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

25 June 2025

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

Dear Sir or Madam:

The St. Louis District, U.S. Army Corps of Engineers, has prepared a draft Environmental Assessment (EA) with unsigned Finding of No Significant Impact (FONSI) to evaluate the proposed Lock and Dam 25 Spillway Access Road Construction Project in Calhoun County, Illinois, USA.

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

https://www.mvs.usace.army.mil/Portals/54/docs/pm/Reports/EA/LD25AccessRoadDraftEA.pdf

The USACE St. Louis District is proposing the construction of an 1,858 ft gravel access road for vehicular access to the Lock and Dam 25 Spillway. The proposed project would be beneficial for future lock and dam repairs, prevent failure of the overflow dike, allow for more routine spillway maintenance, and at the same time help to minimize interruptions to navigation on the Upper Mississippi River.

Please provide any comments you may have regarding this project to Natalia I. Ramírez Irizarry of the USACE St. Louis District Environmental Compliance Section, by **e-mail** **CEMVS_Planning@usace.army.mil** , using subject line *Lock and Dam 25 Access Road Draft EA Comment*; or by **mail** to the address above, ATTN: Environmental and Planning Branch (PD-C, Ramirez). **In order for comments to be considered prior to a final decision being made, they must be received by this office by close of business on 25 July 2025.**

Sincerely,

Brian L. Johnson
Chief, Environmental Compliance Branch

Draft Environmental Assessment

with

Finding of No Significant Impact (FONSI)

Lock & Dam 25 Spillway Access Road Construction Project

Calhoun County, Illinois

June 2025

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

US Army Corps of Engineers®

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Acronyms and Abbreviations

AAHU	Average Annual Habitat Unit
AdH	Adaptive Hydraulics Model
ASTM	American Society for Testing and Materials
BMPs	Best Management Practices
cfs	Cubic feet per second
CWA	Clean Water Act
dB	decibels
EA	Environmental Assessment
EcoCAT	Ecological Compliance Assessment Tool
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FONSI	Finding of No Significant Impact
FWOP	Future without Project
FWP	Future with Project
HTRW	Hazardous, Toxic and Radioactive Waste
IDNR	Illinois Department of Natural Resources
IPaC	Information for Planning and Consultation
L&D 25	Lock and Dam 25
LPP	Locally Preferred Plan
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NLAA	Not Likely to Adversely Affect
O&M	Operation and Maintenance
RECs	Recognized Environmental Conditions
RM	River Mile
UMR	Upper Mississippi River
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service

1 PURPOSE OF AND NEED FOR ACTION

1.1 INTRODUCTION

The St. Louis District of the U.S. Army Corps of Engineers (USACE) has prepared this Environmental Assessment (EA) to evaluate the potential impacts associated with the construction of an access road, at the eastern part of the Lock and Dam 25 (L&D 25) Spillway. The Proposed Action is located in Calhoun County, Illinois.

USACE operates and maintains a total of 29 locks and dams on the Upper Mississippi River (UMR) starting near Minneapolis/St. Paul, Minnesota and ends near St. Louis, Missouri. USACE operates these locks to allow both commercial and recreational vessels to navigate from one pool (the water backed up behind each dam) to the next. The St. Louis District (District) is responsible for the operation and maintenance (O&M) of L&D 25 and associated infrastructure, located in Winfield, Lincoln County, Missouri, near Mississippi River Mile (RM) 241.4. L&D 25, completed over 85 years ago, is the third southern-most dam on the UMR, is 1,296 feet long, has 14 tainter gates and 3 roller gates used to control the depth of the water in the pool upstream of the dam (Figure 1).

Figure 1: Lock and Dam 25 in Winfield, Missouri.

1.2 PROJECT LOCATION

L&D 25 is located on the Mississippi River, approximately 3 miles east of Winfield, Missouri, along the east shore of Bradley Island, 61.5 RMs upstream from the St. Louis, and 241.4 RMs above the mouth of the Ohio River. Pool 25 extends from L&D 25 upstream 32 RMs to L&D 24 at Clarksville, Missouri. The lock is located in Lincoln County, Missouri, with the dam extending across the state line to Illinois. There is an overflow dike that extends from the dam storage yard on the Illinois side of the dam to the Illinois bluff which creates the spillway (Figure 2).

Figure 2. Project Location, Lock and Dam 25 and the proposed spillway access road, Calhoun County, Illinois.

1.3 PROJECT AUTHORITY

L&D 25 is part of the Upper Mississippi River 9-Foot Channel Navigation Project which was authorized by Congress via the Rivers and Harbors Act on July 3, 1930, created and ensured a reliable 9-foot deep navigation channel.

This Environmental Assessment (EA) has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 as amended by the Fiscal Responsibility Act of 2023 and the USACE Engineering Regulation 200-2-2. Impacts on relevant environmental resources are discussed in this EA and summarized in the Finding of No Significant Impact (FONSI).

1.4 PURPOSE AND NEED

The District purposes to construct an additional access road leading to L&D 25. The purpose of the proposed project is to provide USACE personnel, and designated contractors, a route to access L&D 25 from the Illinois bankline along the Mississippi River. Currently, there is no land-based access for vehicular equipment to the L&D 25 overflow dike and spillway. Access to the overflow dike and spillway is limited to a small area downstream of L&D 25 near the storage yard. Water access is not deemed safe or practical from the upstream of the overflow dike. Since construction of L&D 25, the overflow dike has overtopped numerous times and the spillway areas immediately downstream have incurred damages from seepage and scour. Additionally, debris is naturally deposited after periods of inundation on the

structure and must be removed to ensure that the structure maintains its integrity. In 2015, emergency repairs were completed downstream of the overflow dike to address scour and seepage concerns.

The addition of this access road would allow for multiple paths of safe entry on and around the dam, which would be beneficial for future lock and dam repairs, would prevent failure of the overflow dike, allow for more routine spillway maintenance, at the same time helping to minimize the interruption to navigation on the UMR. Due to the current access limitations and costs associated with getting equipment onsite, necessary cleaning and inspections are not being routinely performed. Routine inspections and preventive maintenance would increase the life expectancy of the spillway structure and improve site safety. An additional benefit of the land access point is for increased storage capabilities and access of critical spare lock components which are stored in the lot adjacent to the Illinois side of the dam.

2 ALTERNATIVES

This section of the EA describes the alternatives considered and summarizes the alternatives in terms of their environmental impacts and their achievement of objectives. One Action Alternative was developed by identifying construction measures to create access to L&D 25 from the Illinois bankline. A No Action Alternative is also considered for the project area.

2.1 NO ACTION ALTERNATIVE

NEPA requires that a No Action Alternative be addressed and provide a baseline or reference against which to describe environmental effects of the Action Alternative. Under the No Action Alternative, the District would not construct an access road leading to L&D 25 along the Illinois bankline of the Mississippi River. Entrance to L&D 25 Spillway would be solely from the Missouri side or water based access. If the District would not construct the access road the project would be subject to significantly higher mobilization and demobilization costs associated with equipment movements for the chute/spillway cleaning following highwater or overtopping events. Due to the current access limitations and costs associated with getting equipment onsite necessary cleaning and inspections are not being routinely performed which could decrease the life expectancy of the spillway structure.

2.2 ACTION ALTERNATIVE

The project proposes the construction of a gravel access road for vehicular access to the L&D 25 Spillway. This road easement would be accessible from West Point Landing Road in Calhoun County, Illinois. The access road would be constructed from an existing parking area on private lands, accessed from West Point Landing Road and run between Maxey Island on the west and the rock bluff on the eastern extent of the lock and dam. There is currently no land-based access for vehicular equipment to the L&D 25 Spillway. Figure 2 shows that a portion of this proposed project area is private land (white line), and other portion in government land (yellow line).

The Action Alternative would extend 2,311 ft of an existing privately owned road to connect with existing L&D 25 Spillway infrastructure, requiring 1,858 ft of new haul road construction (39.004881°, -90.674746°) (Figure 2). This alternative would require 652 cubic yards of fill material into the

impoundment area adjacent to the bankline, impacting approximately 1.5 acre of wetland. Fill materials would include quarry run limestone of graded “A” stone and gravel. The stone and gravel material would be placed in a one lane width along the base of the bluff creating an access road on USACE lands.

To compensate the unavoidable permanent impacts to 1 acre of forested wetland resources USACE is proposing to implement a mitigation project on USACE property north of L&D 25 (Figure 3; Appendix C). This mitigation project would involve the reforestation of 5-acre area. There has been low survivorship of the trees within this area and an increase in reed canary grass throughout the site. Cottonwood and sycamore would be planted evenly throughout the field.

Figure 3. USACE owns 5-acres field (green) available for mitigation. This mitigation area is in close proximity to the L&D 25 Access Road (yellow).

3 Affected Environment and Environmental Consequences

This section describes existing conditions and potential environmental consequences in the potential project area, which are referred to under the NEPA process as the affected environment and environmental consequences, respectively. The resources described in this section are those recognized as significant by laws, executive orders, regulations, and other standards of national, state, or regional agencies and organizations; technical or scientific agencies, groups, or individuals; and the general public.

3.1 Topography, Geology, and Soil

The proposed project area is a riparian bank abutting limestone bluff that travels to the easternmost part of the L&D 25. The bluff runs parallel to the proposed haul road location for roughly 0.3 miles (Figure 4). The West Point Landing Section is considered one of the outstanding geologic significances

within Illinois (Appendix A; Templeton and Willman, 1963). The type of sections present in the area are Metz Member of Joachim Formation and Victory Member of Grand Detour Formation, both are sedimentary rocks from the Middle Ordovician Period (occur 470 to 458 million years ago). Detailed analysis by the Illinois Geological Survey has revealed mappable formations within the Foley Quadrangle; Calhoun County, IL (Devera, 2010). Devera (2010) described the Plattin Limestone as a rock dominantly composed of gray lime mudstones and dolostones that are exposed along the Mississippi River bluff and up West Point Creek, Madison Creek and extends to Dixon Hollow in the southern portion of the quadrangle on the Illinois side.

Hydric soils were identified throughout the project area during a wetland delineation (Appendix A). The local plant community is hydrophytic and was densely populated by Cottonwood, Smartweed, and Cocklebur. These are all species of plants that grow in highly saturated soils and wetlands. According to the Natural Resource Conservation Service (NRCS), USDA, Web Soil Survey, Tice silt loam (32.8%), Menfro silt loam (4.9%), and Hamburg silt loam (39.4%) all occur within the project area.

3.1.1 No Action Alternative

Under the No Action Alternative, no access road would be constructed. No significant changes to the topography, geology, and soil composition of the project area would be expected.

3.1.2 Action Alternative

The Action Alternative would be using approximately 652 cubic yards of fill material for the construction of a new access road (Figure 5). The fill materials will include graded “A” stone and gravel. Once a fill source is identified by the contractor, they would be required to submit documentation to the District for approval. Under Action Alternative, no significant adverse effects to topography, geology, or soils in the project area are anticipated. Impacts to soils compaction and erosion due to construction would be minor and short term.

Figure 4. Bluff wall along eastern side of the proposed access road, The West Point Landing Geological Section.

Figure 5. L&D 25 Spillway Access Road with Fill Area.

3.2 PRIME AND UNIQUE FARMLAND

Prime and unique farmland is important in meeting the Nation's short- and long-range needs for food and fiber. Prime farmland soils, as defined by the U.S. Department of Agriculture (USDA), are soils that are best suited for food, feed, forage, fiber, and oilseed crops. Prime farmland soils may presently be

used as cropland, pasture, forestland, or for other purposes. Soils that have a high-water table, are subject to flooding, or are droughty may qualify as prime farmland where these limitations are overcome by drainage measures, flood control, or irrigation. The USDA uses the following characteristics to classify prime farmland soils:

- Adequate and dependable supply of moisture from precipitation or irrigation.
- Temperature and growing season are favorable.
- Level of acidity or alkalinity and the content of salts and sodium are acceptable.
- Few, if any, rocks and permeable to water and air.
- Not excessively erodible or saturated with water for long periods, and they are not frequently flooded during the growing season or are protected from flooding.
- Slopes range mainly from 0 to 6 percent.

Approximately 62.4% of the project area is defined as "not prime farmland", primarily composed of forested wetland terrain that is not conducive to farming (Appendix A). While some of the soils are considered "prime farmland", the project area is routinely inundated and has not been used for agricultural production since the construction of L&D 25.

3.2.1 No Action Alternative

Under the No Action Alternative, no access road would be constructed. No change in land use is expected under the No Action Alternative.

3.2.2 Action Alternative

An analysis of the soil classifications according to the Natural Resource Conservation Service (NRCS), USDA, Web Soil Survey for the Action Alternative shows the majority of the soil within the project area footprint is considered "not prime farmland" and some is considered "prime farmland"(Appendix A). However, the action area has not been used for agricultural production or farmed; therefore, no impacts to agriculture are expected.

3.3 HYDROLOGY AND HYDRAULICS

There is an overflow dike that extends from the dam storage yard on the Illinois side of the dam to the Illinois bluffs. Since construction, the overflow dike has been overtopped numerous times. The cyclical behavior of head water and tailwater which produce these differential heads have caused the overflow dike and areas immediately downstream to incur damages from seepage and scour. Additionally, debris naturally deposits after periods of inundation on the structure and must be removed to ensure that the structure maintains its integrity. In 2015, emergency repairs were completed downstream of the overflow dike to address scour and seepage concerns.

The Mississippi River along the Illinois bluff within the side channel near the project location has a maximum velocity of 4.4 ft/s at the 438,000 cfs event (~ 1% frequency event). The maximum velocity was obtained through an existing depth-averaged, 2-D hydrodynamic Adaptive Hydraulics Model (AdH) model of the Mississippi River at L&D 25. From the results hydraulic scour potential within the side channel near the project area is relatively low, especially with lower flow events occurring regularly through the tainter gates of L&D 25. The existing hydraulic conditions near the haul road project

location occur in a backwater region downstream of the overflow dike at the L&D 25. The flow withing this reach of the river is back fed from downstream to upstream and is relatively static and stagnate until water overtops the overflow dike. Once the overflow dike overtops, then flow and velocity increase slightly, but do not exceed the maximum velocity of 4.4 ft/s, previously mentioned for the 1% frequency event.

Executive Order (EO) 11988 Floodplain Management directs federal agencies to avoid, to the extent possible, the long and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative. Engineering Regulation (ER) 1165-2-26 Implementation of Executive Order 11988 on Floodplain Management outlines the USACE policy for compliance with EO 11988. ER 1165-2-26 states it is the policy of USACE to formulate projects which, to the extent possible, avoid or minimize adverse impacts associated with use of the base floodplain and avoid inducing development in the base floodplain unless there is no applicable alternative. The base floodplain is defined as the area subject to a one percent chance of flooding in any given year.

The study area encompasses the Mississippi River and its associated riparian area, all of which are within the base floodplain as defined by ER 1165-2-26. There are currently no structures within the 100-year floodplain of the project area (Appendix A). However, most of the study area is a forested wetland.

3.3.1 No Action Alternative

Under the No Action Alternative, the hydrology and river hydraulics at the project area are expected to remain similar to the existing conditions with minimal natural variability.

Under the No Action Alternative, the project area would not see any hydrology changes that would redefine the 100-year, or base, floodplain. No residential or commercial development is expected to occur within the base floodplain under the No Action Alternative.

3.3.2 Action Alternative

Construction of the Action Alternative would have no significant impact on the hydrology and hydraulics within the project area as the flow and velocity dynamics would remain relatively unchanged with the project in place. A permanent access road would be placed near existing grade along the river bluff along the Illinois side of the Mississippi River to provide access for maintenance crews and equipment over towards the overflow dike at L&D 25. The hydrologic drainage area of the project area was determined to be approximately 18.5 acres or 0.03 square miles, using 2018 LiDAR topography following contour ridgelines within the limits of the permanent access road. The hydrologic peak runoff was calculated to be 21.6 cubic feet per second (cfs), using the Rational Method at a 2-year, 15-minute storm frequency event.

However, to prevent potential erosion and scour damage, the access road would require an aggregate driving surface with a rock lined drainage ditch or swale as well as a culvert underneath to allow for drainage. Additionally, the access road would require side slopes lined with riprap revetment for road stability along the entire embankment to protect against potential embankment erosion and/or scouring

along the river side channel during higher flow events when overtopping occurs at the overflow dike at L&D 25.

The action alternative would occur within the base floodplain as defined by ER 1165-2-26. In general, construction would cause temporary disturbances to the riparian area within the base floodplain. Construction access would be obtained by an existing road and the new access road would be constructed in a manner to reduce the disturbance footprint. Improvements could include gravel surfacing and clearing overhead branches. Staging area for materials and equipment would likely be established in an open land, an area of minimal flood hazard. Tree clearing associated with the project is anticipated to be cumulatively 1.5 acres.

The action alternative is not expected to induce development within the base floodplain.

3.4 WATER QUALITY

The Illinois EPA Section 303(d) list includes this section of the Mississippi River (HUC 07110004) as impaired for fish consumption due to mercury, PCBs, and pesticides, and for primary contact due to Fecal coliform (IEPA, 2024).

Illinois Environmental Protection Agency has had an active water quality monitoring program since the mid-1990s at the Rivers Project that consists of physical, chemical, and biological sampling. MVS Environmental Quality section executes seasonal sampling with a minimum of four events annually (funding dependent). Physical, chemical, and biological data are collected throughout the Mississippi and Illinois Rivers at designated stations which best represent the entire watershed. One such long term monitoring station (UMR-7) is located approximately 1.3 miles downstream of L&D 25. Water quality concerns for this and other stations nearby include high concentrations of phosphorus, chlorophyll, and bacteria.

3.4.1 No Action Alternative

Under the No Action Alternative, the water quality is expected to remain in similar current existing conditions.

3.4.2 Action Alternative

Under the Action Alternative, gravel material would be placed in a one lane width along the base of the bluff creating an access road, the bluff would help mitigate any water quality issues. Action Alternative may result in minor and/or temporary water quality impacts due to the construction of the project; use of the best management practices (BMPs) would be enforced. The action proposed would not adversely contribute to water quality impacts. Therefore, the impacts to water quality due to construction would be negligible and short term.

It is the USACE policy to comply with requirements of the Clean Water Act (CWA) and prevent degradation of existing water quality conditions to the maximum extent that is practicable, consistent with project authorities, federal legal and regulatory requirements, public interest, and water control

manuals. The Clean Water Act Section 404(b)(1) was completed to evaluate impacts to water quality is found in Appendix B.

3.5 WETLANDS AND TERRESTRIAL HABITAT

Wetlands are areas where the frequent and prolonged presence of water at or near the ground surface dictates the kinds of soils that form, the plants that grow, and the fish and/or wildlife that use the habitat. Wetland habitats are important ecosystems because they provide flood control and storm barriers. Wetlands are sometimes called "nature's kidneys" due to their ability to absorb and filter out harmful chemicals and pollutants from aquatic systems.

Under Section 404 of the Clean Water Act, wetlands are a protected habitat type and the alteration, or destruction, of wetlands requires mitigation. A Wetland delineation was completed September 1st, 2023, by the St. Louis USACE Regulatory office. Due to the Hydric Soils, hydrophytic plant community, and wetland hydrology, it was determined that the entire proposed access road lies within a wetland. The wetland criteria were observed during a mild drought, which means that under normal climatic conditions, the wetland area would likely be larger and even more prominent. Wetland extent within the proposed access road footprint includes the entire proposed project area (Figure 6). Exceptions would include very small portions of what appears to be a severely degraded road bed, and the southern portion of the road that is immediately abutting the parking/staging area.

3.5.1 No Action Alternative

Under the No Action Alternative, the wetland and terrestrial habitat is expected to remain in similar to the existing conditions.

3.5.2 Action Alternative

Under the Action Alternative, approximately 0.5 acres of wetland habitat would be temporarily removed, while 1 acre of wetland would be permanently replaced by the proposed access road. However, the area adjacent to the project footprint is densely forested wetland and would provide places for wildlife displaced due to construction a place to take shelter until construction would be completed. Reforestation through natural regeneration would occur in the excavated area that is not having fill material placed (Appendix B; Section 404(b)(1) Clean Water Act). Therefore, this feature would have a minor long-term effect on wetlands a terrestrial habitat, which would be offset by mitigation.

The Upper Mississippi River System Floodplain Forest Habitat Model (certified for regional use in the Upper Mississippi River System, expiration 8 September 2028) was used to evaluate impacts of the project on forested wetland. Upper Mississippi River System Floodplain Forest Habitat Model spreadsheet was used to calculate average annual habitat units (AAHU), which is a measure of habitat quality over a 50-year period. Based on the analysis of existing, future without project (FWOP), and future with project (FWP) conditions, project activities would negatively impact 0.77 AAHUs of forested wetland, requiring compensatory mitigation. USACE is proposing to implement a mitigation project to offset unavoidable projects impacts (Figure 7). Mitigation would occur on a 5-acres field in Batchtown, IL (39.054621°, -90.675009°) that is managed by USACE. There has been low survivorship of the existing trees and an increase in reed canary grass throughout the site. The field would benefit from a

supplemental planting of containerized cottonwood and sycamore trees. These trees would grow quickly and shade out reed canary grass. Detailed mitigation calculations and planning can be found in Appendix C.

Figure 6. Forested wetland along the proposed access road, pictures from July 2023 site visit.

Figure 7. Proposed mitigation field area (yellow).

3.6 AQUATIC AND TERRESTRIAL ORGANISMS

Common terrestrial species in the project area include white-tailed deer (*Odocoileus virginianus*), coyotes (*Canis latrans*), gray fox (*Urocyon cinereoargenteus*) and red fox (*Vulpes vulpes*), bobcats (*Lynx rufus*), skunks (*Mephitidae*), river otters (*Lontra canadensis*), weasels (*Mustela*), minks (*Neogale vison*), opossums (*Didelphidae*), eastern cottontail rabbits (*Sylvilagus floridanus*), eastern gray (*Sciurus carolinensis*) and fox squirrels (*Sciurus niger*), chipmunks (*Tamias*), beavers (*Castor*), muskrats (*Ondatra zibethicus*), eastern wild turkey (*Meleagris gallopavo*), bobwhite quail (*Colinus virginianus*), as well as several mouse, bat, and other species. Several species of birds are also common in and around the project area. Common bird species for the area include raptors, songbirds, and waterfowl.

Aquatic Organisms present in the area of L&D 25 are typical for this reach of the Mississippi River. Dominant species include bluegill (*Lepomis macrochirus*), black crappie (*Pomoxis nigromaculatus*), white crappie (*Pomoxis annularis*), channel catfish (*Ictalurus punctatus*), blue catfish (*Ictalurus furcatus*), flathead catfish (*Pylodictis olivaris*), common carp (*Cyprinus carpio*), and freshwater drum (*Aplodinotus grunniens*). In addition, lake sturgeon (*Acipenser fulvescens*) is likely to occur near the lock and dam. Deep holes in the vicinity of L&D 25 may provide fish with overwintering habitat.

3.6.1 No Action Alternative

Under the No Action Alternative impacts to fish and wildlife would remain consistent with the existing conditions.

3.6.2 Action Alternative

There would be impacts to wildlife as forested areas are temporarily and permanently cleared during construction. However, the area adjacent to the project footprint is densely forested and would provide

places for wildlife displaced due to construction a place to take shelter until construction would be completed. Both aquatic and terrestrial organisms are anticipated to relocate due to constructions activities such as: noise and vibration. Impacts to aquatic organisms would be minor short-term due to constructions activities and would be expected to return to existing conditions following the completion of the construction.

3.7 PROTECTED SPECIES

3.7.1 Bald and Golden Eagle

Bald eagles (*Haliaeetus leucocephalus*) winter along the major rivers of Illinois and Missouri, and at scattered locations some remain throughout the year to breed. Perching and feeding occurs along the edge of open water, from which eagles obtain fish. The bald eagle is protected under the Bald and Golden Eagle Protection Act and by the Migratory Bird Treaty Act. Recommendations to minimize potential project impacts to the bird and nests are provided by the USFWS in the agency's National Bald Eagle Management Guidelines publication (USFWS, 2007). The guidelines recommend: (1) maintaining a specified distance between the activity and the nest (660 foot buffer area); (2) maintaining natural areas (preferably forested) between the activity and nest trees (landscape buffers); and (3) avoiding certain activities during the breeding season. Specifically, construction activity is prohibited within 660 feet of an active nest during the nesting season, which in the Midwest is generally from late January through late July.

There are two documented bald eagle nests in the project vicinity, approximately 1.78 miles northwest of the proposed project area. These nests are not visible from the project area and are outside the recommended 660-ft buffer area.

All Alternatives: No impacts to bald eagles, or their nests, are anticipated under the No Action and Action Alternatives. If a bald eagle nest is observed during construction activities, then the USFWS would be contacted, and the guidelines would be implemented.

3.7.2 State Listed Species

The Illinois Department of Natural Resources (IDNR) was contacted via the Ecological Compliance Assessment Tool (EcoCAT) website on 8 May 2025, for a list of Illinois state threatened and endangered (T&E) species that could potentially be located in the proposed project area (IDNR project number: 2512853, Alternate number: 2317105). The EcoCAT report identified the Batchtown Mussel Bed INAI Site, Cap Au Gris INAI Site, West Point Landing Geological Area INAI Site, Butterfly Mussel (*Ellipsaria lineolate*), and Lake Sturgeon (*Acipenser fulvescens*). The West Point Landing Geological Area INAI Site is described in detail in Section 3.1 Topography, Geology, and Soil.

All Alternatives: No impacts to state-listed species or INAI sites, are anticipated under the No Action and Action Alternatives. According to the concurrence letter form EcoCat received on 13 May 2025, the IDNR concluded that adverse effects are unlikely to occur by the proposed action.

3.7.3 Federally Listed Species

In accordance with Section 7(a)(2) of the Endangered Species Act (ESA) of 1973 (as amended), federally funded, constructed, permitted, or licensed projects must take into consideration impacts to federally listed and proposed threatened or endangered species.

The U.S. Fish and Wildlife Service (USFWS) was contacted via USFWS Information for Planning and Consultation (IPaC) website on March 12 2025, for a list of Federal threatened, endangered and candidate species that could potentially be located in the project area (Project Code: 2023-0112542; Table 2).

Table 1. List of federally listed threatened and endangered species potentially occurring within the proposed project area.

Common Name	Scientific Name	Listing Status	Habitat
Indiana bat	*Myotis sodalis*	Endangered	Hibernacula in caves and mines; maternity and foraging habitat in small stream corridors with well developed riparian woods; upland forests.
Tricolored bat	*Perimyotis subflavus*	Proposed Endangered	Hibernates in caves and mines – swarming in surrounding wooded areas in autumn. Roosts and forages in upland forests during late spring and summer.
Spectaclecase (mussel)	*Cumberlandia monodonta*	Endangered	Suitable habitat is typically within large rivers in areas where they are sheltered from the main force of the river currents. Typically, this species is clustered in firm mud and sheltered areas such as rock, riprap, rock slabs or between boulders. The fish hosts for this species are mooneye (Hiodon tergisus) and goldeye (H. alosoides).
Monarch Butterfly	*Danaus plexippus*	Proposed Threatened	During the breeding season, monarchs lay their eggs on their obligate milkweed host plant.
Western Regal Fritillary	*Argynnis idalia occidentalis*	Proposed Threatened	A migratory insect that uses violet plants as a reproductive host. Found in tall grass prairie habitat.
Decurrent False Aster	*Boltonia decurrens*	Threatened	Disturbed alluvial soils

Indiana bat (*Myotis sodalist*) The Indiana bat is typical of the Myotis species in its appearance. Flying insects are the typical prey and its diet reflects the species present in its available foraging habitat. It typically forages along the shorelines of rivers and lakes, in the canopy of trees in floodplains and in upland forests. In summer, habitat consists of wooded or semi-wooded areas, mainly along streams. Females, solitary or in small maternity colonies, bear their offspring in hollow trees or under loose bark of living or dead trees. Trees standing in sunny openings are attractive because of warmer air spaces and

crevices under the bark. Maternity sites have been reported as occurring in riparian areas, floodplain forests, and upland habitats. Habitat for the Indiana bat extends from eastern Oklahoma, north to Iowa, Wisconsin, and Michigan (USFWS, 2025a), east to New England and south to western North Carolina, Virginia, and northern Alabama. Northern populations migrate south to Alabama, Tennessee, Kentucky, Indiana, Missouri, and West Virginia for winter. Limestone caves with pools are preferred for hibernacula. Hall (1962) noted that preferred caves are of medium size with large, shallow passageways.

No Action Alternative: The No Action Alternative would have no impact on the listed bat species.

Action Alternative: No caves and bluff/rock formation area would be impacted by the project. Approximately 1 acre of trees would be removed from several locations for site access and placement. Suitable summer roost and foraging habitat may be located in the forested areas in the vicinity of the project area. As a best management practice, in order to minimize impacts to tree roosting bat species, tree clearing would be restricted to the bat non-active period between 1 October through 31 March. For these reasons, the District determined the proposed project ***may affect, but is not likely to adversely affect*** **(NLAA)** Indiana Bat.

Tricolored bat (*Perimyotis subflavus*) On September 13, 2022, the USFWS announced a proposal to list the tricolored bat as endangered since it is in danger of extinction throughout all or a significant portion of its range. The tricolored bat is a small insectivorous bat that is distinguished by its unique tricolored fur and often appears yellowish to nearly orange. The once common species is wide ranging across the eastern and central United States and portions of southern Canada, Mexico, and Central America. During the winter, tricolored bats are often found in caves and abandoned mines, although in the southern United States, where caves are sparse, tricolored bats are often found roosting in road-associated culverts. During the spring, summer, and fall, tricolored bats are found in forested habitats where they roost in trees, primarily among leaves of live or recently dead deciduous hardwood trees, but may also be found in Spanish moss, pine trees, and occasionally human structures (USFWS, 2025b). Tricolored bats face extinction due primarily to the range wide impacts of white-nose syndrome, which has caused estimated declines of more than 90 percent in affected tricolored bat colonies across the majority of the species range. Suitable summer roost and foraging habitat may be located in the forested areas in vicinity of the project area.

No Action Alternative: The No Action Alternative would have no impact on the listed bat species.

Action Alternative: No caves and bluff/rock formation area would be impacted by the project. Approximately 1 total acres of trees would be removed from several locations for site access and sediment placement. Suitable summer roost and foraging habitat may be located in the forested areas in the vicinity of the project area. In order to minimize impacts to bat species, tree clearing would be restricted to the bat non-active period between 1 October through 31 March. Due to this site-specific information, the St. Louis District has made a **NLAA** determination for the tricolored bat.

Spectaclecase (mussel) (*Cumberlandia monodonta*) On April 12, 2012 the spectaclecase was listed as a endangered species by the USFWS and is still in danger of extinction throughout its range. It is found in the Mississippi, Missouri and Ohio River basins. The spectaclecase is considered a specialist species that

requires very specific habitat needs, which limit its current range and distribution to certain sites within large rivers. Spectaclecase mussels depend mostly on a fish and other aquatic species to move upstream. Dams block fish passages which prohibit mussels from moving upstream. This isolates populations and leads to small, unstable populations. Consequently, these smaller populations are more vulnerable to other threats. The lifestyle of a spectaclecase is mostly sedentary which enhances their vulnerability to toxins and poor water quality. Contaminants from accidental spill, factory discharge, sewage treatment plants and landfills and runoff from field feedlots, mines and construction sites can directly kill mussels, and indirectly kill host fish (USFWS, 2024).

No Action Alternative: The No Action Alternative would have no impact on the listed mussel species.

Action Alternative: The spectaclecase could potentially found very low numbers in Pools 25 and 26, no individuals have been found near the project area and project impacts to the spectaclecase are highly improbable due to overall lack of suitable habitat. Due to the site-specific information, the St. Louis District has made a **no effect** determination for the spectaclecase.

Monarch Butterfly (*Danaus plexippus*) has been a candidate species since December 2020. Much of the monarch butterfly's life is spent migrating between Canada, Mexico, and the United States. Grasslands of central North America, particularly the area known as the Corn Belt, and areas vegetated by milkweed (*Asclepias syriaca L*.) comprise the majority of its summer breeding areas. During the breeding season, monarchs lay their eggs on their obligate milkweed host plant and larvae emerge after two to five days (USFWS, 2025c). Nectar sources are also required by the butterflies to fuel fall migration and spring flights northward. Monarch populations of eastern North America have declined 90%, due primarily to deforestation, illegal logging, increased development, agricultural expansion, livestock raising, forest fires, and other threats to their migratory paths and summer and overwintering habitats. Chemical-intensive agriculture, increasing acreage converted to row crops, and mowing/herbicide treatment of roadsides have contributed to a decline of milkweed, the only plant eaten by monarch caterpillars.

No Action Alternative: The No Action Alternative would have no impact on the listed butterfly species.

Action alternative: Multiple site visits were conducted at the proposed area and there are no populations of milkweed in the project area. Project activities are unlikely to affect individual monarch butterflies or their habitat, the St. Louis District has made a **NLAA** determination for the Monarch Butterfly.

Western Regal Fritillary (*Argynnis idalia occidentalis*) is listed as a Proposed Threatened species by the USFWS wherever it is found. This particular butterfly has a large rusty orange color with distinctive rows of white spots that's curve across the wings. The western regal fritillary is now almost completely confined to high-quality native tallgrass prairie habitats. Much of the western regal fritillary's life is spent migrating across Arkansas, Colorado, Connecticut, Delaware, Illinois, Indiana, Iowa, Kansas, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, South Dakota, Vermont,

Virginia, West Virginia, Wisconsin and parts of Canada in search of its host plant, prairie violets. Populations are declining because their prairie habitat is disappearing.

No Action Alternative: The No Action Alternative would have no impact on the listed butterfly species.

Action Alternative: Multiple site visits were conducted at the proposed project area and prairie violets were not present. Due to this site-specific information, the St. Louis District has made a **NLAA** determination for the Western Regal Fritillary.

Decurrent False Aster (*Boltonia decurrens*) is listed as threatened and 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. Decurrent false aster favors recently disturbed areas, and flooding may play a role in maintaining this habitat type. Current habitats include riverbanks, old fields, roadsides, mudflats and lake shores.

No Action Alternative: The No Action Alternative would have no effect the listed perennial plant specie.

Action Alternative: Multiple site visits were conducted at the proposed project area and the decurrent false aster was not present. No suitable habitat would be adversely impacted by the proposed work involved. Due to this site-specific information, the St. Louis District has made a **NLAA** determination for the decurrent false aster.

3.8 RECREATION

A substantial amount of recreation activity occurs in and around the L&D 25 area and downstream. St. Louis and Illinois makes it an attractive outdoor recreation area for a large population. The area is also used regularly by local residents. People are attracted to the river because of the resources and recreational opportunities that it offers. The area is used heavily by hunters, fishermen, birdwatchers, picnickers, recreational boaters, and walkers. The L&D 25/Winfield Recreation Area provides a useful public bank-side access point to the river, comfort station and a parking lot, important for many activities. Most of the land is Federal land, there is not recreational site in the project area, but is only publicly accessible from the river - by boat under high stage conditions or by foot under low stage conditions. In general, recreationally enjoyment of the project area is passive from a boat on the Mississippi River.

3.8.1 No Action Alternative

Under the No Action, recreation in the project area is not expected to change from existing conditions.

3.8.2 Action Alternative

Under Action Alternative, impacts to the passive recreation experience would be minor and temporary. There may be disruptions from noise during construction, but that would cease following the completion of the access road. Public access to the L&D 25 Spillway would be restricted.

3.9 HISTORIC AND CULTURAL RESOURCES

It is outlined in Section 106 of the National Historic Preservation Act of 1966, as amended, that impacts on cultural resources be considered prior to actions of federal agencies. On October 7, 2024, USACE archaeologists conducted a Phase I cultural resources survey to determine if unknown archaeological resources were located within the proposed project area and to meet the Section 106 requirements. Subsurface testing was implemented in all construction areas, a total of 24 shovel tests were conducted. All of which revealed frequently flooded soils with many layers of recent deposition. The survey revealed that the northern portion of the project area is located within the L&D 25 Historic District, however, the project area does not intersect any contributing structures within the Historic District. No other cultural resources were identified.

All Alternatives: no impacts to historical or cultural resources. In a letter dated October 11, 2024, USACE has determined that no historic properties will be affected by the proposed action. In a letter dated November 3, 2024, the Illinois State Historic Preservation Officer (SHPO) concurred with the District's determination (SHPO Log Number: 001101524) (Appendix A).

3.10 TRIBAL RESOURCES

The St. Louis District consults with 22 tribes that have an interest in proposed project area. Consultation was initiated with these tribes on October 29, 2024, via a letter explaining the proposed project and the results of the archaeological survey. Tribes were asked to review the information and notify the District of any tribal concerns. To date a total of four tribes have replied and expressed no concerns with the project but requested to be notified if archaeological or human remains are identified during construction. The letter to the tribes and the replies received can be found in Appendix A.

All Alternatives: no impacts to tribal resources.

3.11 HAZARDOUS, TOXIC, AND RADIOACTIVE MATERIALS

USACE regulations (ER 1165-2-132 and ER 200-2-3), and St. Louis District policy, requires procedures be established to facilitate early identification and appropriate consideration of potential hazardous, toxic, or radioactive water (HTRW) in reconnaissance, feasibility, preconstruction engineering and design, land acquisition, construction, operations and maintenance, repairs, replacement, and rehabilitation phases of water resource studies or projects by conducting HTRW Initial Hazard Assessments. USACE specifies that these assessments follow the process/standard practices for conducting Phase I Environmental Site Assessments published by the American Society for Testing and Materials (ASTM). The objective of the Phase I was to identify, to the extent feasible pursuant to the process described, recognized environmental conditions (RECs) in connection with a given property(s). This assessment is prepared using the following ASTM Standards:

- E1527-21: Standard Practice for Environmental Site Assessments – Phase I Environmental Site Assessment process
- E1528-14: Standard Practice for Limited Environmental Due Diligence: Transactions Screen Process (interview questionnaires)
- ER 200-2-3: Environmental Quality: Environmental Compliance Policies

According to ER 200-2-3, the acquisition of an easement does not require an Environmental Condition of Property (ECP) Report which is the equivalent of the ASTM ESA. However, given the construction involved in building and maintaining this road it was decided that a modified ESA Phase I was appropriate to capture the current condition of the property. A modified ESA Phase I was conducted by CEMVS-EC-EQ and detailed in a memorandum dated August 9, 2023. This consisted of a site visit, interview, and review of available historical information from environmental databases. This ESA Phase I revealed no evidence of RECs in connection with this property (Appendix A).

3.11.1 No Action Alternative

Hazardous, Toxic, and Radioactive waste concerns in the project area would be anticipated to remain similar to existing conditions under the No Action Alternative.

3.11.2 Action Alternative

A Phase I Environmental Site Assessment was conducted in August 2023. The project shall comply with the protection of the environment and natural resources. Contractor(s) performing the work are required to comply with all applicable Federal, state, and local environmental laws and regulations. This includes but is not limited to disposal of hazardous materials, petroleum products, pesticide/herbicide use, and spill reporting on the construction site. The Environmental Quality Section should be contacted immediately if HTRW material is encountered at any point during construction activities.

3.12 Air Quality and Noise

The Clean Air Act of 1963 requires the USEPA to designate National Ambient Air Quality Standards (NAAQS). The USEPA has identified standards for six pollutants: lead, sulfur dioxide, carbon monoxide, nitrogen dioxide, ozone, particulate matter (less than 10 microns and less than 2.5 microns in diameter), along with some heavy metals, nitrates, sulfates, volatile organic and toxic compounds (Table 2). The project area is in rural Calhoun County, which is in attainment for all six criteria pollutants (USEPA, 2024).

Table 2. Six pollutants and their standard criteria designated by the USEPA.

Pollutant	Averaging time	Criteria	Form
Carbon monoxide	8 hours	9 ppm	Not to be exceeded more than once per year
	1 hour	35 ppm	
Lead	Rolling 3 month	0.15 µg/m^3	Not to be exceeded
Nitrogen dioxide	1 hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	1 year	53 ppb	Annual Mean
Ozone	8 hours	0.070 ppm	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
Particle	1 year	12.0 µg/m^3	Annual mean, averaged over 3 years

Pollution ($PM_{2.5}$)	24 hours	35 µg/m^3	98th percentile, averaged over 3 years
Sulfur dioxide	1 hour	75 ppb	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years

The land use surrounding the proposed project includes a L&D 25 operations, rock quarry, wooded rural foothills, open space and recreational areas. There are no major population centers near the project area. Agricultural and open space areas typically have noise levels in the range of 30-70 decibels (dB) depending on their proximity to major transportation facilities. Noise associated with major transportation facilities such as highways and railroads would be greater than those in rural areas. In addition to mining/quarry operations near the project area, transportation related noise associated with barge traffic are the main sources of noise within the study area. Figure 7 illustrates common sounds and their associated noise levels.

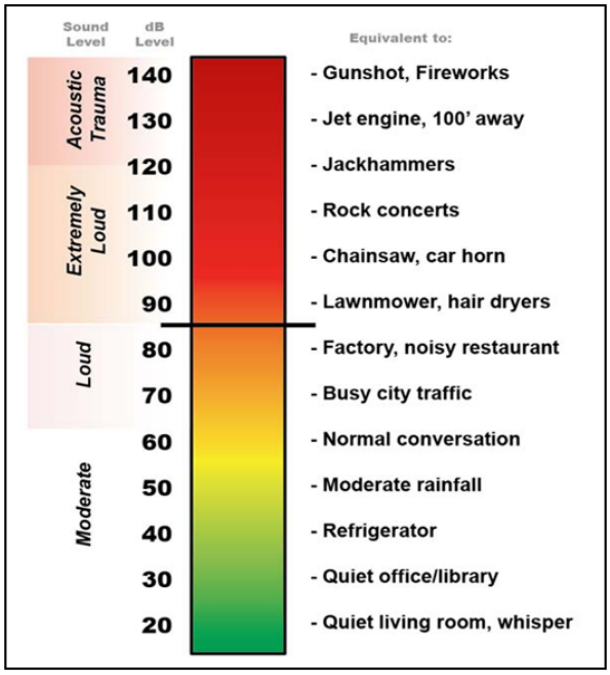

Figure 7. Sound level and decibel (dB) level of a variety of sources. The land-use within the project area consists of forest, agriculture, and transportation. Agricultural and open space areas typically have noise levels in the range of 30-70 dB.

3.12.1 No Action Alternative

No effects to air quality or noise would result from the No Action Alternative.

3.12.2 Action Alternative

The Action Alternative air quality would also be subjected to short-term impacts in the construction areas. Emissions from construction machinery, as well as dust would be generated during project construction. If practical, the use of off-road construction equipment that has been retrofitted with air pollution control devices would further reduce the emissions related to the project. Grading operations

and the transportation and handling of materials, such as earth and aggregates, would result in the release of dust into the air. Specifically, adherence to the sections concerning fugitive dust and visible emissions would be required in the construction contracts in an effort to minimize the short-term effects upon air quality within the project areas.

The noise level would increase during project construction. The overall long-term noise level would not increase. Noise may unsettle organisms in the area.

Therefore, impacts to air quality and noise would be minor and temporary in nature.

3.13 TRANSPORTATION

The Mississippi Rd and 1475E converge at West Point Landing Rd. West Point Landing leads to the easement in which USACE has access to in order to construct the access road that leads to the Illinois bankline of L&D 25.

The Mississippi River and L&D 25 are integral parts of a large navigation network. Primarily, the network serves as a transportation system for large barges carrying bulk commodities up and down the river system. It connects Midwest ports with destinations throughout the world. It also carries a substantial amount of small private boat traffic. It is vital part of the local, regional, and national transportation system.

3.13.1 No Action Alternative

Under the No Action Alternative, transportation would remain the same. All access to L&D 25 would be from Missouri along the western shoreline. USACE personnel and equipment would all be funneled through that access point. Backups due to traffic or construction could become a hindrance at L&D 25 for general O&M as well as any future construction at L&D 25.

Additionally, if any emergency or critical construction is needed at L&D 25 navigation could be affected, depending on the season, it could have major economic impacts.

3.13.2 Action Alternative

Under the Action Alternative, traffic numbers would increase on the roadways heading in Illinois heading into the eastern side of L&D 25. USACE personnel and contractors would have access to the road which would in some cases make travel time for faster as well as lower the traffic congestion on the roads leading into L&D 25 from the western roadways. Increased noise and vibration could from a higher volume of traffic in the proposed project area could cause a minor disturbance to the local species. Some species may be displaced for a short amount of time during and after construction. The effects from this action would be short term and negligible. Would be permanent beneficial to traffic conditions in having two access to L&D 25 for future maintenance and repairs.

Additional under the Action Alternative the proposed project should have no impact on commercial navigation.

4 CUMULATIVE ADVERSE IMPACTS

This chapter identifies possible cumulative effects of the considered alternatives when combined with past trends and other ongoing or expected future plans and projects. The discussion of cumulative impacts considers the effects on the resource that result from the incremental impact of the action being considered when added to other past, present, and reasonably foreseeable future actions regardless of what agency, Federal or non-Federal, or person undertakes such other actions. Cumulative impacts can result from individually minor, but collectively significant, actions taken place over a period of time (40 CFR §1508.7).

4.1 BOUNDING CUMULATIVE EFFECT ANALYSIS

Cumulative effect analysis requires expanding the geographic boundaries and extending the time frame to encompass additional effects on the resources, ecosystem, and human communities of concern.

The geographic boundaries for each resource were determined by the distribution of the resource itself, and the area within that distribution where the resource could be affected by the project in combination with other past, present, and reasonably foreseeable actions (Table 3). The geographic boundary for the cumulative effects action area for threatened and endangered species, and other fish and wildlife, land use, transportation, esthetics, and air qualilty was defined as all lands and waters within five miles of the project boundary. This five mile area was used because Indiana bat foraging distances have been documented to be from about ½ mile to about five miles from roosts for females and about ½ mile to about two miles from roosts for males (USDA Forest Service, 2005). Therefore, the selected boundary should encompass the entire home range of any individual bat using any part of the proposed action area, including indiana, and tricolored bats, in addition to any land use changes that may impact fish and wildlife. The project area location boundary for historic and cultural resources was used due to the scale of the surveys that took place. Finally, water quality and HTRW were limited to a 1-mile radius due to natural boundaries of the project as well as the size and scale of the proposed project.

Table 3. Geographic boundaries for the cumulative effects analysis for resources outlined in this Environmental Assessment.

Resource	Geographic Boundary
Land use	5-mile Radius
Aquatic Habitat & Wetlands	5-mile Radius
Wildlife & Fisheries	5-mile Radius
IL Species of Concern	5-mile Radius
Threatened & Endangered Species	5-mile Radius
Water Quality	1-mile Radius
HTRW	1-mile Radius
Historic & Cultural Resources	Project Area
Socioeconomics & Transportation	5-mile Radius
Recreation & Aesthetics	5-mile Radius
Air Quality & Noise Levels	5-mile Radius

The timeframe for the cumulative effects analysis for each resource begins when past actions began to change the status of the resource from its original condition, setting the long-term trend currently evident and likely to continue into the reasonably foreseeable future. For all resources, the timeframe began in approximately 1939 when the construction of Lock and Dam was originally completed and ends in 2076 (50 years after proposed project completion).

4.2 IDENTIFYING PAST, PRESENT, AND REASONABLY FORESEEABLE FUTURE ACTIONS

In order to identify present and reasonably foreseeable actions, information regarding the existing conditions of the Project area and its environment were collected from resources managers and online resources (Chapter 3). "Reasonably foreseeable actions" were defined as actions or projects with a reasonable expectation of actually happening, as opposed to potential developments expected only on a basis of speculation. The following criteria were applied to determine reasonably foreseeable actions:

- Actions on an agency's list of proposed actions
- Actions where scoping has started
- Actions already permitted
- Actions where budgets have been requested

Based on these criteria, the following actions were identifies as being reasonably foreseeable and were included in these cumulative effects analysis (Table 4):

- O&M at L&D 25
- Construction of access road
- Construction of a new 1200-foot lock at L&D 25

Table 4. Cumulative Effects Analysis for Identified Resources.

Resource	Past Actions	Present Actions	Future Actions
Geology, Topography, & Soil	Construction of L&D 25 altered the geology, topography & soil.	O&M at L&D 25, Construction of a new 1200-foot at L&D 25	Construction access road, O&M at L&D 25, Construction of a new 1200-foot at L&D 25
Prime & Unique Farmland	Construction of L&D 25 altered the land use.	O&M at L&D 25, Construction of a new 1200-foot at L&D 25	Construction access road, O&M at L&D 25, Construction of a new 1200-foot at L&D 25

Resource	Past Actions	Present Actions	Future Actions
Hydrology & Hydraulics	Construction of L&D 25	O&M at L&D 25, Construction of a new 1200-foot at L&D 25	Construction access road, O&M at L&D 25, Construction of a new 1200-foot at L&D 25
Water Quality	Construction of L&D 25	Impacts due to L&D O&M, navigation traffic, Construction of a new 1200-foot at L&D 25	Construction access road, O&M at L&D 25, Construction of a new 1200-foot at L&D 25
Air Quality & Noise	Construction of L&D 25 altered	Impacts due to L&D O&M, navigation traffic and local traffic, Construction of a new 1200-foot at L&D 25	Construction access road, O&M at L&D 25, Construction of a new 1200-foot at L&D 25
Recreation	Construction of L&D 25	Recreation, Construction of a new 1200-foot at L&D 25	Construction access road, O&M at L&D 25, Construction of a new 1200-foot at L&D 25
HTRW	Construction of L&D 25	Impacts due to L&D O&M, navigation traffic, Construction of a new 1200-foot at L&D 25	Construction access road, O&M at L&D 25, Construction of a new 1200-foot at L&D 25
Transportation	Construction of L&D 25	Impacts due to L&D O&M, navigation traffic and local traffic, Construction of a new 1200-foot at L&D 25	Construction access road, O&M at L&D 25, Construction of a new 1200-foot at L&D 25
Cultural & Tribal Resources	Construction of L&D 25	L&D 25 is listed in the National Register of Historic Places, Construction of a	Construction access road, O&M at L&D 25, Construction of a new 1200-foot at L&D 25

Resource	Past Actions	Present Actions	Future Actions
		new 1200-foot at L&D 25	
Wetlands & Terrestrial Habitats	Construction of L&D 25	Impacts due to L&D O&M, navigation traffic, Construction of a new 1200-foot at L&D 25	Construction access road, O&M at L&D 25, Construction of a new 1200-foot at L&D 25
Aquatic & Terrestrial Organisms	Construction of L&D 25	Impacts due to L&D O&M, navigation traffic, Construction of a new 1200-foot at L&D 25	Construction access road, O&M at L&D 25, Construction of a new 1200-foot at L&D 25
Bald & Golden Eagles	Construction of L&D 25	Impacts due to L&D O&M, navigation traffic, recreational activities, local traffic, Construction of a new 1200-foot at L&D 25	Construction access road, O&M at L&D 25, Construction of a new 1200-foot at L&D 25
Threatened & Endangered Species	Construction of L&D 25	Impacts due to L&D O&M, navigation traffic, Construction of a new 1200-foot at L&D 25	Construction access road, O&M at L&D 25, Construction of a new 1200-foot at L&D 25

Within the cumulative effects analysis area, the major land cover types include the forested wetland throughout the majority of the project area as well as the bluff that is adjacent to the proposed access road. The Action Alternative would result in the removal of less than 1 acre of forest for the access road construction, which less than 1% of the total available forested habitat within the cumulative effects analysis area. Due to the federal right of way and proposed project, it is expected that forested habitats will remain as the main land uses in the proposed Project area.

5 EVALUATION AND COMPARISON OF ALTERNATIVES

Table 5. Potential impacts for each alternative and construction costs were compared in order to tentatively select a suitable alternative for further development.

Resource	No Action	Action Alternative
Project Objective	Does not meet objective	Fully meets objective
Topography, Geology & Soil	No Change	651.08 cubic yards of fill material permanently placed along base of bluff totaling approx. 1 acre of area. No adverse effect.
Prime and Unique Farmland	No Change	Approx <0.5 acres of tree clearing; Loss of 0 acres of prime farmland. Minor impacts to land use.
Hydrology & Hydraulics	No Change	Less than significant
Water Quality	No Change	Minimal amount of fill material will be placed into open water near L&D 25.
Aquatic Habitat & Wetlands	No change	Permanently impact approx. 1 acre of wetlands; Permanent access road filled along base of bluff.
Wildlife & Fisheries	No Change	Minimal tree clearing would temporarily displace wildlife. Once construction is completed, only temporary disturbances would occur with use.
Threatened & Endangered Species	No Change	Temporary displacement due to construction. Mitigation would offset potential impacts to bat species.
Recreation	No Change	No Change
Historic & Cultural Resources	No Change	No Change
Tribal Resources	No Change	No Change
HTRW	No Change	No Change
Air Quality & Noise Levels	No Change	Temporary increases in noise levels that would cease after construction.
Transportation	Access would still be limited to the west side of L&D 25	The access road would allow for transportation on the eastern side to L&D 25. Once construction is completed, only temporary disturbances would

		occur with use and beneficial for future O&M.

6 PUBLIC REVIEW

This Draft Environmental Assessment and Unsigned Finding of No Significant Impact were sent to the following officials, agencies, tribes, and organizations for 30-day review and comment period (See Appendix A for list). Additionally, these documents were posted to the USACE St. Louis District website at:

https://www.mvs.usace.army.mil/Portals/54/docs/pm/Reports/EA/LD25AccessRoadDraftEA.pdf to provide access for all interested parties. All associated letters, comments, and responses will be filed with the final version of this document in Appendix A.

7 ENVIRONMENTAL COMPLIANCE

Guidance	Degree of Compliance
Federal Statutes	
Archaeological and Historic Preservation Act, as Amended, 16 U.S.C. 469, et seq.	FC[1]
Bald and Golden Eagle Protection Act, 42 USC 4151-4157	FC
Clean Air Act, as Amended, 42 U.S.C. 7401-7542	FC
Clean Water Act, as Amended 33 U.S.C. 1251-1375	PC[2]
Comprehensive Environmental Response, Compensation, and Liability Act, 42 USC 9601-9675	FC
Endangered Species Act, as Amended, 16 U.S.C. 1531-1543	FC
Farmland Protection Policy Act, 7 U.S.C. 4201-4208	FC
Federal Water Project Recreation Act, as Amended. 16 U.S.C. 4601, et seq.	FC
Fish and Wildlife Coordination Act, as Amended, 16 U.S.C. 661-666c	PC[2]
Land and Water Conservation Fund Act, as Amended, 16 U.S.C. 4601, et seq.	FC
National Environmental Policy Act, as Amended, 42 U.S.C. 4321- 4347	PC[3]
National Historic Preservation Act, as Amended, 54 U.S.C 300101, et seq.	FC
Noise Control Act, 42 USC 4901, et seq.	FC
Migratory Bird Treaty Act of 1918, 16 USC 703, et seq.	FC
Resource Conservation and Recovery Act, 42 USC 6901-6987	FC
Executive Orders	
Floodplain Management, E.O. 11988 as amended by E.O. 12148	FC
Protection of Wetlands, E.O 11990 as amended by E.O. 12608	FC
Protection and Enhancement of the Cultural Environment, E.O. 11593	FC
Consultation and Coordination with Indian Tribal Governments, 06 Nov 2000, E.O. 13175	FC
Protection of Migratory Birds (EO 13186)	FC

FC = Full Compliance, PC = Partial Compliance.

1. Full compliance will be attained after all required archaeological investigations, reports and coordination have been completed.
2. Full compliance will be attained upon completion of any permitting requirements or coordination with other agencies.
3. Full compliance will be attained upon signing of the NEPA decision document.

Applicable permits:

Certification under Section 401 of the Clean Water Act will coordinate with Illinois Department of Natural Resources. Compliance with Section 404 of the Clean Water Act was coordination with the USACE Regulatory Branch. Signing of the FONSI and the 404(b)(1) Analysis would be included in the final Environmental Assessment.

8 List of Preparers

- Zachary Day, USACE Wildlife Biologist
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- Ben Greeling, USACE HTRW Specialist
- Lara Anderson, USACE Cultural Specialist
- Meredith Trautt, USACE Tribal Specialist
- Matthew M. Voss, USACE Hydrologic & Hydraulics
- Kyle L. Wiseman, USACE Project Manager

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U.S. Fish and Wildlife Service (USFWS).2025a. Indiana Bat. Environmental Conservation Online System Overview https://www.fws.gov/species/indiana-bat-myotis-sodalis

U.S. Fish and Wildlife Service (USFWS).2025b. Tricolored Bat. Environmental Conservation Online System Overview https://www.fws.gov/species/tricolored-bat-perimyotis-subflavus

U.S. Fish and Wildlife Service (USFWS).2025c. Monarch Butterfly. Environmental Conservation Online System Overview https://www.fws.gov/species/monarch-danaus-plexippus

FINDING OF NO SIGNIFICANT IMPACT

Lock and Dam 25 Spillway Access Road Construction Project

With Environmental Assessment

Mississippi River, River Mile 241.4, Calhoun County, Illinois

The U.S. Army Corps of Engineers, St. Louis District (Corps) has conducted an environmental analysis in accordance with the National Environmental Policy Act of 1969, as amended. The final Environmental Assessment (EA) dated **DATE OF EA**, for the Lock and Dam 25 Spillway Access Road Construction Project addresses the efficiency to maintain and perform repairs as needed on the east-most part of the Lock and Dam 25 and overflow dike. Project located in Calhoun County, Illinois.

The Final EA, incorporated herein by reference, evaluated an alternative that would provide another access, beneficial for future lock and dam repairs, reduce delays on O&M, increase safety in the study area, prevent failure of the overflow dike and would help to minimize the interruption to navigation on the UMR. The recommended plan includes:

- Construction of 1,858 ft of new haul road to connect the eastern part of L&D 25.
- Implementation of compensatory mitigation of unavoidable impacts to forested wetlands.

In addition to a "no action" plan, existing resources have been part of the evaluation.

For the action alternative, the potential effects were evaluated, as appropriate. A summary assessment of the potential effects of the Recommended Plan are listed in Table 1:

Table 1: Summary of Potential Effects of the Recommended Plan.

	Insignificant effects	Insignificant effects as a result of mitigation*	Resource unaffected by action
Topography, Geology, and Soil	☒	☐	☐
Prime and Unique Farmland	☐	☐	☒
Hydrology & Hydraulics/Floodplains	☒	☐	☐
Water Quality	☒	☐	☐
Aquatic Resources/Wetlands	☐	☒	☐
Fish and Wildlife Habitat	☒	☐	☐
Threatened/Endangered Species/Critical Habitat	☒	☐	☐
Recreation	☐	☐	☒
Cultural and Historic Resources	☐	☐	☒
Tribal Resources	☐	☐	☒

	Insignificant effects	Insignificant effects as a result of mitigation*	Resource unaffected by action
Hazardous, Toxic and Radioactive Waste	☒	☐	☐
Air Quality and Noise Levels	☒	☐	☐
Transportation/Navigation	☐	☐	☒

All practicable and appropriate means to avoid or minimize adverse environmental effects were analyzed and incorporated into the recommended plan. Best management practices (BMPs) as detailed in the EA will be implemented, if appropriate, to minimize impacts. Best management practices (BMPs) as detailed in the EA will be implemented, if appropriate, to minimize impacts.

The recommended plan will result in unavoidable adverse impact to 1 acre of wetland. To mitigate for these unavoidable adverse impacts, the U.S. Army Corps of Engineers will construct the mitigation (see Appendix C).

Public review of the draft EA and FONSI was completed on 25 July 2025. All comments submitted during the public review period were responded to in the Final EA and FONSI.

Endangered Species Act:

Pursuant to section 7 of the Endangered Species Act of 1973, as amended, the U.S. Army Corps of Engineers determined that the recommended plan may affect but is not likely to adversely affect the following federally listed species or their designated critical habitat: indiana bat, tricolored Bat, monarch butterfly, western regal fritillary and decurrent false aster; and no effect determination for the spectaclecase (mussel). The U.S. Fish and Wildlife Service (FWS) concurred with the Corps' determination on **DATE OF CONCURRENCE LETTER**

National Historic Preservation Act:

Pursuant to section 106 of the National Historic Preservation Act of 1966, as amended, the U.S. Army Corps of Engineers determined that historic properties would not be adversely affected by the Action Alternative. The SHPO concurred with the determination on 3 November 2024.

Clean Water Act Section 404(b)(1) Compliance:

Pursuant to the Clean Water Act of 1972, as amended, the discharge of dredged or fill material associated with the recommended plan has been found to be compliant with section 404(b)(1) Guidelines (40 CFR 230). The Clean Water Act Section 404(b)(1) Guidelines evaluation is found in Appendix B with 404(b)(1) evaluation of the EA.

CLEAN WATER ACT SECTION 401 COMPLIANCE:

401 WQC PENDING:

A water quality certification pursuant to section 401 of the Clean Water Act was obtained from the Environmental Protection Agency (EPA) prior to construction. In a letter dated **DATE OF LETTER**, Illinois EPA stated that the recommended plan appears to meet the requirements of the water quality

certification, pending confirmation based on information to be developed during the pre-construction engineering and design phase. All conditions of the water quality certification will be implemented in order to minimize adverse impacts to water quality.

Finding:

All applicable laws, executive orders, regulations, and local government plans were considered in evaluation of alternatives. Based on this report, the reviews by other Federal, State and local agencies, Tribes, input of the public, and the review by my staff, it is my determination that the recommended plan would not cause significant adverse effects on the quality of the human environment; therefore, preparation of an Environmental Impact Statement is not required.

_____ _____

Date

Andy J. Pannier
Colonel, U.S. Army
District Commander

Lock & Dam 25 Spillway Access Road

Construction Project

Calhoun County, Illinois

June 2025

Appendix A: Environmental Compliance and Coordination

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

US Army Corps of Engineers®

1 List of Recipients

U.S. Fish and Wildlife, Southern Illinois Sub-Office
Illinois Department of Natural Resources
Illinois State Historic Preservation Officer
Caddo Nation of Oklahoma
Citizen Potawatomi Nation, Oklahoma
Eastern Shawnee Tribe of Oklahoma
Forest County Potawatomi Community, Wisconsin
Hannahville Indian Community, Michigan
Ho-Chunk Nation of Wisconsin
Iowa Tribe of Kansas and Nebraska
Iowa Tribe of Oklahoma
Kickapoo Tribe of Indians of the Kickapoo Reservation in Kansas
Kickapoo Tribe of Oklahoma
Match-E-Be-Nash-She-Wish Band of Pottawatomi Indians
Menominee Indian Tribe of Wisconsin
Miami Tribe of Oklahoma
Nottawaseppi Huron Band of the Potawatomi, Michigan
Peoria Tribe of Indians of Oklahoma
Pokagon Band of Patawatomi Indians, Michigan and Indiana
Prairie Band Potawatomi Nation
Sac & Fox Nation of Missouri in Kansas and Nebraska
Sac & Fox Nation, Oklahoma
Sac & Fox Tribe of the Mississippi in Iowa
United Keetoowah Band of Cherokee of Oklahoma
The Osage Nation

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Southern Illinois Sub-Office
Southern Illinois Sub-office
8588 Route 148
Marion, IL 62959-5822
Phone: (618) 998-5945
Email Address: Marion@fws.gov
https://www.fws.gov/office/illinois-iowa-ecological-services

In Reply Refer To: 03/12/2025 17:17:58 UTC
Project Code: 2023-0112542
Project Name: L & D 25 Access Road

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The attached species list identifies federally threatened, endangered, proposed and candidate species that may occur within the boundary of your proposed project or may be affected by your proposed project. The list also includes designated critical habitat, if present, within your proposed project area or affected by your project. This list is provided to you as the initial step of the consultation process required under section 7(c) of the Endangered Species Act, also referred to as Section 7 Consultation. If you determine that other federally protected species not listed in this Official Species List are present in your action area, you are still responsible to analyze your potential effects to those species and consult with the U.S. Fish and Wildlife Service if consultation is required.

Under 50 CFR 402.12(e) (the regulations that implement Section 7 of the Endangered Species Act) **the accuracy of this species list should be verified after 90 days**. This verification can be completed formally or informally. You may verify the list by visiting the Information for Planning and Consultation (IPaC) website https://ipac.ecosphere.fws.gov at regular intervals during project planning and implementation and completing the same process you used to receive the attached list.

Section 7 Consultation

Section 7 of the Endangered Species Act of 1973 requires that actions authorized, funded, or carried out by Federal agencies not jeopardize federally threatened or endangered species or adversely modify designated critical habitat. To fulfill this mandate, Federal agencies (or their designated non-federal representative) must consult with the U.S. Fish and Wildlife Service

(Service) if they determine their project “may affect” listed species or designated critical habitat. Under the ESA, it is the responsibility of the Federal action agency or its designated representative to determine if a proposed action may affect endangered, threatened, or proposed species, or designated critical habitat, and if so, to consult with the Service further. Similarly, it is the responsibility of the Federal action agency or project proponent, not the Service to make "no effect" determinations. If you determine that your proposed action will have no effect on threatened or endangered species or their respective designated critical habitat, you do not need to seek concurrence with the Service.

Note: For some species or projects, IPaC will present you with *Determination Keys*. You may be able to use one or more Determination Keys to conclude consultation on your action for species covered by those keys.

Technical Assistance for Listed Species

1. 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 information on the species life history, species status, current range, and other documents by selecting the species from the thumbnails or list view and visiting the species profile page.???????

No Effect Determinations for Listed Species

1. If there are *no* species or designated critical habitats on the Endangered Species portion of the species list: conclude "no species and no critical habitat present" and document your finding in your project records. No consultation under ESA section 7(a)(2) is required if the action would result in no effects to listed species or critical habitat. Maintain a copy of this letter and IPaC official species list for your records.
2. If any species or designated critical habitat are listed as potentially present in the **action area** of the proposed project the project proponents are responsible for determining if the proposed action will have “no effect” on any federally listed species or critical habitat. No effect, with respect to species, means that no individuals of a species will be exposed to any consequence of a federal action or that they will not respond to such exposure.
3. If the species habitat is not present within the action area or current data (surveys) for the species in the action area are negative: conclude “no species habitat or species present” and document your finding in your project records. For example, if the project area is located entirely within a “developed area” (an area that is already graveled/paved or supports structures and the only vegetation is limited to frequently mowed grass or conventional landscaping, is located within an existing maintained facility yard, or is in cultivated cropland conclude no species habitat present. Be careful when assessing actions that affect: 1) rights-of-ways that contains natural or semi-natural vegetation despite periodic mowing or other management; structures that have been known to support listed species (example: bridges), and 2) surface water or groundwater. Several species inhabit rights-of-ways, and you should carefully consider effects to surface water or groundwater, which often extend outside of a project’s immediate footprint.
4. Adequacy of Information & Surveys - Agencies may base their determinations on the best evidence that is available or can be developed during consultation. Agencies must give the benefit of any doubt to the species when there are any inadequacies in the information. Inadequacies may include uncertainty in any step of the analysis. To provide adequate information on which to base a determination, it may be appropriate to conduct surveys to determine whether listed species or their habitats are present in the action area. Please contact our office for more information or see the survey guidelines that the Service has made available in IPaC.

May Effect Determinations for Listed Species

1. If the species habitat is present within the action area and survey data is unavailable or inconclusive: assume the species is present or plan and implement surveys and interpret results in coordination with our office. If assuming species present or surveys for the species are positive continue with the may affect determination process. May affect, with respect to a species, is the appropriate conclusion when a species might be exposed to a consequence of a federal action and could respond to that exposure. For critical habitat, ‘may affect’ is the appropriate conclusion if the action area overlaps with mapped areas of critical habitat and an essential physical or biological feature may be exposed to a consequence of a federal action and could change in response to that exposure.
2. Identify stressors or effects to the species and to the essential physical and biological features of critical habitat that overlaps with the action area. Consider all consequences of the action and assess the potential for each life stage of the species that occurs in the action area to be exposed to the stressors. Deconstruct the action into its component parts to be sure that you do not miss any part of the action that could cause effects to the species or physical and biological features of critical habitat. Stressors that affect species’ resources may have consequences even if the species is not present when the project is implemented.
3. If no listed or proposed species will be exposed to stressors caused by the action, a ‘no effect’ determination may be appropriate – be sure to separately assess effects to critical habitat, if any overlaps with the action area. If you determined that the proposed action or other activities that are caused by the proposed action may affect a species or critical habitat, the next step is to describe the manner in which they will respond or be altered. Specifically, to assess whether the species/critical habitat is "not likely to be adversely affected" or "likely to be adversely affected."
4. Determine how the habitat or the resource will respond to the proposed action (for example, changes in habitat quality, quantity, availability, or distribution), and assess how the species is expected to respond to the effects to its habitat or other resources. Critical habitat analyses focus on how the proposed action will affect the physical and biological features of the critical habitat in the action area. If there will be only beneficial effects or the effects of the action are expected to be insignificant or discountable, conclude "may affect, not likely to adversely affect" and submit your finding and supporting rationale to our office and request concurrence.
5. If you cannot conclude that the effects of the action will be wholly beneficial, insignificant, or discountable, check IPaC for species-specific Section 7 guidance and conservation measures to determine whether there are any measures that may be implemented to avoid or minimize the negative effects. If you modify your proposed action to include conservation measures, assess how inclusion of those measures will likely change the effects of the action. If you cannot conclude that the effects of the action will be wholly beneficial, insignificant, or discountable, contact our office for assistance.
6. Letters with requests for consultation or correspondence about your project should include the Consultation Tracking Number in the header. Electronic submission is preferred.

For additional information on completing Section 7 Consultation including a Glossary of Terms used in the Section 7 Process, information requirements for completing Section 7, and example letters visit the Midwest Region Section 7 Consultations website at: https://www.fws.gov/library/collections/midwest-region-section-7-consultations.

https://www.fws.gov/office/midwest-region-headquarters/midwest-section-7-technical-assistance

You may find more specific information on completing Section 7 on communication towers and transmission lines on the following websites:

- Incidental Take Beneficial Practices: Power Lines - https://www.fws.gov/story/incidental-take-beneficial-practices-power-lines
- Recommended Best Practices for Communication Tower Design, Siting, Construction, Operation, Maintenance, and Decommissioning. - https://www.fws.gov/media/recommended-best-practices-communication-tower-design-siting-construction-operation

Tricolored Bat Update

On September 14, 2022, the Service published a proposal in the Federal Register to list the tricolored bat (Perimyotis subflavus) as endangered under the Endangered Species Act (ESA). The Service has up to 12-months from the date the proposal published to make a final determination, either to list the tricolored bat under the Act or to withdraw the proposal. The Service determined the bat faces extinction primarily due to the rangewide impacts of white-nose syndrome (WNS), a deadly fungal disease affecting cave-dwelling bats across North America. Because tricolored bat populations have been greatly reduced due to WNS, surviving bat populations are now more vulnerable to other stressors such as human disturbance and habitat loss. Species proposed for listing are not afforded protection under the ESA; however, as soon as a listing becomes effective (typically 30 days after publication of the final rule in the Federal Register), the prohibitions against jeopardizing its continued existence and “take” will apply. Therefore, if your future or existing project has the potential to adversely affect tricolored bats after the potential new listing goes into effect, we recommend that the effects of the project on tricolored bat and their habitat be analyzed to determine whether authorization under ESA section 7 or 10 is necessary. Projects with an existing section 7 biological opinion may require reinitiation of consultation, and projects with an existing section 10 incidental take permit may require an amendment to provide uninterrupted authorization for covered activities. Contact our office for assistance.

Bald and Golden Eagles

Although no longer protected under the Endangered Species Act, be aware that bald eagles are protected under the Bald and Golden Eagle Protection Act and Migratory Bird Treaty Act, as are golden eagles. Projects affecting these species may require measures to avoid harming eagles or may require a permit. If your project is near an eagle nest or winter roost area, please contact our office for further coordination. For more information on permits and other eagle information

visit our website https://www.fws.gov/library/collections/bald-and-golden-eagle-management.

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

Attachment(s):

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

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:

Southern Illinois Sub-Office
Southern Illinois Sub-office
8588 Route 148
Marion, IL 62959-5822
(618) 998-5945

PROJECT SUMMARY

Project Code: 2023-0112542
Project Name: L & D 25 Access Road
Project Type: Road/Hwy - New Construction
Project Description: Access from Illinois side to spillway for maintenance at Lock and Dam 25.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.0049731,-90.6750410263011,14z

Counties: Calhoun County, Illinois

ENDANGERED SPECIES ACT SPECIES

There is a total of 6 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[1], 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.

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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
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

CLAMS

NAME	STATUS
Spectaclecase (mussel) *Cumberlandia monodonta* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7867	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened
Western Regal Fritillary *Argynnis idalia occidentalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/12017	Proposed Threatened

FLOWERING PLANTS

NAME	STATUS
Decurrent False Aster *Boltonia decurrens* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7705	Threatened

CRITICAL HABITATS

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

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

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.

IPAC USER CONTACT INFORMATION

Agency: Army Corps of Engineers
Name: Zachary Day
Address: 1222 Spruce St
City: St. Louis
State: MO
Zip: 63103
Email zachary.a.day2@usace.army.mil
Phone: 3143318027

EcoCAT
Ecological Compliance Assessment Tool

ILLINOIS DEPARTMENT OF NATURAL RESOURCES

Applicant: Natalia Ramirez Irizarry
Contact: Natalia Ramirez Irizarry
Address: US Army Corps of Engineers 1222 Spruce St
Saint Louis, MO 63103

IDNR Project Number: 2512853
Date: 05/08/2025
Alternate Number: 2317105

Project: LD 25 Access Road EEDM
Address: W Point Landing Road, Batchtown

Description: Real Estate Design Memorandum for access road construction to service/maintain Lock and Dam 25.

Natural Resource Review Results

The Illinois Natural Heritage Database shows the following protected resources may be in the vicinity of the project location:

Batchtown Mussel Bed INAI Site
Cap Au Gris INAI Site
Mississippi River - Cap Au Gris INAI Site
West Point Landing Geological Area INAI Site
Butterfly *(Ellipsaria lineolata)*
Lake Sturgeon *(Acipenser fulvescens)*

An IDNR staff member will evaluate this information and contact you to request additional information or to terminate consultation if adverse effects are unlikely.

Location

The applicant is responsible for the accuracy of the location submitted for the project.

County: Calhoun

Township, Range, Section:
12S, 2W, 19

IL Department of Natural Resources Contact
Alex Davis
217-785-5500
Division of Ecosystems & Environment

Government Jurisdiction
U.S. Army Corps of Engineers

Disclaimer

The Illinois Natural Heritage Database cannot provide a conclusive statement on the presence, absence, or condition of natural resources in Illinois. This review reflects the information existing in the Database at the time of this inquiry, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, compliance with applicable statutes and regulations is required.

Terms of Use

By using this website, you acknowledge that you have read and agree to these terms. These terms may be revised by IDNR as necessary. If you continue to use the EcoCAT application after we post changes to these terms, it will mean that you accept such changes. If at any time you do not accept the Terms of Use, you may not continue to use the website.

1. The IDNR EcoCAT website was developed so that units of local government, state agencies and the public could request information or begin natural resource consultations on-line for the Illinois Endangered Species Protection Act, Illinois Natural Areas Preservation Act, and Illinois Interagency Wetland Policy Act. EcoCAT uses databases, Geographic Information System mapping, and a set of programmed decision rules to determine if proposed actions are in the vicinity of protected natural resources. By indicating your agreement to the Terms of Use for this application, you warrant that you will not use this web site for any other purpose.

2. Unauthorized attempts to upload, download, or change information on this website are strictly prohibited and may be punishable under the Computer Fraud and Abuse Act of 1986 and/or the National Information Infrastructure Protection Act.

3. IDNR reserves the right to enhance, modify, alter, or suspend the website at any time without notice, or to terminate or restrict access.

Security

EcoCAT operates on a state of Illinois computer system. We may use software to monitor traffic and to identify unauthorized attempts to upload, download, or change information, to cause harm or otherwise to damage this site. Unauthorized attempts to upload, download, or change information on this server is strictly prohibited by law.

Unauthorized use, tampering with or modification of this system, including supporting hardware or software, may subject the violator to criminal and civil penalties. In the event of unauthorized intrusion, all relevant information regarding possible violation of law may be provided to law enforcement officials.

Privacy

EcoCAT generates a public record subject to disclosure under the Freedom of Information Act. Otherwise, IDNR uses the information submitted to EcoCAT solely for internal tracking purposes.

Illinois Department of
Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271
http://dnr.state.il.us

JB Pritzker, Governor
Natalie Phelps Finnie, Director

May 13, 2025

Natalia Ramirez Irizarry
Natalia Ramirez Irizarry
US Army Corps of Engineers 1222 Spruce St
Saint Louis, MO 63103

RE: LD 25 Access Road EEDM
Project Number(s): 2512853 [2317105]
County: Calhoun

Dear Applicant:

This letter is in reference to the project you recently submitted for consultation. The natural resource review provided by EcoCAT identified protected resources that may be in the vicinity of the proposed action. The Department has evaluated this information and concluded that adverse effects are unlikely. Therefore, consultation under 17 Ill. Adm. Code Part 1075 is terminated.

This consultation is valid for two years unless new information becomes available that was not previously considered; the proposed action is modified; or additional species, essential habitat, or Natural Areas are identified in the vicinity. If the project has not been implemented within two years of the date of this letter, or any of the above listed conditions develop, a new consultation is necessary.

The natural resource review reflects the information existing in the Illinois Natural Heritage Database at the time of the project submittal, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, you must comply with the applicable statutes and regulations. Also, note that termination does not imply IDNR's authorization or endorsement of the proposed action.

Please contact me if you have questions regarding this review.

Alex Davis

Alex Davis
Division of Ecosystems and Environment
217-785-5500

From: Steiger, Rachel L CIV USARMY CEMVP (USA)
To: Hayes, Bradley
Cc: Allen, Teresa C (Teri) CIV USARMY CEMVP (USA); Day, Zachary A CIV (USA)
Subject: RE: Inquiry regarding West Point Landing area of geologic significance
Date: Wednesday, July 26, 2023 3:07:28 PM
Attachments: image001.png
image002.png
image003.png

Hi Brad,

Thanks for reaching out and collecting all the below information! I'm actually taking a new job starting next week so I've cc'd Teri Allen here for her to pass on to the next biologist assigned to this project.

But, yes, the road is planned for the bottom of the bluff, would only be used for access to the dam, and there will be no disturbance to either the bluff face or the walls of the quarry (comment from Eric highlighted below). However if there are any particular BMPs that need to be reference in the compliance document just let us know!

Thanks,
Rachel

From: Hayes, Bradley <Bradley.Hayes@illinois.gov>
Sent: Wednesday, July 26, 2023 9:14 AM
To: Steiger, Rachel L CIV USARMY CEMVP (USA) <Rachel.L.Steiger@usace.army.mil>
Subject: [URL Verdict: Neutral][Non-DoD Source] Fw: Inquiry regarding West Point Landing area of geologic significance

Hi Rachel,
I am slowly trying to catch up. We got some feed back on the INAI site that might be impacted by this project (see below). Anyway we can determine away to avoid those impacts? Or, I guess, confirm if impacts are likely? Let me know what you think would be the appropriate next step.
Brad

From: Plankell, Eric Thomas <eplankel@illinois.edu>
Sent: Monday, July 17, 2023 11:02 AM
To: Skufca, Jenny <Jenny.Skufca@illinois.gov>
Cc: Cox, Phil <Phil.Cox@illinois.gov>; Njapa, Valerie <Valerie.Njapa@illinois.gov>; Locke, Randy <rlocke@illinois.edu>
Subject: [External] FW: Inquiry regarding West Point Landing area of geologic significance

Good morning, Jenny-

Please see the email below from senior ISGS geologist Joe Devera, regarding the stratigraphy at West Point Landing area of geologic significance. Joe concurs that these exposures have significant stratigraphic value.

Please let me know if you have any further questions.

Eric

From: Plankell, Eric Thomas
Sent: Monday, July 17, 2023 9:27 AM
To: Devera, Joseph A <jdevera@illinois.edu>
Cc: Phillips, Andrew C <aphillps@illinois.edu>; Locke, Randy <rlocke@illinois.edu>
Subject: RE: Inquiry regarding West Point Landing area of geologic significance

Good morning, Joe,

Thanks for confirming the location and significance of the features at West Point Landing. I'll share your thoughts with the IDNR and let you know if they need any further information.

Have a great day!
Eric

From: Devera, Joseph A <jdevera@illinois.edu>
Sent: Monday, July 17, 2023 9:04 AM
To: Plankell, Eric Thomas <eplankel@illinois.edu>
Cc: Phillips, Andrew C <aphillps@illinois.edu>; Locke, Randy <rlocke@illinois.edu>
Subject: RE: Inquiry regarding West Point Landing area of geologic significance

Hello Eric,

Yes, this site is in the Foley 7.5' Quadrangle along the Mississippi River (SW quarter of the old 15' Hardin Quad). The type sections of these members are correctly located in the bluff north of and within the abandoned quarry north of West Point Landing. I concur with your assessment, if the road is located below the bluff, then it would yield better access to these member type sections.

Measured section 11, West Point Landing of Templeton and Willman (1963) pg. 228-229, yields 9' 6" of the Metz Member (Type), of the Joachim Formation total of 31' 10", with Matson and Defiance Members also observed below the Metz (Type). Also noted is the overlying Member of the Victory (Type) of the Grand Detour Fm of the Plattin Subgroup in the West Point Landing Section 11.

So, this area is of significant stratigraphic value. If you need any other assistance with this, please let me know.

Thanks,

Joe

From: Plankell, Eric Thomas <eplankel@illinois.edu>
Sent: Thursday, July 13, 2023 5:29 PM
To: Devera, Joseph A <jdevera@illinois.edu>
Cc: Phillips, Andrew C <aphillps@illinois.edu>; Locke, Randy <rlocke@illinois.edu>
Subject: Inquiry regarding West Point Landing area of geologic significance

Good afternoon, Joe-

This is Eric Plankell from the Wetlands Geology Section here at the ISGS. I remember running into you a couple of times in the past (probably at the ISGS Open House), but it's certainly been awhile. I hope this finds you well!

Anyway, the reason I am writing is that Randy Locke and I received an inquiry from Jenny Skufca (Natural Areas Program Manager, IDNR-Division of Natural Heritage) earlier today regarding what is known as the West Point Landing area of geologic significance. This site was designated long ago by H.B. Willman as one of over 150 sites of outstanding geologic significance within Illinois, and it is apparently the type section for the both the Metz Member of the Joachim Dolomite and also the Victory Member of the Grand Detour Formation. Long story short, the US Army Corps would like to build an access road for the nearby Lock and Dam (see the attached .kmz file for the location of the proposed roadway) that will butt up right against the river bluff and an old quarry where the exposures exist (though it's unclear if the exposures will actually be disturbed), and IDNR wants our opinion on the importance of the site as far as protecting it goes. FYI – it is listed as a Category IV site of geologic significance on the Illinois Natural Areas Inventory, thus the inquiry by IDNR. And it was originally assigned by Willman as having a preservation value of 5 = an exceptionally good and/or unusual exposure, the highest ranking available.

I spoke briefly with Drew Phillips this afternoon, and he mentioned that you had been mapping in the area where the exposure occurs as recently as 2010. I was curious if you could provide any insight into why this location and the type sections exposed should be considered significant and whether, in your opinion, they should continue to be protected, and with your blessing I will include your thoughts in a response to Jenny.

Lastly, below is a draft of the response that I have started, as well as the rest of the email string regarding the project for your reference. Some of this information may be confidential, so please kindly keep it to yourself.

Thanks for your time, and hope to hear from you soon,

Eric

ERIC T. PLANKELL, M.S., LPG
Associate Research Scientist, Wetlands Geologist

Illinois State Geological Survey
Prairie Research Institute
University of Illinois at Urbana-Champaign

136 Natural Resources Building | M/C 650
Champaign, IL 61820
217.265.8029 | eplankel@illinois.edu
isgs.illinois.edu

ILLINOIS

Hello Jenny,

Thanks for reaching out regarding the West Point Landing area of geologic significance. Drew, Randy, and I have discussed briefly, and here are some thoughts. As you mentioned, the site has been described as the geologic type section for the Ordovician-age Metz Member of the Joachim Dolomite. Additionally, ISGS Bulletin 89 (Templeton and Willman 1963) also mentions the West Point Landing Section as the type section for the Victory Member of the Grand Detour Formation (see excerpt below).

11. West Point Landing Section Quarry in east bluff of Mississippi River, and exposures in bluff north of quarry, a quarter of a mile north of West Point Landing, Calhoun County, Illinois (SE NE SE 19, 7N-2W, Hardin Quad.). ***Type sections of Metz Member of Joachim Formation and Victory Member of Grand Detour Formation.*** (p. 28, ISGS Bulletin 89).

From the International Commission on Stratigraphy, a type section or Stratotype is defined as

"The designated exposure of a named layered stratigraphic unit or of a stratigraphic boundary that serves as the standard of reference. A stratotype is the specific stratal sequence used for the definition and/or characterization of the stratigraphic unit or boundary being defined."

Additionally, in his classification of West Point Landing, Willman assigned it a preservation value of 5, which refers to an exceptionally good and/or unusual exposure.

Based on those criteria alone, it would be my opinion that preservation of the exposures should be pursued if at all possible. If the road is strictly going to be used for access to the dam, and there will be no disturbance or restriction of access to either the bluff face or the walls of the quarry, then I'm not sure it will be a problem, and it might, depending on how access is controlled, make it actually easier for future visits to the exposures to occur.

Anyway, it is hard to say for certain what the impact of the road might be without seeing the site or construction plans firsthand. We'd be happy to review any additional information regarding plans for the road as it becomes available, and if you or others think it would be helpful, we would certainly be willing to entertain a field visit to the site to further check it out as well.

Hope this information helps!

Sincerely,
Eric

From: Skufca, Jenny Jenny.Skufca@illinois.gov
Sent: Thursday, July 13, 2023 8:34 AM
To: Locke, Randy rlocke@illinois.edu; Plankell, Eric Thomas eplankel@illinois.edu
Cc: Cox, Phil Phil.Cox@illinois.gov; Njapa, Valerie Valerie.Njapa@illinois.gov
Subject: FW: 2317105 EcoCAT LD25 Access Road REDM

Good morning Randy and Eric,

Please see my highlights below, this reflects a proposed action and what the Department knows about this Category IV Illinois Natural Areas Inventory Site – West Point Landing Geological Area INAI in Calhoun County. Do your records indicate anything particularly sensitive or rare here that the US Army Corps of Engineers should avoid impacting during construction of this access road? Olive green polygon shown in map just below is extent of impact.

It occurs to me that you knowing what types of projects come our way for review may help in the development of the criteria for inclusion as a Category IV INAI. Potential threats to these places is always on our Department's radar. Some indication of the sensitivity of work in close proximity would be ideal for all of the sites. I suspect some places ISGS may recommend a buffer, but other sites may only require a recommendation of no excavation of feature.

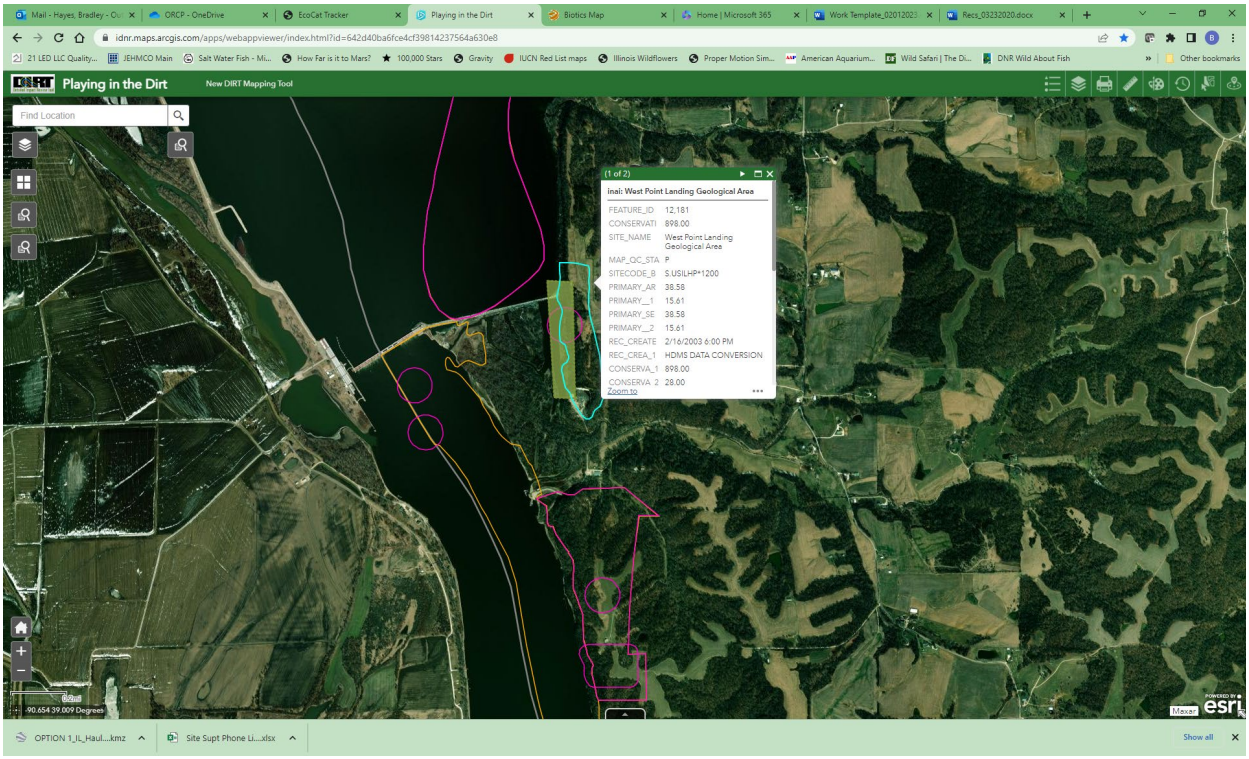
For now, if your time allows, we would benefit from knowing if you have any information indicating a need to restrict the USACE's proposed action in this location. Thank you.

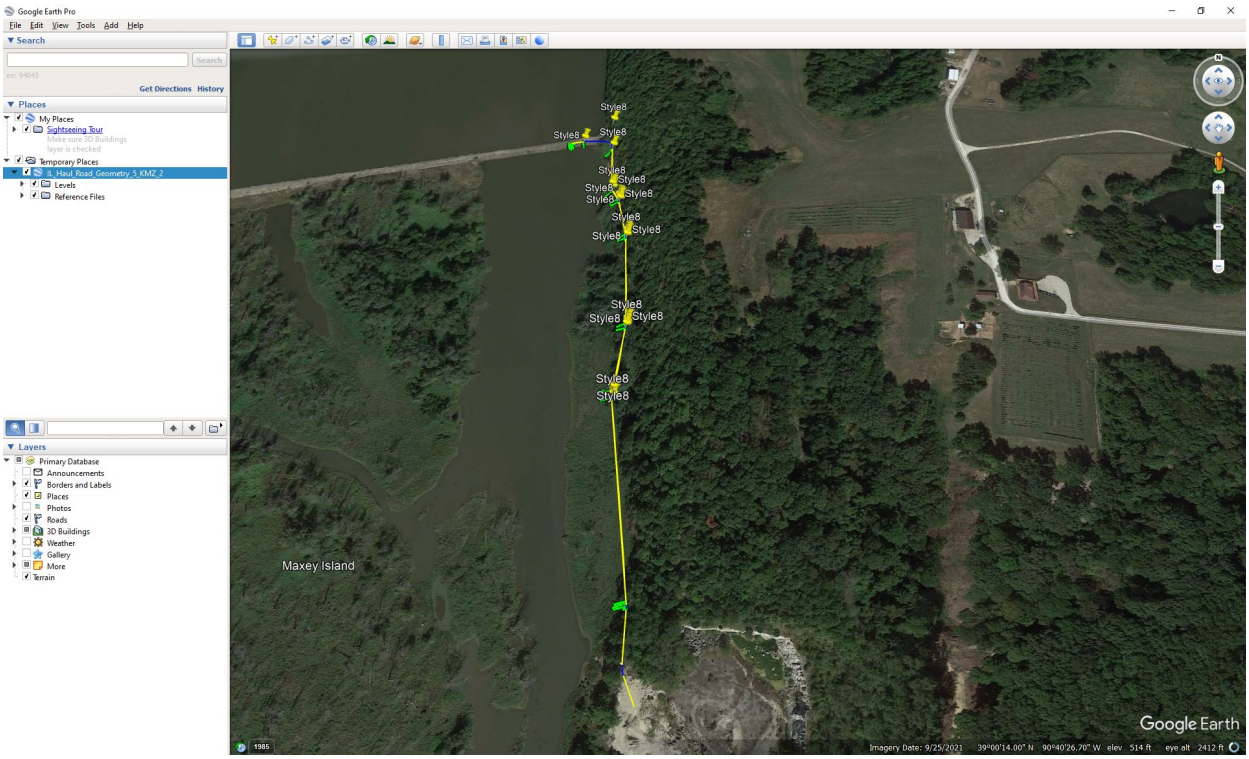
Jenny

Jenny Skufca, Natural Areas Program Manager
she/her/hers
Division of Natural Heritage
Office of Resource Conservation
Illinois Department of Natural Resources
One Natural Resources Way
Springfield, IL 62702-1271
(217)761-3349
Learn more about the Natural Areas Program here!
Supporter – IDNR Diversity, Equity, Accessibility, and Inclusion (DEAI) Committee

From: Hayes, Bradley <Bradley.Hayes@illinois.gov>
Sent: Wednesday, July 5, 2023 1:27 PM
To: Skufca, Jenny <Jenny.Skufca@illinois.gov>; Cox, Phil <Phil.Cox@illinois.gov>
Subject: Fw: 2317105 EcoCAT LD25 Access Road REDM

Hello Jenny and Phil,
I have a USACE road project that may impact West Point Landing Geological Area INAI (Calhoun County). They are still working on the EA. I attached a KMZ, and a couple aerials. Do you have any additional information about this site that might be useful? We could set up a site visit if they are concerns about the road location. Let me know what you think.
Thanks!
Brad





From: Steiger, Rachel L CIV USARMY CEMVP (USA) <Rachel.L.Steiger@usace.army.mil>
Sent: Friday, June 23, 2023 1:56 PM
To: Hayes, Bradley <Bradley.Hayes@illinois.gov>
Subject: [External] RE: 2317105 EcoCAT LD25 Access Road REDM

Hi Brad,

The construction limits for the roads plans are up against the bluff, but as far as I know we won't be doing any type of excavation work for this project. I can confirm with the engineers. I don't know anything about the geologic features themselves so please let me know what INAI folks have to say about this area. We're early enough in the project I haven't even made a site visit yet. If we need to coordinate a larger group visit just let me know!

Thanks,
Rachel

From: Hayes, Bradley <Bradley.Hayes@illinois.gov>
Sent: Friday, June 23, 2023 11:27 AM
To: Steiger, Rachel L CIV USARMY CEMVP (USA) <Rachel.L.Steiger@usace.army.mil>
Subject: [Non-DoD Source] Re: 2317105 EcoCAT LD25 Access Road REDM

Hi Rachel,
So the project is within West Point Landing Geological Area INAI site. It is an INAI because of:

The West Point Landing Geological Area, including the adjacent Cap au Gris natural area, contains outstanding exposures of the Ordovician System, including the type section of the Metz Member of the Joachim Dolomite. The rocks are exposed in cliffs and an old quarry on the Mississippi River bluff.

Do you know if this road would impact any of these geologic exposures?
I will get more details from our INAI folks, but I wanted to see if you knew anything about the geologic features before I brought it to them.
Thanks
Brad

From: Steiger, Rachel L CIV USARMY CEMVP (USA) <Rachel.L.Steiger@usace.army.mil>
Sent: Wednesday, June 21, 2023 2:32 PM
To: Hayes, Bradley <Bradley.Hayes@illinois.gov>
Subject: [External] RE: 2317105 EcoCAT LD25 Access Road REDM

Hey Brad,

This one is construction of an access road for LD 25 that looks like it is going to have some impacts. The road alignment would require fill and revetment through some backwater and wetland habitat, plus tree removal. Can you let me know what sort of BMPs or requirements you may have for the listed species on the EcoCat? This will come back around for review once the EA is drafted.

Thanks,
Rachel

From: Hayes, Bradley <Bradley.Hayes@illinois.gov>
Sent: Wednesday, June 21, 2023 11:35 AM
To: Steiger, Rachel L CIV USARMY CEMVP (USA) <Rachel.L.Steiger@usace.army.mil>
Subject: [Non-DoD Source] 2317105 EcoCAT LD25 Access Road REDM

Hi Rachel,
Do you have any plans for this?
Thanks
Brad

Bradley Hayes

Manager, Impact Assessment Section

Division of Real Estate Services and Consultation

Office of Realty & Capital Planning

Illinois Department of Natural Resources

One Natural Resources Way

Springfield, IL 62702

Bradley.Hayes@Illinois.gov

Phone: (217) 782-0031

Cell:(217) 473-0373

From: Lamontagne, Chad M CIV USARMY CEMVS (USA) <Chad.M.Lamontagne@usace.army.mil>
Sent: Friday, September 1, 2023 11:20
To: Day, Zachary A CIV (USA) <Zachary.A.Day2@usace.army.mil>
Subject: L&D 25 Site Visit on 08/31/23

Zack,

Thank you for accompanying me to L&D 25 to discuss the presence of potential wetlands at the site of the proposed access road along the left descending bank. Approximate northernmost extent of review (39.0076, -90.6753) & approximate southernmost extent of review (39.0026, -90.6746). Site is riparian bank abutting limestone bluffs, and it appears the entirety of the site falls within the INAI West Point Landing Geological Area.

Antecedent precipitation conditions: Site visit was conducted during the dry season, during a period of Mild Drought. Site has experienced normal rainfall for this time of year. River Gauge data showed the river at approximately 12.0', and falling, on 08/31/2023. These conditions will often understate the true extent of any wetlands present.

Hydric Soils Identified: (F3) Depleted Matrix & (F6) Redox Dark Surface soils were observed throughout the review area.

Hydrophytic Plant Community: Plant community is Hydrophytic – dominated by Cottonwood, Smartweed, & Cocklebur. Large quantities of the invasive Japanese Hops was also present. While Japanese Hops does not have a wetland label, it is only found in wet riparian areas within the St. Louis District.

Wetland Hydrology Identified: (B3) Drift Deposits, (B7) Inundation Visible on Aerial Imagery, locations of (B8) Sparsely Vegetated Concave Surface, (C3) Oxidized Rhizospheres on Living Roots, (D2) Geomorphic Position, & the (D5) FAC-Neutral Test.

To Summarize: The proposed road location lies within a wetland. These wetland criteria were observed during a mild drought, which means that under normal climatic conditions, the wetland area would likely be larger and even more prominent. Observed wetland criteria indicate a wetland frequently flooded, and for long durations. Wetland extent within the road footprint includes, essentially, the entire proposed project area. Exceptions would include very small portions of what appears to be a severely degraded road bed, and the southern portion of the road that is immediately abutting the parking/staging area.

Ordinary High Water Mark elevation for the Mississippi River at this location is 433.5 so any work below this elevation would occur in Section 10 jurisdictional waters, while work above that elevation would be jurisdictional under Section 404.

If you have any further questions, please don't hesitate to ask.

Take care,
Chad LaMontagne
Regulatory Project Manager
CEMVS, OD-F
1222 Spruce Street
St. Louis, Missouri 63103-2833
314-331-8044

90° 40' 42" W
90° 40' 17" W
39° 0' 32" N
39° 0' 6" N

Map Scale: 1:3,830 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 50 100 200 300

Feet
0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

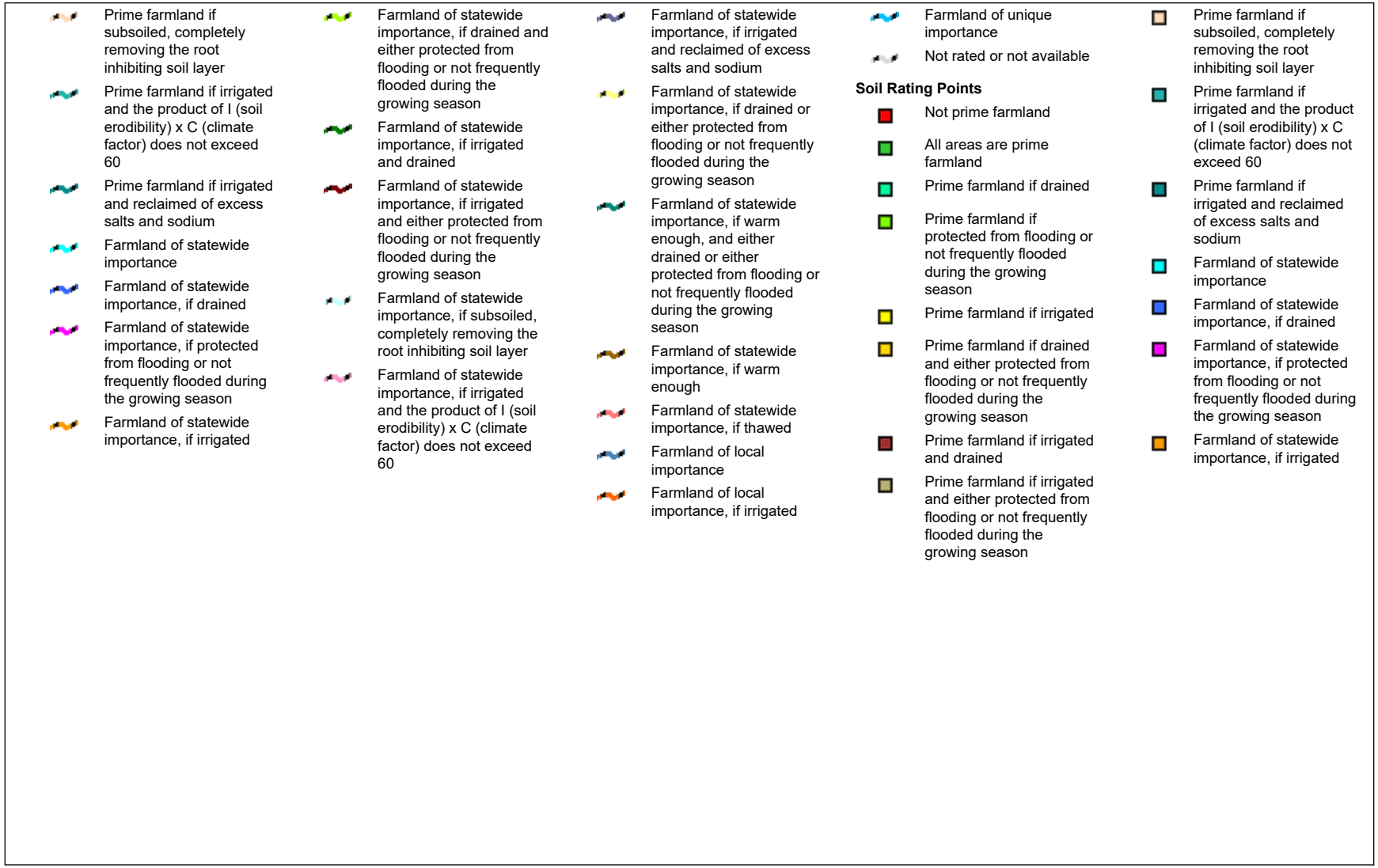
Soils

Soil Rating Polygons

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if subsoiled, completely removing the root inhibiting soil layer
- Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance
- Farmland of statewide importance, if drained
- Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated
- Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated and drained
- Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
- Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough
- Farmland of statewide importance, if thawed
- Farmland of local importance
- Farmland of local importance, if irrigated
- Farmland of unique importance
- Not rated or not available

Soil Rating Lines

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season


Prime farmland if subsoiled, completely removing the root inhibiting soil layer
Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Prime farmland if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance
Farmland of statewide importance, if drained
Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated
Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated and drained
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Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough
Farmland of statewide importance, if thawed
Farmland of local importance
Farmland of local importance, if irrigated
Farmland of unique importance
Not rated or not available
Soil Rating Points
Not prime farmland
All areas are prime farmland
Prime farmland if drained
Prime farmland if protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated
Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated and drained
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Prime farmland if subsoiled, completely removing the root inhibiting soil layer
Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Prime farmland if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance
Farmland of statewide importance, if drained
Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated

- Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated and drained
- Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
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- Farmland of statewide importance, if warm enough
- Farmland of statewide importance, if thawed
- Farmland of local importance
- Farmland of local importance, if irrigated
- Farmland of unique importance
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Calhoun County, Illinois
Survey Area Data: Version 17, Aug 31, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 22, 2022—Aug 25, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Farmland Classification

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
30G	Hamburg silt loam, 35 to 60 percent slopes	Not prime farmland	7.6	39.4%
79C2	Menfro silt loam, 5 to 10 percent slopes, eroded	Farmland of statewide importance	0.9	4.9%
3284L	Tice silt loam, 0 to 2 percent slopes, frequently flooded, long duration	All areas are prime farmland	6.3	32.8%
W	Water	Not prime farmland	4.4	23.0%
Totals for Area of Interest			**19.3**	**100.0%**

Description

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Rating Options

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

National Flood Hazard Layer FIRMette

FEMA

90°40'49"W 39°0'28"N

90°40'11"W 39°N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN — Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 — Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 5/28/2025 at 3:54 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

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

October 11, 2024

Engineering and Construction Division
Curation and Archives Analysis Branch

Subject: Lock and Dam 25 Access Road Construction, Calhoun County, Illinois

Jeffrey D. Kruchten
Illinois State Historic Preservation Office
Illinois Department of Natural Resources
One Natural Resources Way
Springfield, Illinois 62702

Dear Mr. Kruchten,

The U.S. Army Corps of Engineers, St. Louis District (District), is contacting your office to initiate consultation for a project in Calhoun County, Illinois, under Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations 36 CRF 800. The District will be constructing an access road to Lock and Dam 25 on the Illinois side of the Mississippi River (Figure 1). By creating the access road, repairs to and around the dam on the eastern side will be streamlined. This will involve the use and maintenance of 2,311 feet of currently existing gravel road on private land and the construction of 1,858 feet of new road. The new road construction will involve bringing in 651.08 cubic yards of fill. A total of 0.4 acres will be impacted by this proposed undertaking.

A Phase I cultural resource survey was conducted by District archaeologists on 7 October 2024 (enclosed). Subsurface testing was implemented in all construction areas that were not covered in rock, flooding debris, or where safe access was not possible. A total of 24 shovel tests were conducted, all of which revealed frequently flooded soils with many layers of recent deposition. No cultural resources were identified within any portion of the project area.

The District has determined that no historic properties will be affected by the proposed action. Should you have any questions, please contact Mark Smith (Supervisory Archaeologist) at (314) 331-8831 (email Mark.A.Smith4@usace.army.mil) or Kimberly Byrnes (Archaeologist) at (314) 331-8584 (email Kimberly.E.Byrnes@usace.army.mil).

Sincerely,

Jennifer L. Riordan
Chief, Curation and Archives
Analysis Branch

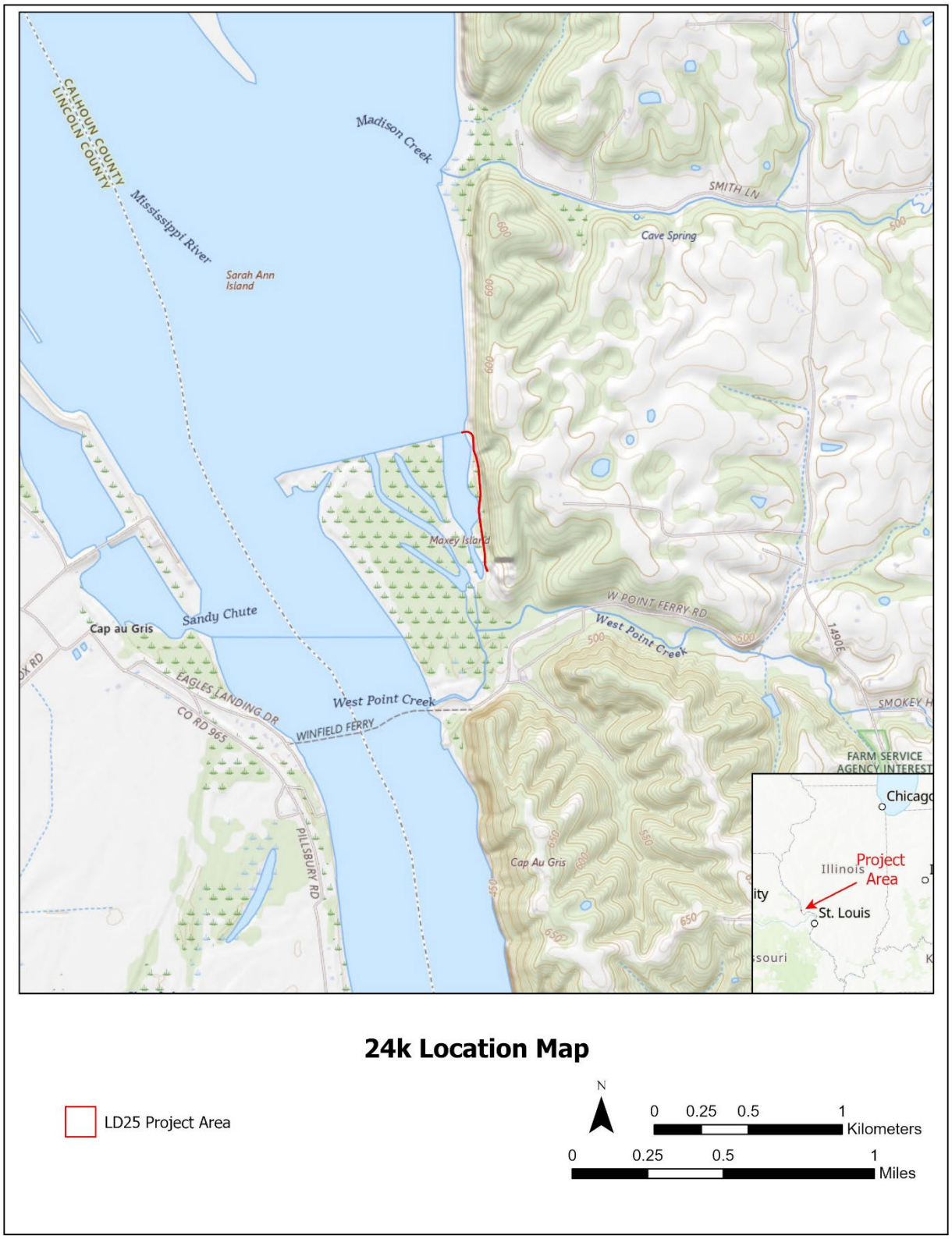

Figure 1. Project Location.

Illinois Department of Natural Resources
JB Pritzker, Governor • Natalie Phelps Finnie, Director
One Natural Resources Way • Springfield, Illinois 62702-1271
www.dnr.illinois.gov

Calhoun County
Batchtown
Maxey Island,
N of W Point Ferry Rd
COESTL
Lock and Dam 25 Access Road Construction

PLEASE REFER TO: SHPO LOG #001101524

November 3, 2024

Jennifer Riordan
U.S. Army Corps of Engineers, St. Louis District
1222 Spruce Street
St. Louis, MO 63103

We have reviewed the documentation submitted for the referenced project in accordance with 36 CFR Part 800.4. Based upon the information provided, no historic properties will be affected. We, therefore, have no objection to the undertaking proceeding as planned.

Please retain this letter in your files as evidence of compliance with Section 106 of the National Historic Preservation Act of 1966, as amended. This approval remains in effect for two (2) years from date of issuance. It does not pertain to any discovery during construction, nor is it a clearance for purposes of the Illinois Human Remains Protection Act (20 ILCS 3440).

If you are an applicant, please submit a copy of this letter to the state or federal agency from which you obtain any permit, license, grant, or other assistance. If further assistance is needed contact Jeff Kruchten, Principal Archaeologist, at 217/785-1279 or jeff.kruchten@illinois.gov.

Sincerely,

Carey L. Mayer

Carey L. Mayer, AIA
Deputy State Historic Preservation Officer

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

October 29, 2024

Engineering and Construction Division
Curation and Archives Analysis Branch

Subject: Lock and Dam 25 Access Road Construction, Calhoun County, Illinois

The Honorable Bobby Gonzalez
Chairman, Caddo Nation of Oklahoma
P.O. Box 487
Binger, OK 73009

Dear Chairman Gonzalez,

The U.S. Army Corps of Engineers, St. Louis District (District), is contacting your Tribe to continue consultation for a proposed undertaking at Lock and Dam 25 in Lincoln County, Missouri and Calhoun County, Illinois per Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations 36 CFR 800. The District is proposing to construct an access road to Lock and Dam 25 in Calhoun County, Illinois (Figure 1) to streamline repairs to and around the dam on the eastern side of the Mississippi River.

Consultation with Tribal Nations pertaining to undertakings at Lock and Dam 25 began in 2006-2007. Most recently, Tribal Nations were contacted on August 15, 2023, pertaining to borrow and staging areas in Lincoln County, Missouri; and on March 14, 2024, pertaining to a 1200-foot extension of the dam on the Missouri side of the Mississippi River. Lock and Dam 25 is listed on the National Register of Historic Places (NRHP) as a historic district (NRHP Reference No. 04000184).

The current proposed undertaking will involve the use and maintenance of 2,311 feet of currently existing gravel road and private land, and the construction of 1,858 feet of new road. The construction of the new road will involve bringing in 651.08 cubic yards of fill. A total of 0.4 acres will be impacted by this proposed undertaking.

A Phase I cultural resource survey was conducted by District archaeologists on October 7, 2024. Subsurface testing was implemented in all construction areas that were not covered in rock, flooding debris, or where safe access was not possible (Figure 2). A total of 24 shovel tests were conducted, all of which revealed frequently flooded soils with many layers of recent deposition. No cultural resources were identified within any portion of the project area.

It is the District’s current opinion that no historic properties will be affected by this proposed undertaking.

If you have any questions, comments, or areas of tribal concern, please contact me at (314) 331-8855 or contact Meredith Hawkins Trautt (Tribal Liaison) at (314) 925-5031 or email Meredith.M.Trautt@usace.army.mil. A copy of this letter has been furnished to Mr. Jonathan M. Rohrer.

Sincerely,

Jennifer L. Riordan
Chief, Curation and Archives
Analysis Branch

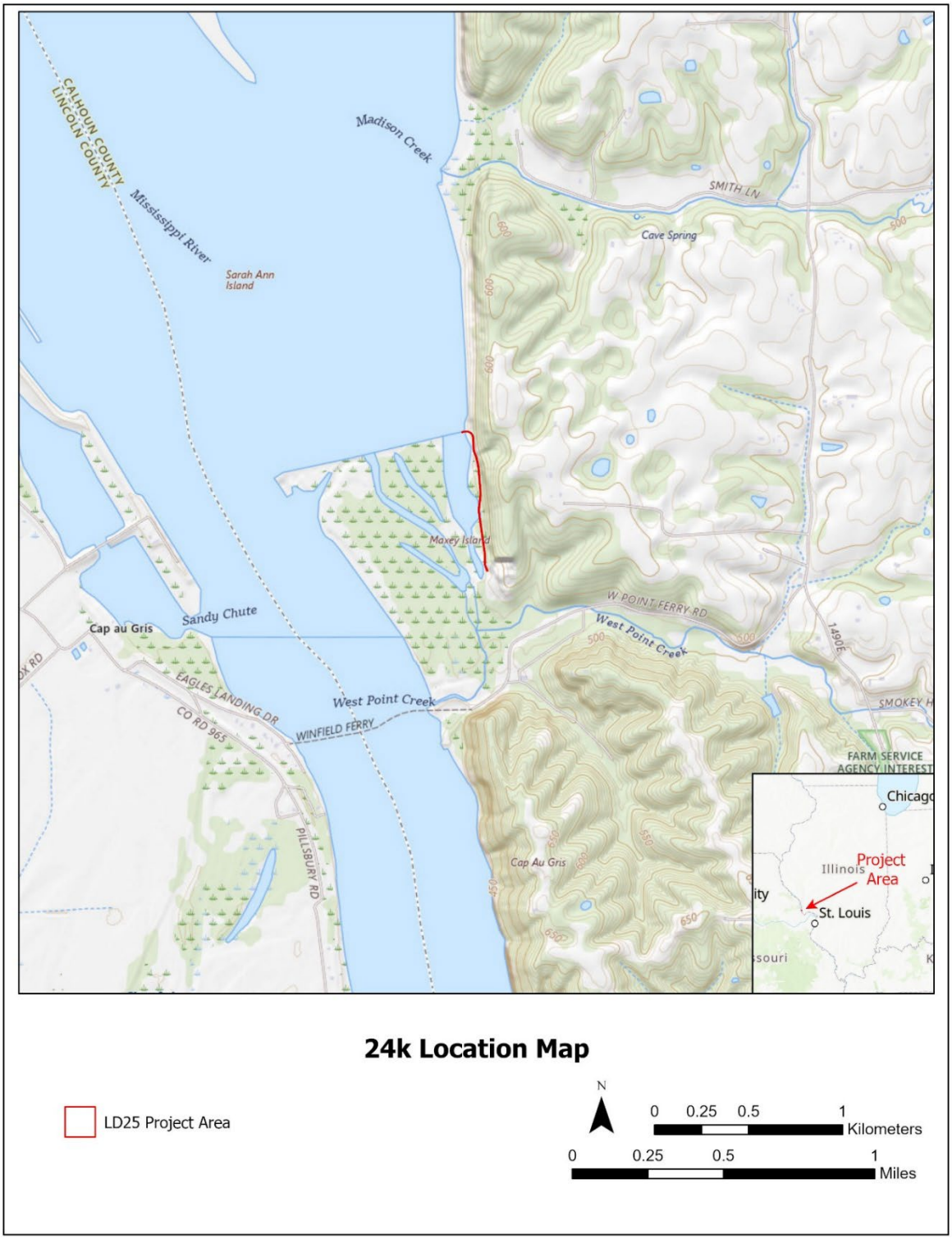

Figure 1. Location of project area.

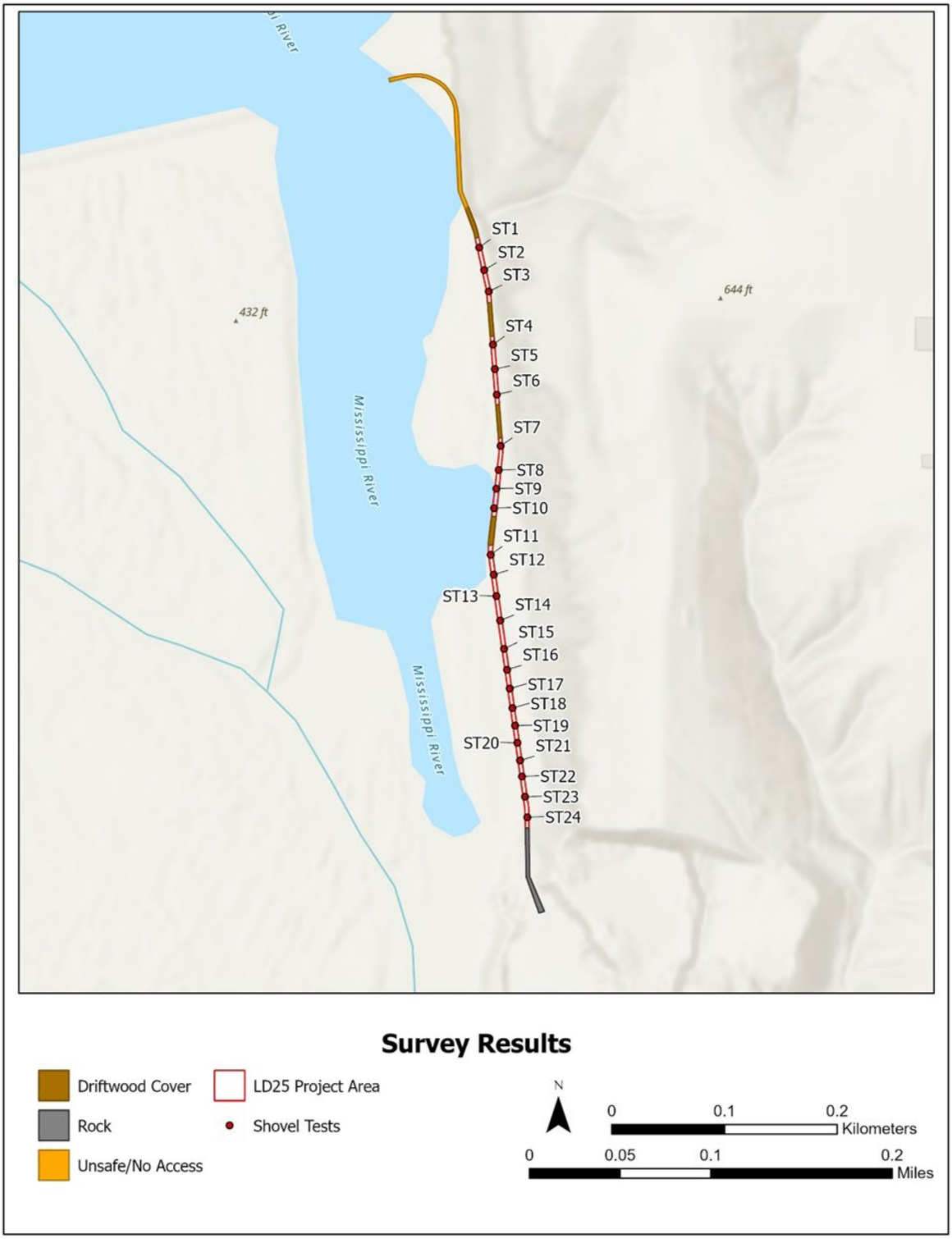

Figure 2. Sketch map of project area.

EASTERN SHAWNEE
CULTURAL PRESERVATION DEPARTMENT
70500 East 128 Road, Wyandotte, OK 74370

November 20, 2024
USACE St. Louis District
1222 Spruce Street
St. Louis, Missouri 63103-2833

RE: ***Lock ans Dam 25 Acess Road Construction, Calhoun, Lincoln County, IL, MO***

Dear Ms. Trautt,

The Eastern Shawnee Tribe has received your letter regarding the above referenced project(s) within Calhoun, Lincoln County, IL, MO. The Eastern Shawnee Tribe is committed to protecting sites important to Tribal Heritage, Culture and Religion. Furthermore, the Tribe is particularly concerned with historical sites that may contain but not limited to the burial(s) of human remains and associated funerary objects.

As described in your correspondence, and upon research of our database(s) and files, we find our people occupied these areas historically and/or prehistorically. However, the project proposes **NO Adverse Effect** or endangerment to known sites of interest to the Eastern Shawnee Tribe. Please continue project as planned. However, should this project inadvertently discover an archeological site or object(s) we request that you immediately contact the Eastern Shawnee Tribe, as well as the appropriate state agencies (within 24 hours). We also ask that all ground disturbing activity stop until the Tribe and State agencies are consulted. Please note that any future changes to this project will require additional consultation.

In accordance with the NHPA of 1966 (16 U.S.C. § 470-470w-6), federally funded, licensed, or permitted undertakings that are subject to the Section 106 review process must determine effects to significant historic properties. As clarified in Section 101(d)(6)(A-B), historic properties may have religious and/or cultural significance to Indian Tribes. Section 106 of NHPA requires Federal agencies to consider the effects of their actions on all significant historic properties (36 CFR Part 800) as does the National Environmental Policy Act of 1969 (43 U.S.C. § 4321-4347 and 40 CFR § 1501.7(a). This letter evidences NHPA and NEPA historic properties compliance pertaining to consultation with this Tribe regarding the referenced proposed projects.

Thank you, for contacting the Eastern Shawnee Tribe, we appreciate your cooperation. Should you have any further questions or comments please contact our Office.
Sincerely,

Lora Nuckolls

Lora Nuckolls, Tribal Historic Preservation Officer (THPO)
Eastern Shawnee Tribe of Oklahoma
(918) 238-5151 Ext:1840
THPO@estoo.net

From: Alan Kelley
To: Trautt, Meredith M CIV USARMY CEMVS (USA)
Subject: [Non-DoD Source] Re: USACE St. Louis District, Lock & Dam 25 Access Road, Calhoun County, IL
Date: Thursday, October 31, 2024 4:36:39 PM

Subject: Lock and Dam 25 Access Road Construction, Calhoun County, Illinois

I Have No Concerns

On Tue, Oct 29, 2024 at 9:49 AM Trautt, Meredith M CIV USARMY CEMVS (USA) <Meredith.M.Trautt@usace.army.mil> wrote:
>
> Dear Mr. Kelley,
>
> Please see the attached letter pertaining to an archaeological survey for an access road at Lock & Dam 25 in Calhoun County, IL.
>
>
>
> Sincerely,
>
>
>
> Meredith Hawkins Trautt, M.S., RPA
>
> Archaeologist and Tribal Liaison
>
> U.S. Army Corps of Engineers, St. Louis District
>
> MCX CMAC, EC Z
>
> 1222 Spruce Street
>
> St. Louis, MO 63103
>
> Office: (314) 925-5031
>
> Mobile: (314) 798-2169
>
> Pronouns: she/her
>
>

--
Alan Kelley
Deputy THPO
Iowa Tribe of KS & NE
3345 Thrasher RD
White Cloud KS 66094
785-351-0080

2872 Mission Drive, Shelbyville, MI 49344 | {p} 269.397.1780 | gunlaketribe-nsn.gov

December 20, 2024

Jennifer Riordan
Chief, Curation and Archives, Analysis Branch
USACE St. Louis District
1222 Spruce Street
St. Louis, MO 63103

Re: Lock and Dam 25 Access Road Construction

Dear Ms. Riordan,

The Match-E-Be-Nash-She-Wish Band of Pottawatomi Indians' Tribal Historic Preservation Office has received the Section 106 consultation request for comments regarding a proposed construction of an access road to Lock and Dam 25 in Calhoun County, IL. At present, we are not providing any additional comments. We have not identified any information concerning the presence of any cultural resources significant to the Match-E-Be-Nash-She-Wish Band of Pottawatomi Indians within the Area of Potential Effect (APE). This is not to say that such a site may not exist, just that this office does not have any available information for the area(s) at this point in time.

This office will be available to assist you in the future or during this project if there is an unanticipated encounter with human remains, funerary objects, and artifacts. The subsequent identification of additional historic properties affected by the undertaking will require reinitiating Section 106 consultation related to all ongoing and proposed project work and the handling of "discoveries" per the National Historic Preservation Act (NHPA) implementing regulations, 36 CFR Part 800, and, as applicable, the Native American Graves and Repatriation Act (NAGPRA) and its implementing regulations, 43 CFR Part 10. In the event of an encounter with unanticipated human remains, funerary objects, and artifacts we request to be notified within 72 hours. At that time, the Tribe will determine if further consultation is necessary.

Please contact our office with any further questions or requests at 269-397-1780 or Section106@glt-nsn.gov. Also, keep in mind that there may be other Tribal Nations that may have an interest or knowledge of cultural resources within the APE that we may not know about. We thank you for including the Match-E-Be-Nash-She-Wish Band of Pottawatomi Indians in your consultation efforts and planning processes.

Sincerely,

Lakota Hobia

Lakota Hobia
Tribal Historic Preservation Officer
Lakota.Hobia@glt-nsn.gov
Section106@glt-nsn.gov

CC: Meredith Hawkins Trautt, Tribal Liaison, Meredith.M.Trautt@usace.army.mil

From:	Caitlin E. Nichols
To:	Trautt, Meredith M CIV USARMY CEMVS (USA)
Subject:	[Non-DoD Source] USACE, St. Louis District, Lock and Dam 25 Access Road Construction, Calhoun County, Illinois File No. 2425-1503IL-10
Date:	Tuesday, February 4, 2025 3:30:40 PM
Attachments:	image001.png 1503IL_No Properties.pdf

Good afternoon, Ms. Trautt

The Osage Nation received notification of this project on October 29, 2024. Due to an excessive workload, I was unable to address it until today; I apologize for the delay in response.

Please see the attached letter for The Osage Nation's official comment. Thank you for consulting with The Osage Nation.

Caitlin Eileen Nichols
Pronouns: She/Her/Hers
Archaeologist, MA, RPA
Osage Nation Historic Preservation Office
627 Grandview Avenue, Pawhuska, OK 74056
Office: 918-287-5427 |
caitlin.nichols@osagenation-nsn.gov
https://www.osagenation-nsn.gov/who-we-are/historic-preservation

Starting October 1, 2022 the Osage Nation Historic Preservation Office is changing the project notification process. **All project notifications and reports must be emailed to s106@osagenation-nsn.gov** Include the Lead Agency, Project Name and Number, and TCNS Number (if available) on the subject line.

Osage Nation Historic Preservation Office

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Date: February 4, 2025 **File No. 2425-1503IL-10**

St. Louis District, USACE
Meredith Hawkins Trautt
1222 Spruce Street
St. Louis, Missouri 63103
Email: meredith.m.trautt@usace.army.mil

RE: USACE, St. Louis District, Lock and Dam 25 Access Road Construction, Calhoun County, Illinois

SENT VIA EMAIL

Dear Ms. McKinney,

The Osage Nation Historic Preservation Office has evaluated your submission regarding the USACE, St. Louis District, Lock and Dam 25 Access Road Construction, Calhoun County, Illinois and determined that the proposed project **most likely will not adversely affect any sacred properties and/or properties of cultural significance to The Osage Nation**. For direct effect, the finding of the NHPA Section 106 review is a determination of "**No Properties**" eligible or potentially eligible for the National Register of Historic Places.

In accordance with the National Historic Preservation Act, (NHPA) [54 U.S.C. § 300101 et seq.] 1966, undertakings subject to the review process are referred to in 54 U.S.C. § 302706 (a), which clarifies that historic properties may have religious and cultural significance to Indian tribes. Additionally, Section 106 of NHPA requires Federal agencies to consider the effects of their actions on historic properties (36 CFR Part 800) as does the National Environmental Policy Act (43 U.S.C. 4321 and 4331-35 and 40 CFR 1501.7(a) of 1969).

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

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

Andrea A. Hunter, Ph.D.
Director, Tribal Historic Preservation Officer

Caitlin Eileen Nichols, MA, RPA
Archaeologist

627 Grandview Ave. * Pawhuska, OK 74056 Telephone 918-287-5328 * Fax 918-287-5376
www.osagenation-nsn.gov/who-we-are/historic-preservation * HistoricPreservation@osagenation-nsn.gov

CEMVS-EC-EQ August 9, 2023

MEMORANDUM THRU Kevin Slattery, CEMVS-EC-EQ

FOR CEMVS-RE

SUBJECT: Lock & Dam 25 Access Road Easement

1. The purpose of this memorandum is to document the minimum standards by the Environmental Protection Agency for All Appropriate Inquiry (AAI) requirements as defined in the American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments, ASTM E 1527-21 for the Lock & Dam (L&D) 25 Access Road Easement. This process is conducted to identify recognized environmental conditions (RECs) in connection with this easement.

2. This Environmental Condition of Property (ECP) memo is for the construction of a gravel access road on private property in conjunction with the extension of L&D 25. This road easement will be accessible from West Point Landing Road in Calhoun County, Illinois. The access road will be constructed from a parking area accessed from West Point Landing Road and run between Maxey Island on the west and the rock bluff on the east to the eastern extent of the lock and dam. The site is approximately 50 miles northwest of St. Louis, Missouri at River Mile (RM) 241.4. See attached maps and photos of the easement area location.

3. A Phase I is not required for an easement, but since this is associated with the construction of a road on private property it was determined that a modified Phase I should be conducted to assess the current condition of the property. This modified Phase I is in conformance with the scope and limitations of ASTM Practice E 1527-21 and meets the requirement a an ECP according to ER 200-2-3. A site visit was conducted on 26 July 2023 by United States Army Corps of Engineers, St. Louis District personnel and accompanied by Ben Tepen property manager. As seen in the attached photographs the easement will traverse through a heavily vegetated area along a rock bluff. The site visit that was conducted on 26 July 2023 and the document review revealed no evidence of RECs in connection with this site. The United States Army Corps of Engineers (USACE) does not and cannot represent that these sites contain no hazardous waste or material, oil (including petroleum products).

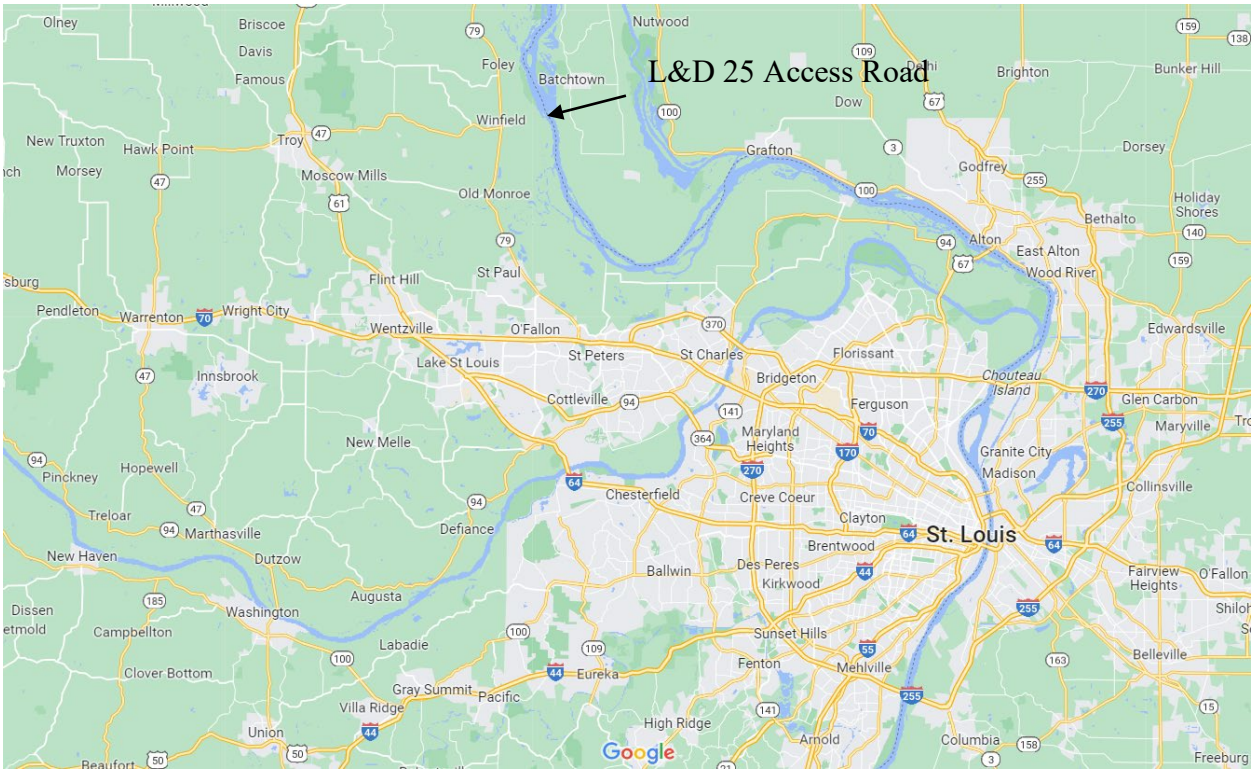
4. The project shall comply with the protection of the environment and natural resources. Contractor(s) performing the work are required to comply with all applicable Federal, state, and local environmental laws and regulations. This includes but is not limited to disposal of hazardous materials, petroleum products, pesticide/herbicide use, and spill reporting on the construction site. The Environmental Quality Section should be contacted immediately if HTRW material is encountered at any point during construction activities.

5. If you have any questions, please contact me at 314-865-6307.

/s/

Encls

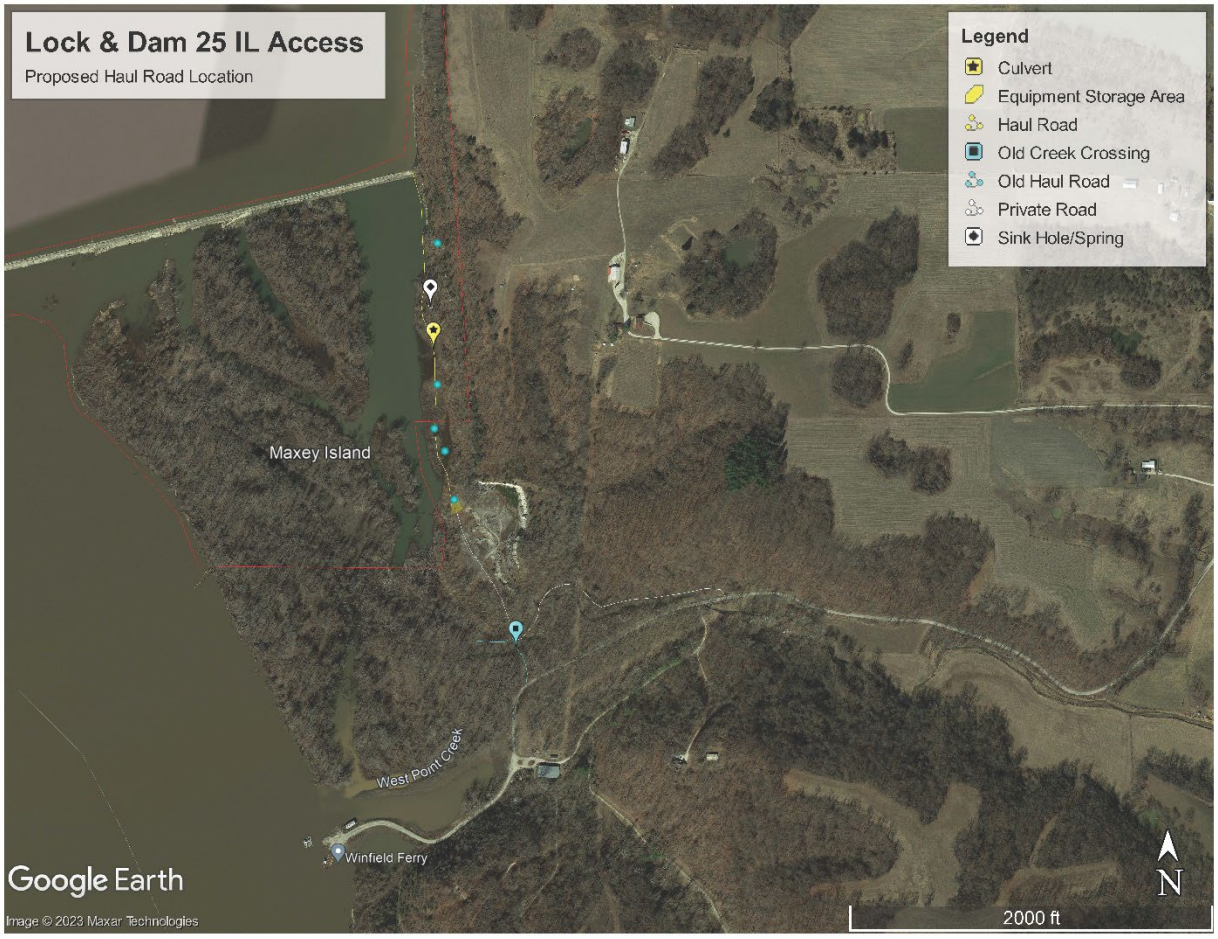
Richard D. Archeski
Environmental Engineer



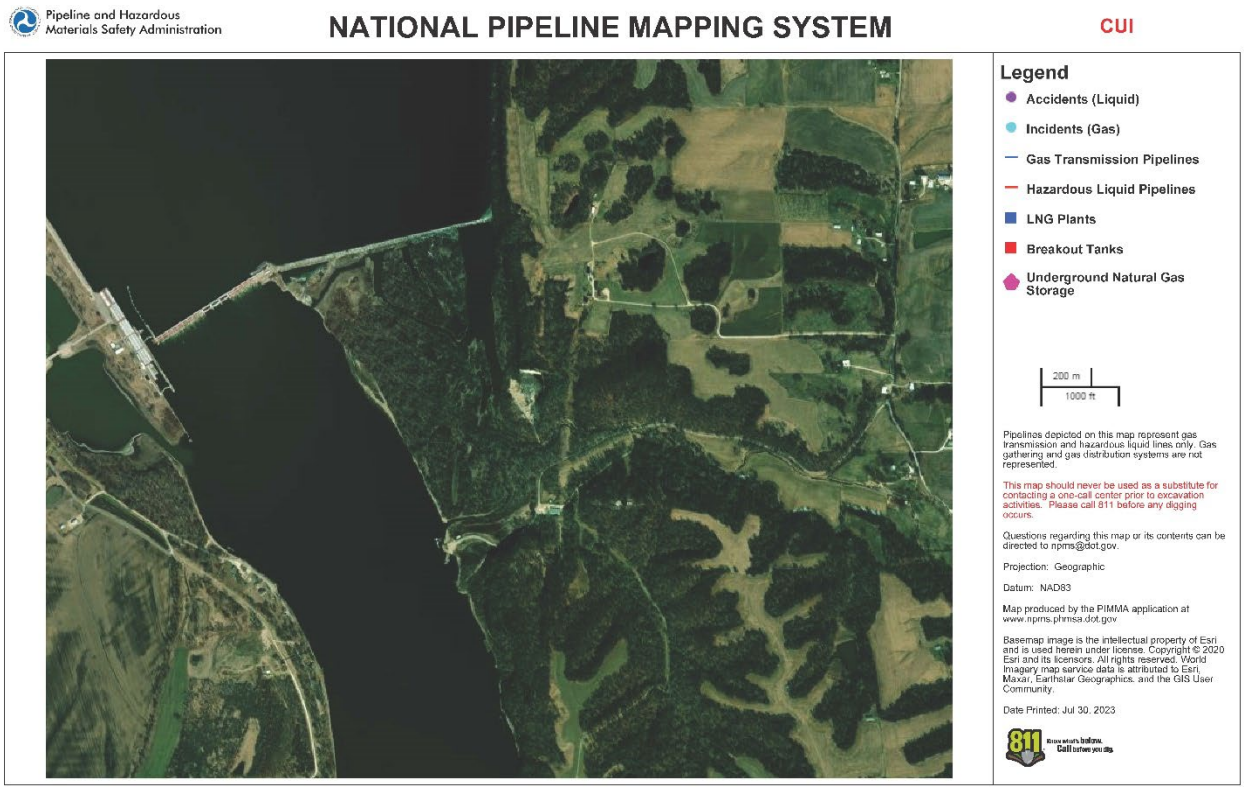
Locator Map for L&D 25 Access Road Easement.

Location of L&D 25 Access Road Easement.

Location of L&D 25 Access Road Easement.



Lock & Dam 25 Road Easement.



There are no pipelines located in the area of this easement.

The Illinois Emergency Management Agency (IEMA) Report did not indicate any spills in the vicinity of this easement. The Enforcement and Compliance History Online (ECHO) and the U.S. Environmental Protection Agency (EPA) Envirofacts did not indicate any sites of concern in the area that would affect this project.

Photographs

Photographs progress from parking area to L&D 25

Looking northwest from parking area at beginning of access road.

Looking west from parking area at beginning of access road.

Looking southeast from parking area at beginning of access road.

Looking southeast from parking area at beginning of access road.

Looking east from parking area at beginning of access road.

Start of access road from parking area.

Looking north along proposed access road near parking area.

Looking north along proposed access road from interior of site.

Looking north along proposed access road from interior of site.

Looking south toward parking area from interior of site.

Looking north along proposed access road from interior of site.

Looking south along proposed access road from interior of site.

Looking north along proposed access road from interior of site.

Looking north along proposed access road from interior of site.

Looking north along proposed access road from interior of site.

Looking south along proposed access road from interior of site.

Looking north along proposed access road from interior of site.

Looking north along proposed access road from interior of site.

Looking north along proposed access road from interior of site.

Looking south along proposed access road from interior of site.

Looking north along proposed access road from interior of site.

Looking northwest near northern extent of access road.

Looking south along proposed access road from interior of site.

Looking north along proposed access road from interior of site.

Looking north from northern portion of proposed access road.

Bluff wall along eastern side of access road.

Looking south from northern portion of proposed access road.

HTRW Questionnaire

Name of person answering this questionnaire _Kurt A. Mungenast on behalf of the Kurt A. Mungenast Revocable Trust
Are they the current owner? Yes If not, what is their association with the property or owner? Please check public records for sale date between Kevin Jenkins Trust and current owner. Current owner has only occupied property since the sales date.

1. Please refer to public records. How long has the current owner owned this property?
2. N/A. If this is a lease, how long has the current Lessee leased the property? If this is an easement, how long has the property been an easement and what is the reason for the easement?
3. Only Roundup and 24D. Twice annually along road and containers. Has there ever been any herbicide or pesticide application to the property? If so, what chemicals were applied? How many years were they applied?
4. None during current ownership. Has there ever been any type of spill (oil products, chemicals, etc.) on the property? If so, what was spilled an approximately how many gallons? Did spill reach surface waters?
5. Previous owner operated quarry on property. No commercial operations currently. Were the properties ever used for an industrial use? If so, what type?
6. Previous owner left several vehicles and empty containers. Were the properties ever used as a dump site (metal, tires, glass, chemical containers, old drums, etc.), either household or industrial?
7. None noted or disclosed on sales agreement. Were there or are there any storage tanks either underground or aboveground? If so, how many gallons, what did they store, gasoline, fuel oil, etc.? Did they leak and were they removed?
8. None noted. Are there any wells (drinking or other) on this property?
9. None noted. Were there or are there any waste water treatment facilities (septic systems, lagoons, etc.) on these property?
10. None noted. Was there or are there any transformers, capacitors or hydraulic equipment which could have contained PCB's?
11 None noted. Any storage of hazardous materials? If so, how much, when, for how many years? Where on property?
12. None noted. Any burn pits on this property?
13. None noted. Any buildings on this property? Where they built before 1980?
14. N/A. Was an asbestos and lead based paint survey been completed for the buildings? If so, was any asbestos and/or lead based paint found? Was it removed?
15. No. Is the property served by a public or private drinking water supply? Is this supply conveyed through asbestos cement mains, lead containing lines or piping that uses copper and/or lead solder?

Let me know if you have any questions.

Thanks
Rick

Kurt A. Mungenast, Kurt A. Mungenast Revocable Trust 2 Aug 2023

Lock & Dam 25 Spillway Access Road
Construction Project
Calhoun County, Illinois
June 2025

Appendix B: Clean Water Act

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

US Army Corps of Engineers®

1 PROJECT DESCRIPTION

1.1 Location

On the Upper Mississippi River, a total of 29 lock and dam systems were constructed, forming a stairway of water from Minnesota to Illinois. The locks are necessary at each of the dams to allow boats to navigate from one pool (the water backed up behind each dam) to the next. Operational on May 18, 1939, Lock and Dam 25 (L&D 25) is the third southern-most dam in the system on the Upper Mississippi River. The dam, which is 1,296 feet long, consists of 14 tainter gates and 3 roller gates used to control the depth of the water in the pool upstream of the dam. In times of high water, these gates are raised completely, and the river flows almost unimpeded, allowing a more natural flow of the river. The roller gates, located near the center of the dam, also restrict the water flow, but in a manner meant to reduce erosion. The U.S. army Corps of Engineers (USACE) operates and maintains L&D 25. L&D 25 is located in Lincoln County, Missouri and reaches to Calhoun County, Illinois on the Mississippi River at river mile (RM) 241.4.

1.2 General Description

Since L&D 25 was established, access has been solely from the western side of the Mississippi. The proposed action would extend an existing private road to connect with L&D 25 infrastructure, requiring 1,858 ft of new haul road. This alternative would require discharge of 652 cubic yards of fill material into approximately 1 acre of wetland. Not having multiple routes of access to L&D 25 negatively impacts the ability of USACE for flood risk management as well as operational and maintenance (O&M) purposes.

The following objectives and rehabilitation measures were considered in detail to achieve the project goal:

Objective 1. Improve access to L&D 25 by adding an alternate route on the eastern side of the lock and dam.

Objective 2. Minimize temporary and permanent impacts to wetlands in the proposed project area.

1.3 Authority and Purpose

The Corps proposes to install an alternate route for Access to L&D 25. This would allow Army Corps personnel to have the ability to access L&D 25 from the eastern side of the Mississippi River. By creating the access road, repairs to and around the dam on the eastern side will be streamlined. This will alleviate stress for L&D 25 personnel along with giving the army corps multiple paths of entry for future projects on and around the lock and dam. The purpose of this draft Environmental Assessment (EA) is to evaluate the proposal for an Access Road leading to the eastern side of L&D 25. The EA meets Corps of Engineers planning guidance and National Environmental Protection Act (NEPA) requirements. This document presents a detailed account

of the planning, engineering, construction, and environmental considerations which resulted in the Tentatively Selected Plan (TSP) and is being developed by the Corps of Engineers. There is no non-federal sponsor.

The purpose of the evaluation portion of this document is to comply with Section 404 of the Clean Water Act pertaining to guidelines for the placement of fill material into waters of the United States. This evaluation, in conjunction with the *Final Environmental Assessment with Finding of No Significant Impact (FONSI), Lock and Dam 25 Access Road Project, Calhoun County, Illinois* would assist in analysis of alternatives for the proposed project, resulting in a designated Tentatively Selected Plan. Further, this evaluation would provide information and data to the state water quality certifying agency demonstrating compliance with state water quality standards.

1.4 General Description of Excavated and Placed Materials

1.4.1 General Characteristics of Materials

a. Fill material

Fill materials will include quarry run limestone consisting of graded "A" stone and gravel. The total amount of fill material would equate to approximately 652 CY.

b. Excavated material

Excavated material is defined as material that is either hydraulically dredged or mechanically excavated from waters of the United States. Approximately 1.5 acre of forested wetland will be excavated for the placement of gravel fill for the access road.

1.5 Description of the proposed Placement Sites

1.5.1. Location

The proposed placement site of fill material is located along the bluff from the northern access point of the quarry staging area and to the eastern side of L&D25.

1.5.2. Size and Types of Habitat

Final placement of project features will result in loss or conversion of minor amounts of natural habitat. Temporary, short-term impacts to wetlands may result from construction activities. Less than 1 acre of tree clearing will take place to construct and place the fill for the access road.

1.5.3. Type of Site

a. Permanent Deposits of Excavated or Fill Material

The designated wetland area placement sites would result in the permanent placement of gravel for the proposed access road.

a. Temporary Deposits of Excavated or Fill Material

Temporary placement of fill material will be done in such a manner as to avoid and minimize impacts to wetlands and other natural features. Temporary stockpiles of material may also be

necessary during construction of the various project features. Construction staging areas would be created in a logical manner in order to avoid impacts to wetlands.

1.5.4 Timing and Duration of Placement

Depending on local weather and river flooding conditions, the construction period may occur over several months and possibly longer than a year.

1.6 Description of the Placement Method

The proposed project area will be cleared using earth moving equipment along the bluff from the staging area south of L&D 25 and travel north along the bluff. Gravel material will be placed in a 1 lane width along the base of the bluff creating an access road. During the plans and specifications phase, the project delivery team would avoid and minimize the amount of temporary impact to habitat within the study area. After material has been placed, the material may be re-graded using earth-moving equipment.

2 FACTUAL DETERMINATIONS

2.1 Physical Determinations

Elevation and Slope

Construction specifications are provided in the full report.

Sediment Type

The primary soil type in the study area has been characterized by the United States Department of Agriculture as silt loam, a hydric, frequently flooded mollisol of alluvium parent material. This soil is typically found in wet floodplain prairies, with poorly drained permeability.

Actions Taken to Minimize Impacts

Excavated areas without placed fill material would be allowed to reestablish by natural regeneration of early successional woody vegetation or herbaceous emergent vegetation, respective of final grade elevation in order to protect against erosive forces. Areas where fill is placed will be permanently used for access of personnel to and from L&D 25.

Additionally, Best Management Practices for construction would be enforced. Feature designs incorporated methods to reduce tree clearing where practicable. Beneficial reuse of all material was incorporated so soil balances for constructed features were met by excavated features. Therefore, no in-stream disposal of dredged or excavated materials is necessary.

2.2 Water Circulation, Fluctuation, and Salinity Determinations

Physical and Chemical Characteristics	N/A	No Effect	Negligible Effect	Minor Effect (Short Term)	Minor Effect (Long Term)	Major Effect
Substrate		X				
Suspended particulates/ turbidity				X		
Water			X			
Current patterns and water circulation		X				
Normal water fluctuations		X				
Salinity gradients	X					

Table 1. Potential Impacts on Physical and Chemical Characteristics.

Water.

a. Salinity – Not applicable.
b. Water Chemistry – No change is expected.
c. Clarity – Suspended sediment levels are expected to occur along shoreline. Decreased water clarity is expected to be short-term.
d. Color – No change is expected.
e. Odor – The project is not expected to have an impact on water odors.
f. Taste – The project is not expected to impact water taste.
g. Dissolved Gas Levels – Construction activities associated with the project are not expected to have a significant adverse impact on dissolved gas levels.
h. Nutrients – No change is expected.
i. Eutrophication – The project is not expected to contribute toward eutrophication of the water column.
j. Water Temperature – No change is expected.

Current Patterns and Circulation

Overall, the project would not have any effect on circulation and flow patterns.

Normal Water Level Fluctuations

Normal water level fluctuations in the Mississippi River would be unaffected. Restoration features would not detrimentally increase flood heights or adversely affect private property or infrastructure. Refer to Section 3.3, *Hydrology & Hydraulics* for details on H&H.

Actions That Will Be Taken to Minimize Impacts

Best Management Practices for construction would be enforced. Refer to Section 3.3.2 in the main report for more details on the Hydrology and Hydraulics Action Alternative.

2.3 Suspended Particulate/Turbidity Determinations

Expected Changes in Suspended Particles and Turbidity Levels in Vicinity of Placement Site. During construction activities, ground disturbance would be taking place within the proposed project area. If water levels were to rise high enough to reach the base of the bluff, suspended particles would be added into the water column. Best management practices will be followed to reduce impacts to the water column and to prevent any changes to the turbidity of the surrounding waters within the proposed project area.

Effects on Chemical and Physical Properties of the Water Column

a. Light Penetration. There would be a temporary reduction until sediments suspended as part of the project activities settle out of the water column.
b. Dissolved Oxygen. No adverse effects expected.
c. Toxic Metals and Organics. No adverse effects are expected.
d. Aesthetics. Aesthetics of work sites are likely to be adversely affected during construction but are expected to be temporary and improve after construction. Decreased aesthetics would likely be realized soon after construction, but when cleared areas have been revegetated aesthetics will start to improve.
e. Effects on Biota. The project would likely result in some short-term displacement of biota in the immediate vicinity of construction activities due to temporary decreases in water quality and disturbance by construction equipment. Long-term effects would take would only take place in areas where fill is being placed.

2.4 Contaminant Determinations

The Phase I Hazardous, Toxic, and Radioactive Waste survey conducted for this study did not identify contaminant sources or migration pathways from surrounding properties that would adversely impact surrounding environments (human and ecological receptors). It does not appear that there is a risk of HTRW contamination within the project area. Refer to Appendix A and Section 3.11, *Hazardous Toxic Radioactive Waste* for more details.

2.5 Aquatic Ecosystem and Organism Determinations

Biological characteristics	N/A	No Effect	Negligible Effect	Minor Effect (Short Term)	Minor Effect (Long Term)	Major Effect
Threatened and endangered species			X			
Fish, crustaceans, mollusk, and other aquatic organisms			X			
Other wildlife			X			

Table 2. Potential Impacts on Biological Characteristics. More information provided in Section 3.6 & 3.7, Environmental Assessment for species-specific determinations.

Effects on Plankton

The project would not have a significant effect on the plankton in the immediate vicinity of the project area.

Effects on Benthos

The project would not have a significant effect on the benthos in the immediate vicinity of the project area.

Effects on Nekton

The project would not have a significant effect on the nekton in the immediate vicinity of the project area.

Effects on Aquatic Food Web

The project would not have a significant effect on the plankton in the immediate vicinity of the project area.

Effects on Special Aquatic Sites.

Although wetlands within the Project Area would be impacted by one or more features, the impacts would be offset through mitigation. The wetland impacts and restoration are summarized in Table 3 and discussed below:

Special Aquatic Sites	N/A	No Effect	Negligible Effect	Minor Effect (Short Term)	Minor Effect (Long Term)	Major Effect
Sanctuaries and refuges	X					
Wetlands					X	
Mud flats	X					
Vegetated shallows	X					
Coral reefs	X					

Table 3. Potential impacts on special aquatic sites.

a. Forest Clearing – Approximately 1.5 acre of forested area would be cleared. Roughly half of that area would have fill material placed for creation of the access road. The other area would allow for construction equipment to maneuver within the project area. The forest community type in this area currently has a presence of invasive Japanese hops (*Humulus japonicus*) and bush honeysuckle (*Lonicera* maackii) in the understory, with some regeneration of early successional, small diameter forest consisting of cottonwood (*Populus deltoides*), hackberry (*Celtis occidentalis*), silver maple (*Acer saccarhinum*), and American sycamore (*Platanus* occidentalis). Reforestation will occur for the excavated area that is not having fill material placed. Therefore, this feature would have a minor long-term effect on wetlands.

Threatened and Endangered Species

Presence of, or use by, endangered and threatened species is discussed in the FONSI. No adverse impacts are expected to result from this project. Refer to Appendix A for more details.

2.6 Proposed Placement Site Determinations

Mixing Zone Determinations

Suspended particulates and turbidity would increase during construction activities. These increases would be most evident at the point of excavation would quickly fall within baseline conditions in the mixing zone. Excavated or dredged material will be placed within containment berms in order to construct the islands. No significant adverse impacts to the chemical and physical properties of the water column are expected.

Determination of Compliance with Applicable Water Quality Standards

This Clean Water Act Section 404(b)(1) provides the necessary compliance required by law. Section 401 Water Quality certification in compliance with the Clean Water Act, and all other permits necessary for the completion of the project, would be obtained prior to project construction.

Potential Effects on Human Use Characteristics

No long-term adverse impacts to municipal and private water supplies; water-related recreation; aesthetics; or parks, national and historic monuments, national seashores, wilderness areas, research sites or similar preserves would occur.

2.6 Determinations of Cumulative Effects on the Ecosystem

Although minor short-term construction-related impacts to local fish and wildlife populations are likely to occur, no negative cumulative impacts to fish and wildlife are identified. From a systemic approach, the tentatively selected plan would result in long term minor effects in the proposed project area. Refer to Section 3.5, Wetlands and Terrestrial Habitat in the Environmental Assessment for more details.

2.7 Determinations of Secondary Effects on the Ecosystem

No adverse secondary effects should result from the proposed action. Long-term minor impacts to habitat and wildlife are expected. Refer to Section 3.6, Aquatic and Terrestrial Organisms for more details.

3 FINDINGS OF COMPLIANCE OR NON-COMPLIANCE WITH THE RESTRICTIONS ON DISCHARGE

No significant adaptations of the 404(b)(1) guidelines were made relative to this evaluation.

Alternatives that were considered for the proposed action included fewer features than the tentatively selected plan. All feasible combinations of features, 2 final alternatives including the no action alternative were analyzed for environmental benefits and costs. The tentatively selected plan best met project objectives and the four plan formulation criteria of completeness, effectiveness, efficiency, and acceptability.

1 Certification under Section 401 of the Clean Water Act would be obtained from the Illinois Environmental Protection Agency where applicable.

2 Prior to construction, full compliance with the Endangered Species Act would be documented.

3 The project is situated along an inland freshwater river system. No marine sanctuaries are involved or would be affected by the proposed action.

4 No municipal or private water supplies would be affected by the proposed action, and no degradation of waters of the United States is anticipated to result from the proposed action. The proposed construction activity would not have a significant adverse effect on human health and welfare, recreation and commercial fisheries, plankton, fish, shellfish, wildlife, or special aquatic sites. No significant adverse effects on life stages of aquatic life and other wildlife dependent on aquatic ecosystems are expected to result. The proposed construction activity would have no significant adverse effects on aquatic ecosystem diversity, productivity, and stability. No significant adverse effects on recreational, aesthetic, and economic values would occur.

5 The materials used for construction would be chemically and physically stable and

non-contaminating.

6 No other practical alternatives have been identified. The proposed action will be in compliance with Section 404(b)(1) of the Clean Water Act, as amended prior to construction. The proposed action would not significantly impact water quality.

_____ _____

Date

Andy J. Pannier
Colonel, U.S. Army
District Commander

4 Figures

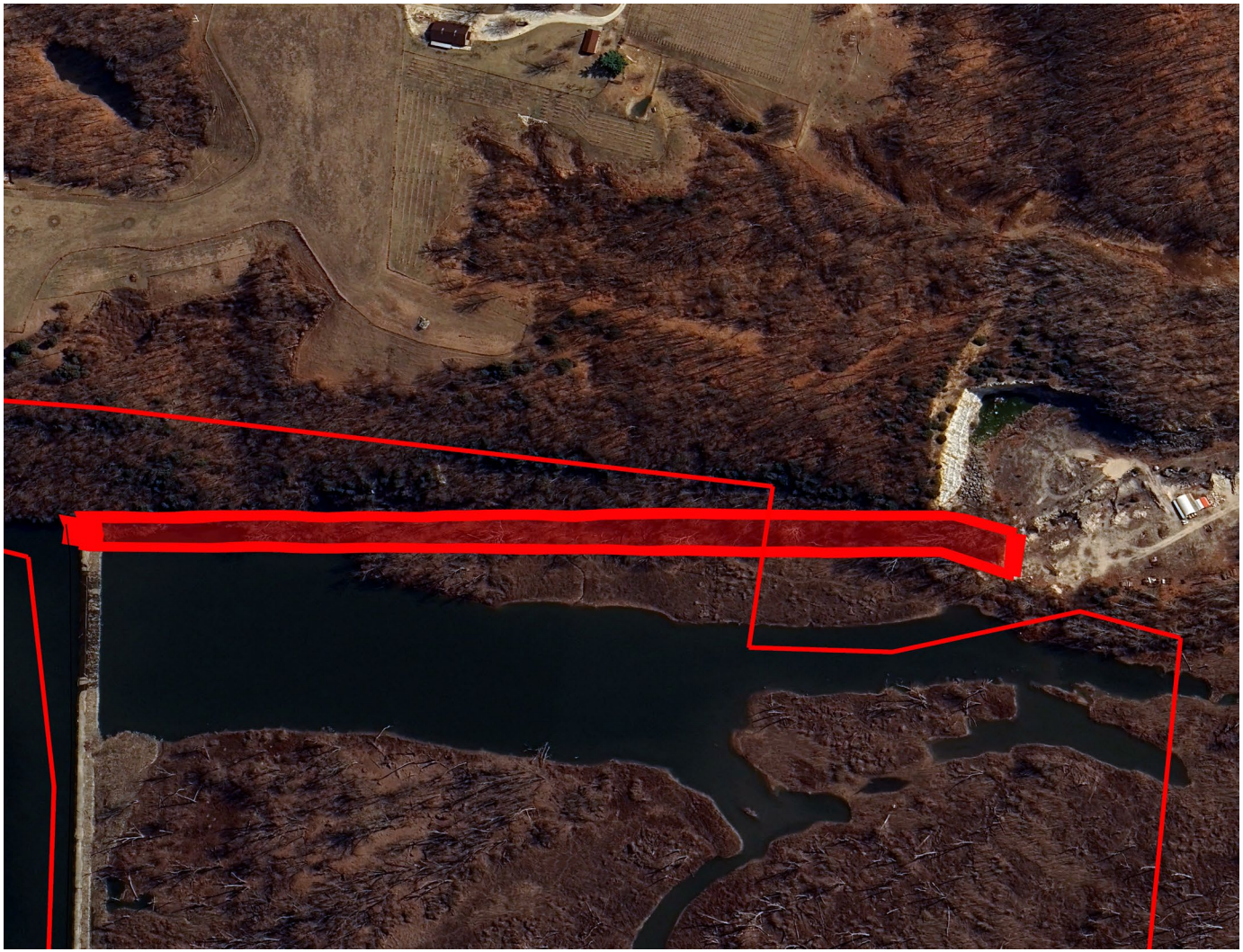


Figure 1. General Access Road Area.

Lock & Dam 25 Spillway Access Road
Construction Project
Calhoun County, Illinois
June 2025

Appendix C: Mitigation Plan

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

US Army Corps of Engineers®

Mitigation Plan
L&D 25 Spillway Access Road Construction Project (Draft)
May 2025

1. Overview

This document presents the compensatory mitigation plan for unavoidable habitat impacts associated with the construction of the Lock and Dam 25 (L&D 25) Spillway Access Road Project. This plan addresses only compensatory mitigation work and not the sequence of other activities performed during project planning to avoid, minimize, rectify, or reduce habitat impacts of the project. The need to develop a compensatory habitat mitigation plan for unavoidable impacts to fish and wildlife resources is covered in the Environmental Assessment (2025 EA). This document details the work performed, including coordination and environmental compliance, to develop the compensatory habitat mitigation plan.

2. Requirements

The authority and requirements for compensatory mitigation are founded in Federal laws and regulations. The legal foundation for mitigation for ecological resources includes the Clean Water Act, various Water Resources Development Acts, and other environmental laws. These laws are implemented and administered through rules, guidance, regulations, and policies issued by Executive Branch agencies.

The relevant laws and regulations specific to compensatory mitigation planning for Corps of Engineers civil works projects are listed in the References section of this document. The specific procedures followed to develop this compensatory habitat mitigation plan are found in ER 1105- 2-100, Appendix C. Other forms of mitigation, such as plans for cultural resources conservation or induced flood damages, may also be required for a project. Those types of mitigation requirements are not directly related to fish and wildlife habitat impacts and are not covered in this plan.

Compensatory mitigation is the "restoration (re-establishment or rehabilitation), establishment, enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved" (see 40 CFR 230.92). It is the policy of the Corps of Engineers civil works program, and in accordance with Section 906 of WRDA 1986, as amended, to demonstrate that impacts to all significant ecological resources, both terrestrial and aquatic, have been avoided and minimized to the extent practicable, and that any remaining unavoidable impacts have been compensated to the extent possible. Section 906(d) of WRDA 1986, as amended, requires functional assessments to be performed to define ecological impacts and to set mitigation requirements for impacted habitats. Corps of Engineers policy in ER 1105-2-100, paragraph C-3(e), requires the use of a habitat-based methodology, supplemented with other appropriate information, to describe and evaluate the impacts of the alternative plans, and to identify the mitigation needs.

3. Coordination

Public input was sought during review of the draft report and environmental compliance document. Comments received during public review have been included in the final report.

4. Ecological Resource Impacts

The Upper Mississippi River System Floodplain Forest Habitat Model was used to assess the project's impacts on ecological resources. The model is certified for use by the Corps of Engineers Ecosystem

Restoration Planning Center of Expertise. Model outputs measure habitat value in average annual habitat units (AAHUs). The tool is also suitable for assessing mitigation potential at alternative mitigation sites in the watershed. Table 1 displays the model output results. Additional details on the use of the model and the results of the analysis are presented in the 2025 EA.

Table 1. Unavoidable Habitat Impacts.

Habitat Type	Acres	AAHUs
Wetland	1.5	-0.77

5. Define Mitigation Planning Objectives

The goal of this mitigation plan is to fully compensate for the unavoidable impacts to significant ecological resources that would occur with project implementation. The objectives of the mitigation plan are defined by the results of the habitat impact assessment model using quantified units. The same habitat assessment model is used to estimate potential project impacts and potential outputs of mitigation measures. The objective of this mitigation plan is to:

• Compensate for the permanent loss of 1-acre of forested wetland for the access road and additional temporary loss of 0.5-acres of forested wetland for construction activities (-0.77 average annual habitat units).

Other factors may influence planning objectives and the development of strategies, measures, and alternative plans. These may even play a role in plan selection depending on specific project circumstances and opportunities. Some of these factors are based on legal requirements and policies and others are derived from scientific or technical standards. For example, acquisition of lands or interests in lands for mitigation must be acquired before construction of the project commences or concurrently with acquisition of lands and interests in lands for other project purposes; and the physical construction of the mitigation work is required to be carried out before or concurrently with project construction (see Section 906(a) of WRDA 1986, as amended). This introduces an implementation time factor to consider later in plan evaluation and selection. Another example, from a scientific perspective, is that larger contiguous land tracts may offer better habitat value for fish and wildlife compared to dispersed smaller areas. This may influence site selection and land considerations for a mitigation project.

6. Identify and Assess Potential Mitigation Strategies

Planning strategies are different means employed to develop an alternative plan or plans to achieve a project goal. The use of one or more strategies helps teams focus on an approach to developing a plan. For mitigation planning work, strategies may range from the purchase of mitigation bank credits to the construction of a project or projects to achieve the objectives and compensate for unavoidable habitat impacts. Strategies may also involve different approaches to site selection such as the use of public lands or identifying contiguous sites to enhance wildlife corridors or expand wildlife populations. In addition, Section 2036(c) of WRDA 2007, as amended, requires the Corps of Engineers to consider mitigation banks and in-lieu fee programs where appropriate. Consideration of these options as mitigation strategies may be helpful when available. The strategies considered for planning this mitigation project are described below.

- Purchase of mitigation bank credits. Mitigation banks sell credits for mitigation work performed

at an approved site. The banks are approved and legally bound through banking instruments that hold the operators to certain standards of performance and reporting. The use of mitigation banks for a project may offer advantages to the government and non-federal sponsor by reducing performance risk and eliminating project specific requirements for operations and maintenance work and the development of monitoring and adaptive management plans.

- Purchase of in-lieu fee program credits. In-lieu fee programs are established by state or local natural resource management agencies and approved by the Corps of Engineers and U.S. Environmental Protection Agency to accept funds for future mitigation work. The programs are approved to implement either specific or general wetland or other aquatic resource development projects. Programs must meet the requirements that apply to an offsite mitigation effort and provide adequate assurances of success and timely implementation. A formal agreement between the program sponsor and the agencies, like a banking instrument, defines the conditions under which the use of the program is considered appropriate. Using an in-lieu-fee program for a project's mitigation needs may offer advantages to the government and non-federal sponsor by reducing performance risk and eliminating project specific requirements for operations and maintenance work and the development of monitoring and adaptive management plans.

- Construction of a mitigation project. The government may choose to construct a mitigation project. This construction strategy offers some potential advantages in tailoring a project to specific needs or locations. In addition, project partners may bring special expertise to the project gained from previous work on similar projects in the area.

7. Formulate Alternative Mitigation Plans

No Action Alternative. Under this scenario no mitigation work would be performed, the District would not construct an access road leading to L&D 25 along the Illinois bankline of the Mississippi River. Entrance to L&D 25 would be solely from the Missouri side. The alternative is retained for purposes of a baseline comparison against other action alternatives.

Action Alternative 1- purchase mitigation bank credits. Under this scenario would extend an existing private road to connect with existing L&D 25 infrastructure, requiring 1,858 ft of new haul road. This alternative would require discharge of 651.08 cubic yards of fill material into the impoundment adjacent to the bankline, would impact approximately 1 acre of wetland. To offset the unavoidable impacts to aquatic resources, wetland mitigation credits and stream mitigation credits would be purchased from a wetland mitigation bank. To help mitigate unavoidable impacts to the habitat of endangered bat species, construction would take place during the least active season which takes place between October 1st and March 31st.

Action Alternative 2- USACE-constructed mitigation. Under this scenario would extend an existing private road to connect with existing L&D 25 infrastructure, requiring 1,858 ft of new haul road. This alternative would require discharge of 651.08 cubic yards of fill material into the impoundment adjacent to the bankline, would impact approximately 1 acre of wetland. To offset the unavoidable impacts to wetland resources. The preferred location would be an USACE own 5-acre field that is currently a reforestation area that was planted with hard mast trees in 2015. There has been low survivorship of those trees and an increase in reed canary grass throughout the site. The site would benefit from a

supplemental planting of 3-gallon containerized cottonwood and sycamore trees (Figure 1). Construction for this alternative would involve:

1. 550 trees (225 each cottonwood and sycamore) will be planted evenly throughout the site. These trees would grow quickly and shade out reed canary grass.
2. Care will be taken to not plant directly around the lingering oaks and hickories on the site.
3. Bamboo stakes will be driven through the root ball of each planted tree into the soil below to hold the tree upright and in place.

Figure 1. USACE currently owns a 5-acre field (green) available for mitigation. This mitigation area is in close proximity to the L&D 25 Access Road Project (yellow).

8. Define and Estimate Costs of Mitigation Plans

Cost estimates were prepared for each alternative. Available information included records of recent mitigation bank credit and in-lieu fee program credit sales and details from recently completed nearby ecosystem projects. The study team also considered other cost factors such as site access, fuel and equipment, and the availability of plant materials. Table 2 displays the costs and outputs for each alternative plan.

Table 2. Estimated Costs of Alternative Plans.

Alternatives	Cost	Plan Outputs
No Action	$0	0
Action Alternative 1 - purchase mitigation bank credits	$47,000.00	0.77 AAHUs
Action Alternative 2 – USACE-constructed mitigation	$14,170.00	0.79 AAHUs

9. Display Incremental Costs

Cost effectiveness analysis is conducted on alternative compensatory mitigation plans to ensure the least cost alternative is identified for each level of output. Subsequently, incremental cost analysis is done on the cost-effective plans to reveal changes in costs as output levels increase and allow for an assessment of whether the increase in output is worth the additional cost. Determination of the final compensatory mitigation plan will utilize these results to identify and describe the least cost plan.

The outputs of different mitigation alternatives may be similar. Each alternative plan should be appropriately scaled to meet the mitigation planning objective based upon unavoidable ecological impacts generally expressed in habitat units. Some variations in alternative plan outputs and costs may be expected because of differences in site conditions or other factors at various project locations under consideration.

IWR Planning Suite Software is used to analyze and compare plans. The software uses information about the mitigation measures and alternative plans including combinability and exclusions, costs, and outputs. The team establishes the parameters and enters cost estimates and plan outputs into the software. The resulting information is used to evaluate alternatives and identify a suite of cost-effective solutions or plans. Figure 2 displays the results of the cost effectiveness evaluation for all the alternative plans. Figure 3 shows only the cost-effective plans and Figure 4 displays the incremental cost analysis of best buy plans.

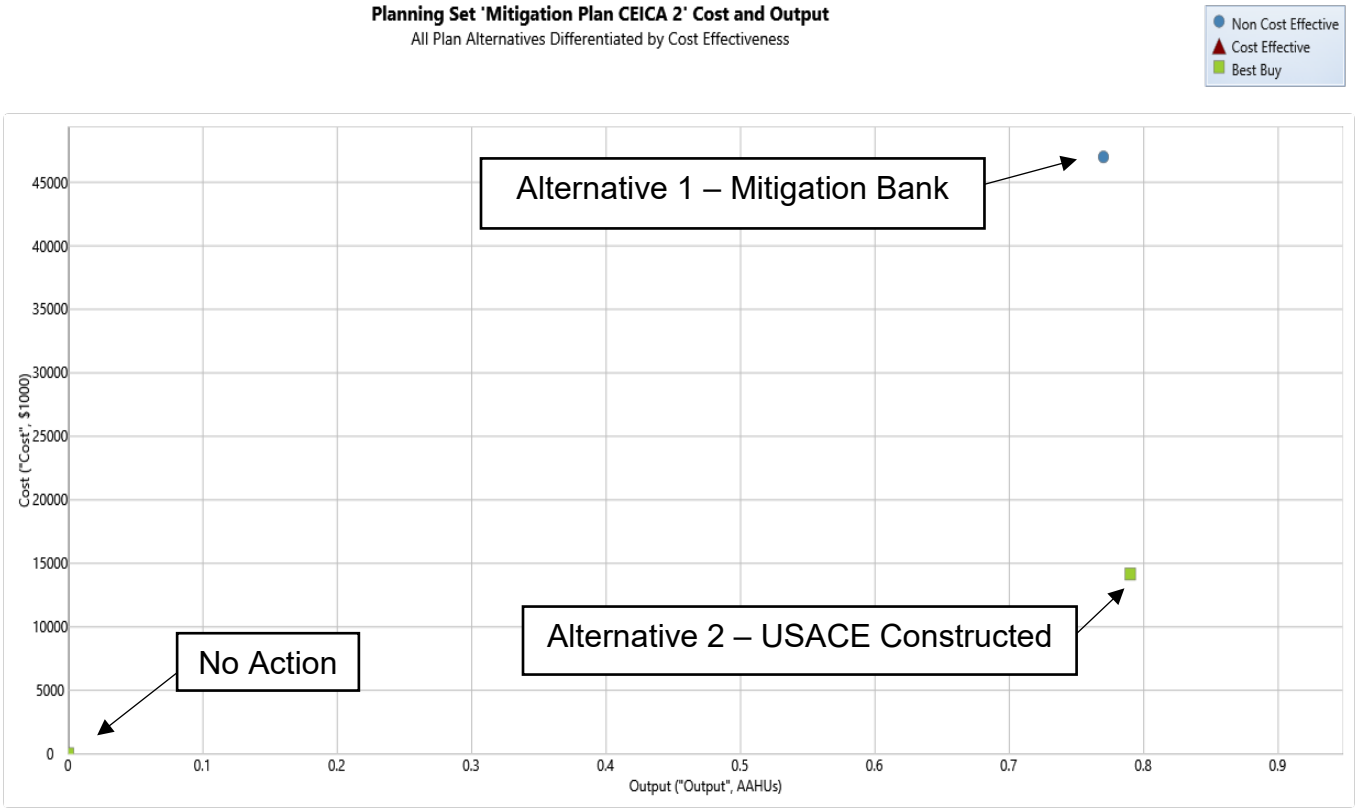


Figure 2. Chart of Alternative Plans.

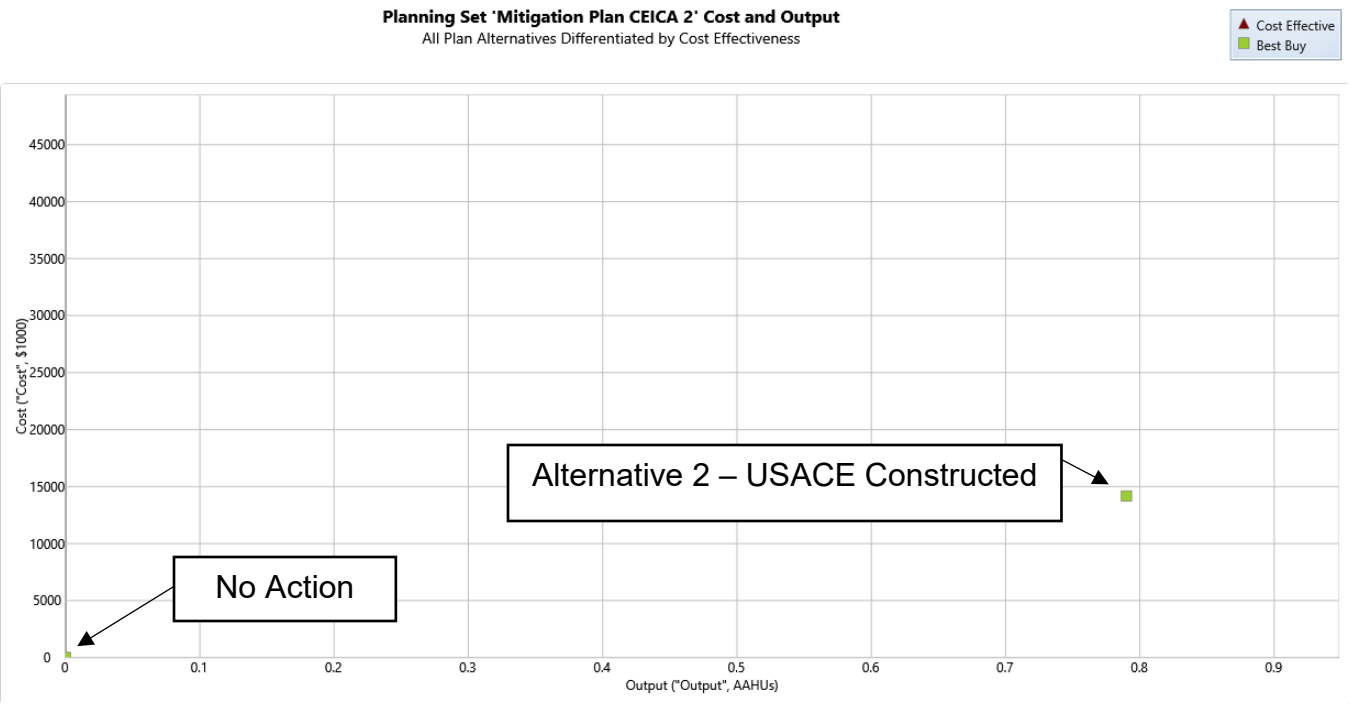


Figure 3. Chart of Cost Effective Alternative Plans.

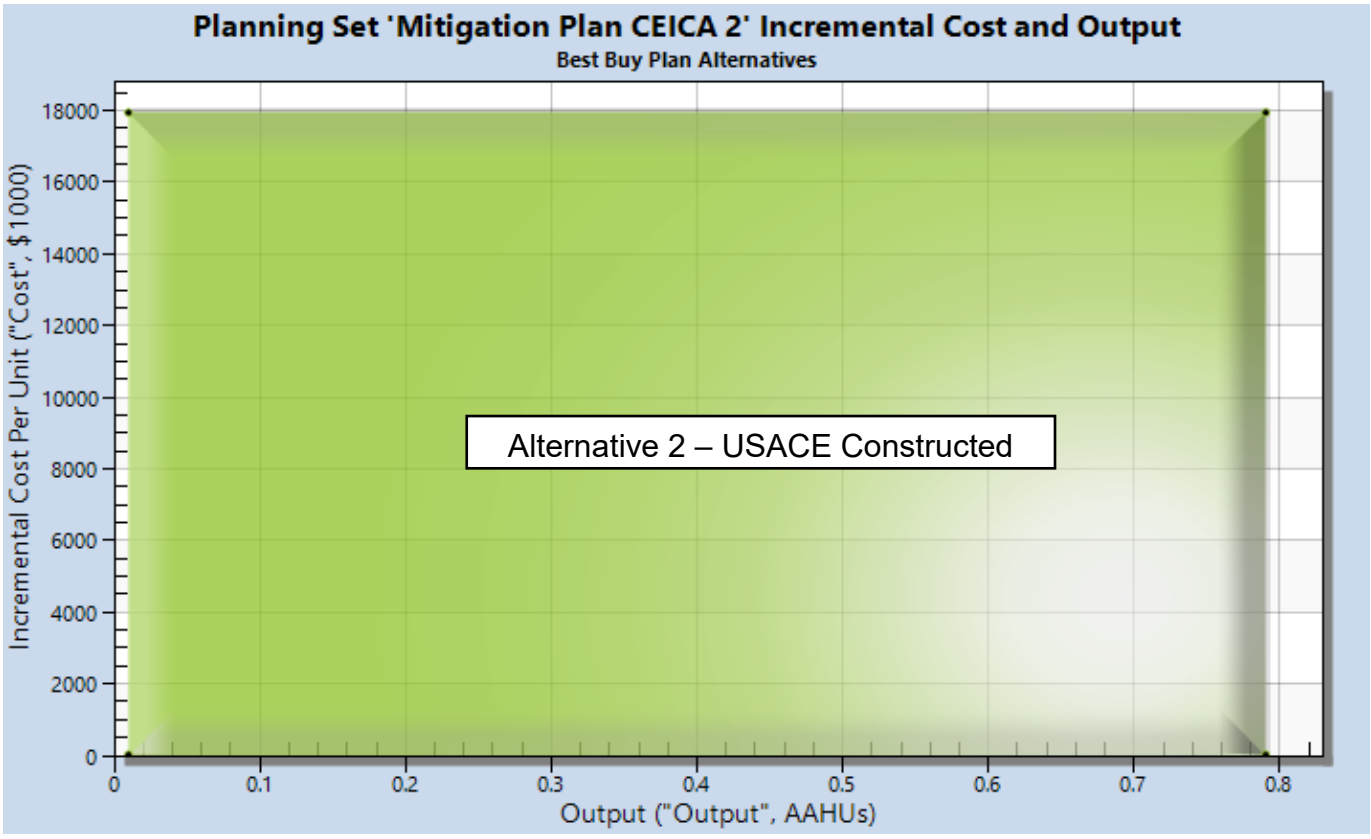


Figure 4. Chart of Incremental Costs and Benefits of Alternatives

The least cost alternative plan – Alternative 2 – that provides full mitigation of losses specified in the planning objectives is identified and displayed. There are no other plans that provide more benefits at a lower cost.

10. Plan Selection Considerations

Multiple formulation and plan selection considerations may be relevant to identifying a recommended alternative for the project. Factors to consider include compliance with laws, regulations and policies, location of work, a plan's cost effectiveness, implementation timing, and risk elements. The table below poses questions to consider selection factors for both alternatives.

Table 3. Plan Selection Considerations

Comparison Questions	No Action Alternative	Action Alternative 1	Action Alternative 2
Is the mitigation alternative located onsite?	No	Yes	No
Does the alternative mitigate for habitat losses in-kind?	No	Yes	Yes
Is the mitigation alternative in the same basin as the habitat impacts?	No	Yes	Yes
Can the alternative be implemented before or concurrent with construction?	No	Yes	Yes
Can the alternative be implemented faster than other alternatives?	No	Yes	No
Does the alternative have higher implementation risks than others?	No	No	No
Does the mitigation alternative have operation risks for the government?	No	No	Yes
Is the mitigation alternative cost effective?	Yes	No	Yes

The table above assesses each alternative plan by posing and answering a set of questions aimed at discerning differences in alternatives beyond simply identifying the least cost plan. Several questions are related to location and in-kind replacement of lost functions and values. These questions are linked to water resources law and policy that in most cases requires in-basin and in-kind mitigation. All alternatives provide in-basin and in-kind mitigation. The question regarding on-site mitigation could identify a preferable plan location but may have implementation timing implications. Law requires mitigation work to be performed before or concurrently with project construction. All alternatives can be implemented before construction and none of the alternatives entail on-site compensatory mitigation. There are differences in risks between the alternatives. Constructing mitigation work versus purchasing mitigation credits carries risks of project non-performance that would have to be addressed by additional work at government expense. Based upon these considerations, Alternative 1, purchase mitigation bank credits, would be eliminated from further consideration. Alternative 2, USACE-constructed mitigation, is the least cost and lowest risk plan, because of lessons learn from past action in the area.

11. Recommended Compensatory Mitigation Plan

The recommended plan for compensatory mitigation is the USACE-constructed mitigation from an approved 5-acre field located in Batchtown, IL (39.054621°, -90.675009°; NE Sec. 6, T. 12 S., R. 2 W.). Specifically, the construction is to compensate for the unavoidable loss of habitats in the basin as follows:

- 1-acre of forested wetland (-0.77 AAHUs) would be impacted by the construction of the new access road. USACE-constructed mitigation is available in USACE land, 5-acre field would be required to compensate for the 0.79 AAHUs of impact.

11.1 Monitoring Requirements & Adaptive Management Plan

Monitoring will commence the year after mitigation site is planted, which will constitute year one. For the first five years, an annual forest survey will be conducted. If at the end of the five-year monitoring period, the ecological success targets are being met and the USACE is satisfied with performance (greater than 80% survivorship, positive relative growth rates and less than 25% invasive cover), the forested wetland and bottomland hardwood forest portion(s) of the mitigation site will be considered stable and self-sustaining and require monitoring on a five-year basis instead of annually. If ecological success targets have not been attained after five years, annual monitoring will continue. At 10 years if all the measures are met, USACE will consider the ecological success of the mitigation site in coordination with state agencies.

In the event that the USACE or state agency, in coordination with USACE, determine that ecological success is not likely to be met using information provided in the monitoring reports, USACE will take all necessary measures to modify management practices in order to achieve ecological success in the future (see Implementation Guidance for Section 1163 of WRDA 2016, Wetlands Mitigation).

12. References

U.S. Army Corps of Engineers. 2019. Engineer Regulation 1105-2-100 Planning Guidance Notebook, Appendix C. Washington, D.C. 57pp.

Additional References

Laws

- Clean Water Act (33 U.S.C. 1531 et seq)
- Endangered Species Act (16 USC 1531 et seq)
- Fish and Wildlife Coordination Act
- Magnuson – Stevens Fishery Conservation and Management Act (16 USC 1801 et seq)
- National Environmental Policy Act
- Water Resources Development Acts of 1986, 1990, 2000, 2007, 2014, and 2016.

Implementation Guidance

- Implementation Guidance for Section 2036(a) of the Water Resources Development Act of 2007 (WRDA 07) - Mitigation for Fish and Wildlife and Wetlands Losses. Issued by ASA(CW) 31 August 2009.
- Implementation Guidance for Section 1162 of the Water Resources Development Act of
- 2016 and Section 1040 of the Water Resources Reform and Development Act of 2014, Fish and

Wildlife Mitigation (Section 906 of the Water Resources Development Act of 1986, as amended (33 U.S.C. 2283)) Issued by ASA(CW) 08 March 2019.

- Implementation Guidance for Section 1163 of the Water Resources Development Act of 2016, Wetlands Mitigation. Issued by ASA(CW) 08 March 2019.

Policy

- Cost Sharing for Lands Associated with Fish and Wildlife Mitigation. Issued by USACE Director of Civil Works 19 September 2006.

Regulations

- 40 CFR 230.92, definition of mitigation bank.
- 40 CFR 1500.3(b)(2), include alternatives input from State, Tribal and local governments.
- 40 CFR 1503.3(e), cooperating agencies must cite statutory authority to specify mitigation.
- 40 CFR 1508.5, definition of cooperating agency.
- 40 CFR 1508.20, definition of mitigation.
- Engineer Circular 1105-2-412 Assuring Quality of Planning Models.
- Engineer Regulation 1105-2-100 Planning Guidance Notebook, Appendix C.
- Engineer Regulation 200-1-5 Policy for Implementation and Integrated Application of the U.S. Army Corps of Engineers (USACE) Environmental Operating Principles (EOP) and Doctrine.
- Engineer Regulation 200-2-2 Procedures for Implementing NEPA.