

**DRAFT ENVIRONMENTAL ASSESSMENT  
WITH  
FINDING OF NO SIGNIFICANT IMPACT**

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**LEVEE REPAIR (PL 84-99)  
ELM POINT LEVEE DISTRICT  
MISSISSIPPI RIVER, RIVER MILE 226 to 228  
ST CHARLES COUNTY, MISSOURI**

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**February 2020**



**US Army Corps  
of Engineers**  
St. Louis District

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# 1. PURPOSE OF AND NEED FOR ACTION

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## 1.1 INTRODUCTION

The U.S. Army Corps of Engineers – St. Louis District (USACE), in cooperation with the Elm Point Levee Association, is proposing to repair the Elm Point Levee System. The Elm Point Levee System is a non-federally constructed, non-federally maintained levee located in St. Charles County, Missouri, and is located approximately 3 miles south of the Mississippi River at approximately miles 226 to 228 (Figure 1). The system is maintained by the nonfederal Sponsor, Elm Point Levee Association. The Elm Point Levee System was completed in 2002 and consists of 4.3 miles of earthen embankment levee constructed with an 8-foot to 10 foot crown width and 1 on 3 side slopes. The levee system provides a 25-year level of protection with 2 feet of freeboard. The Elm Point Levee System is active in USACE Rehabilitation and Inspection Program (RIP), which make them eligible for Flood Control and Coastal Emergency funding under Public Law (PL) 84-99 to make repairs to levees damaged during flood events.

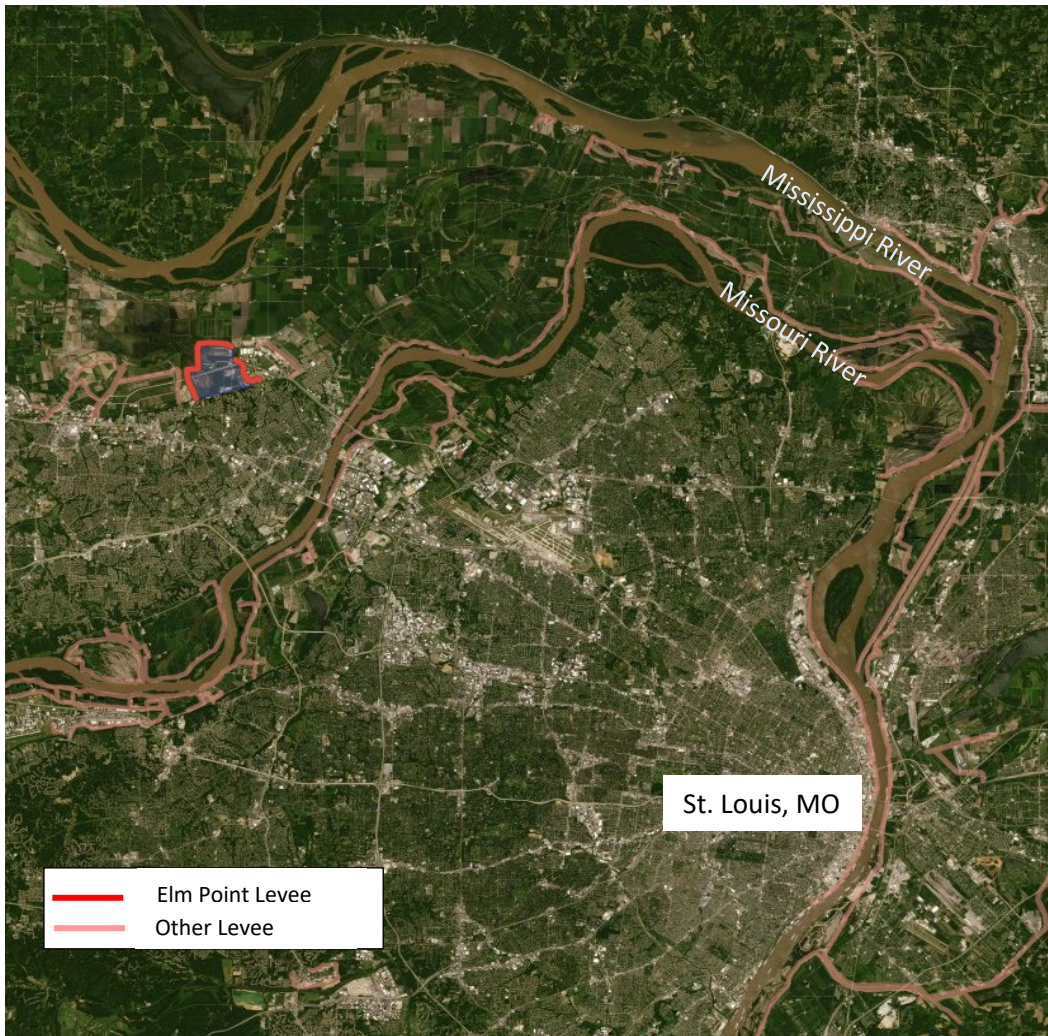


Figure 1. The Elm Point Levee System (red line) is within the Mississippi River floodplain.



## 1.2 NEED FOR ACTION

Exceptional snowfall accumulation in the northern parts of the Mississippi, Missouri, and Illinois River watersheds, immediately followed by elevated levels of rainfall led to historic flooding. For the period of October 2018–January 2019 there was average to slightly above average precipitation in the St. Louis District region; however, the Mississippi and Missouri watersheds to the north and west experienced above average precipitation, mostly in the form of snow. A large spring thaw, immediately followed by rounds of heavy rainfall, set the stage for historic flooding. Multiple events brought significant precipitation across the region from March through June. Most area rivers quickly went up into flood stage by mid-March including the Mississippi River. The end of May marked the sixth consecutive month with above average precipitation. Spring 2019 was within the top four wettest spring seasons in recorded history, with May 2019 ranking as the third wettest May. This weather pattern resulted the longest continuous flood stage recorded at the St. Louis gage at 126 days.

The Spring 2019 high water event primarily affected the Mississippi, Missouri, and Illinois Rivers and tributaries within the St. Louis District. All told, 24 levees overtopped and 13 of those levees breached during this event. All five locks in the District on the Mississippi River were closed for periods of time during this flood event. Multiple federal and state disaster proclamations were issued for flood affected areas in the aftermath of this event.

On 23 August 2019, USACE levee specialists met with representatives from the Elm Point Levee District to evaluate and classify the flood damage (Table 1) from the 2019 High Water Event on the levee system.

Table 1. Classifications used by USACE levee specialist to classify damages sustained to levees during the 2019 flood.

<b>Damage Classification</b>	<b>Description</b>	<b>Potential Repair Method</b>
<b>Breach</b>	Rupture, break, or gap in the levee system	Stripping, preparing, placing embankment, and compacting in lifts
<b>Slide</b>	Movement of soil down the levee slope	Excavation of damaged area, and replacement of embankment in compacted lifts
<b>Erosion Type I</b>	Wave wash / minor erosion less than 12 inches deep	Stripping, disking, filling, and compacting
<b>Erosion Type II</b>	Moderate erosion between 12 and 18 inches deep	Stripping, preparing, placing embankment, and compacting
<b>Erosion Type III</b>	Major erosion greater than 18 inches deep	Stripping, preparing, placing embankment, and compacting in layers
<b>Scour</b>	Channel or pool created by water flowing forcefully over something (e.g., levee)	Often accompanies a levee breach. Repair method varies by location and severity.
<b>Turf Damage</b>	The upper layer of ground made up of grass and plant roots has been damaged due to long-standing water inundation.	Disking and seeding

<b>Rutting</b>	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 depressions using embankment material from designated borrow area(s) or material from the adjacent undamaged levee section.
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There were five Damage Areas documented during the levee evaluation (Figure 3). Damages documented at one or more of the Damage Areas included Erosion Type 1, slides, and breaches. Specific damages at each Damage Area are as follows:

- **Damage Area 1.** Erosion Type 1 located on the landside of the levee. The erosion is less than 12 inches in depth, 130 feet in length, and has an average width of 10 feet, on the upper 1/3 of the levee slope.
- **Damage Area 2.** Erosion Type 1 located on the leveed side and unprotected side of the levee. The erosion is less than 12 inches in depth, 190 feet in length on the leveed side and the unprotected side. The erosion has an average width of 18 feet on the top 1/3 and middle 1/3 of the leveed slope and 12 feet on the top 1/3 of the unprotected slope.
- **Damage Area 3 and 4.** Embankment Slide(s) located on the leveed side and unprotected side of the levee (Figure 2). The slide on the leveed side is 370 feet in length, 7 feet wide into the crown section. The slides on the unprotected side starting with the north most slide are 80 feet in length and 85 feet in length, and 4 feet wide into the crown section.
- **Damage Area 5.** Levee Breach with a length of 100 feet. The breach did not scour below the existing ground surface elevation.
- **Damage Area 6.** Levee Breach with a length of 400 feet. The breach has a leveed side scour area that extends 150 feet from the levee toe. The scour was approximately 5 feet lower than surrounding ground surface elevation.



Figure 2. Embankment slide along the unprotected side of the Elm Point levee.



The damages to the levee system result in the levee system not providing an adequate level of flood risk reduction to the 700+ residents and employees within the leveed area. The levee system, when performing to the designed level of protection, reduces flood risk to 1,365-acres of land, which includes productive agricultural bottomland, the St. Louis Youth Soccer Association (SLYSA) Soccer Complex, which serves over 12,000 youth annually, a mobile home park, chemical manufacturers, an electrical substation, rail line, and several oil/gas pipelines. Deficiencies in the Elm Point Levee System would continue to put people and infrastructure at risk of more severe flooding and subsequent damages during future flood events.

### **1.3 PROJECT AUTHORIZATION AND OBJECTIVE**

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 PL 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 PL 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 (PL 93-205 and Appendix B of ER 1105-2-50) and archeological and historic properties (Chapter 3 of ER 1105-2-50).

Since the Elm Point Levee District is active in the USACE Rehabilitation and Inspection Program, they are eligible for Flood Control and Coastal Emergency funding authorized by PL 84-99. Based on the authority outlined in PL 84-99, the objective of the proposed actions are to restore the Elm Point Levee System to its' pre-disaster conditions.

The St. Louis District of the U.S. Army Corps of Engineers has prepared this Environmental Assessment (EA) to evaluate the potential environmental impacts of the proposed levee repairs to the Elm Point Levee System, and to serve as a record of coordination for the rehabilitation actions.

This EA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 and the Council on Environmental Quality's Regulations (40 Code of Federal Regulations §1500-1508, as reflected in the USACE Engineering Regulation 200-2-2. Impacts on relevant environmental resources are discussed in this EA and summarized in the unsigned Finding of No Significant Impact (FONSI).

## **2. PROJECT ALTERNATIVES CONSIDERED**

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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 Elm Point Levee District. The National Environmental Policy Act (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 Water Resources Development Act (WRDA) of 1974 (PL 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 Elm Point levee. It is possible that the Levee District would make repairs without federal assistance. Environmental impacts of repairs made by the Levee District would be similar to the tentatively selected alternative, except that the repair duration may differ and the environmental protections may be reduced. However, due to the uncertainty of the Levee District making all necessary repairs, **the environmental impacts of allowing the damage to remain unrepaired are regarded as the No Action Alternative.**



Figure 4. A severe rain event and elevated Mississippi River levels led to flooding along Sandfort Creek resulting in the continued flooding within the levee district through Breach 2. Pictures were taken on 29 October 2019.

The total levee breach in Damage Area 6 reduces flood risk for the entire levee district. The Damage Area 6 breach is located along Sandfort Creek, which is a perennial stream that ultimately feeds into the Mississippi River. During high water events on the Mississippi River, flood waters can back-up into Sandfort Creek and cause flooding into the Elm Point Levee District through this breach. In addition, during localized intense rain events Sandfort Creek receives surface water runoff from adjacent communities that can cause flooding within the Elm Point Levee District at times when the Mississippi River levels are below flood stage. In order to prevent routine flooding within the leveed area, the Elm Point Levee District had a cofferdam installed at the Damage Area 6 levee breach. Taking no additional action to repair levee breaches would result in more frequent flooding within the levee district, resulting in reoccurring economic losses. However, the increased flood storage within the reconnected floodplain would benefit fish and wildlife. During the 29 October 2019 site visit, several species of waterfowl and wading birds were observed using the flooded agricultural fields.

## 2.2 ALTERNATIVE 2 – NON-STRUCTURAL MEASURES

Section 73 of the WRDA of 1974 (P.L. 93-251) require 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 could be accomplished by changing the land use within the floodplains through relocation of residential and commercial structures and regulation of floodplain development, or by mitigating existing flood hazard through flood proofing and flood warning and preparedness systems. A flood warning system

would do little to reduce structural and agricultural damages. However, flood proofing and relocation out of a flood prone area are effective measures at reducing flood risk. However, non-structural flood risk reduction measures are not desirable to the Elm Point Levee District because they generally have large costs, and non-structural flood risk reduction measures would not protect agriculturally productive lands or other features that could not be flood proofed (e.g., recreation fields, industrial holding ponds, etc.).

**Under PL 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 PL 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 Elm Point Levee District declined to request the pursuit of a non-structural alternative because present owners desire to continue agricultural use; therefore, this alternative was eliminated from further consideration in this EA.

### **2.3 ALTERNATIVE 3 – STRUCTURAL REPAIR OF LEVEE WITH FEDERAL ASSISTANCE (TENTATIVELY SELECTED PLAN)**

Under this alternative, the federal government would reconstruct the levee to pre-flood level of protection. 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. Structural repairs at each Damage Area would reconstruct the levee to pre-flood grade. Specifically, the following repairs would be made:



- Damage Areas 1 & 2.** Erosion Type 1 would be repaired by filling in the eroded areas using embankment material from the adjacent undamaged levee section. The material would be placed in the eroded areas using bulldozers or other earth moving equipment. The placed material would be compacted utilizing crawler-type tractors, sheepsfoot rollers, power tampers, or other approved compaction equipment. After the embankment material is compacted the disturbed areas would be seeded by spreading seed, fertilizer, and mulch on the damaged area. The areas would be watered as needed to establish turf.
- Damage Area 3 & 4.** Embankment Slides would be repaired by excavating the damage section of levee to the failure plane utilizing scrapers, bulldozers, excavators, or other excavation equipment and stockpiling the excavated material in designated areas. It is recommended to utilize lime treatment to obtain the correct quality of soil for repairs. The excavated material would be treated with hydrated lime by pulverizing lime into the excavated embankment material using a pulverizer and adding water with a water truck equipped with sprinkling equipment. The lime treated embankment material or non-treated material from slide repair not requiring lime treatment would be placed back in the levee section using scrapers, bulldozers, excavators, or other earthwork equipment. As the material is placed back in the levee section it would be compacted with sheepsfoot rollers or other approved compaction equipment. After the embankment material is placed and compacted, the disturbed areas would be seeded by spreading seed, fertilizer, and mulch on the damaged areas. The seeded areas would be watered as needed to establish turf. In order to access these damage areas from Borrow Area 1, a temporary ditch crossing and tree clearing would be needed. Tree clearing would take place between 1 November and 31 March.
- Damage Areas 5 & 6.** Levee Breaches would be restored with impervious (i.e., water repellent) material. Impervious material would be excavated from borrow areas (see description below) using excavators, scrapers or other excavation equipment and hauled to the breach areas using trucks or excavation equipment on designated haul roads. The placed material would be compacted utilizing sheepsfoot rollers or other approved compaction equipment. After the embankment material is compacted the disturbed areas would be seeded by spreading seed, fertilizer, and mulch on the disturbed area. The areas would be watered as needed to establish turf. The Damage Area 6 breach repair would consist of a new levee segment. Since the levee district installed a cofferdam, the permanent levee segment would be set-back from the existing alignment by approximately 80 feet (Figure 4). The cofferdam installed by the Levee District would not be removed after the permanent levee segment was completed.

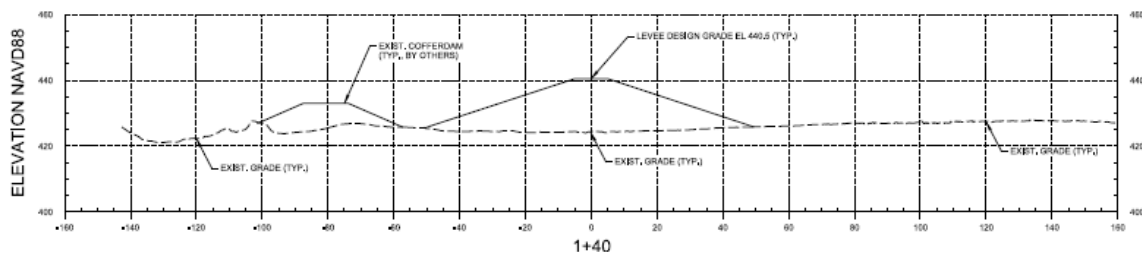


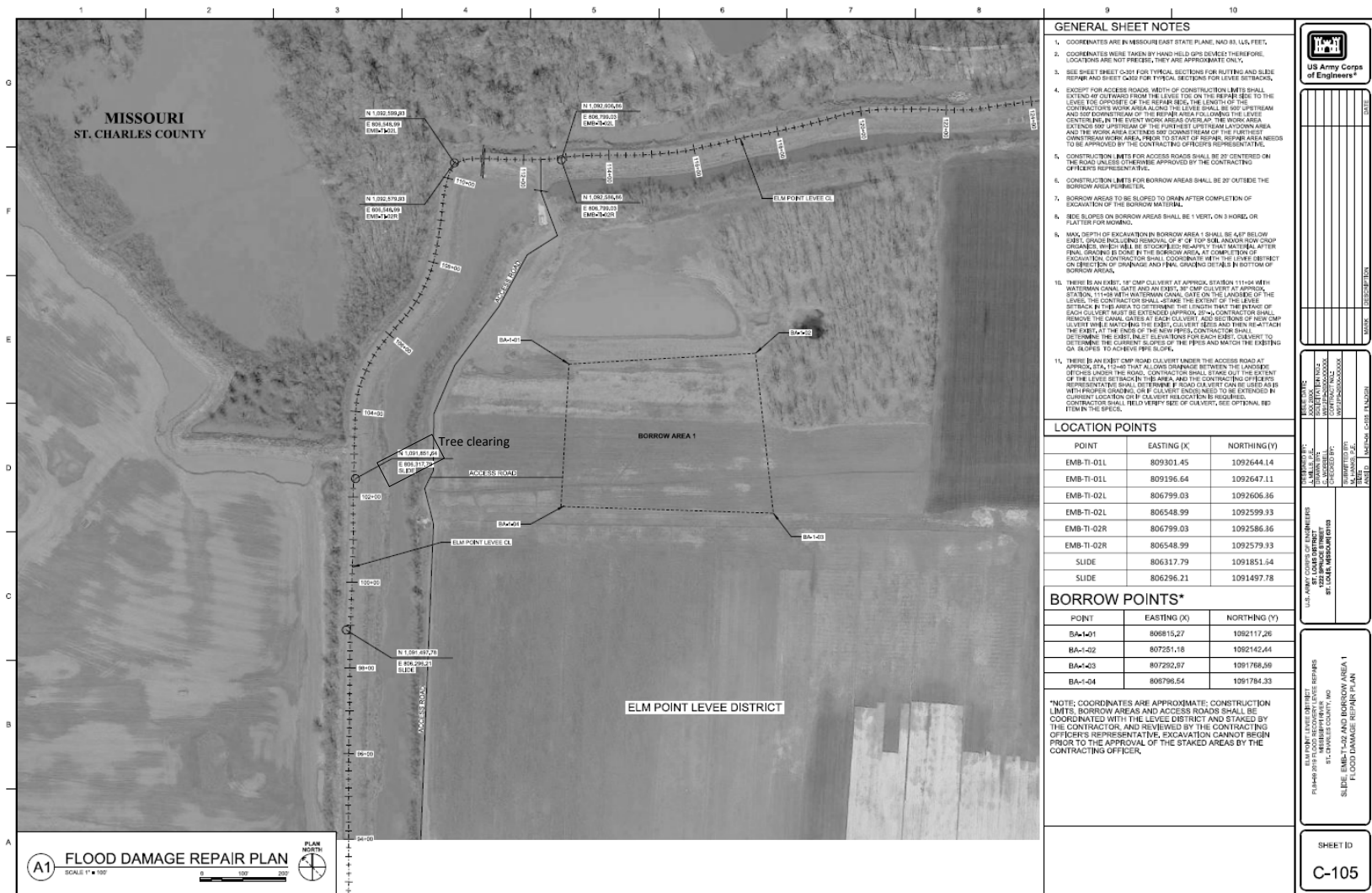
Figure 5. The Elm Point Levee Association had a temporary cofferdam placed within the breach at Damage Area 6. The permanent levee repair would involve the construction of a new levee segment set-back from the existing alignment by approximately 80 feet.

In order to complete the proposed repairs listed above, approximately 15,000 cubic yards (CY) of soil (i.e., borrow material) would be needed. In most situations, using a local source for borrow material would be the most economic rather than purchasing material and hauling from a quarry. The Elm Point Levee Association identified five potential borrow areas (Figures 6 – 9) that contained suitable soils to make the repairs, and had willing landowners to grant access to borrow material. All five borrow areas were identified and coordinated during the 2015 flood repairs. All borrow areas have some wetland characteristics; however they do not exhibit all of the criteria needed to be regulated under Section 404 of the Clean Water Act. In addition, all borrow areas were surveyed under the National Historic Preservation Act, as amended, and concurrence for the “No Historic Properties Affected” determination was received on 20 November 2019. Borrow area 4 was identified as the main source of borrow and would be used as the primary borrow source until all suitable borrow material is exhausted.

In order to avoid or minimize impacts to physical, biological, and societal resources, contractors shall adhere to all environmental protection requirements listed in the Construction Plans and Specifications. Examples include, but are not limited to:

- 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; and an Environmental Monitoring Plan.
- No fill shall be excavated or permanently placed except where required for authorized repairs.
- No removal of existing vegetation outside of the construction area. Tree clearing would only occur within the designated area and would only be permitted 1 November – 31 March of any given year.
- 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 egg deposits from plant pests are not present.
- Proper disposal of solid waste and debris.
- Proper storage and use of fuels and lubricants.
- Minimize interference with, disturbance to, and damage of, fish and wildlife.
- Protection of water resources to avoid pollution of surface and ground waters.
- Construct or install temporary and permanent erosion and sedimentation control features.
- Maintain all excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, disposal sites, and all other work areas free from airborne dust.
- Hydrocarbons and carbon monoxide emissions from equipment shall be controlled to Federal and State allowable limits at all times.

Elm Point Levee District, St. Charles County, Missouri, PL 84-99 2019 Damage Repair / UNCLASSIFIED



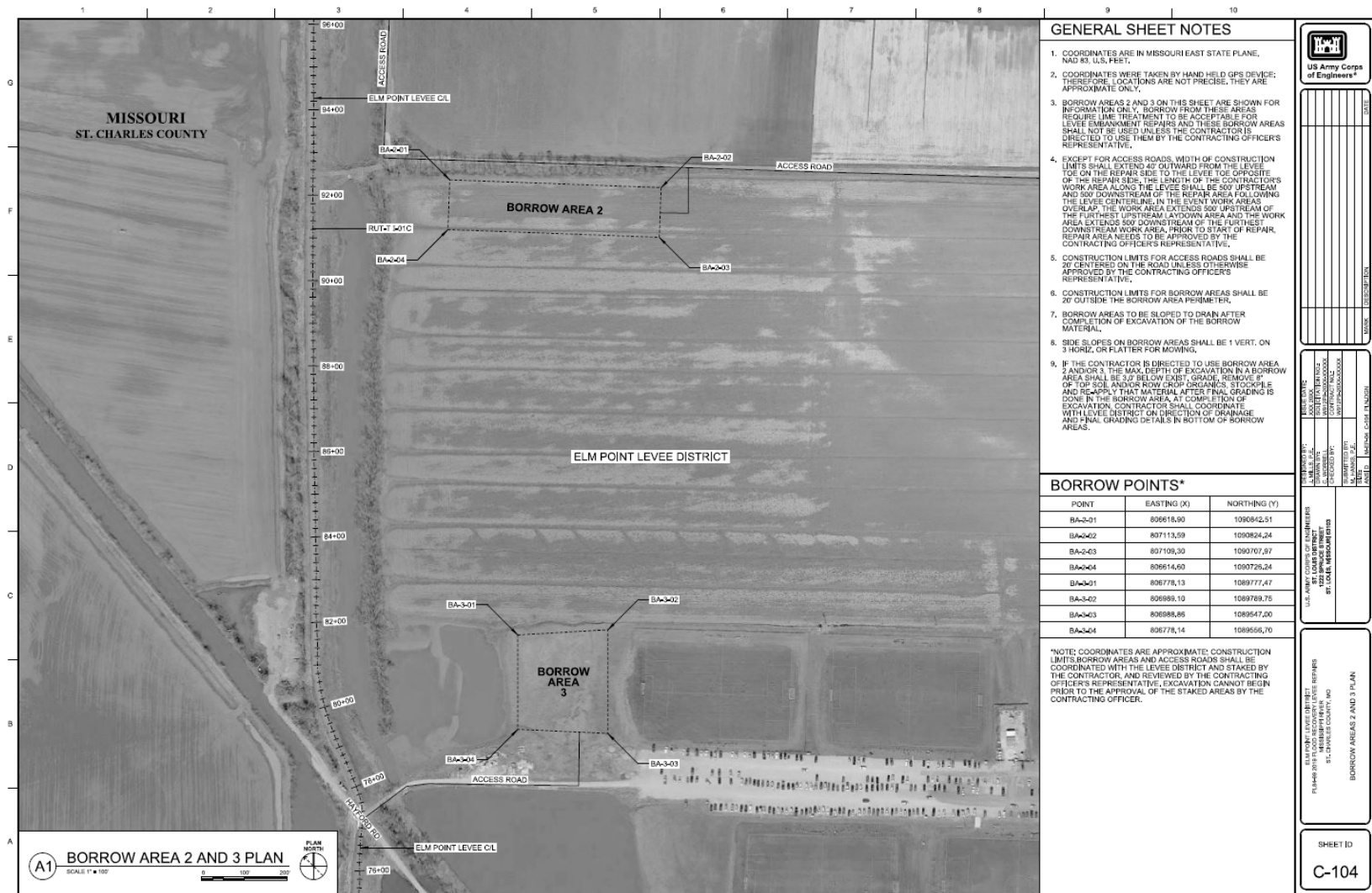


Figure 7. The Elm Point Levee Association identified five potential borrow areas that contained suitable soils to make the repairs, and had willing landowners to grant access to borrow material. Borrow Areas 2 and 3 are in portions of an agricultural field. Access roads to these Borrow Areas follow existing roads.

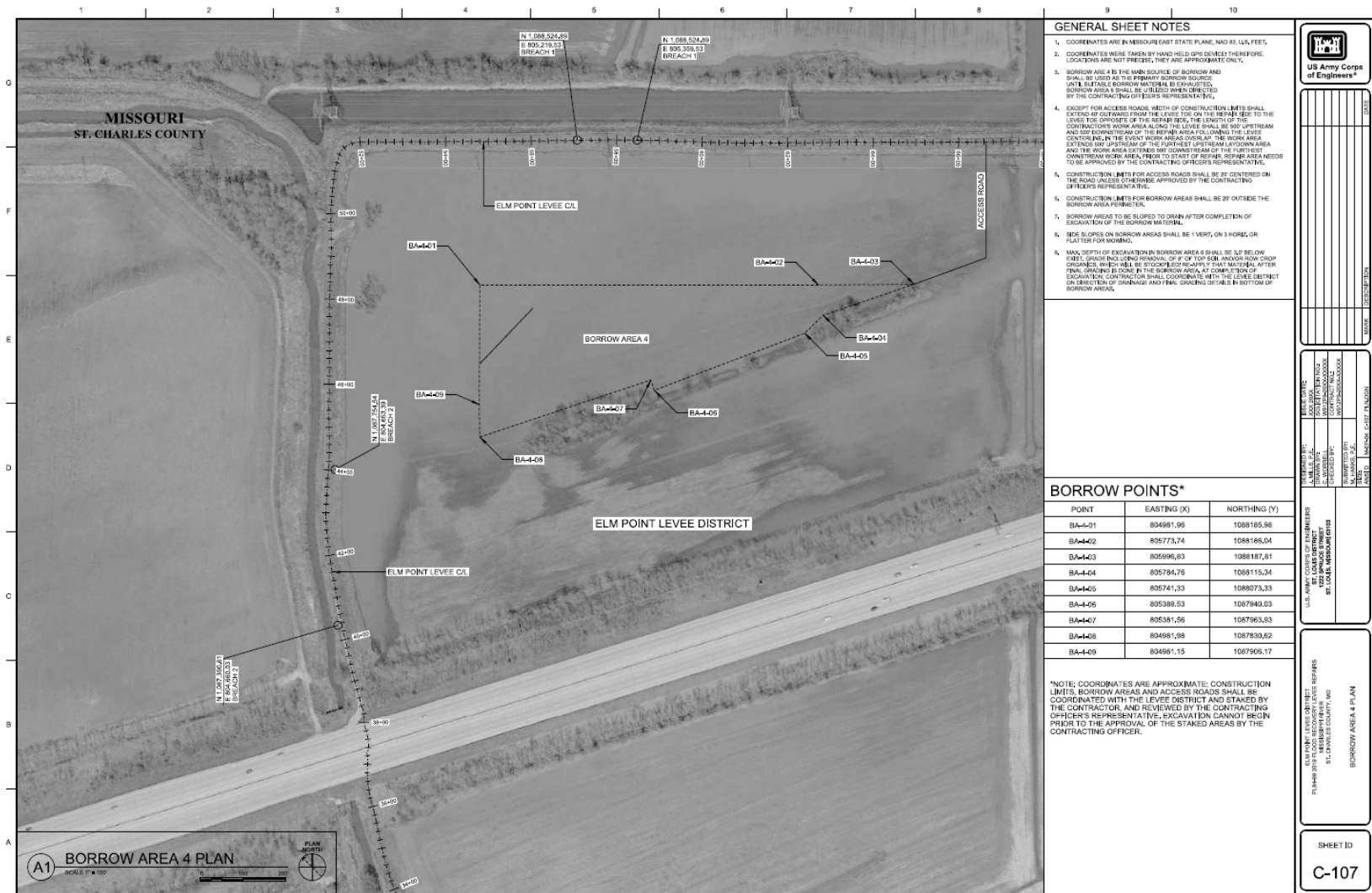


Figure 8. The Elm Point Levee Association identified five potential borrow areas that contained suitable soils to make the repairs, and had willing landowners to grant access to borrow material. Borrow Area 4 and associated access roads are in an agricultural field. This Borrow Area is the primary borrow source.

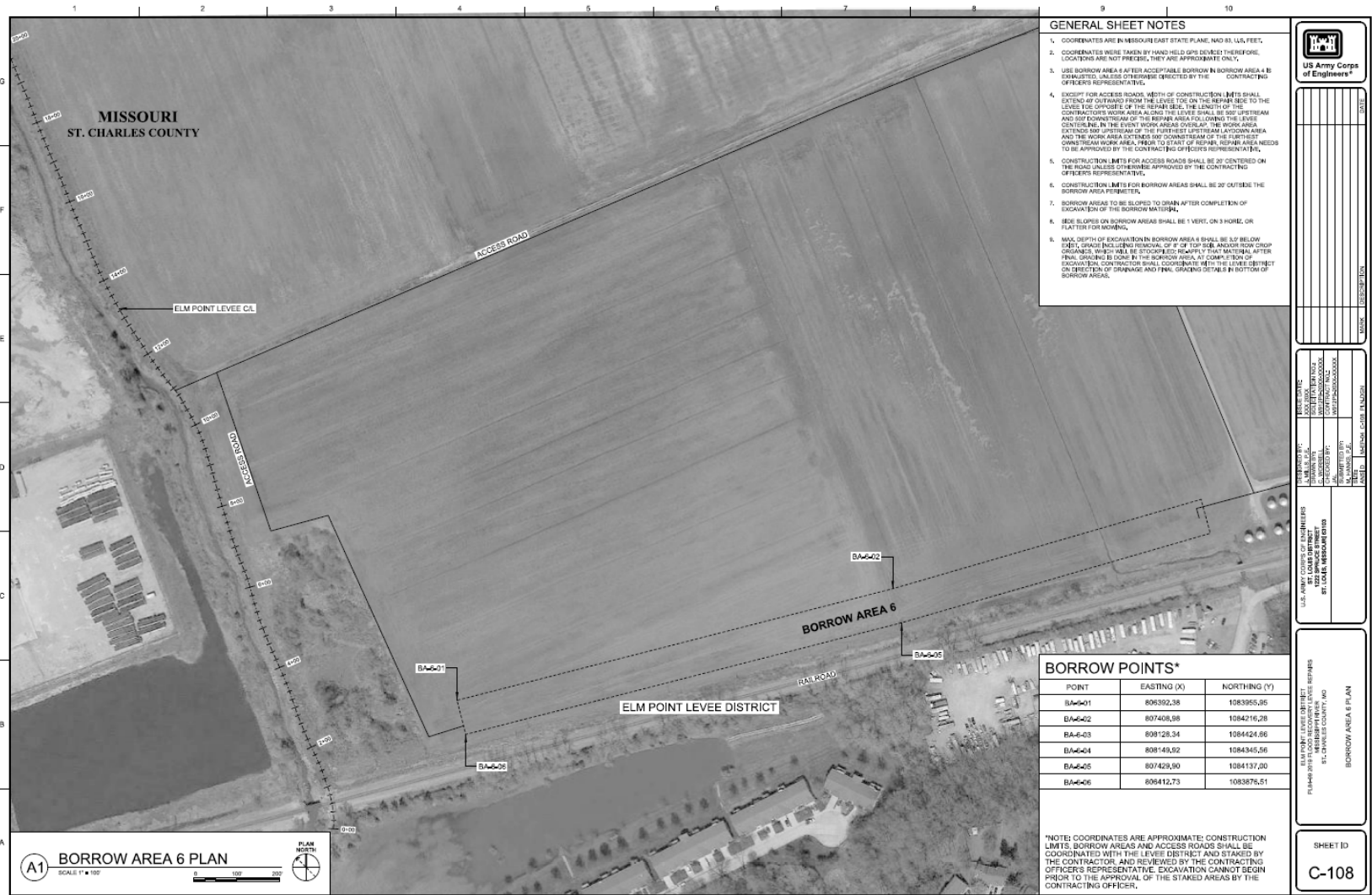


Figure 9. The Elm Point Levee Association identified five potential borrow areas that contained suitable soils to make the repairs, and had willing landowners to grant access to borrow material. Borrow Area 6 and associated access roads are in an agricultural field. Borrow Area 5 is not being considered as a borrow source.



### 3. AFFECTED ENVIRONMENT & ENVIRONMENTAL IMPACTS

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This chapter summarizes the biological, physical, and social environments of the affected project area relative to the alternatives under consideration. Relevant resources are addressed in terms of their present condition, their projected condition under the No Action alternative, and the expected effects of the Tentatively Selected Plan.

#### 3.1 PHYSICAL RESOURCES

The Elm Point Levee District is located in St. Charles County within the floodplain of the Mississippi River. The levee system is bordered by Sandfort Creek to the west and Cole Creek to the north and the east. Both creeks join Dardenne Creek approximately 0.5 miles from the levee. Dardenne Creek travels approximately 2.0 miles before dumping into the Mississippi River. Dardenne Creek is listed as an impaired water due to low dissolved oxygen levels and high levels of *Escherichia coli* (*E. coli*) (MDNR 2018). Neither Sandfort Creek nor Cole Creek are listed as impaired waters.

According to the National Wetland Inventory, there are some isolated freshwater ponds scattered throughout and one larger forested wetland in the center of the Elm Point Levee District. There are also several wetland complexes on the Mississippi River side of the levee system.

Land use within the levee district is primarily agricultural production land. Over 50% of the 1,343 acres of land within the leveed is used to grow a mixture of corn, soybean, and wheat. In addition to traditional commodity crops, the leveed area also contains a sod farm, a small high-density residential area, and about 200 acres of natural and recreation lands, which includes a soccer complex. Even though the leveed area could be considered rural, it is surrounded by large residential and commercial developments as well as busy roadways. The ambient noise in the study area is a product of the surrounding traffic, agricultural production, and recreation at the soccer complex.

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: carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter (PM<sub>10</sub> = less than 10 microns; and PM<sub>2.5</sub> = less than 2.5 microns in diameter), and sulfur dioxide. St. Charles County, Missouri, is currently a non-attainment area for 8-hour ozone (USEPA 2019). The area is in attainment for carbon monoxide, lead, nitrogen dioxide, particulate matter, and sulfur dioxide (USEPA 2019).

*Alternative 1 – No Action (Future without Project)* – Because of the increased risk of levee failure and landside flooding under the current conditions, future high water events could have adverse impacts including increased scour and sedimentation as well as temporary or permanent changes in land use. Debris, deposition of unsuitable materials, and contaminated liquids or solids could enter farm fields creating less than desirable agricultural conditions and hinder future farming productivity. Residential and commercial properties, as well as infrastructure, roadways, and utilities could become inundated. However, without the levee, the nearby waterways could gain lateral connectivity with the floodplain, possibly benefitting fish and wildlife. Air quality and noise pollution are not anticipated to be altered by this alternative.

*Alternative 3 – Repair of Levees with Federal Assistance* – Construction activities for the Damage Area 6 levee breach would occur adjacent to Sandfort Creek below the ordinary high water mark. The levee repair could cause a short-term increase in turbidity in the adjacent waterways near the construction site if flooding or heavy rains occurred during construction. The Contractor shall provide environmental protective measures and procedures to limit aquatic habitat disruption and would correct environmental damage that occurs during construction. The expected slight increases in turbidity would cease after construction. All disturbed areas would be reseeded following construction to reduce the potential for erosion. No wetlands would be impacted as part of this Alternative.

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 this Alternative. GP 41 is currently valid with an expiration date of April 22, 2023 unless revoked or specifically extended (See attachment). 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 permits are on file in the District Office.

Emissions from construction equipment may minimally increase ozone, carbon monoxide, suspended airborne particulates, and carbon dioxide levels in the vicinity of the construction site. Due to the limited levee repairs required, the expected increases would be negligible and would cease after construction. EPA has set *de minimis* emission levels beneath which conformity to the state implementation plan (SIP) does not need to be demonstrated. Due to the relatively small scale of the project, emissions of particulate matter are clearly *de minimis*; therefore an emissions analysis was not performed. 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 dust and emissions, limit habitat disruption, and correct environmental damage that occurs during construction. The expected increases would be negligible and would cease after construction.

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 (Figure 10). 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 normal after construction completion.

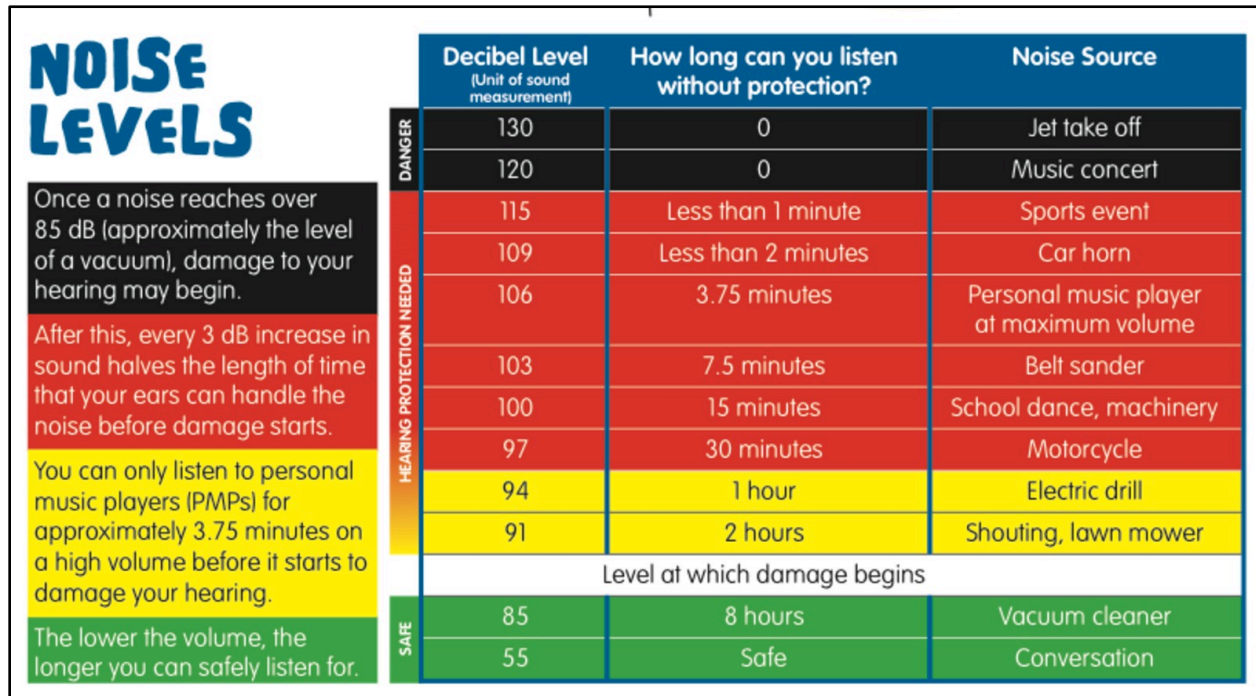


Figure 10. Example of noise levels and time exposure in relation to hearing loss.

## 3.2 BIOLOGICAL RESOURCES

### 3.2.1 Fish and Wildlife

Fish and wildlife habitats located in and near the leveed area include permanent water, temporary water, and agricultural cropland. These habitats provide food and cover for a variety of fish and wildlife, including Largemouth Bass, Bluegill, Common Carp, Crappie, Warmouth, Channel Catfish, Bullfrog, Snapping Turtle, Muskrat, Rabbits, Squirrel, Red Fox, White-Tailed Deer, and Beaver. Common birds in the area include species of waterfowl, shorebirds, and songbirds. 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 Elm Point Levee District is not repaired to the federal standard, the levee system would have less stability and there is an increased probability of future flooding. If that flooding were to occur then a more diverse and dynamic terrestrial and aquatic habitat may develop if the levee system were to remain unrepaired. The terrestrial habitat could be inundated by high water more frequently, and 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, killing agricultural vegetation as flood water ponds on typically historical wetland areas that are currently dominated by agriculture. However over time, wetland vegetation would become reestablished. During flood events, terrestrial fauna would be displaced as their habitat is inundated. Conversely, fishes and other aquatic organisms would gain access to floodplain habitat, which would benefit the spawning and rearing of many species.

*Alternative 3 – Repair of Levees with Federal Assistance* – It is anticipated that impacts of the levee repair on fish and wildlife resources would be minimal. Tree clearing would only be permitted within the defined

0.1 acres area for the establishment of the access road between Borrow Area 4 and Damage Areas 3 & 4 (Figure 6).

If heavy rain occurs during levee repair, washing soil into the river and other waterways, there could be a short-term increase in turbidity in the immediate area, possibly displacing fish and other mobile organisms temporarily. Following construction, any displaced mobile aquatic species would be expected to return. However, the Contractor is required to comply with all applicable federal, state, and local laws and regulations and 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 limited 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). The BGEPA prohibits unregulated take of bald eagles, including disturbance. The U.S. Fish and Wildlife Service (USFWS) 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. In April 2014, an active bald eagle nest was identified along Cole Creek at the eastern end of the Elm Point levee system. However, on 21 February 2020, the eastern end of the Elm Point levee system was surveyed and no bald eagle nests were identified. No additional nests along the levee system were identified during the 29 October 2019 site visit. The known bald eagle nest is located over 1,200 feet from the nearest Damage Area. Impacts to bald eagles or bald eagle nests are not anticipated under Alternative 1 or Alternative 3.

**3.2.3 Biological Assessment**

In compliance with Section 7(c) of the Endangered Species Act of 1973, as amended, official lists of species and critical habitats potentially occurring in the vicinity of the proposed project was acquired from the USFWS Information for Planning and Conservation (IPaC) website at (<https://ecos.fws.gov/ipac/>) on 04 February 2020 (Consultation Code: 03E14000-2020-SLI-1164; Event Code: 03E14000-2020-E-02928) (Table 2). Habitat requirements and impacts of the federal action are discussed for each listed species below.

Table 2. List of federally threatened and endangered species and habitat potentially occurring in the vicinity of the proposed project.

Common Name (Scientific Name)	Classification	Habitat
Gray bat ( <i>Myotis grisescens</i> )	Endangered	Caves year-round (winter hibernacula and summer roosting). In the summer gray bats forage along rivers, lakes, and creeks, and may roost under bridges.

<b>Common Name (Scientific Name)</b>	<b>Classification</b>	<b>Habitat</b>
<b>Indiana Bat (<i>Myotis sodalis</i>)</b>	Endangered	Caves, mines (winter hibernacula); trees (summer roosting); and small stream corridors with well-developed riparian woods; upland forests (foraging)
<b>Northern Long-eared Bat (<i>Myotis septentrionalis</i>)</b>	Threatened with 4(d) rule	Caves, mines; rivers and reservoirs adjacent to forests
<b>Decurrent False Aster (<i>Boltonia decurrens</i>)</b>	Threatened	Disturbed alluvial soils.

**Gray Bat (*Myotis grisescens*)**

The Gray Bat is a species that has a limited range in limestone karst areas of the southeastern United States, including several Illinois and Missouri counties. Gray Bats typically roost in caves year-round. During winter, Gray Bats hibernate in deep, vertical caves, and during summer, Gray Bats generally roost in various caves, but have been documented roosting under bridges and in other structures. Gray Bats forage on a variety of night-flying aquatic and terrestrial insects, and use water features and forested riparian corridors for foraging and travel.

The Gray Bat is endangered largely because of their habitat of living in large numbers in only a few caves, thus making the species vulnerable to human disturbance and habitat loss or modification. Disturbance of Gray Bats in their caves during their hibernation can cause them to use their energy reserves and could lead to starvation. Disturbances to their caves during their nursing season (June and July) can frighten females causing them to drop non-volant pups to their death in panic to flee from the intruder. Additionally, many important caves that have been historically used by Gray Bats have been inundated by reservoirs. The commercialization of caves, and alterations of the air flow, temperature, humidity, and amount of light can make the cave unsuitable habitat for Gray Bats. The fatal bat disease, white-nose syndrome (WNS), has been documented to adversely affect the Gray Bat. Gray Bats are cave obligates, and considering how WNS has decimated other cave-dwelling bat species, WNS could be a significant threat to the Gray Bat.

*Alternative 1 – No Action (Future without Project)* – There are no known caves within the leveed area. However, more frequent flooding of the area would be anticipated which may cause mortality of flood-intolerant tree species within the leveed area. The increased frequency of standing water within the leveed area may increase the food supply for any Gray Bats that may travel in or around the project area.

*Alternative 3 – Repair of Levees with Federal Assistance* – The proposed project would not negatively affect any caves or summer foraging habitat (i.e., forested riparian habitat). This project involves less than 0.1 acres of tree clearing that would occur between 1 November and 31 March. Therefore, the St. Louis District has determined that the proposed project “*may affect, but is not likely to adversely affect*” the Gray Bat.

**Indiana Bat (*Myotis sodalis*)**

The endangered Indiana Bat has been noted as occurring in several Illinois and Missouri counties. Indiana Bats are considered to potentially occur in any area with forested habitat. Indiana Bats migrate seasonally

between winter hibernacula and summer roosting habitats. Winter hibernacula includes 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. A maternity colony may include from one to 100 individuals. A single colony may utilize a number of roost trees during the summer, typically a primary roost tree and several alternates. Some males remain in the area near the winter hibernacula during the summer months, but others disperse throughout the range of the species and roost individually or in small numbers in the same types of trees as females. The best available data indicate that the species or size of tree does not appear to influence whether Indiana Bats utilize a tree for roosting provided the tree exhibits any of the following characteristics: exfoliating bark, cracks, crevices, or cavities. Data also indicate that the use of a particular tree is influenced by conditions, such as solar exposure, temperature and precipitation (USFWS 1999, USFWS 2007b).

During the summer, Indiana Bats frequent the corridors of small streams with well-developed riparian woods, as well as mature bottomland and upland forests. 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. It has been shown that the foraging range for the bats varies by season, age and sex and ranges up to 81 acres (33 ha). Suitable Indiana Bat summer habitat may be located in the forested areas in and adjacent to the Elm Point levee system.

*Alternative 1 - No Action (Future without Project)* – More frequent flooding of the area would be anticipated which may cause mortality of flood-intolerant tree species within the leveed area. The increased frequency of standing water within the leveed area may increase the food supply for any Indiana Bats that may travel in or around the project area.

*Alternative 3 - Repair of Levees with Federal Assistance* – The proposed project would not negatively affect any caves or summer roost / foraging habitat (i.e., forested riparian habitat). This project involves less than 0.1 acres of tree clearing that would occur between 1 November and 31 March. Therefore, the St. Louis District has determined that the proposed project “*may affect, but is not likely to adversely affect*” the Indiana Bat.

### **Northern Long-Eared Bat (*Myotis septentrionalis*)**

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. 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, and manmade structures such as barns and culverts. Foraging occurs in interior upland forests. Forest fragmentation, logging and forest conversion are major threats to the species. 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 summer habitat may be located in the forested areas in and adjacent to the Elm Point levee system.

*Alternative 1 - No Action (Future without Project)* – More frequent flooding of the area would be anticipated which may cause mortality of flood-intolerant tree species within the leveed area. The increased frequency of standing water within the leveed area may increase the food supply for any Gray



Bats that may travel in or around the project area

*Alternative 3 - Repair of Levees with Federal Assistance* – The proposed project would not negatively affect any caves or summer roost / foraging habitat (i.e., forested riparian habitat). This project involves less than 0.1 acres of tree clearing that would occur between 1 November and 31 March. Therefore, the St. Louis District has determined that the proposed project “*may affect, but is not likely to adversely affect*” the Northern Long-Eared Bat.

#### **Decurrent False Aster (*Boltonia decurrens*)**

The Decurrent False Aster is presently known from scattered localities on the floodplains of the Illinois River and Mississippi River from its confluence with the Missouri River south to Madison County, Illinois. Decurrent False Aster grows in wetlands, on the borders of marshes and lakes, and on the margins of bottomland oxbows and sloughs. Historically, this plant was found in wet prairies, marshes, and along the shores of some rivers and lakes. The species favors recently disturbed areas and flooding may play a role in maintaining its habitat. Current habitats include riverbanks, old fields, roadsides, mudflats and lake shores. It relies on periodic flooding to scour away other plants that compete for the same habitat (USFWS 2015). The typical flowering season for Decurrent False Aster is from August through October.

In Missouri, Decurrent False Aster distribution is currently restricted to the Mississippi River floodplain from the Illinois River southward. Current populations are fewer and more isolated than in historical times. Presently it is only known to occur in St. Charles County, MO.

*Alternative 1 - No Action (Future without Project)* – Failure to repair the levee could possibly lead to the increased potential of Decurrent False Aster colonization within the agricultural areas adjacent to the breaches if a nearby seed source is present. However, these areas would likely return to agricultural production once flood water receded, inhibiting the establishment of the species.

*Alternative 3 - Repair of Levees with Federal Assistance* – The proposed project area is within the existing levee footprint and adjacent agricultural lands (borrow areas). The levees are planted with grasses and mowed regularly. The agricultural lands are intensively managed for row crop production and receive chemical and mechanical disturbance annually, making them non-suitable for establishment of Decurrent False Aster. The St. Louis District has determined that the proposed project “*may affect, but is not likely to adversely affect*” the Decurrent False Aster.

#### **3.2.4 State Listed Species**

Missouri Department of Conservation Natural Heritage Reviews were conducted for this project on 29 August and 04 October, 2019. The Reviews generated a Level 2 and Level 3 report, respectively. The Level 2 Report is the result of two species occurrences: Columbia watermeal (*Wolffia columbiana*) and American badger (*Taxidea taxus*). Both species occurred southwest of the project location in the uplands. The Level 3 Report is the result of a bald eagle nest located near the west end of Lakeside Park, which is about 1.5 miles from the project boundary. Neither alternative is anticipated to impact the Columbia watermeal, American badger, or bald eagle.

### **3.3 SOCIOECONOMIC RESOURCES**

The Elm Point Levee District repair project would provide flood risk reduction against a 4.0% (25-year frequency, pre-flood design) chance exceedance flood. Action is needed to repair the levee damage and,

therefore, prevent future flooding of the 1,343 acres (739 cropland acres) protected by the levee.

According to 2017 census estimates for Saint Charles County, Missouri, there were approximately 142,554 households in the county, with a median income of \$78,380, and an average of 2.8 persons per household (U.S. Census Bureau, 2017). The median value of owner-occupied housing units was \$188,200. The population was approximately 90% white, 5% black, 3% Asian, 2% Hispanic or Latino. According to 2015 data, approximately 6.3% of the population for whom poverty status is determined in Saint Charles County, MO live below the poverty line. This is less than half the national average of 14.7%. Furthermore, the most common race or ethnicity living below the poverty line in Saint Charles County, MO is White, followed by Hispanic or Latino and Black.

*Alternative 1 - No Action (Future without Project)* - If the Elm Point Levee District is not repaired to the Federal standard, there would be reduced flood protection during future flood events. The previously leveed area would be subject to a higher probability of flooding, making the area less suitable for reliable agricultural productivity, and may decrease recreational activities such as youth soccer, especially under flood conditions. Should the levee remain unrepaired, reduced production of these commodity crops would be expected. This could result in potential negative economic effects on the Levee District and the local economy.

*Alternative 3 - Repair of Levees with Federal Assistance* - Local agriculture, agri-businesses and recreational business such as the SLYSA complex, would benefit from levee repair and subsequent flood damage reduction. The proposed levee repairs would not require residential displacement. No adverse impacts to life, health, or safety would result from levee repair.

### **3.4 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. There are no recorded archaeological sites within the repair site locations or proposed borrow areas.

*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 unknown culturally significant sites protected by the levee.

*Alternative 3 – Repair of Levees with Federal Assistance* – The proposed repairs to the levee within the Elm Point Levee District would have no effect upon significant historic properties. The repairs consist of earth work and turf establishment on the levee itself. The borrow sites are described in Section 2.3.2 of this EA. All of the borrow areas are currently being farmed in row crop agriculture, except for borrow area 3. Borrow area 3 has soil structure consistent with a previously disturbed site, fill material has been added. There would be no significant effect to historic properties. On 20 November 2019, the Missouri State Historic Preservation Office (SHPO) concurred with USACE determination that there would be “No Historic Properties Affected” by implementing the proposed repairs.

In the unlikely event that earthmoving activities associated with the proposed repairs 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 St. Louis District in concert with the professional staff of the Missouri State Historic Preservation Office.

### **3.5 TRIBAL COORDINATION**

The St. Louis District consults with 26 tribes that have an interest in projects along all rivers within our district boundaries.

*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 unknown culturally significant sites protected by the levee.

*Alternative 3 - Repair of Levees with Federal Assistance* – The proposed repairs were coordinated with all tribes in a letter dated 30 October 2019. On 25 November 2019, the Quapaw Nation concurred with USACE findings that the proposed repairs is not likely to adversely affect properties of cultural or sacred significance to the Quapaw Nation.

### **3.6 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 Populations and Low-Income Populations," 1994)
- "Department of Defense's Strategy on Environmental Justice" (March 24, 1995).

*Alternative 1 – No Action (Future without Project)* – If the levee is not repaired to the Federal standard, the level of protection would be reduced from that provided by the design levee. This would not disproportionately affect low income or minority populations.

*Alternative 3 - Repair of Levees with Federal Assistance* - If the Elm Point Levee District levee is repaired to the Federal standard, the level of protection would be that provided by the design levee. This would not disproportionately affect low income or minority populations.

### **3.7 HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE**

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 Hazardous, Toxic, and Radioactive Waste (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).

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 within the scope of the U.S. Environmental Protection Agency's (EPA) Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and petroleum products. Current policy is to avoid known HTRW sites. At this time, there are no recognized environmental conditions (REC) 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.

*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 would conduct a modified Phase I assessment including a site investigation prior to construction to ensure that no HTRW contamination exists within the project area. However, the Environmental Quality Section should be contacted immediately if HTRW material is encountered at any point during construction activities.

## 4. 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 2.

**Table 2. Summary of the effects of the “No Action” and Tentatively Selected Plan to physical, biological, and socioeconomic resources.**

Resources	Alternatives	
	No Action	Tentatively Selected Plan
Physical Resources	Additional creek bankline scour will occur if the damage is not repaired; and the integrity of the levee would be compromised during high water events.	Erosion repair and turf 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-2015 conditions.
Biological Resources	There is potential for beneficial impacts due to potential increase in floodplain wetland habitat.	Construction would be confined to the levee which may result in minor temporary impacts.
	Federal T&E species would not likely be adversely impacted.	Federally listed species are not anticipated to be adversely affected.
	Meets project objective of minimal environmental impacts.	Meets project objective of minimal environmental impacts.

<b>Socioeconomic Resources</b>	The levee district would be susceptible to future floods and potential negative impacts to the levee 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 (25- year frequency) of the levee system.
	Does not protect the socioeconomic value of the levee district.	Protects the socioeconomic value of the levee district.

## 5. CUMULATIVE IMPACTS

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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 high water events of 2019. Temporary impacts from noise, air, and increased water sedimentation 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 riverward or landward of the levee systems. The Elm Point Levee District 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 utilized borrow areas. Some PL 84-99 projects, including Elm Point Levee District, sustained damage that is impractical to repair on the original levee alignment. For new levee alignments, some acreage would be removed from agricultural use causing a minor loss to overall farm production and increase in floodplain habitat. 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 anticipated.

## 6. RELATIONSHIP OF TENTATIVELY SELECTED PLAN TO ENVIRONMENTAL REQUIREMENTS

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

**Table 3. Relationship of the Tentatively Selected Plan to environmental requirements, environmental acts, 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	PC <sup>1</sup>
Endangered Species Act, 16 USC 1531-1543	PC <sup>1</sup>
Farmland Protection Policy Act, 7 (Prime Farmland) USC 4201-4208	FC
Fish and Wildlife Coordination Act, 16 USC 661-666c	PC <sup>1</sup>
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 <sup>2</sup>
National Historic Preservation Act, 16 USC 470 et seq.	PC <sup>1</sup>
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
Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (EO 12898)	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<sup>1</sup> = Partial Compliance (on-going, would be accomplished before construction), PC<sup>2</sup> = Full compliance will be achieved upon signing of the NEPA document.



## 7. COORDINATION, PUBLIC VIEWS, AND RESPONSES

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Notification of this Draft Environmental Assessment and unsigned Finding of No Significant Impact was sent to the officials, agencies, organizations, and individuals listed below for review and comment (Table 4). During the public review period an electronic copy is available on the St. Louis District's website at:

<https://www.mvs.usace.army.mil/Portals/54/docs/pm/Reports/EA/ElmPointPL84992019Feb2020PublicReview.pdf>

Please note that the Finding of No Significant Impact is unsigned. These documents will 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 construction phases of the proposed levee repairs.

**Table 4. A letter regarding the availability of a draft Environmental Assessment and unsigned FONSI for the Elm Point Levee District PL 84-99 repair was sent to the following entities.**

Missouri Senator Roy Blunt  
260 Russell Senate Office Building  
Washington, DC 20510

PO Box 176; 1101 Riverside Drive  
Jefferson City, MO 65102-0176

Missouri Senator Josh Hawley  
212 Russell Senate Office Building  
Washington, D.C. 20510

Karen Herrington  
U.S. Fish and Wildlife Service  
Missouri Ecological Services Field Office  
101 Park Deville Drive, Suite A  
Columbia, MO 65203-0057

U.S. Representative Blaine Luetkemeyer (Dist 3;  
MO)  
2230 Rayburn House Office Building  
Washington, DC 20515

Matt Vitello, P.E.  
Policy Coordinator  
Missouri Department of Conservation  
PO Box 180  
Jefferson City, MO 65102

MO Senator Bill Eigel (District 23)  
201 W Capitol Ave., Room 227  
Jefferson City, Missouri 65101

Missouri Department of Agriculture  
PO Box 630  
1616 Missouri Boulevard  
Jefferson City, Missouri 65102

MO Representative Tom Hannegan (District 65)  
201 West Capitol Avenue, Room 304-A  
Jefferson City MO 65101

Sierra Club, Missouri Chapter  
2818 Sutton Avenue  
St. Louis, MO 63143

Federal Emergency Management Agency (MO –  
Region 7)  
11224 Holmes Rd, Kansas City, MO 64131

The Nature Conservancy  
Missouri Field Office  
2800 S. Brentwood Boulevard  
St. Louis, MO 63144

Missouri Emergency Management Agency  
Department of Public Safety  
PO Box 116  
Jefferson City, Missouri 65102

St. Charles County Floodplain Vision Board  
201 N. Second St.  
St. Charles, MO 63301

Missouri Environmental Protection Agency  
Missouri Department of Natural Resources

## **8. ENVIRONMENTAL ASSESSMENT PREPARERS**

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Alison Anderson, Ph.D., Ecologist

Role: Environmental compliance

Ben Greeling, Environmental Engineer

Role: Environmental Engineering, HTRW

Mark Smith, Ph.D., District Archaeologist

Role: National Historic Preservation Act Analysis and Compliance

James Mills, P.E.

Role: Technical Engineering Lead

Shane Simmons, Project Manager

Role: Project Manager

Evan Stewart, Economist

Role: Economist

## 9. REFERENCES

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- MDC (Missouri Department of Conservation). 2017.  
<https://nature.mdc.mo.gov/discover-nature/field-guide/decurent-false-aster>
- U.S. Census Bureau. 2017. 2013-2017 American Community Survey 5-Year Estimates.
- USEPA (U.S. Environmental Protection Agency). 2019. Missouri Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants.  
<https://www3.epa.gov/airquality/greenbook/hbcs.html#MO>
- USFWS (U.S. Fish and Wildlife Service). 1999. Agency draft Indiana Bat (*Myotis sodalis*) revised recovery plan. U.S. Fish and Wildlife Service, Fort Snelling, Minnesota. 53 pp.
- USFWS (U.S. Fish and Wildlife Service). 2007. Species Profile: Bald Eagle (*Haliaeetus leucocephalus*). Available at  
<http://ecos.fws.gov/speciesProfile/SpeciesReport.do?scode=B008>
- USFWS (U.S. Fish and Wildlife Service). 2007a. 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\\_fnlrdftrecpln\\_apr07.pdf](https://www.fws.gov/midwest/Endangered/mammals/inba/pdf/inba_fnlrdftrecpln_apr07.pdf)
- USFWS (U.S. Fish and Wildlife Service). 2007b. Protection of Eagles; Definition of “Disturb”. Federal Register 72(107): 31132-3113
- USFWS (U.S. Fish and Wildlife Service). 2007c. National Bald Eagle Management Guidelines.  
<https://www.fws.gov/southdakotafieldoffice/NationalBaldEagleManagementGuidelines.pdf>
- USFWS (U.S. Fish and Wildlife Service). 2015.  
<https://www.fws.gov/midwest/endangered/plants/decurentfalseaster/decurrefa.html>

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## FINDING OF NO SIGNIFICANT IMPACT

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### PUBLIC LAW 84-99 ELM POINT LEVEE DISTRICT SAINT CHARLES COUNTY, MISSOURI

1. I have reviewed the documents concerned with the proposed levee repairs to the Elm Point Levee District. The purpose of this project is to repair levee sections damaged by an extended high water event during 2019. Repairs would return the levee district to pre-flood conditions in an expedient manner.
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 levee. It is assumed that, because of the cost of repairs, the levee district would not repair the levee.
  - b. Nonstructural Alternative: Under PL 84-99, the Corps has the authority to pursue a non-structural alternative only if the project sponsor requests such an alternative. The Elm Point Levee District 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.
3. The possible consequences of the No Action Alternative and Tentatively Selected Plan 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, and infrastructure.
  - b. No appreciable effects to general environmental conditions (i.e., air quality, noise, and water quality) would result from the Tentatively Selected Plan.
  - c. The Tentatively Selected Plan is not expected to cause significant adverse impacts to general fish and wildlife resources.
  - d. The Tentatively Selected Plan is not expected to cause adverse impacts to riparian habitat, bottomland hardwood forest, wetlands, or streams. Levee repairs and associated actions are permitted under Section 404 of the Clean Water Act Missouri General Permit 41 for Flood Recovery and Repair Activities.
  - e. No Federally endangered or threatened species would be adversely impacted by the Tentatively Selected Plan.

- f. No prime farmland would be adversely impacted as a result of the Tentatively Selected Plan.
  - g. No significant impacts to historic properties (cultural resources) are anticipated as a result of the Tentatively Selected Plan.
  - h. The Tentatively Selected Plan would not disproportionately affect low income or minority populations.
  - i. Under the Tentatively Selected Plan, 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 risk reduction levels.
  - j. 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 Tentatively Selected Plan, 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.

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Date

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

# **COORDINATION DOCUMENTATION**

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# 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:

February 04, 2020

Consultation Code: 03E14000-2020-SLI-1164

Event Code: 03E14000-2020-E-02928

Project Name: Elm Point Levee System PL 84-99 Repairs

Subject: 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

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*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

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## Project Summary

Consultation Code: 03E14000-2020-SLI-1164

Event Code: 03E14000-2020-E-02928

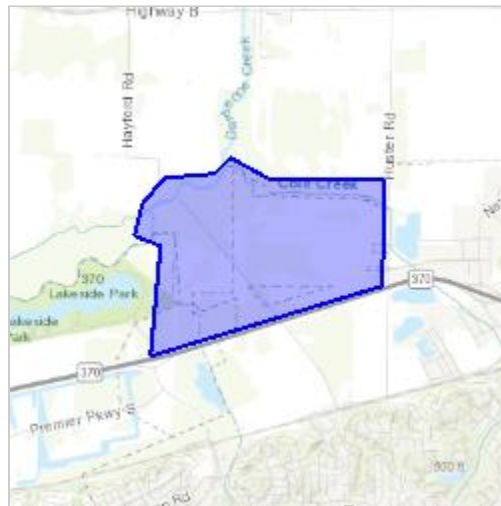
Project Name: Elm Point Levee System PL 84-99 Repairs

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

Project Description: Proposing to repair 2 erosion areas, 2 embankment slides, and 2 levee breaches along the Elm Point Levee. Five borrow sites were identified as material sources for the repairs. No wetlands would be impacted. Minimal tree would be needed to establish access between a borrow site and a repair area. Tree clearing would take place between 1 November and 31 March.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/38.82793964676378N90.5455823463443W>



Counties: St. Charles, MO

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## Endangered Species Act Species

There is a total of 4 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 Fisheries<sup>1</sup>, 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: <a href="https://ecos.fws.gov/ecp/species/6329">https://ecos.fws.gov/ecp/species/6329</a>	Endangered
Indiana Bat <i>Myotis sodalis</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/5949">https://ecos.fws.gov/ecp/species/5949</a>	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a>	Threatened

### Flowering Plants

NAME	STATUS
Decurrent False Aster <i>Boltonia decurrens</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/7705">https://ecos.fws.gov/ecp/species/7705</a>	Threatened

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## **Critical habitats**

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

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# 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.

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# 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

- [PEM1A](#)
- [PEM1C](#)
- [PEM1Cd](#)
- [PEM1Cx](#)
- [PEM1F](#)

## FRESHWATER FORESTED/SHRUB WETLAND

- [PFO1A](#)
- [PFO1C](#)
- [PSS1A](#)

## FRESHWATER POND

- [PUBFx](#)
- [PUBG](#)
- [PUBGx](#)

## RIVERINE

- [R2UBH](#)
  - [R4SBCx](#)
  - [R5UBH](#)
-



## 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:** PL84-99 Elm Point Levee Repairs #6328

**Project Description:** The Elm Point Levee System is a non-federally constructed, non-federally maintained levee located in St. Charles County, Missouri, and is located approximately 3 miles south of the Mississippi River at approximately miles 226 to 228. During the Summer Flood of 2019, the Elm Point Levee System sustained damages at 5 distinct areas. These damages include: 2 breaches, 1 slide, and 2 areas of minor erosion. Since Elm Point is active in the PL84-99 program, they have requested assistance in restoring the Elm Point Levee System to pre-disaster conditions. An Environmental Assessment is being prepared for the repairs and associated borrow sites, if needed.

**Project Type:** Water Use, Transfer, and Channel Activities, Impoundment (flood control, levee, dam)

**Contact Person:** Alison Anderson

**Contact Information:** Alison.M.Anderson@usace.army.mil or 314-331-8458

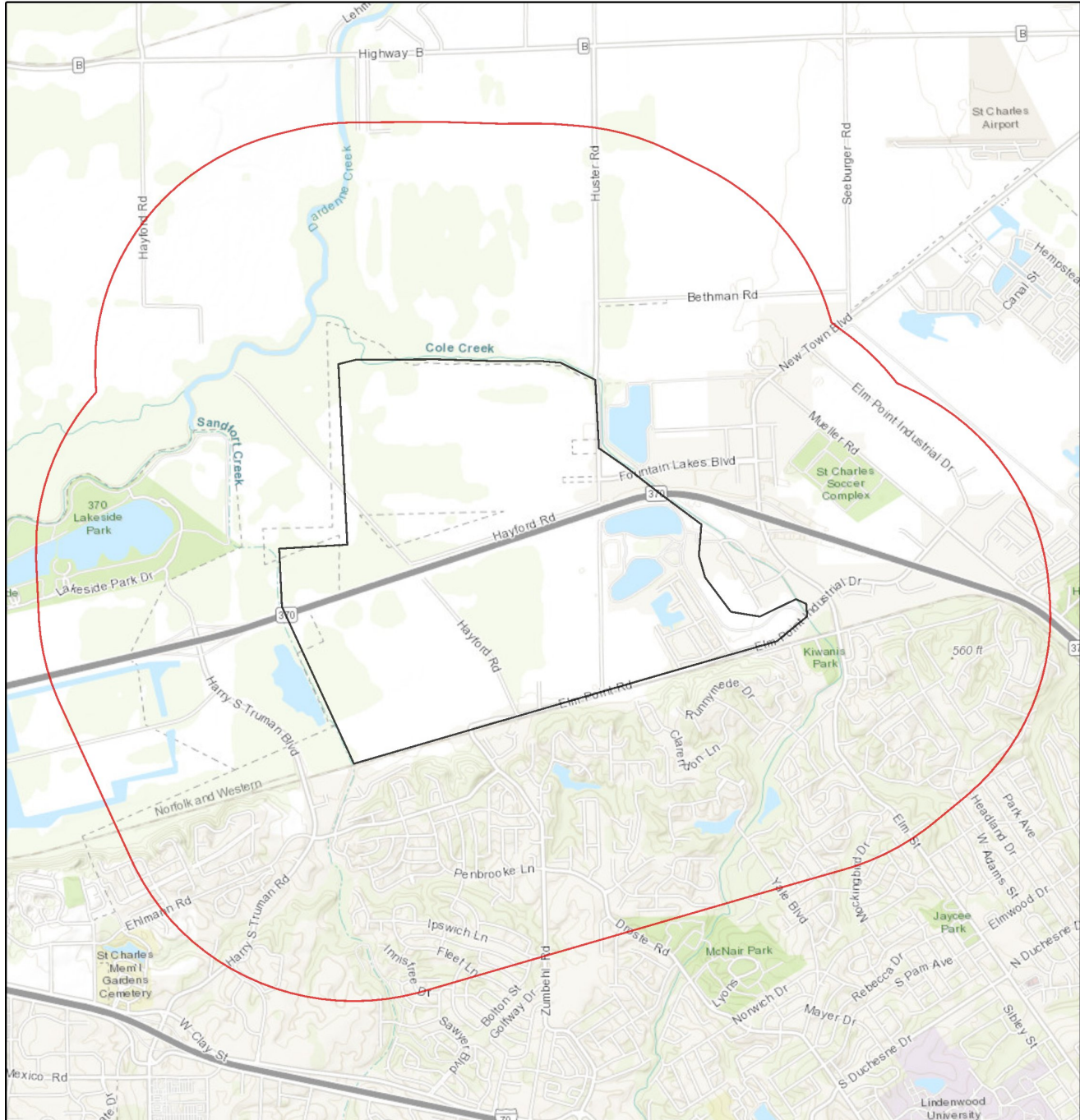
**Disclaimer:** The NATURAL HERITAGE REVIEW REPORT produced by this website identifies if a species tracked by the Natural Heritage Program is known to occur within or near the area submitted for your project, and shares suggested recommendations on ways to avoid or minimize project impacts to sensitive 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](http://www.modot.mo.gov/ehp/index.htm) for additional information on recommendations.

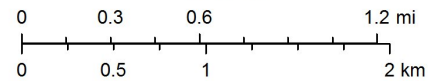
# PL84-99 Elm Point Levee Repairs



October 4, 2019

1:37,315

- 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](mailto: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, St Charles (Fountain Lakes Pond), St Charles (Kluesner Lake), St Charles (Moore Lake), St Charles (Skate Park Lake), please contact MDC.

## Project Type Recommendations:

Water Use, Transfer, and Channel Activities: Impoundment (flood control, levee, dam). Recommendations to help avoid and minimize impacts to fish, forest and wildlife resources are under development.

## 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 location submitted and evaluated is within the known range of the Decurrent False Aster (*Boltonia decurrens*, federal-listed threatened and state-listed endangered) in Missouri. The plant may occur in your project area if suitable habitat conditions exist. Decurrent False Aster is a big river floodplain species that grows in wetlands and on the borders of marshes, lakes, oxbows, and sloughs. It also may be found in old fields, roadsides, agricultural fields, and on levees. It favors sites characterized by moist soil and regular disturbance, preferably periodic flooding, which maintains open areas with high light levels. Today it is found in areas where succession is prevented and sunlight is allowed to reach the seedlings. It is a perennial plant that blooms from August through October. Visit <http://mdc.mo.gov/discover-nature/field-guide/decurrent-false-aster> for more information on this plant species.



**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](mailto: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 1 0). "State Endangered Status" is determined by the Missouri Conservation Commission under constitutional authority, with requirements expressed in the Missouri Wildlife Code, rule 3CSR 1 0-4.111. 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](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.

**From:** [Matt Vitello](#)  
**To:** [Anderson, Alison M CIV \(USA\)](#)  
**Subject:** [Non-DoD Source] RE: PL84-99 Natural Heritage Review Elm Point Levee (UNCLASSIFIED)  
**Date:** Tuesday, October 8, 2019 11:14:51 AM

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Hi Alison,

The Level 2 Report is the result of two species occurrences (both southwest of the project location in the uplands):  
- Columbia Water meal (*Wolffia Columbiana*, State rank: SU - unranked)  
- American Badger (*Taxidea taxus*, State rank: S3 - imperiled)

The Level 3 Report is the result of a Bald Eagle nest located just outside the west end of Lakeside Park (about 1.5 miles from the project boundary). This nest was active this year.

Let me know if you need additional information.

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: Anderson, Alison M CIV (USA) <[Alison.M.Anderson@usace.army.mil](mailto:Alison.M.Anderson@usace.army.mil)>  
Sent: Friday, October 04, 2019 8:10 AM  
To: Matt Vitello <[Matt.Vitello@mdc.mo.gov](mailto:Matt.Vitello@mdc.mo.gov)>  
Subject: PL84-99 Natural Heritage Review Elm Point Levee (UNCLASSIFIED)

CLASSIFICATION: UNCLASSIFIED

Hi Matt,

Can you please provide the species list or areas of conservation concern for the attached reports?

There are 2 reports attached. I didn't realize Teri already requested a report so I ended up requesting another one. I am preparing an EA for the repairs. If you need additional details please let me know.

Thanks,  
Alison

Alison Anderson, Ph.D.  
Aquatic Ecologist  
U.S. Army Corps of Engineers  
St. Louis District  
Regional Planning and Environmental Division-North Environmental Compliance Section CEMVP-PD-C  
Office: (314) 331-8458  
Cell: (419) 305-4167

CLASSIFICATION: UNCLASSIFIED



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

REPLY TO  
ATTENTION OF:

October 17, 2019

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

Amy Rubingh  
Office of Historic Preservation  
Missouri Department of Natural Resources  
P.O. Box 176  
Jefferson City, Missouri 65102

Subject: Elm Point, PL84-99 Levee Repairs, Saint Charles County, MO

Dear Ms. Rubingh:

We are contacting you to initiate consultation for a proposed undertaking to repair flood damage to the Elm Point levee, St. Charles County, Missouri, in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended. The St. Louis District, U.S. Army Corps of Engineers (Corps) will provide assistance to the levee district to repair damage that took place during the April/May 2019 high water event (Figure 1). This assistance is provided under Public Law 84-99, the Flood Control and Coastal Emergency Act.

The Elm Point Levee suffered two breaches and multiple areas of minor erosion. The majority of the repair work will be undertaken within the footprint of the levee itself without effecting the surrounding areas. Borrow areas, however, may have to be utilized to provide additional repair material. The Corps proposes using up to four areas that were previously surveyed and cleared for repairs made after the 2015 flood event (Figure 2). At that time your office, in a letter dated June 22, 2017 concurred with the Corps determination that no historic properties would be affected (included). Given the time since then, however, we are reinitiating consultation. It is the Corps opinion that use of these borrow areas will have no significant effect to historic resources.

If you have any questions or comments, please feel free to contact me at telephone number (314) 331-8831, or e-mail at [Mark.A.Smith4@usace.army.mil](mailto:Mark.A.Smith4@usace.army.mil).

Thank you,

Mark A. Smith, Ph.D., RPA  
Chief, Archaeology and Archives Section



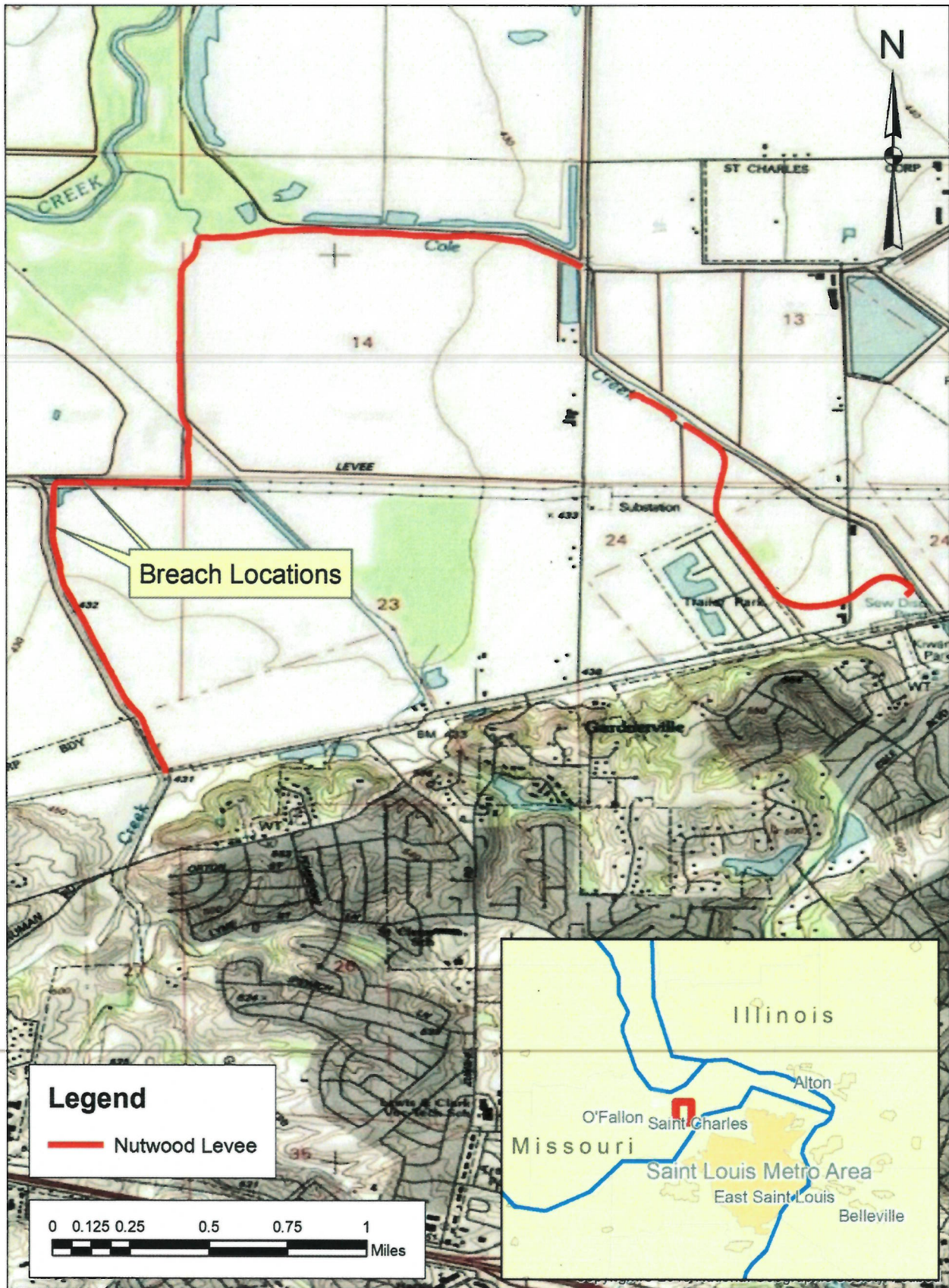


Figure 1: Elm Point Levee locator map showing indicating breach locations.



# Elm Point Levee Repair PL-84-99

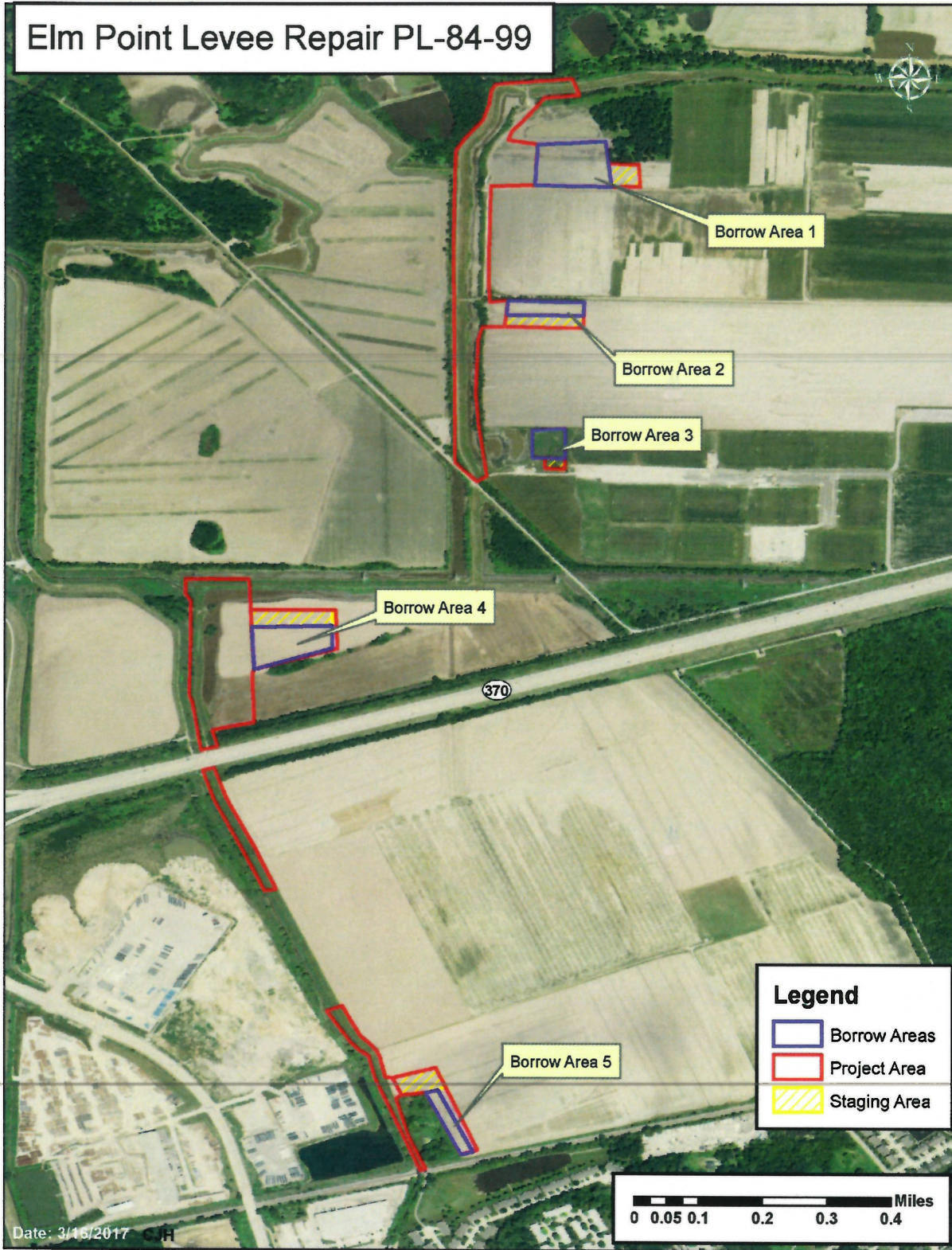


Figure 2: Elm Point Borrow Areas surveyed in 2017.

**CULTURAL RESOURCE ASSESSMENT  
Section 106 Review**

**CONTACT PERSON/ADDRESS**

**C:**

Michael Trimble  
Department of the Army  
St. Louis District Corps of Engineers  
1222 Spruce St  
St. Louis, MO 63103

**PROJECT:**

Elm Point Levee Repairs

**FEDERAL AGENCY**

Army Corps

**COUNTY:**

Saint Charles

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, PhD, Deputy State Historic Preservation Officer

June 22, 2017  
Date

**MISSOURI DEPARTMENT OF NATURAL RESOURCES  
STATE HISTORIC PRESERVATION OFFICE  
P.O. Box 176, Jefferson City, Missouri 65102  
For additional information, please contact Amanda Burke, (573) 522-4641.  
Please be sure to refer to the project number: 021-SC-17**



# QUAPAW NATION

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

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

November 25, 2019

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

Re: PL 84-99 Levee Flood Damage Repairs, Elm Point Levee, St. Charles County, Missouri

To Whom it may Concern,

The Quapaw Nation Historic Preservation Office has received and reviewed the information provided for the proposed project PL 84-99 Levee Flood Damage Repairs, Elm Point Levee, St. Charles County, Missouri. This office concurs with your findings that this project is not likely to adversely affect properties of cultural or sacred this office significance to the Quapaw Nation.

In accordance with the National Historic Preservation Act, (NHPA) [16 U.S.C. 470 §§ 470-470w-6] 1966, undertakings subject to the review process as referred to in S101 (d) (6) (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 Quapaw Nation has vital interests in protecting its historical 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, or the Native American Graves Protection and Repatriation Act. If, however, artifacts or human remains become discovered during project construction, we ask that work cease immediately and that you contact the Quapaw Nation Historic Preservation Office.

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 Quapaw Nation on this matter.

Sincerely,



Tribal Historic Preservation Office  
Quapaw Nation  
P.O. Box 765  
Quapaw, OK 74363  
(w) 918-238-3100