of the decibel (dB) level of various sources.

Alternative 1 - No Action (Future without Project) – If no action is taken, the level of noise would remain the same as pre-flood conditions.

Alternative 3 - Repair of Levees with Federal Assistance – The proposed project would be expected to temporarily increase noise levels near the repair and associated worksites. The U.S. Environmental Protection Agency has set a limit of 85 decibels on the A scale (the most widely used sound level filter) for eight hours of continuous exposure to protect against

permanent hearing loss. Based upon similar construction activities conducted in the past, noise above this level would not be expected to occur for periods longer than eight hours. Noise levels would return to pre-flood conditions after construction completion.

3.1.3 Water Quality

Water Quality Standards (WQS) are the foundation of the Clean Water Act. In Missouri, the standards define the water quality goals for a waterbody by designating its beneficial uses (MO DNR 2019a). The WQS also set maximum allowable concentrations for up to 100 contaminants for each of those beneficial uses (MO DNR 2019a). Missouri's water quality standards extend the Clean Water Act protections to more than 115,000 miles of streams and rivers and 3,080 lakes and reservoirs. The standards also give the beneficial uses for each of those waters. The Elsberry/King’s Lake System lies within the Sny watershed. The levee system is bordered on the east by the Mississippi River and to the north by Bryant’s Creek. The Old King’s Lake Creek runs through the system from north to south, where it empties into an unnamed farm pond. Bryant’s Creek and Old King’s Lake Creek are primarily designated as warm water habitat, a source of irrigation and livestock and wildlife protection, and a source of secondary contact recreation (MO DNR 2019c). The Mississippi River along the levee system shares the same designations as Bryant’s Creek and Old King’s Lake Creek, but is also designated as drinking water and as industrial water supply (MO DNR 2019c).

Section 303(d) of the federal Clean Water Act requires that each state identify waters that are not meeting water quality standards and for which adequate water pollution controls have not been required. Water quality standards protect such beneficial uses of water as whole body contact (such as swimming), maintaining fish and other aquatic life, and providing drinking water for people, livestock and wildlife. There are no streams or water bodies within the levee system that are on the MO DNR’s 303d list for impairment (MO DNR 2019b).

Alternative 1 – No Action (Future without Project) - If the Elsberry/King’s Lake System levee is not repaired to the federal standard there would be an increased flood risk and more physical damages would occur within the Drainage District, such as erosion and sedimentation. These changes may alter the water quality and classifications of the water bodies within the protected area.

Alternative 3 – Repair of Levees with Federal Assistance – The proposed repair activities may result in minor increases in sedimentation into the Mississippi River. Levee repairs could cause a short-term increase in turbidity in the waterways at the immediate construction site if flooding or heavy rains occurred during construction. However, the Contractor shall comply with all applicable federal, state, and local laws and regulations. The Contractor shall provide

environmental protective measures and procedures to prevent and control pollution, limit habitat disruption, and correct environmental damage that occurs during construction. All disturbed areas would be reseeded following construction to reduce the potential for erosion.

3.1.4 Air Quality

The Clean Air Act of 1963 requires the U.S. Environmental Protection Agency (USEPA) to designate National Ambient Air Quality Standards (NAAQS). The USEPA has identified standards for six criteria pollutants: ozone, particulate matter (PM₁₀ = less than 10 microns; and PM_{2.5} = less than 2.5 microns in diameter), sulfur dioxide, lead, carbon monoxide, and nitrogen dioxide. Lincoln and Pike counties are currently in attainment for all U.S. Environmental Protection Agency air quality criteria (USEPA 2016).

Alternative 1 – No Action (Future without Project) – If the levee is not repaired to the federal standard the air quality standards in the D&LD would be maintained at their current levels.

Alternative 3 – Repair of Levees with Federal Assistance – Construction activities would cause a slight increase in suspended particulates (i.e., dust). Emissions from construction equipment would increase the ozone, carbon monoxide and carbon dioxide levels in the vicinity of the construction site. The expected increases would be very negligible and would cease after construction. The Contractor shall follow environmental protective measures and procedures to reduce impacts to air quality.

3.2 Biological Resources

3.2.1 Fish and Wildlife

Fish and wildlife habitats located in and near the leveed area include open water, streams and rivers, and several wetland habitat types including: deep marsh, shallow marsh, wet meadow, scrub-shrub, and bottomland forest. The area is predominately agricultural cropland, which provides some marginal habitat alongside old fields and hedgerows. These habitats provide food and cover for many species of fish, frogs, toads, turtles, muskrat, rabbits, squirrel, red fox, white-tailed deer, and many species of waterfowl, shorebirds, songbirds. Typical tree species include pecan, eastern cottonwood, American elm, box-elder, silver maple, pin oak, shagbark hickory, and river birch. The 4,307 acre B.K. Leach Memorial Conservation Area lies within the Elsberry/King’s Lake System. The area contains a wide variety of wetland habitats, ranging from early successional marshes to deep backwater sloughs. The wetlands are managed to provide food for migrating waterfowl, while also providing habitat for resident marsh birds, and other wetland dependent wildlife. The levees are mowed grass areas that are managed to prevent shrub and tree growth and animal damage.

Alternative 1 – No Action (Future without Project) – If the Elsberry/King's Lake System levee is not repaired to the federal standard, the levee system would have less stability and there is an increased probability of future flooding and, therefore, less agricultural use. In this case, a more diverse and dynamic terrestrial and aquatic habitat may develop. If the terrestrial habitat is inundated by high water more frequently, the vegetative composition may be altered. During high water events, water could pond on the landside of the levee and deposit sediment, decreasing flood water turbidity, filling wetlands, killing vegetation as flood water ponds on typically dry areas currently dominated by agriculture. However over time, wetland vegetation would become established. During high water events, terrestrial fauna would be displaced as their habitat is inundated. Conversely, fishes and other aquatic organisms would gain access to a large area of floodplain habitat, which would benefit the spawning and rearing of many fish species. The altered hydroperiod would also disrupt the current wetland management strategies in place at BK Leach CA. Managing the wetland units might become much more difficult, as the flooding would prevent fine-tuned water management within each individual pool.

Alternative 3 – Repair of Levees with Federal Assistance – Impervious borrow material would be excavated from seven borrow areas and pervious material would be excavated from large deposits that were left after the flood. With the exception of weeds and grass vegetation growing on the topsoil, no tree or vegetation clearing are required at any of the four sites. All borrow material sites are located on the Mississippi River floodplain, but all areas (with the exception of the BK Leach site-Elsberry D&LD site #3) are currently farmed or fallow fields. After borrow material is removed, usually to a depth of no greater than 2-4 feet, the areas would be graded and put back into agricultural production. If heavy rain occurs during construction, washing soil into the river and other waterways, there could be a short-term increase in turbidity in the immediate area, temporarily displacing fish and other mobile organisms. Following construction, aquatic species would be expected to return. However, the Contractor is required to comply with all applicable federal, state, and local laws and regulations. The Contractor is required to provide environmental protective measures and procedures to prevent and control pollution. This includes the condition that the Contractor shall keep construction activities under surveillance, management and control to minimize interference with, disturbance to, and damage of, fish and wildlife. Therefore, no more than short-term, temporary impacts to fish and wildlife resources are anticipated.

3.2.2 Bald Eagle

Although the Bald Eagle (*Haliaeetus leucocephalus*) was removed from the Federal list of threatened and endangered species in 2007, it continues to be protected under the Migratory

Bird Treaty Act and the Bald and Golden Eagle Protection Act (BGEPA) (USFWS 2019a). The BGEPA prohibits unregulated take of bald eagles, including disturbance. The U.S. Fish and Wildlife Service developed the National Bald Eagle Management Guidelines (USFWS 2007a) to provide landowners, land managers, and others with information and recommendations regarding how to minimize potential project impacts to Bald Eagles, particularly where such impacts may constitute disturbance. On 16 Oct 2019, USACE Wildlife Biologist Evan Hill conducted a field inspection of the levee district to determine the presence of Bald Eagle nests/nesting within the levee district. One nest was found within 660 feet of King's Lake damage area six (Figure 27). A Bald Eagle Disturbance Permit was submitted to the USFWS on 12 Feb 2020. Disturbance permit MB70717D-0 was obtained on 5 March 2020 (Appendix 3).

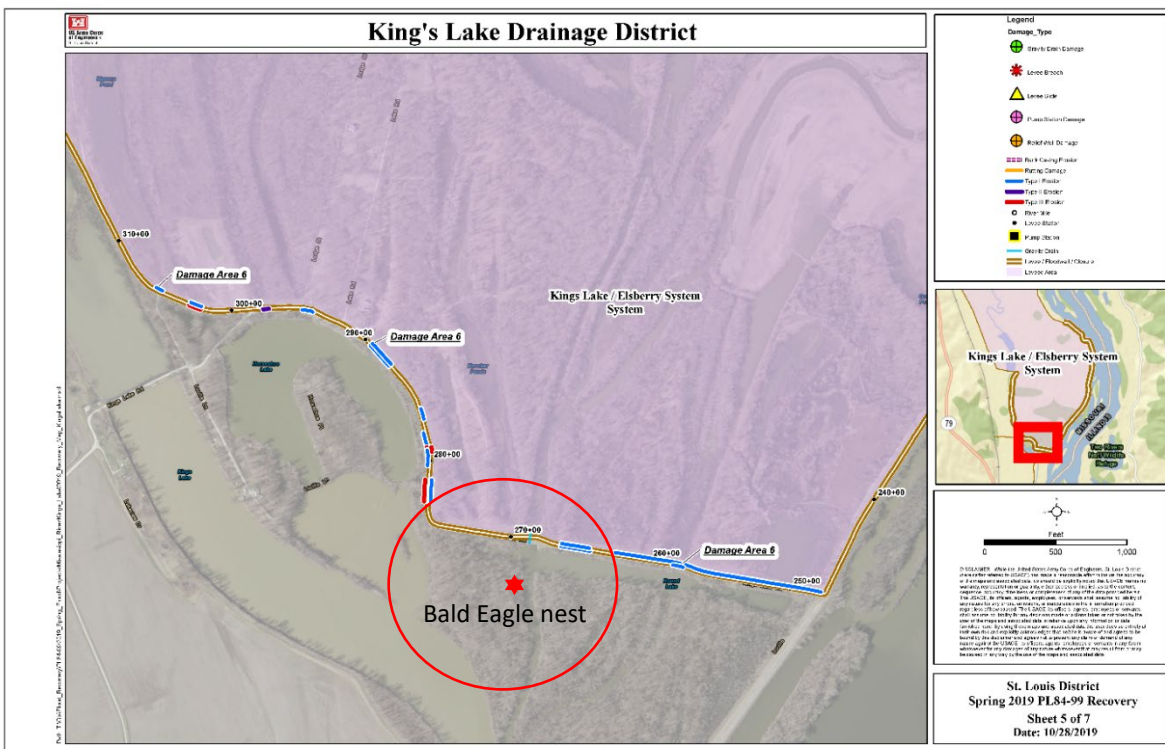


Figure 27. Location of the Bald Eagle nest that lies within 660 feet of damage area

Alternative 1 – No Action (Future without Project) –

If no action is taken to repair the levee, agriculture use would decrease and a more diverse and dynamic terrestrial and aquatic habitat may develop. This would indirectly benefit Bald Eagle (and other wildlife) by creating additional foraging and nesting habitat. Furthermore, the decreased agricultural use would reduce the amount of disturbance events to nesting Bald Eagles.

Alternative 3 – Repair of Levees with Federal Assistance –

If actions are taken to repair the levee, the Bald Eagle nest may be abandoned due to construction disturbance. However, the breeding pair may select an alternate nest in the area. Furthermore, given that the nest was built so near the levee, which is routinely maintained by the levee district, the breeding pair may be acclimatized to disturbances. In this case, the nest may not be abandoned, despite the construction disturbance.

3.3 Federally Threatened and Endangered Species Assessment

In compliance with Section 7(c) of the Endangered Species Act of 1973, as amended, a list of species and critical habitat was acquired from the USFWS IPaC website on 7 January 2020 Elsberry/King's Lake System project area (Table 4, Appendix 1). Habitat requirements and impacts of the federal action are discussed for each species below.

Table 4. List of threatened and endangered species for the Elsberry/King's Lake System generated by an IPaC report obtained on 7 January 2020.

Common Name (Scientific Name)	Classification	Habitat
Indiana Bat (<i>Myotis sodalis</i>)	Endangered	Hibernates during winter in caves or abandoned mines. In Summer, roosts under loose tree bark on dead or dying trees. Forages near sources of water.
Northern Long-eared Bat (<i>Myotis septentrionalis</i>)	Threatened	Hibernates during winter in caves or abandoned mines. In Summer, roosts under loose tree bark on dead or dying trees. Forages near sources of water.
Gray Bat (<i>Myotis sodalis</i>)	Endangered	Lives in caves year-round. During the winter, uses deep, vertical caves. In the summer, uses caves scattered along rivers.
Pallid Sturgeon (<i>Scaphirhynchus albus</i>)	Endangered	Mississippi and Missouri Rivers.
Higgins Eye (Lampsilis <i>higginsii</i>)	Endangered	Larger rivers where it is usually found in deep water with moderate currents.

3.3.1. Indiana Bat

This species has been noted as occurring in several Illinois and Missouri counties (USFWS 2007b). Indiana Bats are considered to potentially occur in any area with forested habitat (USFWS 2007b). Indiana Bats migrate seasonally between winter hibernacula and summer roosting habitats. Winter hibernacula include caves and abandoned mines. Females emerge from hibernation in late March or early April to migrate to summer roosts. Females form nursery colonies under the loose bark of trees (dead or alive) and/or in cavities, where each female gives birth to a single young in June or early July. During the summer, Indiana Bats frequent the corridors of small streams with well-developed riparian woods, as well as mature bottomland and upland forests (USFWS 2019b). They forage for insects along stream corridors,

within the canopy of floodplain and upland forests, over clearings with early successional vegetation (old fields), along the borders of croplands, along wooded fence rows, and over farm ponds and in pastures (USFWS 2019b). It has been shown that the foraging range for the bats varies by season, age and sex and ranges up to 81 acres (USFWS 2007b). Suitable Indiana bat foraging habitat may be located in the forested areas in and adjacent to the Elsberry/King's Lake Levee System.

Alternative 1 - No Action (Future without Project) - If the levee district remains unrepaired, the suitability of the land for agriculture would be diminished. More permanent and seasonal wetland is expected to establish in the area. These dynamic habitat conditions would provide better foraging habitat than current conditions, which are dominated by agriculture.

Alternative 3 - Repair of Levees with Federal Assistance - The proposed project would not affect any caves or summer roosting habitat (i.e.; trees). As currently planned, this project involves no tree clearing. Therefore, the St. Louis District has determined that the Tentatively Selected Plan would have “No effect” on the Indiana bat.

3.3.2. Northern Long-Eared Bat

The Northern Long-eared Bat is sparsely found across much of the eastern and north central United States, and all Canadian provinces from the Atlantic Ocean west to the southern Yukon Territory and eastern British Columbia (USFWS 2015). Northern long-eared bats spend winter hibernating in large caves and mines. During summer, this species roosts singly or in colonies underneath bark, in cavities, in crevices of both live and dead trees. Foraging occurs in interior upland forests (USFWS 2015). Forest fragmentation, logging and forest conversion are major threats to the species (USFWS 2015). One of the primary threats to the Northern Long-eared Bat is the fungal disease, white-nose syndrome, which has killed an estimated 5.5 million cave hibernating bats in the Northeast, Southeast, Midwest and Canada. Suitable Northern Long-eared Bat foraging habitat may be located in the forested areas in and adjacent to the Elsberry/King's Lake Levee System.

Alternative 1 - No Action (Future without Project) - If the levee district remains unrepaired, the suitability of the land for agriculture would be diminished. More permanent and seasonal wetland is expected to establish in the area. These dynamic habitat conditions would provide better foraging habitat than current conditions, which are dominated by agriculture.

Alternative 3 - Repair of Levees with Federal Assistance - The proposed project would not affect any caves or summer roosting habitat (i.e.; trees). As currently planned, this project involves no

tree clearing. Therefore, the St. Louis District has determined that the Tentatively Selected Plan would have “*No effect*” on the Northern Long-Eared Bat.

3.3.3. Gray Bat

The Gray Bat occurs in several Illinois and Missouri counties where it inhabits caves during both summer and winter. With rare exceptions, gray bats live in caves year-round. During the winter gray bats hibernate in deep, vertical caves. In the summer, they roost in caves which are scattered along rivers. These caves are in limestone karst areas of the southeastern United States. They do not use houses or barns. This species forages over rivers and reservoirs adjacent to forests. Many important caves were flooded and submerged by reservoirs. Other caves are in danger of natural flooding. Even if the bats escape the flood, they have difficulty finding a new cave that is suitable. Suitable Gray Bat foraging habitat may be located in the forested areas in and adjacent to the Elsberry/King's Lake Levee System.

Alternative 1 - No Action (Future without Project) - If the levee district remains unrepaired, the suitability of the land for agriculture would be diminished. More permanent and seasonal wetland is expected to establish in the area. These dynamic habitat conditions would provide better foraging habitat than current conditions, which are dominated by agriculture

Alternative 3 - Repair of Levees with Federal Assistance - The proposed project would not affect any caves or summer roosting habitat (i.e.; trees). As currently planned, this project involves no tree clearing. Therefore, the St. Louis District has determined that the Tentatively Selected Plan would have “*No effect*” on the Gray Bat.

3.3.4. Pallid Sturgeon

The Pallid Sturgeon are found in the Mississippi River, typically downstream of its confluence with the Missouri River (USFWS 2014). Pallid Sturgeon forage for insects, crustaceans, snails, clams, and fish along the bottom of large rivers (USFWS 2014). These fish are most frequently caught over a sand bottom, which is the predominant bottom substrate within the species' range on the Mississippi River (USFWS 2014). Tag returns have shown that the species may be using a range of habitats in off-channel areas and tributaries of the Mississippi River (USFWS 2014).

Alternative 1 - No Action (Future without Project) – If the flood damage is not repaired, water is expected to remain ponded in the leveed area, and a more dynamic floodplain habitat is expected to develop. While this would provide Pallid Sturgeon with access to additional floodplain habitat, they typically do not occur in the Mississippi River upstream of the confluence with the Missouri River.

Alternative 3 - Repair of Levees with Federal Assistance - Levee repairs would take place within the footprint of the levee and designated work areas. Pallid sturgeon are generally not found in the Mississippi River upstream of the Missouri River, thus the repairs would not likely impact any Pallid Sturgeon or their habitat (USFWS 2014). The Contractor shall use best management practices to reduce or eliminate sedimentation resulting from the proposed repairs. Therefore, the St. Louis District has made a “No effect” determination for the on the Pallid Sturgeon.

3.3.5. Higgins Eye

The Higgins eye is an endangered freshwater mussel with a rounded to slightly elongate smooth-textured shell that is usually yellowish brown with green rays (USFWS 2012). Since 1980, live Higgins eye have been found in parts of the upper Mississippi River north of Lock and Dam 19 at Keokuk, Iowa and in three tributaries of the Mississippi River: the St. Croix River between Minnesota and Wisconsin, the Wisconsin River in Wisconsin, and the lower Rock River between Illinois and Iowa (USFWS 2012). The Higgins eye is a freshwater mussel of larger rivers where it is usually found in deep water with moderate currents (USFWS 2012).

Alternative 1 - No Action (Future without Project) - No impacts to Higgins Eye mussel habitat are anticipated if the levves are not repaired under the PL 84-99 program.

Alternative 3 - Repair of Levees with Federal Assistance - Levee repairs would take place within the footprint of the levee and designated work areas and would not impact any Higgins eye habitat. The Contractor shall use best management practices to reduce or eliminate sedimentation resulting from the proposed repairs. Therefore, the St. Louis District has made a “No effect” determination for the Higgins Eye.

In an e-mail dated 12 Feb 2020, Vona Kuczynska of the U.S. Fish and Wildlife Service, Columbia, Missouri Ecological Services Field Office stated that based on the information in the BA, the Service concurs with the Corps determination that the project would have no effect on the federally listed species (Appendix 2). Coordination with the Missouri Dept. of Conservation is found in Appendix 4 and 5.

3.4 Socioeconomic Resources

3.4.1 Economic

The Elsberry/King’s Lake System encompasses 22,090 acres, providing benefits to over 500 residents and approximately \$73.7 million in property value. The main occupation in the Elsberry/King’s Lake System is agriculture, and levees are of regional economic importance to maintain the agricultural productivity occurring in the floodplain. If the levee is not repaired,

Mississippi River waters would enter the levee district at approximately a 50% (2-year frequency) annual chance exceedance flood. The repair project would provide flood risk reduction against a 7% (14-year frequency, pre-flood design) annual chance exceedance flood. While the Elsberry D&LD provides protection from a 5% (20-year) annual chance exceedance flood, the Kings Lake segment only provides protection to a 14-year frequency event. Therefore, the combined system can only provide protection up to the 14-year frequency event. The total rehabilitation project cost is approximately \$6,301,000, with a benefit-to-cost ratio of 5.8 to 1. The non-federal sponsor's cost-share responsibility for levee repairs is approximately \$1,181,500.

Alternative 1 – No Action (Future without Project) – If the Elsberry/King's Lake System levee is not repaired to the Federal standard, Mississippi River waters will begin flooding the levee district at approximately a 50% (2-year frequency) chance exceedance flood. The previously leveed area would continue to be subject to flooding, making the area less suitable and possibly unsuitable for agriculture. This would result in a negative economic effect on the Drainage District and the local economy.

Alternative 3 – Repair of Levees with Federal Assistance – Local agricultural and agri-businesses would benefit from levee repair and subsequent flood damage reduction. The repair project would provide flood risk reduction against a 7% (14-year frequency, pre-flood design) chance exceedance flood. The proposed levee repairs would not require residential displacement. No adverse impacts to life, health, or safety would result from levee repair.

3.4.2 Cultural Resources (Historic and Archaeological)

The repair site locations are composed of areas of erosion in recently deposited material or recently-placed levee berm material. The Elsberry borrow sites consist of sediment stockpiled from cleaning out existing drainage ditches and would not impact natural soil horizons. Therefore, the taking of borrow material from the Elsberry borrow sites would have no significant impact historic properties or resources. A letter to request concurrence with these findings was sent to the Missouri SHPO on 25th October 2019. The MO SHPO sent a concurrence letter on 26 November 2019 (Appendix 6).

USACE personnel performed a cultural resource survey of King's Lake borrow site #2 on 25 October 2019. The other two borrow sites consist of sediment from previously used borrow areas. The survey identified site 23LN1442, a mid-20th century historic habitation site, and a prehistoric artifact scatter. Site 23LN1442 was determined to be ineligible to the National Register of Historic Places. The prehistoric artifact scatter was identified on the slope of a berm constructed of sediment that was brought into the area. It is believed that the identified

artifacts were transported into the proposed borrow area site with the soil. Therefore, the taking of borrow material from the King's Lake borrow sites would have no significant impact historic properties or resources. A letter to request concurrence with these findings was sent to the Missouri SHPO on 6th November 2019. The MO SHPO sent a concurrence letter on 10 December 2019 (Appendix 7).

In the unlikely event that earthmoving activities associated with the proposed repairs did impact potentially significant archeological/historic remains, all construction activities and earthmoving actions in the immediate vicinity of the remains would be held in abeyance until the potential significance of the remains could be determined. The precise nature of such investigations would be developed by the Saint Louis District in concert with the professional staff of the Missouri State Historic Preservation Offices (SHPO).

Alternative 1 – No Action (Future without Project) – Without flooding, there would be no change from current conditions. With flooding, there is the potential for damage to culturally significant sites protected by the levee.

Alternative 3 – Repair of Levees with Federal Assistance – The proposed repairs to the levee within the Elsberry/King's Lake System would have no effect upon significant historic properties (archaeological remains or standing structures). The repairs consist of repairs of erosion damage and slides on the levee itself. The two breaches would be repaired with borrow material excavated from agricultural fields. A survey of borrow areas found no evidence of cultural materials. No historic properties would be affected.

3.4.3 Tribal Coordination

The recovery and repair of these damaged levees, authorized under P.L. 84-99, was coordinated with all tribes in the following manner: An initial letter to the tribes described the locations of existing flood damaged structures, lands and fills (Appendix 8). A total of 27 Tribes were contacted to determine if any had objections or concerns to the proposed levee repair activities for the Elsberry D&LD repairs, and 26 Tribes for the Kings Lake repairs. Maps of the areas and a description of the types of impacts resulting from construction were also included. The tribes were requested to contact the USACE if there are known tribal areas of concern in any of the project areas and if they desire further consultation on each or any project.

The Winnebago Tribe (19 November 2019), and the Nottawaseppi Huron Band of the Potawatomi (10 December 2019) wrote to convey that they had no objections to the repairs to the Elsberry D&LD (Appendix 9, 10). The Quapaw (22 November 2019), United Keetowah Band of Cherokee (4 December 2019), Nottawaseppi Huron Band of the Potawatomi (10 December

2019), and Osage (13 January 2020) wrote to convey that they did not have any objections or concerns to the repairs to the King’s Lake DD (Appendix 11, 12, 13, 14). Each of these tribes asked to be notified if any human remains are uncovered during the repairs.

Alternative 1 – No Action (Future without Project) – If the proposed repair actions are not taken, additional flood damage would occur. Flood events have the potential to damage any culturally significant sites that may be located within the leveed area. The No Action alternative may negatively impact cultural resources important to Tribal interests by destroying culturally significant sites and resources that may be located within the leveed area.

Alternative 3 – Repair of Levees with Federal Assistance – The proposed repairs to the levee within the Elsberry/King’s Lake System are not anticipated to negatively impact any culturally sensitive sites or resources. Depending on tribal response, the USACE continues the consultation process until the completion of the project.

3.4.4 Environmental Justice

Environmental justice refers to fair treatment of all races, cultures and income levels with respect to development, implementation and enforcement of environmental laws, policies and actions. Environmental justice analysis was developed following the requirements of: Executive Order 12898 ("Federal Actions to Address Environmental Justice in Minority Population and Low-Income Populations," 1994), and "Department of Defense's Strategy on Environmental Justice" (March 24, 1995). An Environmental Justice Screen Report was generated on 13 Dec 2019 to identify potential Environmental Justice-related concerns. The Demographic Index of the Elsberry/King’s Lake System was 18%, slightly lower than the state average of 27%. The Elsberry/King’s Lake System has a 4% minority population, which is much lower than the state average of 20%. The system has 33% low-income population, which is roughly equal to the state average of 34%. There is no percentage of the population that is linguistically isolated, compared to a 1% state average. Age distribution is comparable to the state average, with 7% under 5 years of age, and 17% over 64 years of age. The state averages are 6% and 16%, respectively for these metrics. The percent of the population with less than a High School education is 8%, slightly less than the state average of 11%.

Alternative 1 – No Action (Future without Project) – If the Elsberry/King’s Lake System levee is not repaired to the Federal standard, the level of protection would be eliminated (due to the levee breaches) from that provided by the design (pre-2019 flood event) levee. This would not disproportionately affect low income or minority populations.

Alternative 3 – Repair of Levees with Federal Assistance – If the Elsberry/King's Lake System is repaired to the Federal standard, the level of protection would be that provided by the design (pre-2019 flood event) levee. This would not disproportionately affect low income or minority populations.

3.4.5 HTRW

The U.S. Army Corps of Engineers (USACE) regulations (ER-1165-2-132, ER 200-2-3) and District policy requires procedures be established to facilitate early identification and appropriate consideration of potential HTRW in reconnaissance, feasibility, preconstruction engineering and design, land acquisition, construction, operations and maintenance, repairs, replacement, and rehabilitation phases of water resources studies or projects by conducting Phase I Environmental Site Assessment (ESA). USACE specifies that these assessments follow the process/standard practices for conducting Phase I ESA's published by the American Society for Testing and Materials (ASTM).

A Phase I was performed on 15 October 2019, and the corresponding reports were generated on 4 November 2019 for the King's Lake DD and 5 November 2019 for the Elsberry D&LD. The purpose of a Phase I ESA is to identify, to the extent feasible in the absence of sampling and analysis, the range of contaminants (i.e. RECs) within the scope of the U.S. Environmental Protection Agency's (EPA) Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and petroleum products. There were no HTRW concerns for repair activities and borrow site usage for either levee segment. The likelihood of hazardous substances adversely affecting the project area due to the proposed levee repair activities is very low. There is still a potential of encountering hazardous substances during the proposed actions. If HTRW material is encountered at any point during the levee repairs, an environmental contractor should be contacted to assess the conditions. USACE does not and cannot represent that the site contains no hazardous waste or material, including petroleum products. Current policy is to avoid known HTRW sites. However, the Environmental Quality Section should be contacted immediately if HTRW material is encountered at any point during construction activities. At this time, there are no recognized environmental conditions that would indicate a risk of HTRW contamination within the project area.

Alternative 1 - No Action (Future without Project) - Without flooding, there would be no change from current conditions. With flooding, there is the potential for flood water to spread some contaminants which may already be present in the area.

Alternative 3 - Repair of Levees with Federal Assistance - The likelihood of hazardous substances adversely affecting the project area due to the proposed construction activities is very low. The

St. Louis District conducted a modified Phase I assessment prior to proposed construction to assess the conditions within the project area.

3.4.6. Permits

The Missouri Regional General Permit (GP) 41 for Flood Recovery and Repair Activities authorizes the protection and repair of existing flood damaged structures, damaged land areas and damaged fills, under authority of Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) and Section 404 of the Clean Water Act (33 USC 1344), which include actions outlined under the recommended alternative. General Permit 41 is currently valid with an expiration date of April 22, 2023 unless revoked or specifically extended. Preconstruction notification is required for all activities obtaining borrow from forested wetlands, borrowing material from potential migratory bird nesting areas, clearing trees along stream channels, working in areas with known exotic species, and/or if the proposed repair activity includes restoration of a stream channel back to the original, pre-flood location. Other authorized activities that meet the terms and limits of this GP may proceed without preconstruction notification to USACE. However, post construction reporting is required for all activities undertaken under this GP. Maintenance of existing flood damaged structures and/or flood damaged fills, which have been previously authorized, may be authorized by Nationwide Permit No. 3 or exempted by Part 323.4 of Federal regulations 33 CFR 320- 332. The repair of uplands damaged by storms, floods or other discrete events may be authorized by Nationwide Permit No. 45 upon notification and review by the Regulatory Branch. Section 401 Water Quality Certification is included with most general permits listed above, but additional coordination and/or other state permits may be required prior to construction depending on the scope of repairs. All authorizations are on file in the District Office.

A Regulatory site visit was conducted on 15 October 2019. The proposed borrow areas do not exhibit wetland characteristics, therefore a pre-construction notice is not required. The levee repair work would be fully authorized under Regional General Permit 41 and/or Nationwide Permit 3. All authorizations are on file in the District Office.

3.5 Summary Comparison of Project Alternatives

Impacts of the Tentatively Selected Plan to natural resources, cultural resources, and other aspects and features of the human environment are summarized in Table 5 of this EA.

Table 5. Summary of the “No Action” and Tentatively Selective Plan to physical, biological, and socioeconomic resources present in the Elsberry/King’s Lake System in Pike and Lincoln counties, Missouri.

Resources	No Action	Tentatively Selected Plan
Physical Resources	Flooding will occur if the levees are not repaired and the levee’s integrity is further compromised during a flood.	Erosion repairs, slide repairs, and breach repairs would meet the Federal standard.
	Increased potential for further erosion of levee and sedimentation within drainage district during flood events.	Temporary minor impacts to water and air quality during construction.
	Does not meet project objective of repairs to Federal standard.	Brings the levee protection level back to pre-2019 flood event conditions.
Biological Resources	If levee system is compromised, there is potential for beneficial impacts due to potential increase in floodplain wetland habitat. However, there is a potential for water/land pollution if contaminants exist in either area or in the floodwaters.	Construction would be confined to the levee and borrow area which may result in minor temporary impacts.
	Federal T&E species would not be adversely impacted.	The proposed action should have no effect on listed bat species and no effect on aquatic species.
	Meets project objective of minimal environmental impacts.	Meets project objective of minimal environmental impacts.
Socioeconomic Resources	The drainage district would be susceptible to future floods and potential negative impacts to the drainage district and regional economy due to levee damages.	Repair of levee would result in the protection of croplands, businesses and structures from floods up to the design (14-year frequency) of the levee system.
	Does not meet project objective of protecting the socioeconomic value of the drainage district.	Meets project objective of protecting the economic value of the drainage district.

4.0 CUMULATIVE IMPACTS

A cumulative impact is defined 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 of what agency (Federal or non-federal) or person undertakes such actions” (40 CFR 1508.7). Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

The majority of the levee systems in the region have been in place for decades. Repairs would involve returning most of the damaged levee sections to the same alignment and level of protection as existed prior to the spring high water events of 2019. Temporary impacts from noise, air, and water pollution would occur; however, repair sites are widely scattered throughout the St. Louis District and therefore additive effects of these impacts would be negligible. These repairs are not anticipated to decrease the post-flood productivity of lands on the protected or unprotected side of the levee systems. The Elsberry/King’s Lake System PL 84-99 project, along with several other levees would require borrow for levee repairs. Borrow sites have been examined and selected in order to avoid sensitive areas and resources. Borrow for the majority of these projects would come from agriculture areas and previously identified borrow areas. The widely scattered nature of repair sites and shallow excavation depth of borrow sites would reduce impacts and no long term adverse cumulative impacts are expected. Borrow sites have been evaluated during field visits to reduce environmental, cultural, and tribal impacts.

4.1 Relationship of Tentatively Selected Plan to Environmental Requirements

The relationship of the Tentatively Selected Plan (Alternative 3 – Repair of Levees with Federal Assistance) to environmental requirements, environmental act, and /or executive orders is shown in Table 6.

Table 6. Relationship of the Tentatively Selected Plan to environmental requirements, environmental act, and /or executive orders.

Environmental Requirement	Compliance
Bald Eagle Protection Act, 42 USC 4151-4157	FC
Clean Air Act, 42 USC 7401-7542	FC
Clean Water Act, 33 USC 1251-1375	FC
Comprehensive Environmental Response, Compensation, and Liability Act, (HTRW) 42 USC 9601-9675	FC
Endangered Species Act, 16 USC 1531-1543	FC
Farmland Protection Policy Act, 7 (Prime Farmland) USC 4201-4208	FC
Fish and Wildlife Coordination Act, 16 USC 661-666c	FC
Food Security Act of 1985 (Swampbuster), 7 USC varies	FC
Land and Water Conservation Fund Act, (Recreation) 16 USC 460d-4601	FC
National Environmental Policy Act, 42 USC 4321-4347	PC
National Historic Preservation Act, 16 USC 470 et seq.	FC
Noise Control Act of 1972, 42 USC 4901-4918	FC
Resource, Conservation, and Rehabilitation Act, (Solid Waste) 42 USC 6901-6987	FC
Rivers and Harbors Appropriation Act, (Sec. 10) 33 USC 401-413	FC
Water Resources Development Acts of 1986 and 1990 (Sec 906 – Mitigation; Sec 307 - No Net Loss - Wetlands)	FC
Floodplain Management (EO 11988 as amended by EO 12148)	FC
Federal Compliance with Pollution Control Standards (EO 12088)	FC
Protection and Enhancement of Environmental Quality (EIS Preparation) (EO 11991)	FC
Protection and Enhancement of the Cultural Environment (Register Nomination) (EO 11593)	FC
Protection of Wetlands (EO 11990 as amended by EO 12608)	FC

FC = Full Compliance, PC = Partial Compliance

5.0 COORDINATION, PUBLIC VIEWS, AND RESPONSES

Notification of this Environmental Assessment and unsigned Finding of No Significant Impact will be sent to the officials, agencies, organizations, and individuals listed below for review and comment. Additionally, an electronic copy will be available on the St. Louis District's website during the public review period at:

<https://www.mvs.usace.army.mil/Portals/54/docs/pm/Reports/EA/ElsberryKingsLakePL84992019PublicReview.pdf>.

Please note that the Finding of No Significant Impact is unsigned. This document would be signed into effect only after having carefully considered comments received as a result of this public review. To assure compliance with the National Environmental Policy Act, Endangered Species Act, and other applicable environmental laws and regulations, coordination with these agencies will continue as required throughout the planning and construction phases of the proposed levee repairs.

A letter regarding the availability of a draft Environmental Assessment and unsigned FONSI for the Elsberry/King’s Lake System 2019 PL 84-99 repair was sent to the following entities.

MVS External Agency Stakeholder

Environmental Protection Agency, Region 5 Melgin, Wendy

Environmental Protection Agency, Region 7 Westlake, Kenneth

State Employees

Illinois

Carney, Doug

Grider, Nathan

Mauer, Paul

Rawe, Adam

Minnesota

Amato, Joel

Missouri Dept. of Conservation

Boaz, Tracy

Brown, Doyle

Leary, Alan

Sternburg, Janet

Todd, Brian

Campbell-Allison, Jennifer

Vitello, Matt
Missouri Dept. of Natural Resources - Policy Unit
Beres, Audrey
Missouri Dept. of Natural Resources, Water Protection Program
Bax, Stacia
Missouri Dept. of Natural Resources - State Historic Preservation Office
Rubingh, Amy
National Oceanic and Atmospheric Administration
Buan, Steve
National Park Service
Lange, James
U.S. Fish and Wildlife Service, Missouri Office
Marquardt, Shauna
Ledwin, Jane
Herrington, Karen
U.S. Coast Guard
Morgan, Justin
SUMR Waterways
U.S. Fish and Wildlife Service, Illinois Office
Mangan, Matthew
McPeck, Kraig
U.S. Department of Agriculture-NRCS, MO Office
Lugo-Camacho, Jorge

MVS External Educational Stakeholder

Washington University
Goode, Peter
Hubertz, Elizabeth
Lipeles, Maxie
Mannion, Clare
Miller, Kenneth

MVS External Environmental Stakeholder

Ducks Unlimited
Held, Eric
Hillburn, Craig
Great Rivers Habitat Alliance
Stokes, David

Great Rivers Law

Morrison, Bruce

Skrukrud, Cindy

Missouri Coalition for the Environment

Fung, Jenny

MVS External Government Stakeholder

Academy Coordinator for Congresswoman Ann Wagner

Winship, Jaci

City of Portage des Sioux

Field Representative Manager for Congressman Sam Graves

Josh Hurlbert

Jefferson County, Missouri

Luchan, Janice

Staff Member with Senator Roy Blunt's Office

Lavalle, Tricia

MVS External Industry Stakeholder

American Waterways Operators (AWO)

Muench, Lynn

Werner, Paul

Tow Inc.

Alter Logistics

G, Jeff

Apex Oil Company

Caito, J

Hanneman, M

Archer Daniels Midland (ADM)

Burlingame, Chuck

Heroff, Bernard

Porter, Jason

Atlantic-Meeco Inc.

Fabrizio, Christi

Canal Barge Company

Popplewell, Micket

Tyson, J

Chain of Rocks WTP

Baldera, Patrick

Consolidated Grain & Barge Co. (CGB)

Jamison, Larry

Cultural Resource Analysts, Inc.

Niquette, Charles

Docks

Economy Boat Store

Zupan, T

Ecosystem Investment Partners

Urban, David

Ecosystems Insurance Associates

Spoth, Robert

Ergon Inc.

Cruse, Lester

Florida Marine

Marine, Louis

Gary Elmestad & Associates

Elmestad, Gary

Hanke Terminal Inc.

HMT Bell South

Hoppies Marine

Illinois Marine Towing

Barnes, Ryan

Ingram Barge Company

Dotts, Glenn

Henleben, Ed

Johnson, Frank

Kristen, John

International Dock Products

Teah, Phillip

J.F. Brennan Company Inc.

Pehler, Kent

JBS USA

JBS Chief

Kirby Corporation

Ebey, Mike

Koch Industries

Muir, T

Layne

Hunt, Henry
Luhr Bros., Inc.
S, Glenn
Missouri Corn Grower's Assoc.
Reitz & Jens
SCI Engineering
Harding, Scott
SEACOR Marine LLC
Coder, Justin
Slay Industries Inc.
Slay, Glen
Southeast Missouri Port Authority
Southern Illinois Transfer
Terra Technologies
Staten, Shane
Treated Wood Council
Miller, Jeff
Tri City Port District
Shahman, Bill
Wilmsmeyer, Dennis
York Bridge Co.
Southwestern Power Administration (SWPA)
Corker, Ashley
BellSouth Telecommunications

MVS External Media Stakeholder

Banner Press
Chicago Commods
Republic Monitor Perry County, MO
Cox, Robert
Waterways Journal
Shoulberg, J

MVS External Tribe Stakeholder

Absentee-Shawnee Tribe
Devon Frazier
Caddo Nation
Historic Preservation Office

Chairman of Caddo Nation
Francis, Tamara
Citizen Potawatomi Nation
Kelli Mosteller
Delaware Nation of Oklahoma
Sonnie Allen
Delaware Tribe of Indians
Dr. Brice Obermeyer
Dr. Larry Heady
Eastern Shawnee Tribe of Oklahoma
Brett Barnes
Forest County Potawatomi
Melissa Cook
Hannahville Indian Community
Earl Meshigaud
Ho-Chunk Nation of Wisconsin
William Quackenbush
Iowa Tribe of Kansas and Nebraska
Lance Foster
Iowa Tribe of Oklahoma
Dr. Robert Fields
Kickapoo Tribe of Indians of Kansas
Fred Thomas
Kickapoo Tribe of Oklahoma
Kent Collier
Miami Tribe of Oklahoma
Diane Hunter
Nottawaseppi Band of Huron Potawatomi
Fred Jacko, JR
Peoria Tribe of Indians of Oklahoma
Logan Pappenfort
Pokagon Band of Potawatomi
Matthew Bussler
Prairie Band Potawatomi Nation
Warren Wahweotten
Sac & Fox Nation of Missouri in Kansas and Nebraska
Chairperson Tiauna Carnes
Sac & Fox Nation of Oklahoma

Principal Chief Kay Rhoads
Sac & Fox Tribe of the Mississippi in Iowa
Buffalo, Jonathon
Shawnee Tribe
Tonya Tipton
SOARRING Foundation
Joseph Standing Bear Schranz
The Osage Nation
Chief John Red
Dr. Andrea Hunter
The Quapaw Tribe of Indians
Everett Bandy
United Keetoowah Band of Cherokee of Oklahoma
Sheila Bird
Winnebago of Nebraska
Randy Tebeo

6.0 ENVIRONMENTAL ASSESSMENT PREPARERS

Evan Hill, Wildlife Biologist.

Role: Environmental Impact Analysis, NEPA and Environmental Compliance

Shane Simmons, Biologist

Role: Project Manager

Mark Games, Construction Manager

Role: Technical Engineering Lead

Alan Edmondson, Regulatory Specialist

Role: Section 404/401 permit review

Rick Archeski, Environmental Engineer

Role: Environmental Engineering, HTRW

Mark Smith, Archaeologist

Role: National Historic Preservation Act Analysis and Compliance

Meredith Trautt, Archeologist and Tribal Liaison Assistant

Role: National Historic Preservation Act Analysis and Compliance, Tribal consultation.

Evan Stewart, Economist

Role: Economist

7.0 REFERENCES

Missouri Department of Natural Resources (MO DNR). 2019a. Rules of DNR Clean Water Commission. Chapter 7-Water Quality. Code of State Regulations. 77 pages.

Missouri Department of Natural Resources (MO DNR). 2019b. Section 303d Listed Waters. <<https://dnr.mo.gov/env/wpp/waterquality/303d/docs/2018-303d-list-epa-approved-08-30-2019-attachments.pdf>> (Accessed 13 Jan 2020).

Missouri Department of Natural Resources (MO DNR). 2019c. Water Quality Standards Map Viewer Application. < <https://modnr.maps.arcgis.com/apps/webappviewer/index.html>> (Accessed 13 Jan 2020).

U.S. Environmental Protection Agency (USEPA). 2016. Missouri Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants. https://www3.epa.gov/airquality/greenbk/anayo_mo.html (Accessed: 13 Jan 2020)

U. S. Fish and Wildlife Service (USFWS). 2007a. National Bald Eagle Management Guidelines. <<https://www.fws.gov/pacific/eagle/documents/NationalBaldEagleManagementGuidelines.pdf>>

U. S. Fish and Wildlife Service (USFWS). 2007b. Indiana Bat (*Myotis sodalis*) Draft Recovery Plan: First Revision. U.S. Fish and Wildlife Service, Fort Snelling, MN. 258 pp. Available: <https://www.fws.gov/midwest/endangered/mammals/inba/pdf/inba_fnldrftrecpln_apr07.pdf>

U. S. Fish and Wildlife Service (USFWS). 2011. Running Buffalo Clover (*Trifolium stoloniferum*) 5-Year Review: Summary and Evaluation. Available: <<https://www.fws.gov/Midwest/endangered/plants/pdf/RunningBuffaloClover5YrReview2011.pdf>> (Accessed: 14 January 2020).

U.S. Fish and Wildlife Service (USFWS). 2012. Higgins Eye Pearlymussel (*Lampsilis higginsii*) Fact Sheet. https://www.fws.gov/midwest/endangered/clams/higginseye/higgins_fs.html (Accessed 14 January 2020).

U.S. Fish and Wildlife Service (USFWS). 2014. Revised Recovery Plan for the Pallid Sturgeon (*Scaphirhynchus albus*).

U. S. Fish and Wildlife Service (USFWS). 2015. Northern Long-eared Bat (*Myotis septentrionalis*) Fact Sheet.

<<https://www.fws.gov/midwest/endangered/mammals/nleb/nlebfactsheet.html>> (Accessed: 14 January 2020).

U. S. Fish and Wildlife Service (USFWS). 2016a. Gray Bat (*Myotis grisescens*) Fact Sheet.

<https://www.fws.gov/midwest/endangered/mammals/grbat_fc.html> (Accessed: 14 January 2020).

U. S. Fish and Wildlife Service (USFWS). 2019a. Species Profile: Bald Eagle (*Haliaeetus leucocephalus*). Available at <<https://ecos.fws.gov/ecp0/profile/speciesProfile?sld=1626>>

(Accessed: 14 January 2020).

U.S. Fish and Wildlife Service (USFWS). 2019b. Indiana Bat (*Myotis sodalis*) Fact Sheet.

<[fws.gov/midwest/endangered/mammals/inba/index.html](https://www.fws.gov/midwest/endangered/mammals/inba/index.html)> (Accessed: 14 January 2020).

8.0 FINDING OF NO SIGNIFICANT IMPACT

**PUBLIC LAW 84-99
ELSBERRY DRAINAGE AND LEVEE DISTRICT
AND
KING’S LAKE DRAINAGE DISTRICT
LINCOLN AND PIKE COUNTIES, MISSOURI
MISSISSIPPI RIVER, MILES 251 TO 260**

1. I have reviewed the documents concerned with the proposed levee repairs to the Elsberry/King’s Lake System. The purpose of this project is to repair levee sections damaged by an extended high water event during the spring of 2019. Repairs would return the levee system to pre-flood conditions.
2. I have also evaluated pertinent data concerning practicable alternatives relative to my decision on this action. As part of this evaluation, I have considered the following alternatives:
 - a. No Action Alternative: Under the no-action alternative, the federal government would not repair the flood damaged levees. It is assumed that, because of the cost of repairs, the levee district would not repair the levee.
 - b. Nonstructural Alternative: Under P.L. 84-99, the Corps has the authority to pursue a non-structural alternative only if the project sponsor requests such an alternative. The non-federal sponsors of the Elsberry/King’s Lake System declined to request the pursuit of a non-structural alternative; therefore, this alternative was eliminated from further consideration.
 - c. Repair of Levees with Federal Assistance (Tentatively Selected Plan): Under this alternative, the federal government would repair the damaged areas to the pre-flood level of protection. Since the Elsberry/King’s Lake System is active in the USACE Rehabilitation and Inspection Program, it is eligible for Flood Control and Coastal Emergency funding authorized by P.L. 84-99.
3. The possible consequences of the No Action Alternative and Levee Repair Alternative have been studied for physical, environmental, cultural, social and economic effect, and engineering feasibility. Major findings of this investigation include the following:

- a. The No Action Alternative was evaluated and subsequently rejected primarily based upon the higher potential for future flooding and damage to area agricultural fields, primary and secondary residences, outbuildings, industrial properties including a grain elevator and agricultural service center, the BK Leach Conservation Area, and infrastructure.
- b. Borrow for the final levee repairs would come from agricultural lands that would be contoured and returned to their previous usage.
- c. No appreciable effects to general environmental conditions (air quality, noise, water quality) would result from the Levee Repair Alternative.
- d. The Levee Repair Alternative is not expected to cause significant adverse impacts to general fish and wildlife resources.
- e. The Levee Repair Alternative is not expected to cause unacceptable adverse impacts to riparian habitat, bottomland hardwood forest, or other wetlands.
- f. No Federally endangered or threatened species are anticipated to be adversely impacted by the Levee Repair Alternative.
- g. A Bald Eagle Take Permit (#MB70717D-0) was obtained from the U.S. Fish and Wildlife Service.
- h. No prime farmland would be adversely impacted as a result of the Levee Repair Alternative.
- i. No significant impacts to historic properties (cultural resources) or tribal resources are anticipated as a result of the Levee Repair Alternative.
- j. Under the Levee Repair Alternative, local economies would benefit through an increased labor demand to carry out levee repairs. Agricultural land and structures within the drainage district would be provided with pre-2019 flood protection level.
- k. The Contractor shall comply with all applicable federal, state, and local laws and regulations. The Contractor shall provide environmental protective measures and procedures to prevent and control pollution, limit habitat disruption, and correct environmental damage that occurs during construction. All disturbed areas would be reseeded following construction to reduce the potential for erosion.

4. Based upon the Environmental Assessment of the Levee Repair Alternative, no significant impacts on the environment are anticipated. The proposed action has been coordinated with appropriate resource agencies, and there are no significant unresolved issues. Therefore, an Environmental Impact Statement will not be prepared prior to proceeding with this action.

Date

Bryan K. Sizemore
Colonel, U.S. Army
District Commander

Appendix 1



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Missouri Ecological Services Field Office
101 Park Deville Drive
Suite A
Columbia, MO 65203-0057
Phone: (573) 234-2132 Fax: (573) 234-2181



In Reply Refer To:

January 07, 2020

Consultation Code: 03E14000-2019-SLI-3787

Event Code: 03E14000-2020-E-02015

Project Name: Elsberry D&LD/King's Lake Levee repair 2019 PL 84-99

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

This response has been generated by the Information, Planning, and Conservation (IPaC) system to provide information on natural resources that could be affected by your project. The U.S. Fish and Wildlife Service (Service) provides this response under the authority of the Endangered Species Act of 1973 (16 U.S.C. 1531-1543), the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d), the Migratory Bird Treaty Act (16 U.S.C. 703-712), and the Fish and Wildlife Coordination Act (16 U.S.C. 661 *et seq.*).

Threatened and Endangered Species

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and may be affected by your proposed project. The species list fulfills the requirement for obtaining a Technical Assistance Letter from the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. **Note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days.** The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

Consultation Technical Assistance

Refer to the Midwest Region [S7 Technical Assistance](#) website for step-by-step instructions for making species determinations and for specific guidance on the following types of projects: projects in developed areas, HUD, pipelines, buried utilities, telecommunications, and requests for a Conditional Letter of Map Revision (CLOMR) from FEMA.

Federally Listed Bat Species

Indiana bats, gray bats, and northern long-eared bats occur throughout Missouri and the information below may help in determining if your project may affect these species.

Gray bats - Gray bats roost in caves or mines year-round and use water features and forested riparian corridors for foraging and travel. If your project will impact caves, mines, associated riparian areas, or will involve tree removal around these features particularly within stream corridors, riparian areas, or associated upland woodlots gray bats could be affected.

Indiana and northern long-eared bats - These species hibernate in caves or mines only during the winter. In Missouri the hibernation season is considered to be November 1 to March 31. During the active season in Missouri (April 1 to October 31) they roost in forest and woodland habitats. Suitable summer habitat for Indiana bats and northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags 5 inches diameter at breast height (dbh) for Indiana bat, and 3 inches dbh for northern long-eared bat, that have exfoliating bark, cracks, crevices, and/or hollows), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Tree species often include, but are not limited to, shellbark or shagbark hickory, white oak, cottonwood, and maple. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of other forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat and evaluated for use by bats. If your project will impact caves or mines or will involve clearing forest or woodland habitat containing suitable roosting habitat, Indiana bats or northern long-eared bats could be affected.

Examples of unsuitable habitat include:

- Individual trees that are greater than 1,000 feet from forested or wooded areas;
 - Trees found in highly-developed urban areas (e.g., street trees, downtown areas);
 - A pure stand of less than 3-inch dbh trees that are not mixed with larger trees; and
 - A stand of eastern red cedar shrubby vegetation with no potential roost trees.
-

Using the IPaC Official Species List to Make No Effect and May Affect Determinations for Listed Species

1. If IPaC returns a result of “There are no listed species found within the vicinity of the project,” then project proponents can conclude the proposed activities will have **no effect** on any federally listed species under Service jurisdiction. Concurrence from the Service is not required for **No Effect** determinations. No further consultation or coordination is required. Attach this letter to the dated IPaC species list report for your records. An example ["No Effect" document](#) also can be found on the S7 Technical Assistance website.

2. If IPaC returns one or more federally listed, proposed, or candidate species as potentially present in the action area of the proposed project other than bats (see #3 below) then project proponents can conclude the proposed activities **may affect** those species. For assistance in determining if suitable habitat for listed, candidate, or proposed species occurs within your project area or if species may be affected by project activities, you can obtain [Life History Information for Listed and Candidate Species](#) through the S7 Technical Assistance website.

3. If IPaC returns a result that one or more federally listed bat species (Indiana bat, northern long-eared bat, or gray bat) are potentially present in the action area of the proposed project, project proponents can conclude the proposed activities **may affect** these bat species **IF** one or more of the following activities are proposed:

- a. Clearing or disturbing suitable roosting habitat, as defined above, at any time of year;
- b. Any activity in or near the entrance to a cave or mine;
- c. Mining, deep excavation, or underground work within 0.25 miles of a cave or mine;
- d. Construction of one or more wind turbines; or
- e. Demolition or reconstruction of human-made structures that are known to be used by bats based on observations of roosting bats, bats emerging at dusk, or guano deposits or stains.

If none of the above activities are proposed, project proponents can conclude the proposed activities will have **no effect** on listed bat species. Concurrence from the Service is not required for **No Effect** determinations. No further consultation or coordination is required. Attach this letter to the dated IPaC species list report for your records. An example ["No Effect" document](#) also can be found on the S7 Technical Assistance website.

If any of the above activities are proposed in areas where one or more bat species may be present, project proponents can conclude the proposed activities **may affect** one or more bat species. We recommend coordinating with the Service as early as possible during project planning. If your project will involve removal of over 5 acres of suitable forest or woodland habitat, we recommend you complete a Summer Habitat Assessment prior to contacting our office to expedite the consultation process. The Summer Habitat Assessment Form is available in Appendix A of the most recent version of the [Range-wide Indiana Bat Summer Survey Guidelines](#).

Other Trust Resources and Activities

Bald and Golden Eagles - Although the bald eagle has been removed from the endangered species list, this species and the golden eagle are protected by the Bald and Golden Eagle Act and the Migratory Bird Treaty Act. Should bald or golden eagles occur within or near the project area please contact our office for further coordination. For communication and wind energy projects, please refer to additional guidelines below.

Migratory Birds - The Migratory Bird Treaty Act (MBTA) prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Service. The Service has the responsibility under the MBTA to proactively prevent the mortality of migratory birds whenever possible and we encourage implementation of recommendations that minimize potential impacts to migratory birds. Such measures include clearing forested habitat outside the nesting season (generally March 1 to August 31) or conducting nest surveys prior to clearing to avoid injury to eggs or nestlings.

Communication Towers - Construction of new communications towers (including radio, television, cellular, and microwave) creates a potentially significant impact on migratory birds, especially some 350 species of night-migrating birds. However, the Service has developed [voluntary guidelines for minimizing impacts](#).

Transmission Lines - Migratory birds, especially large species with long wingspans, heavy bodies, and poor maneuverability can also collide with power lines. In addition, mortality can occur when birds, particularly hawks, eagles, kites, falcons, and owls, attempt to perch on uninsulated or unguarded power poles. To minimize these risks, please refer to [guidelines](#) developed by the Avian Power Line Interaction Committee and the Service. Implementation of these measures is especially important along sections of lines adjacent to wetlands or other areas that support large numbers of raptors and migratory birds.

Wind Energy - To minimize impacts to migratory birds and bats, wind energy projects should follow the Service's [Wind Energy Guidelines](#). In addition, please refer to the Service's [Eagle Conservation Plan Guidance](#), which provides guidance for conserving bald and golden eagles in the course of siting, constructing, and operating wind energy facilities.

Next Steps

Should you determine that project activities **may affect** any federally listed species or trust resources described herein, please contact our office for further coordination. Letters with requests for consultation or correspondence about your project should include the Consultation Tracking Number in the header. Electronic submission is preferred.

If you have not already done so, please contact the Missouri Department of Conservation (Policy Coordination, P. O. Box 180, Jefferson City, MO 65102) for information concerning Missouri Natural Communities and Species of Conservation Concern.

We appreciate your concern for threatened and endangered species. Please feel free to contact our office with questions or for additional information.

Karen Herrington

Attachment(s):

- Official Species List
 - USFWS National Wildlife Refuges and Fish Hatcheries
 - Wetlands
-

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Missouri Ecological Services Field Office

101 Park Deville Drive

Suite A

Columbia, MO 65203-0057

(573) 234-2132

Project Summary

Consultation Code: 03E14000-2019-SLI-3787

Event Code: 03E14000-2020-E-02015

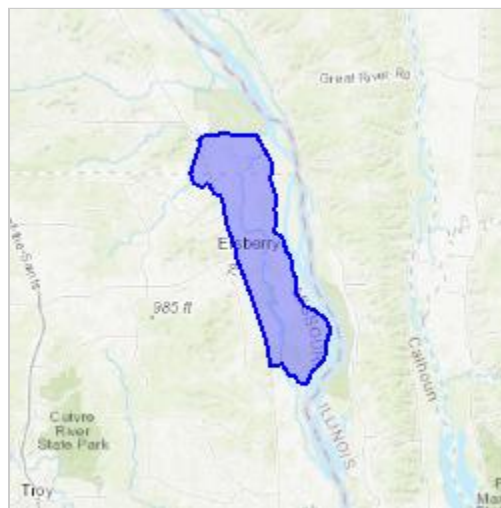
Project Name: Elsberry D&LD/King's Lake Levee repair 2019 PL 84-99

Project Type: STREAM / WATERBODY / CANALS / LEVEES / DIKES

Project Description: Elsberry D&LD/King's Lake Levee system repair of damages sustained during the spring 2019 flood event.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/39.16125357681916N90.75267750333342W>



Counties: Lincoln, MO | Pike, MO

Endangered Species Act Species

There is a total of 5 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Gray Bat <i>Myotis grisescens</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6329	Endangered
Indiana Bat <i>Myotis sodalis</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Fishes

NAME	STATUS
Pallid Sturgeon <i>Scaphirhynchus albus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7162	Endangered

Clams

NAME	STATUS
Higgins Eye (pearly mussel) <i>Lampsilis higginsii</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5428	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER EMERGENT WETLAND

- [PEM1/FO1C](#)
- [PEM1A](#)
- [PEM1Ad](#)
- [PEM1C](#)
- [PEM1Cd](#)
- [PEM1Ch](#)
- [PEM1Cx](#)
- [PEM1F](#)
- [PEM1Fx](#)

FRESHWATER FORESTED/SHRUB WETLAND

- [PFO1A](#)
- [PFO1Ah](#)
- [PFO1Ax](#)
- [PFO1C](#)
- [PFO1Ch](#)
- [PFO1Cx](#)
- [PFO1F](#)
- [PSS1A](#)
- [PSS1C](#)
- [PSS1Ch](#)
- [PSS1Cx](#)

FRESHWATER POND

- [PABF](#)
 - [PABGh](#)
 - [PUBF](#)
-

- [PUBFh](#)
- [PUBFx](#)
- [PUBG](#)
- [PUBGh](#)
- [PUBGx](#)
- [PUBKx](#)

LAKE

- [L1UBH](#)
- [L1UBHh](#)

RIVERINE

- [R2UBGx](#)
 - [R2UBH](#)
 - [R2UBHx](#)
 - [R2USA](#)
 - [R4SBC](#)
 - [R4SBCx](#)
 - [R5UBH](#)
-

Appendix 2

From: [Kuczynska, Iwona](#)
To: [Hill, Evan B CIV USARMY CEMVS \(USA\)](#)
Subject: [Non-DoD Source] Re: Biological Assessment for Emergency Levee Repair (UNCLASSIFIED)
Date: Friday, February 21, 2020 2:25:09 PM
Attachments: [image001.png](#)
[image003.png](#)

You have quite the project on your hands!

Thank you for letting me know, I will add it to our records.

Thank you,

Vona Kuczynska

Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
Missouri Ecological Services Field Office
101 Park DeVille Drive, Suite A, Columbia, MO 65203
Office: 573-234-5011

From: Hill, Evan B CIV USARMY CEMVS (USA) <Evan.B.Hill@usace.army.mil>
Sent: Friday, February 21, 2020 1:21 PM
To: Kuczynska, Iwona <iwona_kuczynska@fws.gov>
Subject: [EXTERNAL] RE: Biological Assessment for Emergency Levee Repair (UNCLASSIFIED)

CLASSIFICATION: UNCLASSIFIED

Hi Vona,

I'm just writing to update you about changes to the borrow sites for this Elsberry/King's Lake project. Borrow sites 2 and 3 will be lengthened. Each site consists of a pile of soil (a spoils pile) running parallel to a ditch, and the team needs to take more of it than they originally thought. The original length is in green, the expansion length is in red. There will be no tree-clearing required, and no impacts to wetlands. Therefore, this will not change my T&E species effects determinations, but I just wanted to keep you in the loop. Let me know if you have any questions!

Figure 6. Location of borrow sites 1 and 2 for the Elsberry D&LD damages.

Figure 7. Location of the borrow site 3 for the Elsberry D&LD damages on BK Leach CA.

Evan Hill

Environmental Compliance Section

Wildlife Biologist

U.S. Army Corps of Engineers

1222 Spruce St

St. Louis, MO 63103

(314) 925-5004

evan.b.hill@usace.army.mil

-----Original Message-----

From: Kuczynska, Iwona [mailto:iwona_kuczynska@fws.gov]

Sent: Wednesday, February 12, 2020 2:31 PM

To: Hill, Evan B CIV USARMY CEMVS (USA) <Evan.B.Hill@usace.army.mil>

Subject: [Non-DoD Source] Re: Biological Assessment for Emergency Levee Repair (UNCLASSIFIED)

Thanks Evan, those all look good. We don't technically need to concur with "No Effect" determinations, so there is no need to send you our formal response language. Please keep me in the loop on what comes of the BAEG permit please. Did anyone run out there to see if the nest is occupied, before going through the process to get the permit? I don't know that permit process, I am not sure if you need to have the nest confirmed before getting the permit.

Thank you,

Vona Kuczynska

Fish and Wildlife Biologist

U.S. Fish and Wildlife Service

Missouri Ecological Services Field Office

101 Park DeVille Drive, Suite A, Columbia, MO 65203

Office: 573-234-5011

From: Hill, Evan B CIV USARMY CEMVS (USA) <Evan.B.Hill@usace.army.mil>

Sent: Wednesday, February 12, 2020 9:34 AM

To: Kuczynska, Iwona <iwona_kuczynska@fws.gov>

Subject: [EXTERNAL] RE: Biological Assessment for Emergency Levee Repair (UNCLASSIFIED)

CLASSIFICATION: UNCLASSIFIED

Hi Vona,

I attached the BA with a "no effect" for all of the species, for your review.

I am coordinating with Margaret Rheude (USFWS) on obtaining a Bald Eagle permit. Katie helped me get in touch with her!

Thanks,

Evan Hill

Environmental Compliance Section

Wildlife Biologist

U.S. Army Corps of Engineers

1222 Spruce St

St. Louis, MO 63103

(314) 925-5004

evan.b.hill@usace.army.mil

-----Original Message-----

From: Kuczynska, Iwona [mailto:iwona_kuczynska@fws.gov]

Sent: Tuesday, February 11, 2020 1:47 PM

To: Hill, Evan B CIV USARMY CEMVS (USA) <Evan.B.Hill@usace.army.mil>

Subject: [Non-DoD Source] Re: Biological Assessment for Emergency Levee Repair (UNCLASSIFIED)

Hi Evan,

Everything sounds good on the non-bat related determinations.

Not to add too much to your work load, but I think if there is no tree clearing at all, as the BA states, I would go with no effect to NLEB and MYSO. I would also go with no effect to MYGR because there are no impacts to caves (and no tree clearing, but this would only be an issue for gray bats if it was extensive or around a cave entrance).

Are you getting enough help from Katie on the BAEG question? She told me yesterday she reached out to the person responsible for taking care of permits. If you need any more help on this though, please let me know.

Thank you,

Vona

From: Hill, Evan B CIV USARMY CEMVS (USA) <Evan.B.Hill@usace.army.mil>

Sent: Tuesday, February 4, 2020 4:08 PM

To: Kuczynska, Iwona <iwona_kuczynska@fws.gov>

Subject: [EXTERNAL] RE: Biological Assessment for Emergency Levee Repair (UNCLASSIFIED)

CLASSIFICATION: UNCLASSIFIED

Hi Vona,

Attached is the revised BA. Teri (my supervisor) helped me with a justification for why we made a "May Affect, Not Likely to Adversely Affect" determination for the bat species. I changed my determination to a "No Effect" for the two aquatic species, however. If you feel that a "No Effect" would be best for the three bat species, I'm fine with changing it.

Also, I attached a map with all of the Eagles Nests that we identified during our talk last week. Each nest has a red ring around it with a radius of 660 feet. As you can see, one of the nests overlaps with the levee, and some areas that will have some erosion repairs done to them. If an Incidental Take permit is necessary for this, can you provide their contact information so I can send them the permit?

If you want to chat about it over the phone as well, I'll be in all week.

Thanks,

Evan Hill

Environmental Compliance Section

Wildlife Biologist

U.S. Army Corps of Engineers

1222 Spruce St

St. Louis, MO 63103

(314) 925-5004

evan.b.hill@usace.army.mil

-----Original Message-----

From: Kuczynska, Iwona [mailto:iwona_kuczynska@fws.gov]

Sent: Thursday, January 30, 2020 2:24 PM

To: Hill, Evan B CIV USARMY CEMVS (USA) <Evan.B.Hill@usace.army.mil>

Subject: [Non-DoD Source] Re: Biological Assessment for Emergency Levee Repair (UNCLASSIFIED)

BAEG information is below. Please do not share/post these anywhere, including in the BA. The locations are considered Natural Heritage records and we don't have permission to share them with the public. You can just refer in the BA to these as " general BAEG nest locations provided by the FWS."

The lat/long correspond to the records above, from top to bottom. I just couldn't copy it all together.

As far as distances - 660 ft - no activity is allowed within this distance during the breeding season w/o an eagle take permit. Activity being any construction, vehicles, etc. If you need more information regarding rules/distances, please email Katie. She was cc'ed on the last email.

From: Hill, Evan B CIV USARMY CEMVS (USA) <Evan.B.Hill@usace.army.mil>

Sent: Tuesday, January 7, 2020 8:24 AM

To: Kuczynska, Iwona <iwona_kuczynska@fws.gov>

Subject: [EXTERNAL] Biological Assessment for Emergency Levee Repair (UNCLASSIFIED)

CLASSIFICATION: UNCLASSIFIED

Hello Vona,

Please find the attached Biological Assessment (BA) for the emergency levee repair efforts at the Elsberry/King's Lake Levee System. Please let me know if you have any questions, or if you need additional information.

Thank you,

Evan Hill

Environmental Compliance Section

Wildlife Biologist

U.S. Army Corps of Engineers

1222 Spruce St

St. Louis, MO 63103

(314) 925-5004

evan.b.hill@usace.army.mil

CLASSIFICATION: UNCLASSIFIED

CLASSIFICATION: UNCLASSIFIED

CLASSIFICATION: UNCLASSIFIED

CLASSIFICATION: UNCLASSIFIED



Appendix 3

Page 1 of 3
SHORT-TERM EAGLE INCIDENTAL TAKE

Permit Number: MB70717D-0
Effective: 03/02/2020 Expires: 12/31/2022

Issuing Office:

Department of the Interior
U.S. FISH AND WILDLIFE SERVICE
Migratory Bird Permit Office
5600 American Blvd West, Suite 990
Bloomington, MN 55437-1458
Tel: 612-713-5436 Fax: 612-713-5393


CHIEF, MIGRATORY BIRD PERMIT OFFICE - REGION 3

Permittee:

US ARMY CORPS OF ENGINEERS
1222 SPRUCE ST
ST. LOUIS, MO 63103

Name and Title of Principal Officer:

EVAN B HILL - WILDLIFE BIOLOGIST

Authority: Statutes and Regulations: 16 U.S.C. 668-668d, 16 U.S.C 703-712; 50 CFR Part 13, 50 CFR 22.26.

Location where authorized activity may be conducted:

Bald Eagle nest at 39.07000, -90.721389, Elsberry/King Lake system, Lincoln County, Missouri

Reporting requirements:

ANNUAL REPORT DUE: 01/31

You must submit an annual report to your Regional Migratory Bird Permit Office each year, even if you had no activity. Form: www.fws.gov/forms/3-202-15.pdf.

Authorizations and Conditions:

Region Eagle Biologist 612-713-5438
Region Migratory Bird Permit Office 612-713-5436

Link to federal permit regulations:

<https://www.fws.gov/birds/policies-and-regulations/permits/permit-policies-and-regulations.php>

To retain the authorizations granted under this permit, you must comply with its reporting requirements. See Condition I for more information.

- A. General conditions set out in Subpart B of 50 CFR 13, and specific conditions contained in federal regulations cited above, are hereby made a part of this permit. All activities authorized herein must be carried out in accordance with and for the purposes described in the application submitted. Continued validity, or renewal of this permit is subject to complete and timely compliance with all applicable conditions, including the filing of all required information and reports.
- B. You are responsible for ensuring that the permitted activity is in compliance with all federal, tribal, state, and local laws and regulations applicable to eagles.
- C. Valid for use by permittee named above and any subpermittees (see Condition G.).
- D. You are authorized to disturb up to two (2) bald eagles tending their nests in 2020 through 2022 that may result in loss of productivity (1.3 chicks per year) and abandonment of their nest at 39.07000, -90.721389, during the course of the following activity: emergency repairs to Elsberry/King Lake system, Lincoln County, Missouri.

The authorizations granted by this permit apply only to bald eagle take that results from activities conducted in accordance with the



Permit Number: MB70717D-0
Effective: 03/02/2020 Expires: 12/31/2022

description contained in the permit application and the terms of the permit. If the permitted activity changes, you must immediately contact 612-713-5436 to determine whether a permit amendment is required in order to retain take authorization.

E. This permit does not authorize intentional take of eagles or eagle nests.

F. You must comply with the following avoidance and minimization measures:

1. Avoid damaging the critical root zone of the bald eagle nest tree (as defined by the circle around the ground corresponding to the drip line of the bald eagle nest tree, or out to a distance of 1.5 feet per inch of DBH, whichever is greater.) This will be accomplished with flagging around the bald eagle nest tree.
2. Avoid staging heavy equipment within 330 feet of the bald eagle nest tree.
3. Stage project activities in a manner that work within the 330 foot buffer of the bald eagle nest can be completed as quickly as possible.
4. Where possible, equipment will drive past the bald eagle nest tree without stopping and at a constant speed.
5. Where possible, leave mature roosting trees intact.
6. The use of plastic rip-rap in erosion control will be avoided to prevent bald eagle entanglement.
7. Within a 330 foot buffer around the bald eagle nest during bald eagle breeding season, project work will not start until one hour after sunrise and will end one hour before sunset in order to allow the ambient temperatures to warm, so if the adult bald eagles flush off their nest the bald eaglets will be less exposed. Once the high temperature for the day reaches 50 degrees F for two days in a row, then the sunrise and sunset restrictions may be lifted. This measure is no longer necessary if the bald eagle nest is confirmed not active any given year (as evidenced by an absence of bald eagles from their nest for ten consecutive days during the bald eagle breeding season).

G. Subpermittees.

Any person who is: Employed by or under contract to you for the activities specified in this permit, or otherwise designated a subpermittee by you in writing, may exercise the authority of this permit.

1. A subpermittee is an individual to whom you have provided written authorization to conduct some or all of the permitted activities in your absence. Subpermittees must be at least 18 years of age.
2. Any subpermittee who has been delegated this authority may not re-delegate to another individual/business.
3. You are responsible for ensuring that your subpermittees are qualified to perform the work and adhere to the terms of your permit. You are also responsible for maintaining current records of designated subpermittees. As the permittee, you are ultimately legally responsible for compliance with the terms and conditions of this permit and that responsibility may not be delegated.
4. You and any subpermittees must carry a legible copy of this permit and display it upon request whenever exercising its authority.

H. Monitoring Requirements.

You are required to monitor bald eagle use of important eagle-use areas where bald eagles are likely to be affected by your activities. You are required to monitor in 2020 during the season(s) when bald eagles would normally be present (See Condition F(4)), in the area where the take is likely to occur, and noting whether bald eagles continue to nest there.

Monitoring should occur at a time of day when eagles are most likely to be in the area, e.g., early morning, before sunrise or late afternoon, just prior to sunset, e.g. 7am-10am; 5pm-7pm CT. Monitoring must provide data on the following:

- 1) Was the bald eagle nest active (bald eagle present and tending their nest) at the start of the permitted activity? (Y/N)
- 2) Did bald eagles attempt to nest during the permitted activity? (Y/N)
- 3) Did the adult bald eagles continue tending their nest (incubating, feeding bald eaglets, etc.) during the permitted activity (abandonment or nest failure is indicated by the absence of adult bald eagles at the nest for >2 days) (Y/N)
- 4) Did the bald eagles in that nest successfully fledge at least one bald eaglet? (Y/N/not sure)

I. Reporting Requirements.

1. You must submit an annual report summarizing the information you obtained through monitoring to the Service for one (1) year to the Migratory Bird Permit Office at permitsr3mb@fws.gov or 5600 American Blvd. W, Bloomington, MN 55437.

You may use Form 3-202-15 (Eagle Take Report) found online at www.fws.gov/forms/3-202-15.pdf <<http://www.fws.gov/forms/3-202-15.pdf>> to report bald eagle monitoring activities.

If no bald eagle activity is observed, a report indicating "no activity observed" is still required.

If project activities were delayed or not conducted, an Annual Report indicating that "no activities occurred" is required.



Permit Number: MB70717D-0
Effective: 03/02/2020 Expires: 12/31/2022

2. You must immediately notify the Migratory Bird Permit Office at permitsr3mb@fws.gov upon discovery of any unanticipated bald eagle take or regarding any apparent injury or death occurring to any eagle, including bald eagle viable eggs or young, related or unrelated to the project activities. You must immediately contact the nearest available permitted migratory bird rehabilitator (see <https://ahnow.org/> to find a permitted rehabilitator near you) to coordinate transportation of any injured eagle.

**Standard Conditions
Eagle Take (Disturbance) Permit
50 CFR 22.26**

All of the provisions and conditions of the governing regulations at 50 CFR part 13 and 50 CFR part 22.26 are conditions of your permit. Failure to comply with the conditions of your permit could be cause for suspension of the permit and/or citation. The standard conditions below are a continuation of your permit conditions. If you have any questions regarding these conditions, refer to the regulations and forms, or to obtain contact information for your issuing office, visit: <https://www.fws.gov/birds/policies-and-regulations/permits/permit-policies-and-regulations.php>.

1. This permit does not authorize you to conduct activities on federal, state, tribal, or other public or private property without additional prior written permits or permission from the agency/landowner.
2. You remain responsible for all outstanding monitoring requirements and mitigation measures required under the terms of the permit for take that occurs prior to cancellation, expiration, suspension, or revocation of the permit. Provisions for discontinuance of permit activity are outlined in 50 CFR 13.26.
3. You must maintain records as required in 50 CFR 13.46. Your records must also include the data gathered for monitoring and reporting purposes. All records relating to the permitted activities must be kept at the location indicated in writing by you to the migratory bird permit issuing office.
4. Acceptance of this permit authorizes the U.S. Fish and Wildlife Service to inspect and audit or copy any permits, books or records required to be kept by the permit and governing regulations (50 CFR 13.47).
5. You must allow Service personnel, or other qualified persons designated by the Service, access to the areas where eagles are likely to be affected by your project activities, at any reasonable hour, and with reasonable notice from the Service, for purposes of monitoring eagles at the site(s) while the permit is valid and for up to 3 years after it expires
6. The Service may amend, suspend, or revoke a permit issued under this section if new information indicates that revised permit conditions are necessary, or that suspension or revocation is necessary, to safeguard local or regional eagle populations. This provision is in addition to the general criteria for amendment, suspension, and revocation of Federal permits set forth in §§13.23, 13.27, and 13.28 of this chapter.
7. To renew this permit if the activities described in Condition D have not been completed by the expiration date of this permit, permittee must meet issuance criteria at the time of renewal and must also have been in compliance with permit conditions, including all monitoring and reporting requirements of the original permit.
8. You may request amendment to your permit. The Service will charge a fee for substantive amendments made to permits within the time period that the permit is still valid. The fee is \$500 for commercial permittees and \$150 for non-commercial permittees (50 CFR 13.11(d)(4)). Substantive amendments are those that pertain to the purpose and conditions of the permit and are not purely administrative. Administrative changes, such as updating name and address information, are required under 13.23(c), and the Service will not charge a fee for such amendments. Requests for substantive amendment must be submitted via Form 3-200-71.

Last Updated: 8/28/19

Appendix 4

Missouri Department of Conservation

Missouri Department of Conservation's Mission is to protect and manage the forest, fish, and wildlife resources of the state and to facilitate and provide opportunities for all citizens to use, enjoy and learn about these resources.



Natural Heritage Review Level Three Report: Species Listed Under the Federal Endangered Species Act

There are records for species listed under the Federal Endangered Species Act, and possibly also records for species listed Endangered by the state, or Missouri Species and/or Natural Communities of Conservation Concern within or near the the defined Project Area. Please contact the U.S. Fish and Wildlife Service and the Missouri Department of Conservation for further coordination.

Foreword: Thank you for accessing the Missouri Natural Heritage Review Website developed by the Missouri Department of Conservation with assistance from the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, Missouri Department of Transportation and NatureServe. The purpose of this website is to provide information to federal, state and local agencies, organizations, municipalities, corporations and consultants regarding sensitive fish, wildlife, plants, natural communities and habitats to assist in planning, designing and permitting stages of projects.

PROJECT INFORMATION

Project Name and ID Number: Elsberry D&LD repair 2019 PL 84-99 #6307

Project Description: Township 50N, Range 2E, Section 01 Lat 39.151, Lon -90.798 Elsberry Levee and Drainage District Lincoln and Pike Counties, Missouri The Elsberry D&LD requests Federal assistance under the PL 84-99 program in order to repair damages sustained during the spring 2019 flood event. Repair activities may involve land disturbance and tree removal. A final repair design is forthcoming.

Project Type: Natural Disasters, Other

Contact Person: Evan Hill

Contact Information: evan.b.hill@usace.army.mil or 5739255004

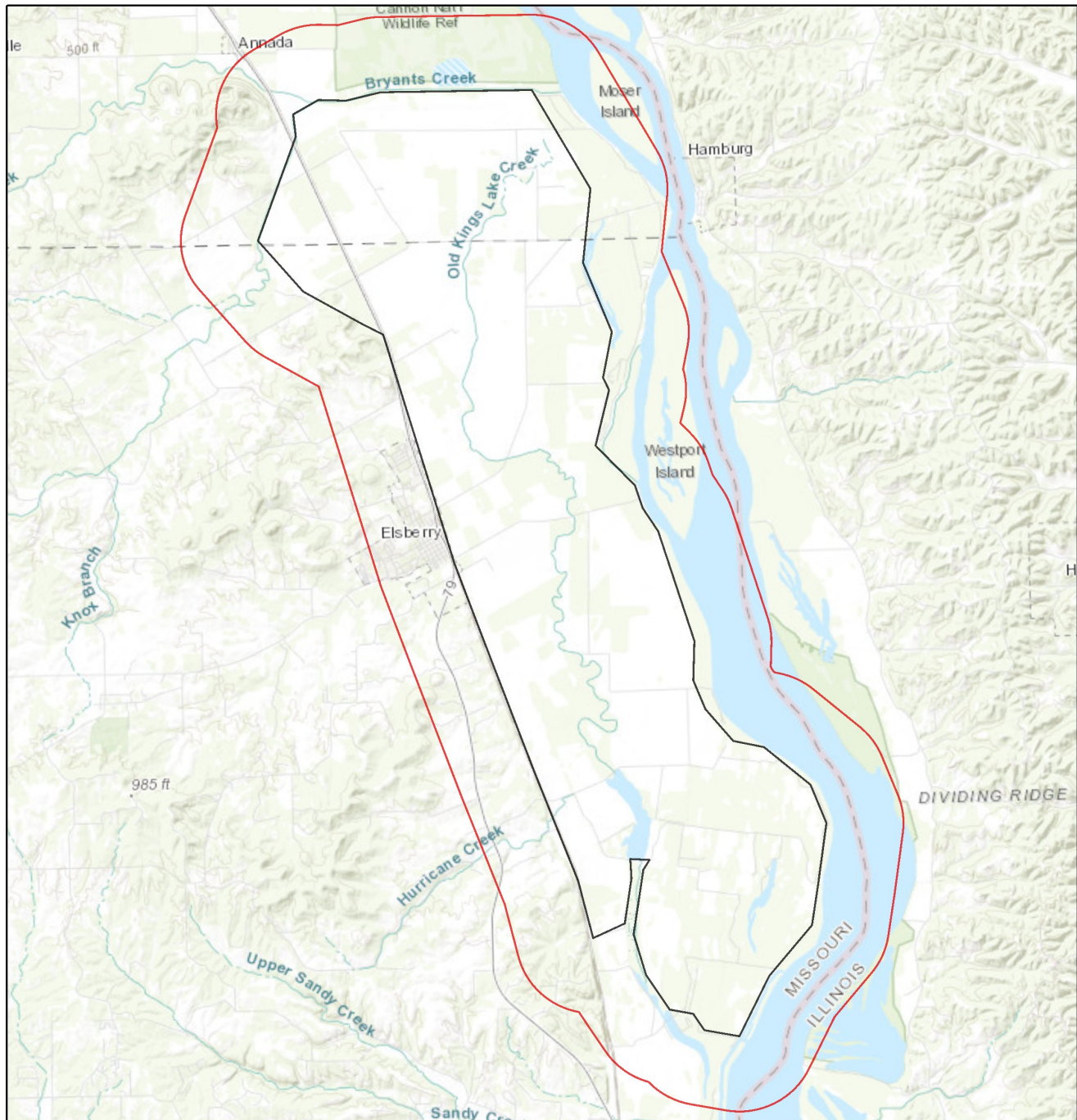
Disclaimer: The NATURAL HERITAGE REVIEW REPORT produced by this website identifies if a species tracked by the Natural Heritage Program is known to occur within or near the area submitted for your project, and shares suggested recommendations on ways to avoid or minimize project impacts to sensitive species or special habitats. If an occurrence record is present, or the proposed project might affect federally listed species, the user must contact the Department of Conservation or U.S. Fish and Wildlife Service for more information. The Natural Heritage Program tracks occurrences of sensitive species and natural communities where the species or natural community has been found. Lack of an occurrence record does not mean that a sensitive plant, animal or natural community is not present on or near the project area. Depending on the project, current habitat conditions, and geographic location in the state, surveys may be necessary. Additionally, because land use conditions change and animals move, the existence of an occurrence record does not mean the species/habitat is still present. Therefore, Reports include information about records near but not necessarily on the project site.

The Natural Heritage Report is not a site clearance letter for the project. It provides an indication of whether or not public lands and sensitive resources are known to be (or are likely to be) located close to the proposed project. Incorporating information from the Natural Heritage Program into project plans is an important step that can help reduce unnecessary impacts to Missouri's sensitive fish, forest and wildlife resources. However, the Natural Heritage Program is only one reference that should be used to evaluate potential adverse project impacts. Other types of information, such as wetland and soils maps and on-site inspections or surveys, should be considered. Reviewing current landscape and habitat information, and species' biological characteristics would additionally ensure that Missouri Species of Conservation Concern are appropriately identified and addressed in planning efforts.

U.S. Fish and Wildlife Service – Endangered Species Act (ESA) Coordination: Lack of a Natural Heritage Program occurrence record for federally listed species in your project area does not mean the species is not present, as the area may never have been surveyed. Presence of a Natural Heritage Program occurrence record does not mean the project will result in negative impacts. The information within this report is not intended to replace Endangered Species Act consultation with the U.S. Fish and Wildlife Service (USFWS) for listed species. Direct contact with the USFWS may be necessary to complete consultation and it is required for actions with a federal connection, such as federal funding or a federal permit; direct contact is also required if ESA concurrence is necessary. Visit the USFWS Information for Planning and Conservation (IPaC) website at <https://ecos.fws.gov/ipac/> for further information. This site was developed to help streamline the USFWS environmental review process and is a first step in ESA coordination. The Columbia Missouri Ecological Field Services Office may be reached at 573-234-2132, or by mail at 101 Park Deville Drive, Suite A, Columbia, MO 65203.

Transportation Projects: If the project involves the use of Federal Highway Administration transportation funds, these recommendations may not fulfill all contract requirements. Please contact the Missouri Department of Transportation at 573-526-4778 or www.modot.mo.gov/ehp/index.htm for additional information on recommendations.

Elsberry D&LD repair 2019 PL 84-99



September 26, 2019

- Project Boundary
- Buffered Project Boundary

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Species or Communities of Conservation Concern within the Area:

There are records for species listed under the Federal Endangered Species Act, and possibly also records for species listed Endangered by the state, or Missouri Species and/or Natural Communities of Conservation Concern within or near the the defined Project Area. Please contact the U.S. Fish and Wildlife Service and the Missouri Department of Conservation for further coordination.

MDC Natural Heritage Review
Resource Science Division
P.O. Box 180
Jefferson City, MO
65102-0180
Phone: 573-522-4115 ext. 3182
NaturalHeritageReview@mdc.mo.gov

U.S. Fish and Wildlife Service
Ecological Service
101 Park Deville Drive
Suite A
Columbia, MO
65203-0007
Phone: 573-234-2132

Other Special Search Results:

The project occurs on or near public land, CLARENCE CANNON NATIONAL WILDLIFE REFUGE, Hamburg Ferry Access, Leach (B K) Mem CA, Prairie Slough CA, Upper Mississippi CA, please contact USFWS, MDC.

Your project is near a designated Natural Area . Please contact MDC Natural Areas Coordinator, 573-751-4115 for more information.

Project Type Recommendations:

Natural Disasters - Other should be managed to minimize erosion and sedimentation/runoff to nearby streams and lakes, including adherence to any "Clean Water Permit" conditions. Project design should include stormwater management elements that assure storm discharge rates to streams for heavy rain events will not increase from present levels. Revegetate disturbed areas to minimize erosion using native plant species compatible with the local landscape and wildlife needs. Annual ryegrass may be combined with native perennials for quicker green-up. Avoid aggressive exotic perennials such as crownvetch and sericea lespedeza. Best management recommendations relating to streams and rivers may be found at: <https://mdc.mo.gov/property/pond-stream-care/streams-construction-best-practices>

Project Location and/or Species Recommendations:

Endangered Species Act Coordination - Indiana bats (*Myotis sodalis*, federal- and state-listed endangered) and **Northern long-eared bats** (*Myotis septentrionalis*, federal-listed threatened) may occur near the project area. Both of these species of bats hibernate during winter months in caves and mines. During the summer months, they roost and raise young under the bark of trees in wooded areas, often riparian forests and upland forests near perennial streams. During project activities, avoid degrading stream quality and where possible leave snags standing and preserve mature forest canopy. Do not enter caves known to harbor Indiana bats or Northern long-eared bats, especially from September to April. **If any trees need to be removed for your project, please contact the U.S. Fish and Wildlife Service (Ecological Services, 101 Park Deville Drive, Suite A, Columbia, Missouri 65203-0007; Phone 573-234-2132 ext. 100 for Ecological Services) for further coordination under the Endangered Species Act.**

The project location submitted and evaluated is within the geographic range of nesting Bald Eagles in Missouri. Bald Eagles (*Haliaeetus leucocephalus*) may nest near streams or water bodies in the project area. Nests are large and fairly easy to identify. Adults begin nesting activity in late December and January and young birds leave the nest in late spring to early summer. While no longer listed as endangered, eagles continue to be protected by the federal government under the Bald and Golden Eagle Protection Act. Work managers should be alert for nesting areas within 1500 meters of project activities, and follow federal guidelines at: <http://www.fws.gov/midwest/MidwestBird/EaglePermits/index.html> if eagle nests are seen.

The project site submitted and evaluated is on or near Sensitive Aquatic Species Waters Mississippi River, an important stream for freshwater mussel and amphibian populations. These streams were so designated because they have highly diverse mussel communities and mussel and amphibian species identified as Species of Conservation Concern. These streams are important to maintaining, restoring, or avoiding future listing of Species of Conservation Concern. Impacts to these aquatic species and habitats can be reduced by avoiding or minimizing activities that disturb the stream substrate, including rock placement, dredging, trenching, and wetted gravel bar disturbance; and avoid introducing heavy sediment loads, chemical or organic pollutants. These streams also are included as a Missouri Nationwide Permit Regional Condition (Number 7) that must be considered if working under a Clean Water Act Section 404 Permit issued by the U.S. Army Corps of Engineers (<http://www.nwk.usace.army.mil/Missions/RegulatoryBranch/NationWidePermit...>). A list of all streams designated under this Condition is available at <http://www.nwk.usace.army.mil/Portals/29/docs/regulatory/nationwidepermi...>.

Invasive exotic species are a significant issue for fish, wildlife and agriculture in Missouri. Seeds, eggs, and larvae may be moved to new sites on boats or construction equipment. Please inspect and clean equipment thoroughly before moving between project sites. See <http://mdc.mo.gov/9633> for more information.

- Remove any mud, soil, trash, plants or animals from equipment before leaving any water body or work area.
- Drain water from boats and machinery that have operated in water, checking motor cavities, live-well, bilge and transom wells, tracks, buckets, and any other water reservoirs.
- When possible, wash and rinse equipment thoroughly with hard spray or HOT water (?140° F, typically available at do-it-yourself car wash sites), and dry in the hot sun before using again.

Streams and Wetlands – Clean Water Act Permits: Streams and wetlands in the project area should be protected from activities that degrade habitat conditions. For example, soil erosion, water pollution, placement of fill, dredging, in-stream activities, and riparian corridor removal, can modify or diminish aquatic habitats. Streams and wetlands may be protected under the Clean Water Act and require a permit for any activities that result in fill or other modifications to the site. Conditions provided within the U.S. Army Corps of Engineers (USACE) Clean Water Act Section 404 permit (<http://www.nwk.usace.army.mil/Missions/RegulatoryBranch.aspx>) and the Missouri Department of Natural Resources (DNR) issued Clean Water Act Section 401 Water Quality Certification (<http://dnr.mo.gov/env/wpp/401/index.html>), if required, should help minimize impacts to the aquatic organisms and aquatic habitat within the area. Depending on your project type, additional permits may be required by the Missouri Department of Natural Resources, such as permits for stormwater, wastewater treatment facilities, and confined animal feeding operations. Visit <http://dnr.mo.gov/env/wpp/permits/index.html> for more information on DNR permits. Visit both the USACE and DNR for more information on Clean Water Act permitting.

For further coordination with the Missouri Department of Conservation and the U.S. Fish and Wildlife Services, please see the contact information below.

MDC Natural Heritage Review
Resource Science Division
P.O. Box 180

Jefferson City, MO
65102-0180

Phone: 573-522-4115 ext. 3182

NaturalHeritageReview@mdc.mo.gov

U.S. Fish and Wildlife Service

Ecological Service

101 Park Deville Drive

Suite A

Columbia, MO

65203-0007

Phone: 573-234-2132

Miscellaneous Information

FEDERAL Concerns are species/habitats protected under the Federal Endangered Species Act and that have been known near enough to the project site to warrant consideration. For these, project managers must contact the U.S. Fish and Wildlife Service Ecological Services (101 Park Deville Drive Suite A, Columbia, Missouri 65203-0007; Phone 573-234-2132; Fax 573-234-2181) for consultation.

STATE Concerns are species/habitats known to exist near enough to the project site to warrant concern and that are protected under the Wildlife Code of Missouri (RSMo 3 CSR 10). "State Endangered Status" is determined by the Missouri Conservation Commission under constitutional authority, with requirements expressed in the Missouri Wildlife Code, rule 3CSR 10-4.111. Species tracked by the Natural Heritage Program have a "State Rank" which is a numeric rank of relative rarity. Species tracked by this program and all native Missouri wildlife are protected under rule 3CSR 10-4.110 General Provisions of the Wildlife Code.

Additional information on Missouri's sensitive species may be found at <http://mdc.mo.gov/discover-nature/field-guide/endangered-species>. Detailed information about the animals and some plants mentioned may be accessed at http://mdc4.mdc.mo.gov/applications/mofwis/mofwis_search1.aspx. If you would like printed copies of best management practices cited as internet URLs, please contact the Missouri Department of Conservation.

Appendix 5

From: [Matt Vitello](#)
To: [Hill, Evan B CIV USARMY CEMVS \(USA\)](#)
Subject: [Non-DoD Source] RE: MDC Natural Heritage species list (UNCLASSIFIED)
Date: Monday, November 4, 2019 9:11:14 AM

Hi Evan,

The only nest adjacent to borrow areas is in the Kings Lake area. The nest is located just west of BK Leach area boundary, north of Burns Pond. It is over 3000 feet from the borrow areas labeled 2 and 3. The last active record for this nest is 2018.

The other borrow areas are not near nests.

Matt

From: Hill, Evan B <Evan.B.Hill@usace.army.mil>
Sent: Thursday, October 24, 2019 9:37 AM
To: Matt Vitello <Matt.Vitello@mdc.mo.gov>
Subject: RE: MDC Natural Heritage species list (UNCLASSIFIED)

CLASSIFICATION: UNCLASSIFIED

Thank you for the info, Matt.

Regarding the Elsberry/King's Lake Levee System:

Fortunately, the borrow areas are all agricultural fields, so no the land disturbance should not impact the listed plant species. We are also working with Gary Calvert (MDC) to take borrow from an area on BK Leach CA in order to expand a slough he's got out there. I am pushing for that site's use, because I think it would ultimately be a win-win.

I am concerned with the presence of Bald Eagle nests near the Elsberry/King's Lake levee system. I did not see any during my site visit, but I figured there would be some in the vicinity. Are the nests outside of the levee system, or are some within the protected area? I just want to make sure the breaches and borrow areas are far enough from the nests so there is not an issue. There are two breaches along the northernmost wall of the Elsberry section, and there's another down south in the King's lake section. I have attached maps showing the locations of the breaches and borrow sites for your reference.

Thanks again,

Evan Hill

Environmental Compliance Section

Wildlife Biologist

U.S. Army Corps of Engineers

1222 Spruce St

St. Louis, MO 63103

(314) 925-5004

evan.b.hill@usace.army.mil <<mailto:evan.b.hill@usace.army.mil>>

-----Original Message-----

From: Matt Vitello [<mailto:Matt.Vitello@mdc.mo.gov>]

Sent: Wednesday, October 23, 2019 1:25 PM

To: Hill, Evan B <Evan.B.Hill@usace.army.mil <<mailto:Evan.B.Hill@usace.army.mil>> >

Subject: [Non-DoD Source] RE: MDC Natural Heritage species list (UNCLASSIFIED)

Evan,

Sorry for the delayed response, attached are the lists of species located in the vicinity of these projects (Elsberry tab and Pike tab). Let me know if you need additional details on any species. There are multiple Bald Eagle nests in the vicinity of both projects.

Matt Vitello, P.E.

Policy Coordinator

Missouri Department of Conservation

573-522-4115 ext. 3191

matt.vitello@mdc.mo.gov <<mailto:matt.vitello@mdc.mo.gov>>

-----Original Message-----

From: Hill, Evan B <Evan.B.Hill@usace.army.mil <<mailto:Evan.B.Hill@usace.army.mil>> >

Sent: Friday, October 04, 2019 11:21 AM

To: Matt Vitello <Matt.Vitello@mdc.mo.gov <<mailto:Matt.Vitello@mdc.mo.gov>> >

Subject: MDC Natural Heritage species list (UNCLASSIFIED)

CLASSIFICATION: UNCLASSIFIED

Hi Matt,

I have a couple of emergency levee repair projects, and I wanted to coordinate with you to get lists of species from the MDC Natural Heritage Database that might be impacted by the repair activities. Knowing if there are any bald eagle nests nearby, any caves, hibernacula, roost trees, or records of state or federally-listed species helps inform my ESA determinations and impact statements.

I attached location maps and the reports generated by the Natural Heritage Review website tool for each project.

1. Project Name and ID Number: Elsberry D&LD repair 2019 PL 84-99 #6307 Project Description: Township 50N, Range 2E, Section 01 Lat 39.151, Lon -90.798 Elsberry Levee and Drainage District Lincoln and Pike Counties, Missouri The Elsberry D&LD requests Federal assistance under the PL 84-99 program in order to repair damages sustained during the spring 2019 flood event.

Repair activities may include permanent fill, tree clearing, and significant land disturbance. A final repair design is forthcoming.

2. Project Name and ID Number: Pike Grain #3 emergency repair 2019 PL 84-99 #5986 Project Description: The USACE and the levee sponsor propose to conduct various emergency repairs to the Pike Grain #2, 3, and 4 Levee System. Repairs could include permanent fill, tree clearing, and significant land disturbance. There will be repair activities on Pike Grain 2, 3, and 4, so I would like to know if there are any records near each of these levee systems (see the map of the Pike Grain Levee system)

Thank you for your help,

Evan Hill

Environmental Compliance Section

Wildlife Biologist

U.S. Army Corps of Engineers

1222 Spruce St

St. Louis, MO 63103

(314) 925-5004

evan.b.hill@usace.army.mil <<mailto:evan.b.hill@usace.army.mil>>

CLASSIFICATION: UNCLASSIFIED

CLASSIFICATION: UNCLASSIFIED

Appendix 6

CULTURAL RESOURCE ASSESSMENT

Section 106 Review

CONTACT PERSON/ADDRESS

C:

Mark Smith
U.S. Army Corps of Engineers
Kansas City District
601 East 12th Street, RM 402
Kansas City, MO 64103

PROJECT:

Elsberry Lake, PL84-99 Levee Repairs

FEDERAL AGENCY

COE

COUNTY:

Pike and Lincoln

The State Historic Preservation Office has reviewed the information submitted on the above referenced project. Based on this review, we have made the following determination:

☐

After review of initial submission, the project area has a low potential for the occurrence of cultural resources. A cultural resource survey, therefore, is not warranted.

☒

Adequate documentation has been provided (36 CFR Section 800.11). There will be "no historic properties affected" by the current project.

☐

An adequate cultural resource survey of the project area has been previously conducted. It has been determined that for the proposed undertaking there will be "no historic properties affected".

For the above checked reason, the State Historic Preservation Office has no objection to the initiation of project activities. PLEASE BE ADVISED THAT, IF THE CURRENT PROJECT AREA OR SCOPE OF WORK ARE CHANGED, A BORROW AREA IS INCLUDED IN THE PROJECT, OR CULTURAL MATERIALS ARE ENCOUNTERED DURING CONSTRUCTION, APPROPRIATE INFORMATION MUST BE PROVIDED TO THIS OFFICE FOR FURTHER REVIEW AND COMMENT. Please retain this documentation as evidence of compliance with Section 106 of the National Historic Preservation Act, as amended.

By:

Toni M. Prawl

Toni M. Prawl, Ph.D., Deputy State Historic Preservation Officer

November 26, 2019

Date

MISSOURI DEPARTMENT OF NATURAL RESOURCES
STATE HISTORIC PRESERVATION OFFICE
P.O. Box 176, Jefferson City, Missouri 65102

For additional information, please contact Amy Rubingh, (573) 751-4589.

Please be sure to refer to the project number: 007-MLT-20



Appendix 7

Missouri Department of dnr.mo.gov
NATURAL RESOURCES
Michael L. Parson, Governor Carol S. Comer, Director

December 10, 2019

Ms. Jennifer L. Riordan
Chief, Curation and Archives Analysis Branch
Department of the Army
St. Louis District Corps of Engineers
1222 Spruce Street
St. Louis, MO 63103-2833

Re: **SHPO Project No. 002-LN-20** – PL84-99 Levee Flood Damage Repairs, Kings Lake Drainage District, Lincoln County, Missouri

Dear Ms. Riordan,

Thank you for submitting information on the above referenced project for our review pursuant to Section 106 of the National Historic Preservation Act (P.L. 89-665, as amended) and the Advisory Council on Historic Preservation's regulation 36 CFR Part 800, which requires identification and evaluation of cultural resources.

We have reviewed the Section 106 survey memo entitled *Phase I Survey for King's Lake Levee, Borrow Area 2, Lincoln Co., MO*. Based on this review it is evident that a thorough and adequate cultural resources survey has been conducted of the project area. Therefore, we concur with the recommendation that there will be **no historic properties affected**, and have no objection to the initiation of project activities.

Please be advised that, should project plans change, information documenting the revisions should be submitted to this office for further review. In the event that cultural materials are encountered during project activities, all construction should be halted, and this office notified as soon as possible in order to determine the appropriate course of action.

Appendix 8



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
ST. LOUIS DISTRICT CORPS OF ENGINEERS
1222 SPRUCE STREET
ST. LOUIS, MISSOURI 63103-2833

November 6, 2019

Engineering and Construction Division
Curation and Archives Analysis Branch (EC-Z)

Governor Edwina Butler-Wolfe
Absentee-Shawnee Tribe of Oklahoma
2025 S. Gordon Cooper Drive
Shawnee, OK 74810-9381

Subject: PL84-99 Levee Flood Damage Repairs, Kings Lake Drainage District, Lincoln County, Missouri

Dear Governor Butler-Wolfe:

We are contacting your tribe to initiate consultation for a proposed undertaking to repair flood damage to the Kings Lake Drainage District (DD) in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended. The U.S. Army Corps of Engineers, St. Louis District (USACE) will be providing assistance to the Kings Lake DD to repair damage that took place during the April/May 2019 water event. Kings Lake DD is a Federal project that is active in the USACE Rehabilitation and Inspection Program (RIP) and is eligible for Flood Control and Coastal Emergency (FCCE) funding authorized by Public Law (PL) 84-99.

Kings Lake DD experienced a breach, erosion, and slides. The majority of the repair work will be undertaken within the footprint of the levee itself without effecting the surrounding areas. A source of borrow material has been located and tentatively selected for use in the repairs (Figure 1). USACE personnel performed a cultural resource survey of the borrow area on 25 October 2019. The survey identified site 23LN1442, a mid-20th century historic habitation site, and a prehistoric artifact scatter. Site 23LN1442 was determined to be ineligible to the National Register of Historic Places. The prehistoric artifact scatter was identified on the slope of a berm constructed of sediment that was brought into the area. It is believed that the identified artifacts were transported into the proposed borrow area site with the soil. Based on these findings, it is our current opinion that the proposed borrow area will have no effect on historic properties.

If your tribe has any questions, comments, or areas of tribal concern, please feel free to contact me at (314) 331-8855, or Chris Koenig (Supervisory Archaeologist and Tribal Liaison) at (314) 331-8151 or email at Christopher.J.Koenig@usace.army.mil. A copy of this letter has been furnished to Ms. Devon Frazier.

Thank you,

Jennifer L. Riordan
Chief, Curation and Archives Analysis Branch

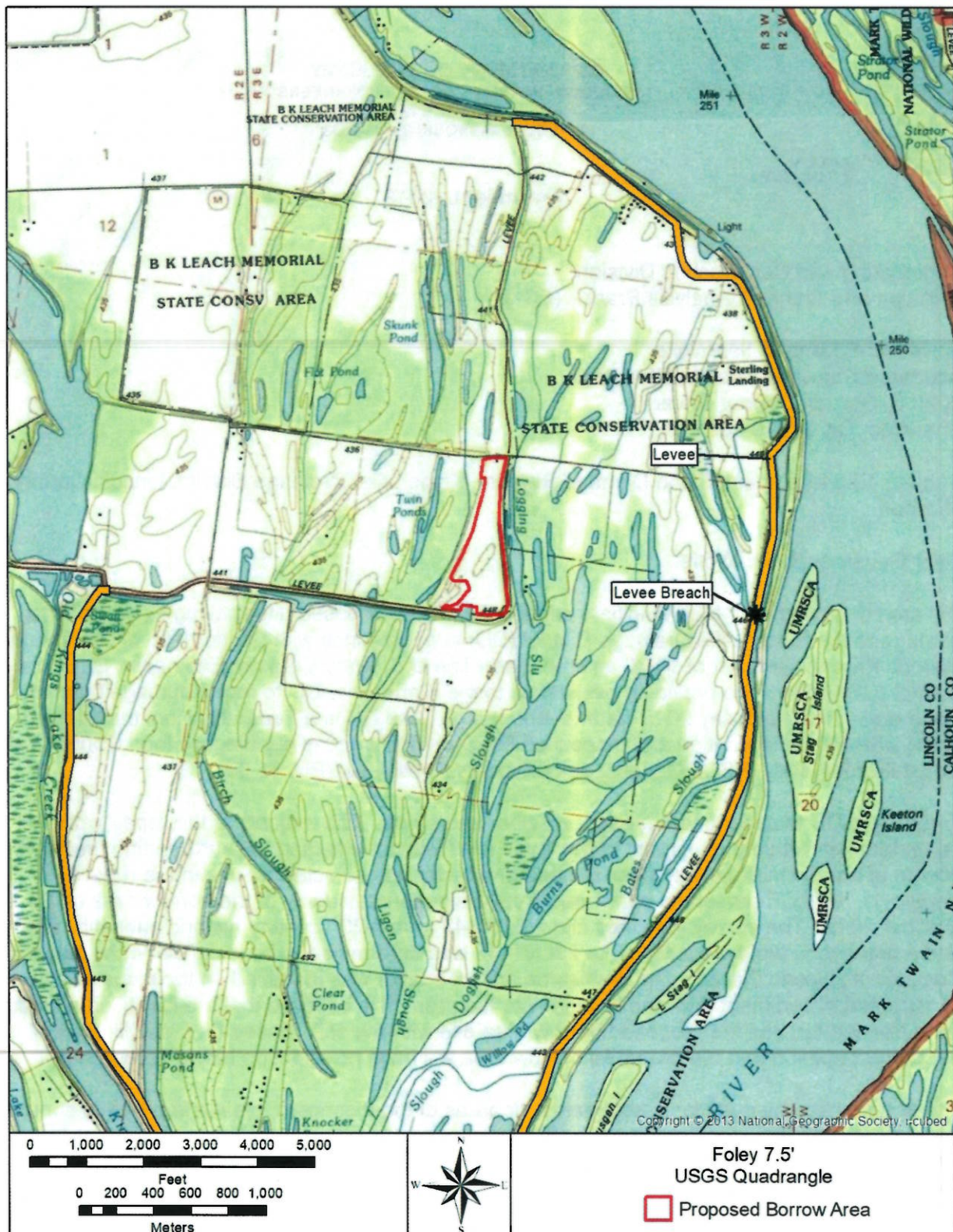


Figure 1: Location Map of Proposed Borrow Area



MISSOURI DEPARTMENT OF NATURAL RESOURCES
HISTORIC PRESERVATION PROGRAM
P.O. BOX 176, JEFFERSON CITY, MISSOURI 65102
(573) 751-7858

SECTION 106 SURVEY MEMO

SHPO USE ONLY

REVIEWER

DATE

SHPO LOG #

☐ ACCEPTED

☐ REJECTED

1) HPP 106 PROJECT #
Not Yet Assigned

LOCATION INFORMATION AND SURVEY CONDITIONS

2) COUNTY(S)

Lincoln County

3) QUADRANGLE

Foley

4) PROJECT TYPE/TITLE

Phase I Survey for King's Lake Levee, Borrow Area 2, Lincoln Co., MO

5) FUNDING/PERMITTING FEDERAL AGENCY(S)

U.S. Army Corps of Engineers

6) SECTION

Landgrant 1693

7) TOWNSHIP

50 North

8) RANGE

3 East

9) U.T.M.

15 Northing: 4330933 Easting: 698081 (approximate center)

10) PROJECT DESCRIPTION

Archaeological survey for borrow area for the breach of King's Lake levee.

11) TOPOGRAPHY

Flood plain (Figure 1).

12) SOILS

Carlow silty clay and Dockery silty clay (Figure 2)

13) DRAINAGE

Mississippi 4 watershed of the Upper Mississippi drainage

14) LAND USE/GROUND COVER (INCLUDING % VISIBILITY)

Recently tilled cultivated field with 100% visibility (Photos 1-4)

15) SURVEY LIMITATIONS

None

HISTORICAL BACKGROUND INFORMATION

16) HPP - CULTURAL RESOURCE INVENTORY



17) ARCHAEOLOGICAL SURVEY OF MISSOURI



18) GIS DATABASE



19) HISTORIC PLATS/ATLASES/SOURCES

1878 Atlas (Figure 3); 1898 Atlas (Figure 4); 1975 Foley 7.5' USGS (Figure 5)

20) PREVIOUSLY REPORTED SITES

None within project area; 12 within one mile (Figure 6; Table 1)

21) PREVIOUS SURVEYS

None within project area; 5 within one mile (Figure 6; Table 2)

22) REGIONAL SOURCES UTILIZED

N/A

23) MASTER PLAN RECOMMENDATION

N/A

24) INVESTIGATION TECHNIQUES

Pedestrian survey with shovel tests for soil stratigraphy. See continuation sheets

25) TIME EXPENDED

16.5

PERSON HOURS

26) HISTORIC PROPERTIES LOCATED

23LN1442 - mid-20th century historic; artifacts not collected

27) CULTURAL MATERIALS

Site 23LN1442 - bricks, limestone, historic ceramics, glass bottle bodies, metal (See continuation sheets)

Prehistoric scatter - Burlington long-stemmed Archaic point base, 7 Burlington secondary flakes (collected)

28) CURATED AT

Illinois State Museum

29) COLLECTION TECHNIQUES

All diagnostic artifacts were collected (see continuation sheet)

30) AREA SURVEYED (ACRES & SQUARE METERS)

35 acres/142,200 sq. meters

31) RESULTS OF INVESTIGATION AND RECOMMENDATIONS:

- ☐ a) No Historic Properties Located.
- ☒ b) No National Register Eligible Historic Properties Located.
- ☐ c) National Register Eligible Historic Properties Located.
- ☐ d) Historic Properties May Meet Requirements For National Register Eligibility; Phase II Testing Is Recommended:

e) Comments: See continuation sheets

CULTURAL RESOURCE MANAGEMENT CONTRACTOR INFORMATION

32) ARCHAEOLOGICAL CONSULTANT

U.S. Army Corps of Engineers, St. Louis District

33) ADDRESS/PHONE

1222 Spruce Street, St. Louis, MO 63103/(314) 925-5031

34) SURVEYOR(S)

Meredith Hawkins Trautt, Katie Leslie, and Josh Wackett

35) SURVEY DATE(S)

10/24/19

36) REPORT COMPILED BY

Meredith Hawkins Trautt, Archaeologist

37) DATE

11/6/19

38) SUBMITTED BY (SIGNATURE AND TITLE)

39) ATTACHMENT CHECK LIST: (REQUIRED)

- ☒ 1) Relevant Portion of USGS 7.5' Topographic Quadrangle Map(s) Showing Project Location and Any Recorded Sites;
- ☒ 2) Project Map(s) Depicting Survey Limits and, when applicable, Approximate Site Limits, and Concentrations of Cultural Materials;
- ☐ 3) Site Form(s): One Copy of Each Form;
- ☐ 4) All Relevant Project Correspondence;
- ☒ 5) Additional Information Sheets as Necessary.

40) ADDRESS OF OWNER/AGENT/AGENCY TO WHOM SHPO COMMENT SHOULD BE MAILED

U.S. Army Corps of Engineers, St. Louis District
CEMVS-EC-Z
1222 Spruce Street
St. Louis, MO 63103

41) CONTACT PERSON

Meredith Hawkins Trautt

42) PHONE NUMBER

(314) 925-5031

REVIEWER COMMENTS

Continuation Sheets King's Lake Borrow Area 2

20.) Previously Reported Sites

There have been no previously reported sites within the project area; however, 12 sites have been identified within one mile (Figure 6). These sites are summarized in Table 1.

Table 1: Previously Reported Sites within One-Mile of the Project Area

Site #	Cultural Affiliation	Site Type	Author	Date
LN235	Historic	Habitation	Sturdevant, Craig	1995
LN236	Historic	Habitation	Sturdevant, Craig	1995
LN237	Historic	Habitation	Sturdevant, Craig	1995
LN238	Historic	Riverboat Landing and Habitation	Sturdevant, Craig	1995
LN239	Prehistoric	Habitation	Sturdevant, Craig	1995
LN240	Prehistoric	Habitation	Sturdevant, Craig	1995
LN241	Prehistoric	Lithic Scatter	Sturdevant, Craig	1995
LN244	Historic	Habitation	Sturdevant, Craig	1995
LN245	Historic	Habitation	Sturdevant, Craig	1995
LN246	Historic	Habitation	Sturdevant, Craig	1995
LN247	Historic	Habitation	Sturdevant, Craig	1995
LN248	Historic	Habitation	Sturdevant, Craig	1995

21.) Previous Surveys

No archeological surveys have taken place within the project area. Five surveys have been conducted within one mile (Figure 6); these surveys are summarized in Table 2.

Table 2: Previous Surveys within One Mile of the Project Areas

Survey #	Title	Conducted By	Conducted For	Author(s)	Date
LN-3	Archaeological Reconnaissance of the Elsberry Agricultural Area No. 8	University of Missouri	U.S. Corps of Engineers	Evans, David R.	1975
LN-7	An Archaeological Reconnaissance of Sections of the Mississippi River Shoreline, Miles 218.4 to 298.1 in Illinois and Missouri	Foundation for Illinois Archaeology	U.S. Army Corps of Engineers	Farnsworth, Kenneth B.	1977
LN-9	An Archaeological Reconnaissance of Sections of the Mississippi River Shoreline, Miles 219.1-298.2 in Illinois and Missouri	Foundation for Illinois Archaeology	U.S. Army Corps of Engineers	Udesen, H.	1978
LN-33	Cultural Resource Investigations, Phase I Survey, B.K. Leach Conservation Area, Lincoln Co., MO	Environmental Research Center	MoDOC	Sturdevant, Craig	1995
LN-115	Phase I Archaeological Survey of Borrow Pits, Levee Slides, Levee Breaches, & Type III Eroded Areas for USACE-St. Louis District: Kings Lake	Center for Archaeological Research	U.S. Army Corps of Engineers	Thompson, Dustin A.	2008

31e.) Results of Investigation and Recommendations

The project area was within a recently tilled agricultural field that afforded 100% visibility (Photos 1-4). The area was walked in transects five meters apart and the ground surface was visually inspected for cultural resources. Six shovel tests were placed throughout the project area to determine soil stratigraphy. Five of the shovel tests revealed a soil profile of (Photo 5):

0-17cm	very dark grayish brown (10YR 3/2) silty loam
17-27cm	dark yellowish brown (10YR 3/4) silty clay
22-35cm	dark yellowish brown (10YR 4/4) clay

This is consistent with the C-horizons of the Dockery soil series of the area; indicating the Ap-horizon had been removed. A sand ridge was identified in the south-central portion of the project area. The shovel test in this area revealed approximately 30 cm of yellowish brown (10YR 5/6) sand before the natural soils of the area was encountered.

Site 23LN1442 was identified within the northern portion of the project area (Figure 7; Photos 6-7). The site was identified by the presence of limestone, brick fragments, plain ironstone body sherds, plain stoneware body sherds, a Fiestaware body sherd, glass body bottle fragments, and metal (i.e., nails, horseshoe, and indeterminate fragments) (Photo 8). No artifacts were collected because they were not diagnostic. A shovel test was placed within the middle of the artifact scatter and it revealed soil stratigraphy consistent with those of the project area, which were the C-horizons of the Dockery soil series. No features were identified during the survey. According to the landowner, a residence and barn that dated to the 1930s had been located within this portion of the project area. The house was destroyed during the flood of 1973 and the house and barn were razed at that time. The lack of subsurface features and missing Ap-horizon indicate that the area was most likely scraped during the removal of the buildings. It is unlikely that subsurface features associated with this site exist; therefore, it is not eligible to the NRHP.

A prehistoric artifact scatter also was identified along the western edge, within the southern portion of the project area (Figure 7; Photo 9). The scatter was identified along the slope of a berm adjacent to the east of a slough. Artifacts recovered were a Burlington long-stemmed Archaic projectile point base and seven Burlington secondary flakes (Photo 10). These artifacts were collected due to the diagnostic projectile point. No features were observed around the artifact scatter. A shovel test was placed within the berm to verify that it was not natural to the area. It revealed a soil profile of:

0-9cm	very dark grayish brown (10YR 3/2) silty loam
9-42cm	very dark grayish brown (10YR 3/2) silty clay
42-50cm	yellowish brown (10YR 5/4) sand

The deeply buried sand is not consistent with the Dockery or Carlow soils of the area. It is not known where the sediment to build the berm originated; however, it seems likely the projectile point base and flakes were brought into the project area with the soil. It is not believed a site is located within the project area.

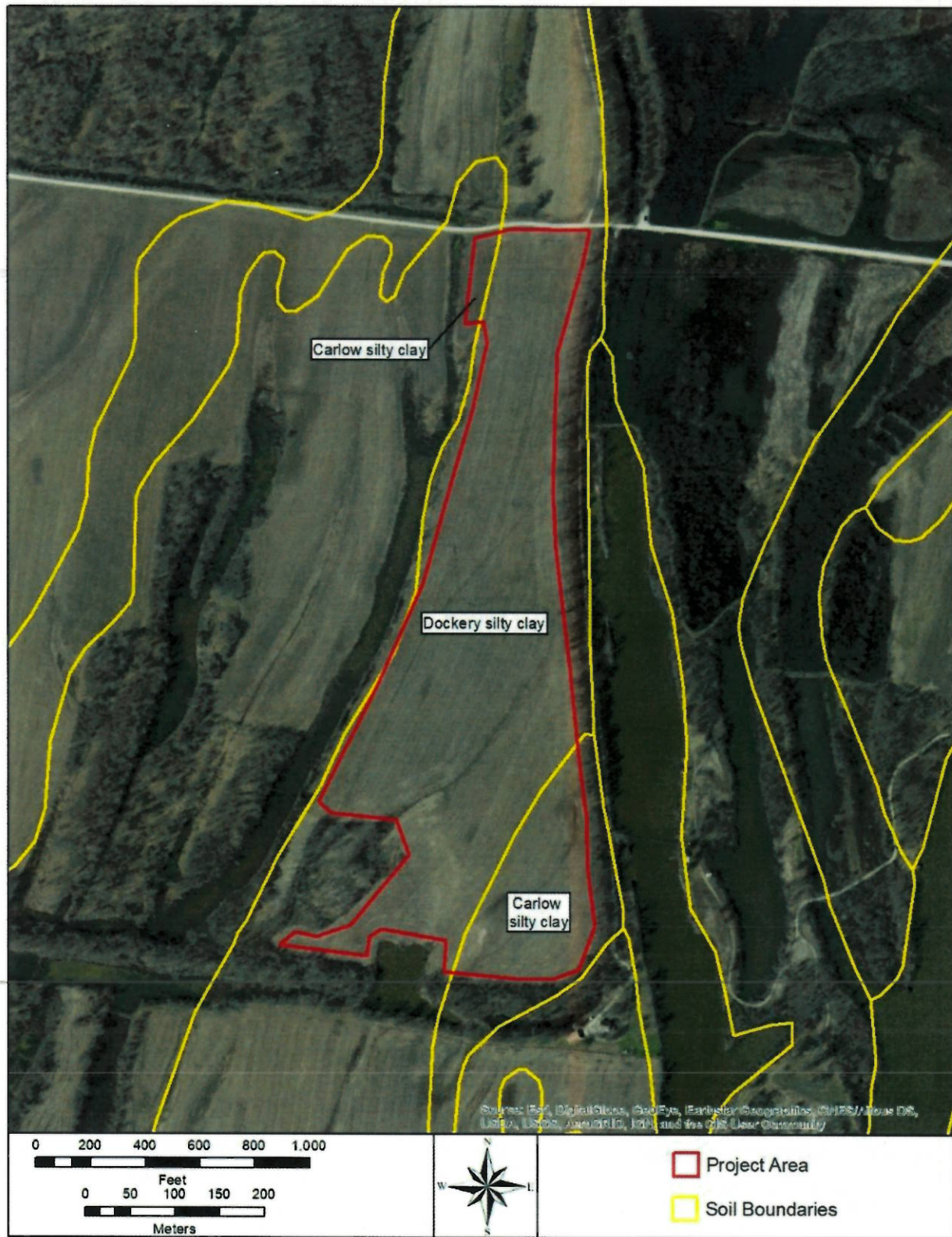


Figure 2: Soils Map



Figure 1: Location Map

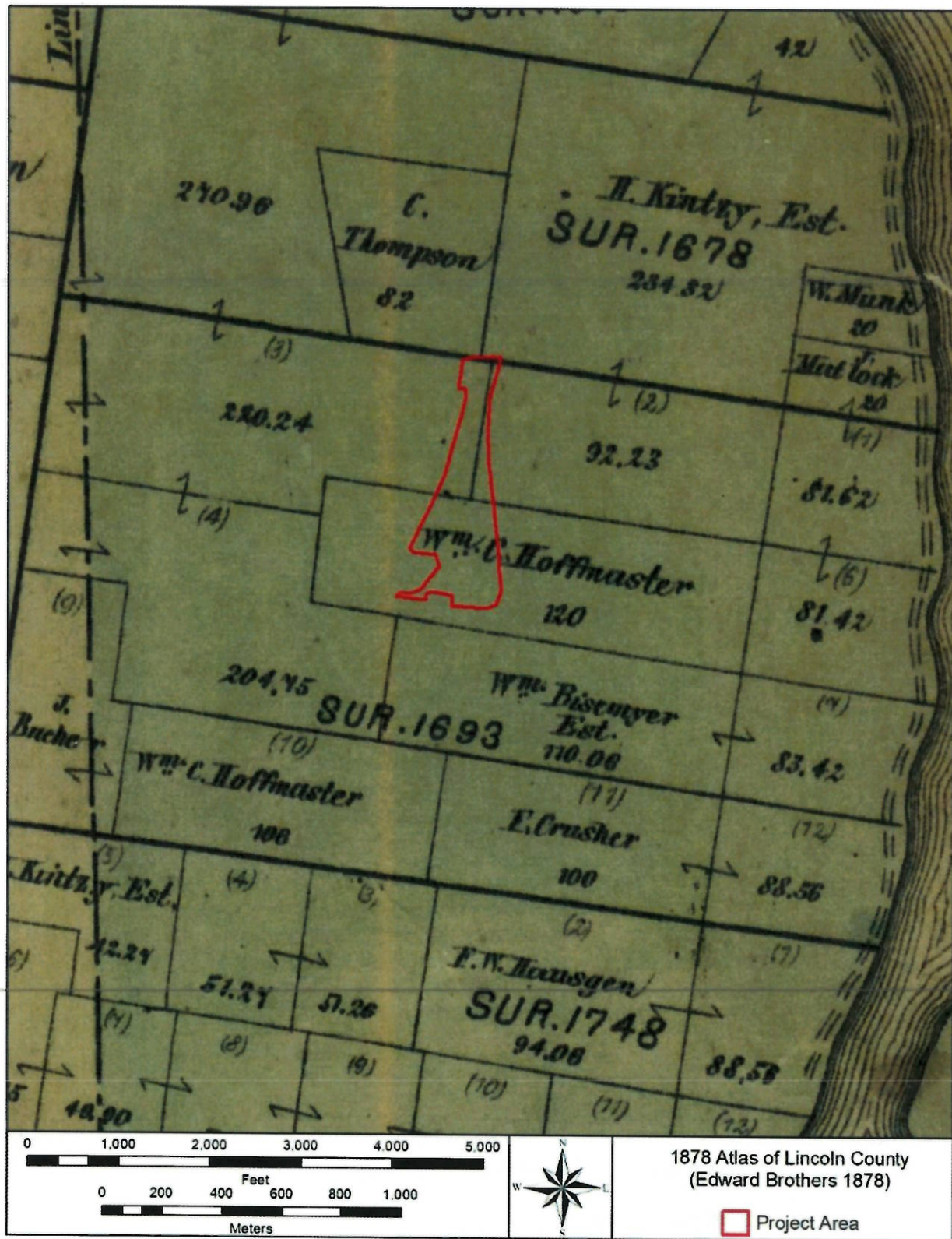


Figure 3: 1878 Atlas of Lincoln County

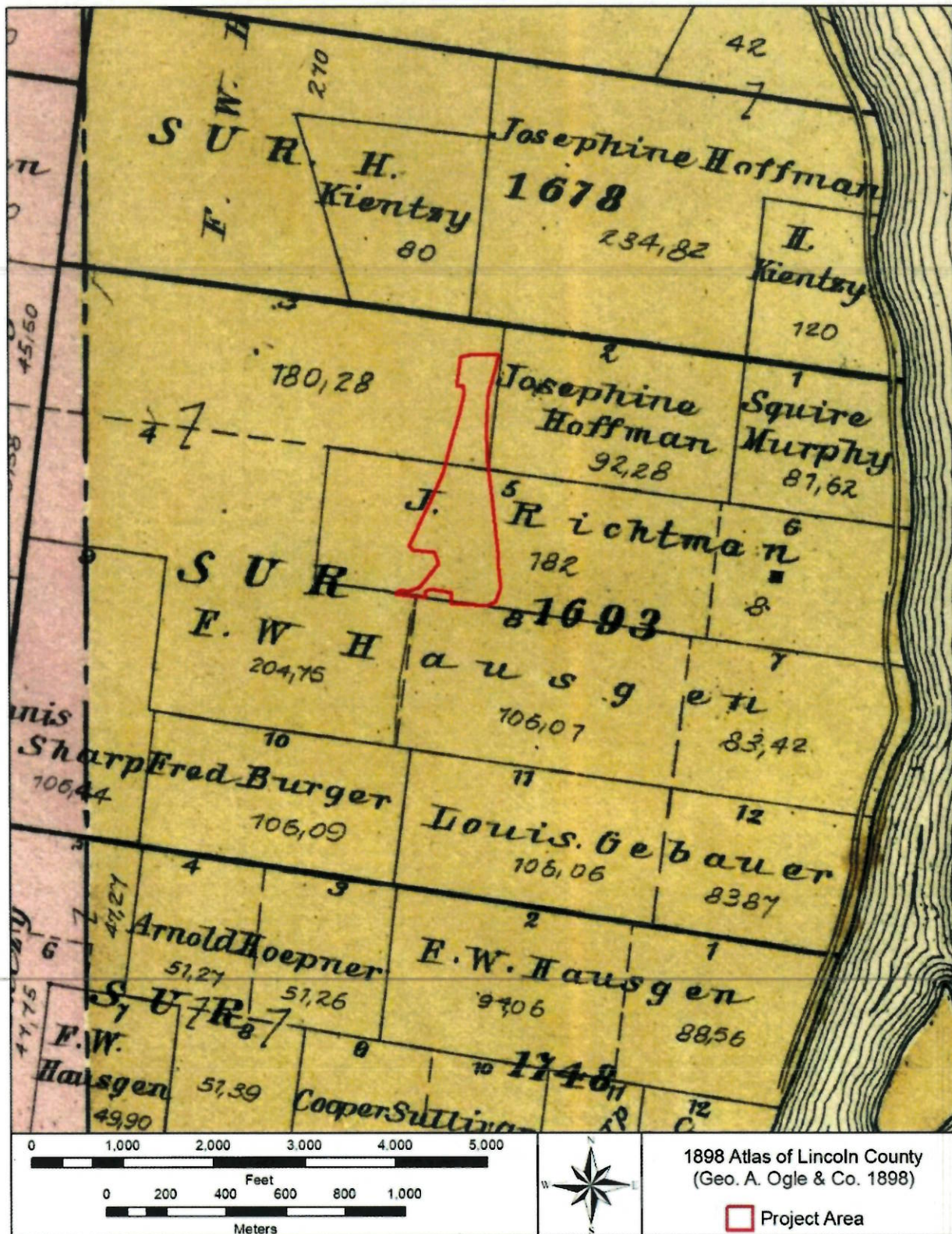


Figure 4: 1898 Atlas of Lincoln County

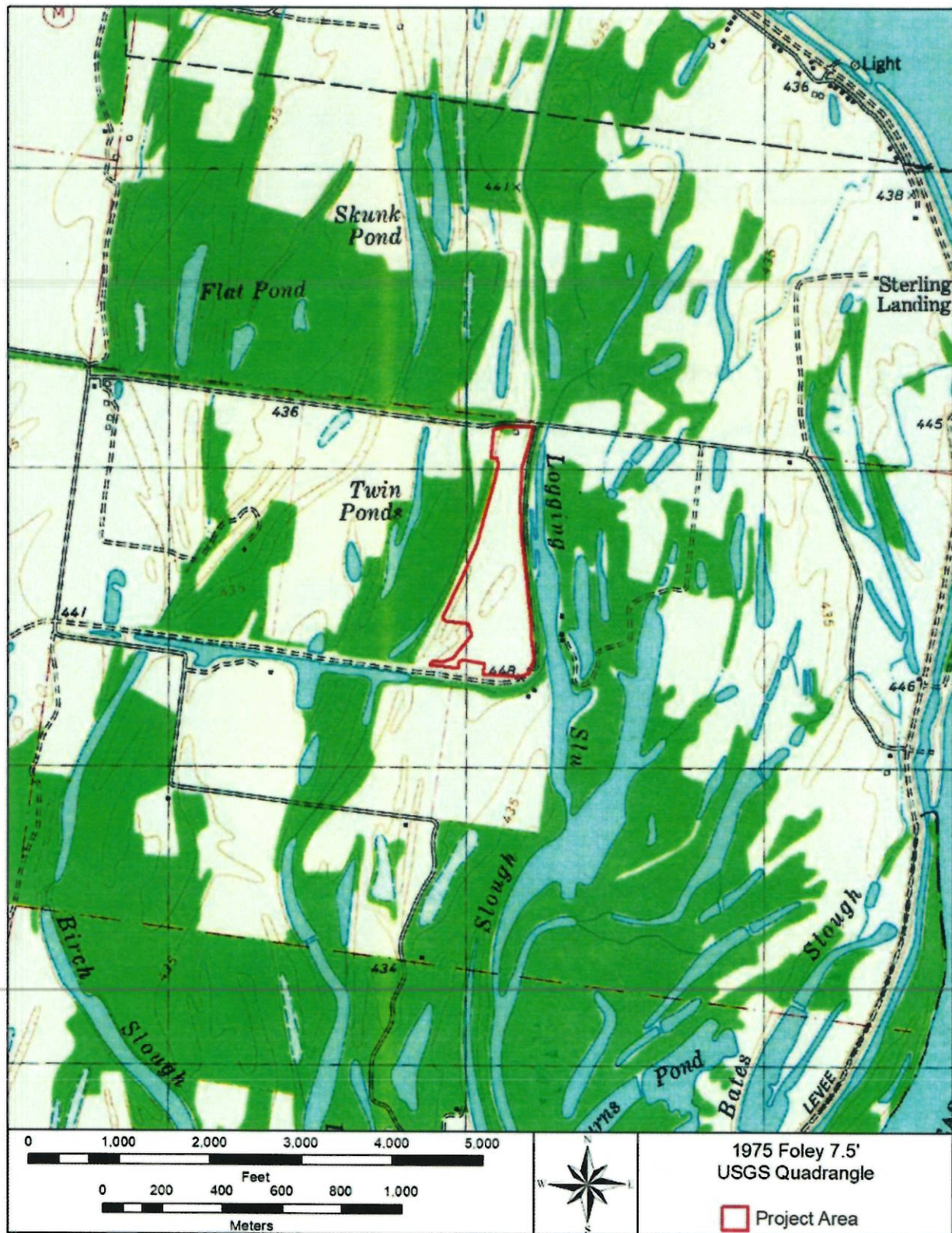


Figure 5: 1975 Foley 7.5' USGS Quadrangle

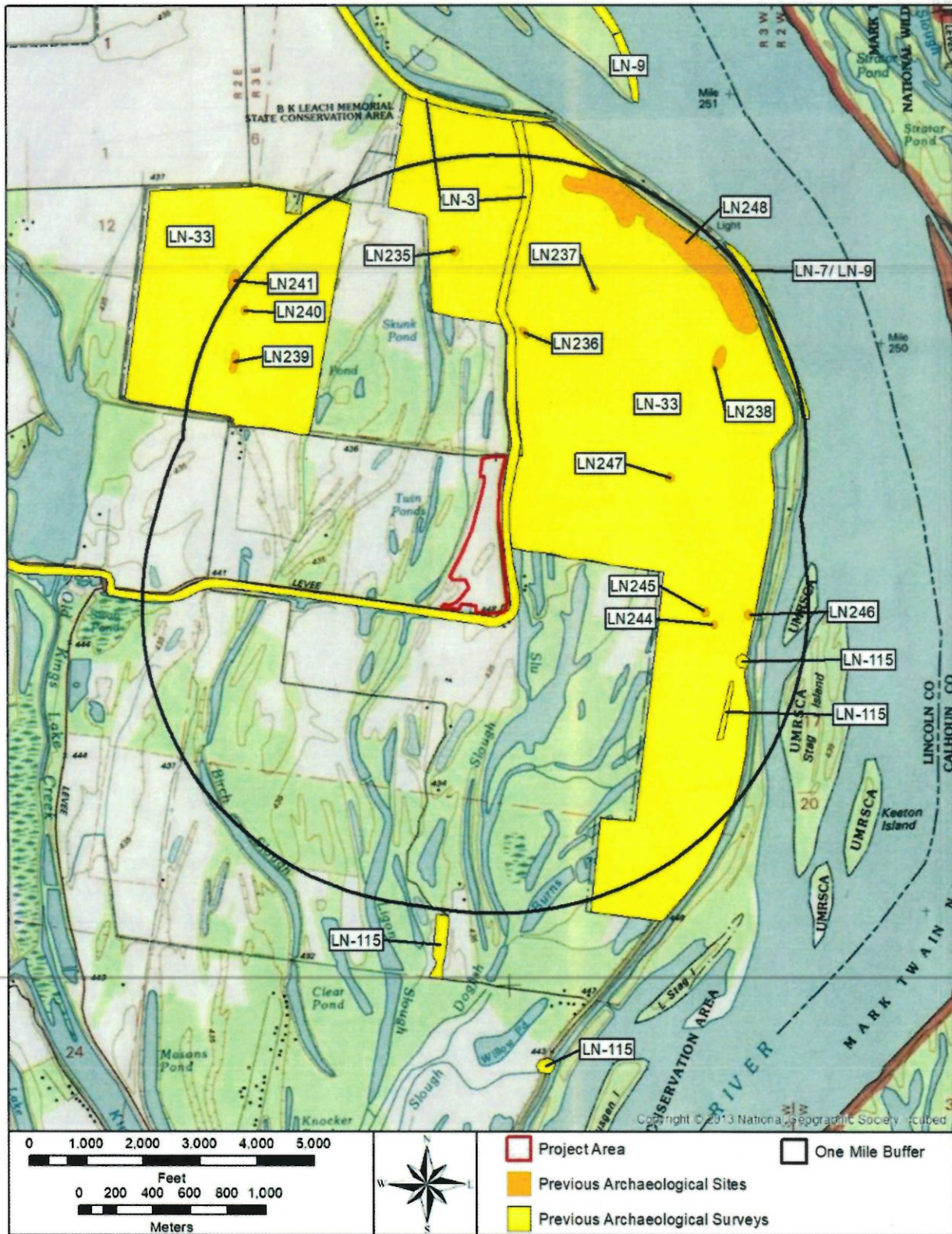


Figure 6: Previous Investigations Map



Photo 1: Overall Project Area, Facing Southeast



Photo 2: Overall Project Area, Facing Northeast



Photo 3: Overall Project Area, Facing Northwest



Photo 4: Overall Project Area, Facing Southeast



Photo 5: Shovel Test Profile, Facing West



Photo 6: Site 23LN1442, Overall, Facing Northwest



Photo 7: Site 23LN1442, Overall, Facing Southeast



Photo 8: Site 23LN1442, Example of Artifacts, Facing West



Photo 9: Prehistoric Artifact Scatter, Showing Shovel Testing of Berm, Facing West



Photo 10: Artifacts from Prehistoric Scatter
(Top Left: Archaic Projectile Point Base)

Appendix 9

From: [Koenig, Christopher J Jr CIV \(US\)](#)
To: [Smith, Mark A CIV USARMY CEMVS \(USA\)](#); [Trautt, Meredith M CIV USARMY CEMVS \(USA\)](#)
Subject: FW: Elsberry Lake, PL84-99 Levee Repairs, Pike & Lincoln Counties, Mo
Date: Tuesday, December 10, 2019 10:01:25 AM
Attachments: [image001.png](#)

FYSA and files.

Christopher Koenig, M.A., RPA
Supervisory Archaeologist and Tribal Liaison
USACE St. Louis District
MCX-CMAC
CEMVS-EC-Z
1222 Spruce Street
St. Louis, MO 63103
Office: 314-331-8151
Work Cell: 314-356-0483
Christopher.J.Koenig@usace.army.mil

From: Douglas Taylor [<mailto:Douglas.Taylor@NHBPI.COM>]
Sent: Tuesday, December 10, 2019 9:55 AM
To: Koenig, Christopher J Jr CIV (US) <Christopher.J.Koenig@usace.army.mil>
Subject: [Non-DoD Source] Elsberry Lake, PL84-99 Levee Repairs, Pike & Lincoln Counties, Mo

Mr. Koenig,

Ref: Elsberry Lake, PL84-99 Levee Repairs, Pike & Lincoln Counties, Mo

Thank you for including the Nottawaseppi Huron Band of the Potawatomi in your consultation process. From the description of your proposed project, it does not appear as if any cultural or religious concerns of the Tribe's will be affected. We therefore have no objection to the project.

Very Respectfully
Douglas R. Taylor

Douglas R. Taylor | Tribal Historic Preservation Officer (THPO)
Pine Creek Indian Reservation
1301 T Drive S, Fulton, Mi 49052
o: 269-704-8347 | c: 269-419-9434 | f: 269.729.5920
Douglas.Taylor@nhbpi.com | Blockedwww.nhbpi.com



NOTTAWASEPPI HURON BAND OF THE POTAWATOMI

A FEDERALLY RECOGNIZED TRIBAL GOVERNMENT

Please consider the environment before printing this email. This message has been prepared on resources owned by the Nottawaseppi Huron Band of the Potawatomi located in the State of Michigan. It is subject to the Electronic Communications Policy of Nottawaseppi Huron Band of the Potawatomi. This communication may contain confidential (including "protected health information" as defined by HIPAA) or legally privileged information intended for the sole use of the designated recipient(s). If you are not the intended recipient, please notify the sender immediately by reply e-mail and delete all copies of this communication and attachments without reading or saving them. If you are not the named addressee you are notified that disclosing, disseminating, copying, distributing or taking any action in reliance on the contents of this information is strictly prohibited.

Appendix 10

Trautt, Meredith M CIV USARMY CEMVS (USA)

From: Koenig, Christopher J Jr CIV (US)
Sent: Wednesday, November 20, 2019 12:22 PM
To: Ben Crawford
Cc: Trautt, Meredith M CIV USARMY CEMVS (USA)
Subject: RE: Elsberry Lake PL84-99 Levee Repairs & the Winnebago Tribe

Hello Eban,

Thank you for the email and good to hear from you - I look forward to working with you moving forward. We will update our tribal database to include your information, the Tribe's areas of interest, and concern with ground disturbing activities. Meredith is also a tribal liaison so you may be hearing from her from time to time as well.

Thanks again Eban and talk soon,

Christopher Koenig, M.A., RPA
Supervisory Archaeologist and Tribal Liaison USACE St. Louis District MCX-CMAC CEMVS-EC-Z
1222 Spruce Street
St. Louis, MO 63103
Office: 314-331-8151
Work Cell: 314-356-0483
Christopher.J.Koenig@usace.army.mil

-----Original Message-----

From: Ben Crawford [mailto:ben.crawford@winnebagotribe.com]
Sent: Wednesday, November 20, 2019 10:16 AM
To: Koenig, Christopher J Jr CIV (US) <Christopher.J.Koenig@usace.army.mil>
Subject: [Non-DoD Source] Elsberry Lake PL84-99 Levee Repairs & the Winnebago Tribe

Dear Mr. Koenig,

My name is Eben Crawford. I work for the Winnebago Tribe of Nebraska as the Tribe's Curator and NAGPRA Assistant. Unfortunately Randy Teboe is no longer serving as the Tribe's THPO and I will be helping to handle his consulting duties temporary until the Tribe finds a suitable replacement.

In the meantime, please address all future communication to thpo@winnebagotribe.com <mailto:thpo@winnebagotribe.com>. I recently received a letter concerning the Elsberry Lake PL84-99 Levee repairs. I have no concerns that sites culturally relevant to the Tribe will be effected. I also wanted to communicate to you that for now I am only concerned with construction projects and ground disturbing activities within the following counties.

Minnesota: Blue Earth, Waseca, Winona, Houston, Olmsted, Fillmore

Wisconsin: Clark, Jackson, La Crosse, Monroe, Juneau, Sauk, Richland, Crawford, Vernon, Grant, Iowa, LaFayette, Green, Rock, Dane, Columbia, Dodge, Jefferson, Fond Du Lac, Winnebago, Green Lake, Marquette, Wood

Iowa: Woodbury, Waukon, Decorah, Clayton, Fayette, Black Hawk, Bremer, Winneshiek, Howard, Chickasaw, Grundy, Hardin, Hamilton, Webster, Humbolt, Wright, Franklin, Kossuth, Winnebago, Worth, Mitchell, Cerro Gordo, Floyd, Butler

Nebraska: Thurston

South Dakota: Buffalo, Hyde, Hughes

Illinois: Winnebago, Boone, Stephenson, Jo Daviess, Carroll, Ogle, Whiteside, Lee, Henry, Bureau

If human remains or artifacts are inadvertently discovered during the course of construction or ground disturbing activities outside of these counties please contact us.

Thank you for your time,

Eben Crawford

Eben Crawford

Museum Curator & NAGPRA Assistant, Winnebago Tribe of Nebraska

402-922-0897

Appendix 11



Osage Nation Historic Preservation Office

ᏊᏊᏊᏊ ᏊᏊᏊ ᏊᏊᏊᏊ

Date: January 13, 2020

File: 1920-2142MO-11

RE: USACE, St. Louis District, PL 84-99, Levee Flood Damage Repairs, Kings Lake Drainage District, Lincoln County, Missouri

St. Louis District, USACE
Christopher Koenig
1222 Spruce Street
St. Louis, MO 63103-2833

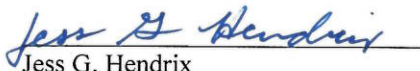
Dear Mr. Koenig,

The Osage Nation Historic Preservation Office has evaluated your submission and concurs that the proposed USACE, St. Louis District, PL 84-99, Levee Flood Damage Repairs, Kings Lake Drainage District, Lincoln County, Missouri most likely will not adversely affect any sacred properties and/or properties of cultural significance to the Osage Nation. **The Osage Nation has no further concern with this project.**

In accordance with the National Historic Preservation Act, (NHPA) [54 U.S.C. § 300101 et seq.] 1966, undertakings subject to the review process are referred to in 54 U.S.C. § 302706 (a), which clarifies that historic properties may have religious and cultural significance to Indian tribes. Additionally, Section 106 of NHPA requires Federal agencies to consider the effects of their actions on historic properties (36 CFR Part 800) as does the National Environmental Policy Act (43 U.S.C. 4321 and 4331-35 and 40 CFR 1501.7(a) of 1969). **The Osage Nation concurs that the St. Louis District, USACE has fulfilled NHPA compliance by consulting with the Osage Nation Historic Preservation Office in regard to the proposed USACE, St. Louis District, PL 84-99, Levee Flood Damage Repairs, Kings Lake Drainage District, Lincoln County, Missouri.**

The Osage Nation has vital interests in protecting its historic and ancestral cultural resources. We do not anticipate that this project will adversely impact any cultural resources or human remains protected under the NHPA, NEPA, the Native American Graves Protection and Repatriation Act, or Osage law. **If, however, artifacts or human remains are discovered during project-related activities, we ask that activities cease immediately and the Osage Nation Historic Preservation Office be contacted.**

Should you have any questions or need any additional information please feel free to contact me at the number listed below. Thank you for consulting with the Osage Nation on this matter.


Jess G. Hendrix
Archaeologist

Appendix 12

From: [Koenig, Christopher J Jr CIV \(US\)](#)
To: [Trautt, Meredith M CIV USARMY CEMVS \(USA\)](#); [Smith, Mark A CIV USARMY CEMVS \(USA\)](#)
Subject: FW: PL84-99 Levee Flood Damage Repairs - Kings Lake Drainage District, Lincoln County
Date: Tuesday, December 10, 2019 10:03:40 AM
Attachments: [image001.png](#)

FYSA and files.

Christopher Koenig, M.A., RPA
Supervisory Archaeologist and Tribal Liaison
USACE St. Louis District
MCX-CMAC
CEMVS-EC-Z
1222 Spruce Street
St. Louis, MO 63103
Office: 314-331-8151
Work Cell: 314-356-0483
Christopher.J.Koenig@usace.army.mil

From: Douglas Taylor [<mailto:Douglas.Taylor@NHBPI.COM>]
Sent: Tuesday, December 10, 2019 10:02 AM
To: Koenig, Christopher J Jr CIV (US) <Christopher.J.Koenig@usace.army.mil>
Subject: [Non-DoD Source] PL84-99 Levee Flood Damage Repairs - Kings Lake Drainage District, Lincoln County

Mr. Koenig,

Ref: PL84-99 Levee Flood Damage Repairs - Kings Lake Drainage District, Lincoln County

Thank you for including the Nottawaseppi Huron Band of the Potawatomi in your consultation process. From the description of your proposed project, it does not appear as if any cultural or religious concerns of the Tribe's will be affected. We therefore have no objection to the project.

Very Respectfully
Douglas R. Taylor

Douglas R. Taylor | Tribal Historic Preservation Officer (THPO)
Pine Creek Indian Reservation
1301 T Drive S, Fulton, MI 49052
o: 269-704-8347 | c: 269-419-9434 | f: 269.729.5920
Douglas.Taylor@nhbpi.com | [Blockedwww.nhbpi.com](#)



NOTTAWASEPPI HURON BAND OF THE POTAWATOMI

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Appendix 13

QUAPAW NATION



P.O. Box 765
Quapaw, OK 74363-0765

(918) 542-1853
FAX (918) 542-4694

November 22, 2019

U.S. Army Corps of Engineers, St. Louis District
1222 Spruce Street
St. Louis, Missouri 63103-2833

Re: PL84-99 Levee Flood Damage Repair, Kings Lake Drainage, Lincoln County, Missouri

To whom it may concern,

This project is outside of the current area of interest for the Quapaw Nation; therefore, the Quapaw Nation does not desire to comment on this project at this time. Thank you for your efforts to consult with us on this matter.

Sincerely,



Everett Bandy, THPO
Quapaw Nation
P.O. Box 765
Quapaw, OK 74363
(p) 918-238-3100



Appendix 14

United Keetoowah Band Of Cherokee Indians in Oklahoma Office of Historic Preservation

P.O. Box 746 • Tahlequah, OK 74465
18263 W Keetoowah Circle • Tahlequah, OK 74464
Phone: (918) 871-2800 • Fax: (918) 414-4000
www.ukb-nsn.gov



December 4, 2019

RE: PL84-99 Levee Flood Damage Repairs, King Lake District

To Whom It May Concern:

Thank you for consulting with the United Keetoowah Band of Cherokee Indians in Oklahoma (UKB). This response is regarding the request from your office for a review of the project listed above. We have reviewed the information provided in your last letter on November 6, 2019. We find after review of the information we concur with the finding of no adverse effects.

We remain interested in further communication regarding this project due to the location. The UKB people have a documented historical presence in Lincoln County, MO.

It is further advised that if the area of potential effect changes or in the event of an inadvertent discovery of human remains or other cultural items that we receive notification within 48 hours. As well, any inadvertent discovery of human remains, or other cultural resources should remain in situ until consultation with interested tribes and agencies is undertaken.

Please note that these comments are based on information available to us at the time of the project review. We reserve the right to revise our comments as information becomes available. If you have any questions or concerns, please contact our Section 106 Projects Officer, Charlotte Wolfe by phone or email.

Best Regards,

Charlotte Wolfe

Charlotte Wolfe



Section 106 Projects/Environmental Specialist
United Keetoowah Band of Cherokee
18263 W. Keetoowah Circle
Tahlequah, OK 74464
918-871-2753 cwolfe@ukb-nsn.gov