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

20 January 2022

REPLY TO ATTENTION OF:
Regional Planning and Environmental Division North
Environmental Compliance Section (CEMVP-PD-C)

RE: Wappapello Lake Lakeside Marina Expansion Project

Dear Sir or Madam:

The St. Louis District, U.S. Army Corps of Engineers has prepared a Draft Environmental Assessment (EA) and unsigned Finding of No Significant Impact (FONSI) for the Lakeside Marina Expansion Project, Wappapello Lake, Wayne County, Missouri. Please note that the Finding of No Significant Impact is unsigned.

Under the National Environmental Policy Act of 2020, the St. Louis District is distributing this letter to notify concerned agencies, interest groups, and individuals of the proposed project and to solicit comments from those persons or organizations who may be interested in or affected by the project. The FONSI is unsigned and would only be signed after comments received as a result of this public review have been given full consideration.

An electronic copy of the EA and unsigned FONSI can be obtained from the St. Louis District's website at

https://www.mvs.usace.army.mil/Portals/54/docs/pm/Reports/EA/LakesideMarinaExpansionProjectEAFONSI2022.pdf

Wappapello Lake and the St. Louis District of the U.S. Army Corps of Engineers propose expanding the entrance road and parking lots of Lakeside Marina to improve recreational access. Additional improvements to the tackle shop water supply, marina cove depth, and shoreline stabilization within the project area would increase functionality and safety of Lakeside Marina. Environmental impacts associated with the proposed project are outlined in the draft EA.

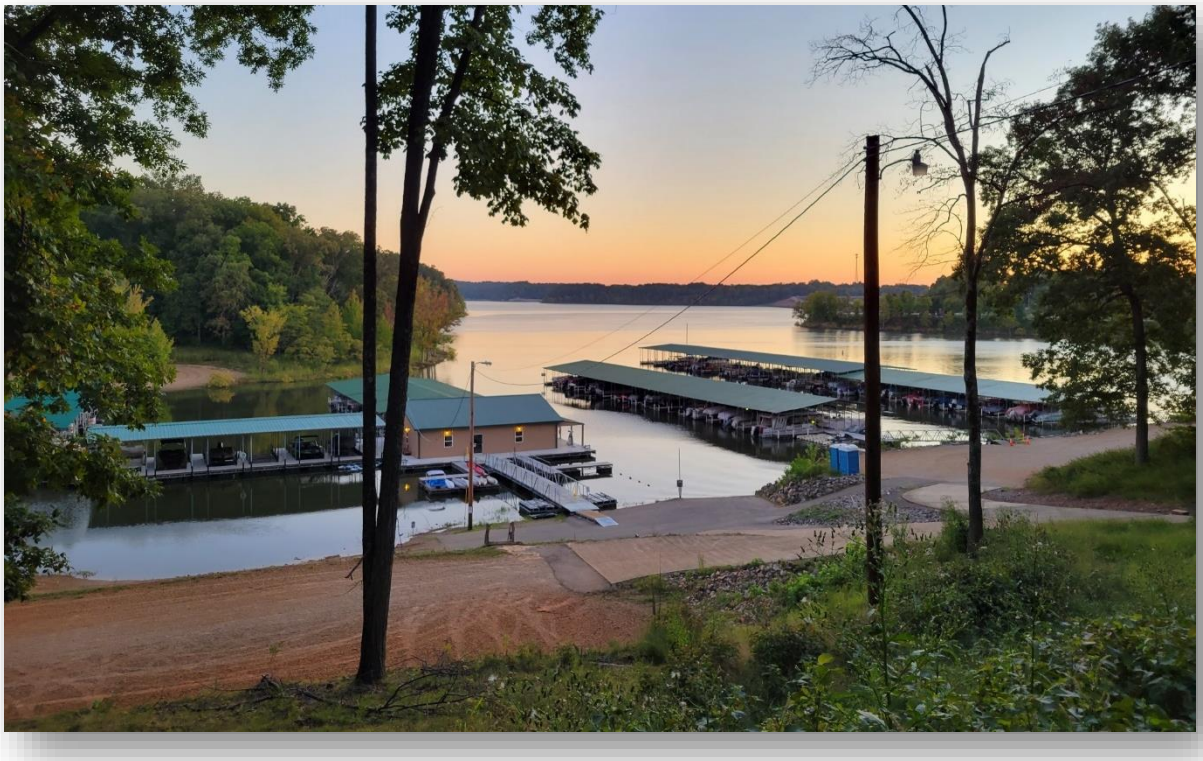
Please provide any comments you may have regarding this project to Rachel Steiger of the Environmental Compliance Section, at **telephone** 314-331-8027 or **e-mail** Rachel.L.Steiger@usace.army.mil. In order for comments to be considered prior to a final decision being made, they must be received by this office by close of business on **21 February 2022**.

Thank you,

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

Draft Environmental Assessment
with
Finding of No Significant Impact (FONSI)

Wappapello Lake Lakeside Marina Expansion Project
Wayne County, Missouri



20 January 2022

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

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1 INTRODUCTION

Wappapello Lake is located in Wayne and Butler counties on the Upper St. Francis River in the southeastern part of Missouri, approximately 22 miles southeast of Greenville, Missouri, and 16 miles northeast of Poplar Bluff, Missouri. Wappapello Lake is an 8,400-acre lake created in 1941 by damming the St. Francis River with the Wappapello Dam. The dam site is located at the edge of the Ozark Plateau hill country and the reservoir is long and narrow with coves developed in the tributary streams. The Lake is owned and operated by the U.S. Army Corps of Engineers (USACE) and provides flood control for the St. Francis River and its tributaries, fish and wildlife conservation, and recreation. Wappapello Lake recreation opportunities and facilities include hiking, backpacking, and equestrian trails; day use areas, playgrounds, and sporting facilities; camping and lodging; and maintained beaches, boat ramps, and marinas.

1.1 PROJECT AUTHORITY

Wappapello Lake Project was originally authorized for construction by the Flood Control Act of 1936. Authorization for recreational development was added in 1944, three years post lake and dam construction completion in 1941. This EA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 2020 and the Council on Environmental Quality's Regulations (40 Code of Federal Regulations §1500-1508, as reflected in the USACE Engineering Regulation 200-2-2). This EA evaluates the environmental, cultural, and social effects of the proposed Wappapello Lakeside Marina Expansion Project.

1.2 PURPOSE AND NEED

Wappapello Lake provides recreation opportunity to nearly one million individuals annually. Lakeside Marina, a newly renovated marina on the southeast end of Wappapello Lake, provides boating and fishing recreational opportunities to Wappapello Lake visitors and the surrounding communities. In 2021 parking availability and road accessibility were insufficient for the 20,000 vehicles that visited Lakeside Marina. The 2022 recreation season is expected to substantially surpass 2021 visitation rates, with all 154 boating slips available at Lakeside Marina currently reserved. Lakeside Marina needs updated and expanded access (i.e. road, parking, and waterway access) to prevent the obstruction of recreation opportunity and safety for visitors.

1.3 PUBLIC AND PARTNER REVIEW

USACE will conduct a month-long review period using a variety of communication methods with affected public, agencies, organizations, and tribes to identify any potential issues related to project scope or proposed project alternatives. The input received during this review period will be taken into account in the process of decision making for this project.

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. The Action Alternative was developed by identifying construction measures to increase parking availability and ease of access to Lakeside Marina

boat docks. A No Action Alternative is also considered for the project area as require by NEPA, and acts as a baseline against which the action alternative(s) are measured.

2.1 No Action Alternative

Under No Action, Lakeside Marina would neither expand parking facilities nor dredge and remove lake bottom material. The current conditions as described in Chapter 3 (Affected Environment) would not be anticipated to change. Seasonal use of marina facilities would be expected to continue, which would continue to impact road and parking traffic patterns. In addition, additional sedimentation of the marina's boat dock area may require more frequent maintenance. USACE would continue to control lake water levels according to the Wappapello Lake Water Control Manual (USACE, 2016).

2.2 Action Alternative

Under the Action Alternative (Table 1, Figure 1), Lakeside Marina would expand the access road and parking facilities to meet anticipated recreational needs. This would include widening the Marina's entrance road to two lanes and widening the curved entrance to Lot 1 an additional 12 feet. The new road would be resurfaced with concrete and the road shoulder reinforced with revetment. An additional 0.6 acres of graveled parking (Figure 1, red areas) would be created by removing, repurposing, and leveling 0.4 acres of earthen material (Figure 1, blue areas), then topping with 1-in gravel. Approximately 0.9 acres of parking (Figure 1, white areas) would be created without placement of additional earthen material, only the addition of 1-in gravel. Approximately 1.4 acres of permanent and 0.7 acres of temporary tree clearing would be required to expand parking facilities.

The Action Alternative would also include replacing an existing waterline (Figure 1, orange line) to maintain water access to the marina's tackle shop. A second, identical, pipe would be installed in the same disturbed area as an alternate waterline. The marina cove between the west bank and marina docks (Figure 1, pink area, 1.3 acres) would be dredged to restore boating access to marina docks. The proposed dredging would establish a water depth of 4-6 feet at normal summer pool (See section 3.3.1). Lake bottom sediment would be removed using an excavator located on the shoreline, dried within the project area in an upland location, and properly disposed of. Additionally, the Lake's bank within the project area, particularly adjacent to constructed parking lots and dredging sites, would be stabilized with stone revetment to reduce further erosion.

Table 1. Location and details of the proposed Action Alternative for the Wappapello Lakeside Marina Expansion project.

Project	Location	Description	Materials & Quantities
Road Expansion	Marina Entrance Road	Widen road (two lane and widen curve), resurface road, reinforce hillside	1000 yards fill, 75 yards road base, 95 yards concrete, 70 yards 90# revetment
	Underground Waterline	Replace 1-in pipe, install back-up waterline	130 yards 1-in pipe
Parking Expansion	Lot 1	Expand and level parking area, reinforce bank	0.5 acres tree clearing, 2500 yards fill material, 150 yards 1-in gravel, 160 yards 90# revetment
	Lot 2		1.0 acres tree clearing, 1500 yards fill material, 340 yards 1-in gravel, 80 yards 90# revetment
	Lot 3		0.6 acres tree clearing, 1500 yards fill material, 270 yards 1-in gravel, 75 yards 90# revetment
Marina Dredging	Cove bank to Lakeside Marina Dock	Dredge to 4-6ft depth, dry dredge material onsite, reinforce bank	≤ 1.3 acres dredging, ≤ 208 yards 90# revetment

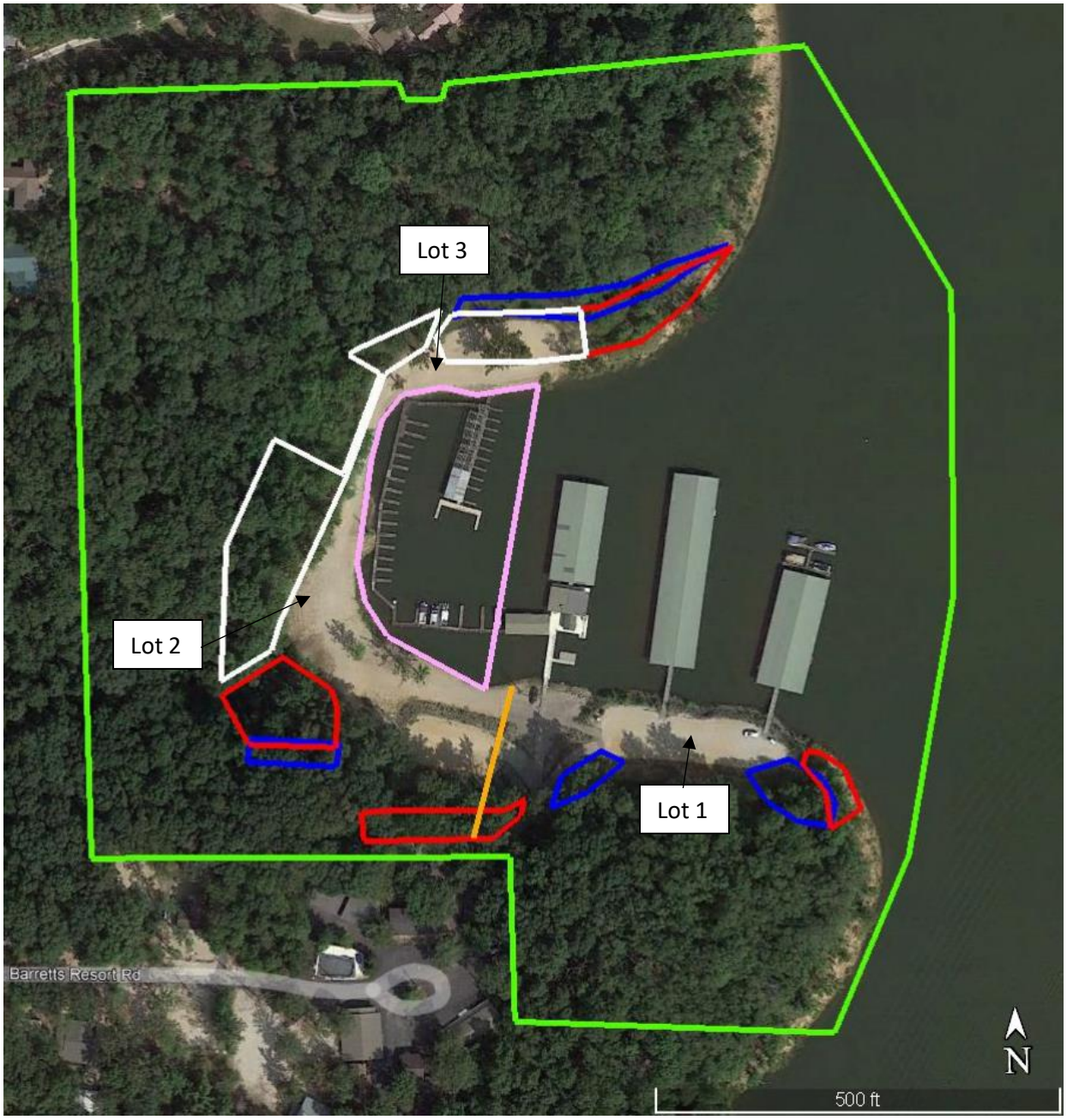

Figure 1. Proposed Action Alternative project area (green), material removal (blue) and placement (red and white), waterline replacement (orange), and lake dredging (pink) for the Wappapello Lakeside Marina Expansion project.

3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section describes existing conditions (Affected Environment) and discussion of impacts (Environmental Consequences) in the proposed project area. 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

3.1.1 Existing Conditions

Wappapello Dam is located on the divide of the high-relief Ozark Plateau and the low-relief Mississippi Alluvial Plain. Wappapello Lake and the project area lie within the Ozark Plateau hill country. According to the Missouri Department of Conservation (MDC), subdivisions of the Ozark Plateau include the St. Francois Mountains and the dissected Salem Plateau regions. The St. Francis River that flows through Wappapello Lake has cut a wide valley some 300 to 350 feet below the dissected uplands. The surrounding slopes are 20 to 35 percent and forested. The Ozark Plateau is dominated by Precambrian igneous rock in the St. Francois Mountains, followed in a downstream direction by sandstone and hard Cambrian dolomites. Eventually, cherty Ordovician dolomite becomes the primary underlayment adjacent to Wappapello Lake.

3.1.2 No Action Alternative

The topography, geology, and soil composition of the project area would not be expected to change as a result of taking no action. Erosion may continue, increasing sedimentation within the marina footprint.

3.1.3 Action Alternative

Removing and grading earthen material from the hillside to construct the proposed parking areas is anticipated to have a negligible change to topography within project area. Shoreline revetment should increase bank stabilization and reduce further erosion. Geology and soil composition would not be expected to change as a result of the Action Alternative.

3.2 LAND COVER/USE

3.2.1 Existing Condition

According to the 2019 National Land Cover Database, the 25-acre project area is primarily classified as deciduous forest and open water, with small areas of open space and barren land (Table 2).

Table 2. Land cover types within the project area according to the 2019 National Land Cover Database.

Land Type	Acres	Percent
Deciduous Forest	13.8	55.2%
Open Water	8.1	32.4%
Barren Land	2.6	10.4%
Developed – Open Space	0.5	2.0%
Total	**25.0**	**100%**

Lands within the USACE Wappapello Lake boundary are classified based on how the land is managed. The project area contains two land use classes, Vegetative Management Area and High-Density Recreation. Definitions of the land classifications and their associated management objectives are outlined in the Wappapello Lake Master Plan (USACE, 2019). Approximately 5.9 acres of the project area is currently managed for and operating as active recreational space. The surrounding forested area is not currently utilized for recreational purposes.

3.2.2 No Action Alternative

Land-use practices and land cover within the project area (Table 2) would not be expected to change as a result of taking no action.

3.2.3 Action Alternative

Under the Action Alternative approximately 2.1 acres of deciduous forest would be converted to developed open space for recreational use (parking). This would increase the total recreational use area to 8 acres within the project area (Table 3). Approximately 17 acres of natural space (deciduous forest and open water) would remain within the project area.

Table 3. Land cover types within the project area under the proposed Action Alternative.

Land Type	Acres	Percent
Deciduous Forest	11.7	46.8%
Open Water	8.1	32.4%
Barren Land	2.6	10.4%
Developed – Open Space	2.6	10.4%
Total	**25.0**	**100%**

3.3 HYDROLOGY

3.3.1 Existing Conditions

The hydrology of the project area is primarily a result of water control in Wappapello Lake as well as local and regional rainfall. Water elevation levels in Wappapello Lake are altered based on seasonal, local, and regional weather conditions. The changes in water level elevations are outlined in the Water Control Plan for Wappapello Lake (USACE 2014). Typically, Lake levels are between 354 feet (Conservation Pool) and 394 feet (Flood Control Pool). The Lake has capacity to hold up to 394.74 feet before the spillway is overtopped. The typical Lake level for the summer recreational period is 359.7 feet (Summer Pool). The Wappapello Lake Water Control Plan was last updated in 2016 and is typically updated every 10 years.

3.3.2 No Action Alternative

The hydrology of the project area is expected to remain similar to the existing conditions as a result of taking no action.

3.3.3 Action Alternative

Under the Action Alternative, the cove between the west bank and Lakeside Marina docks (1.3 acres) would be dredged to provide boating recreationalists better access to Marina docks. The proposed dredging would establish a water depth of 4-6 feet at Summer Pool Lake level. Approximately 0.02% of Wappapello Lake would be impacted by the proposed dredging effort, therefore it is anticipated the hydrology of the project area is expected to remain similar to the existing conditions under the No Action Alternative.

3.4 WATER QUALITY

3.4.1 Existing Conditions

Water quality sampling is conducted within the lake and its tributaries to establish trend analysis and to maintain water quality at or above state and Federal regulation. The water quality monitoring program was conducted during 2019 to assure that safe conditions were maintained for human recreation, wildlife,

and aquatic life. The sampling sites within Wappapello Lake and the vicinity include the following: WAP-1 Spillway, WAP-2 lake side of dam, WAP-5 Otter Creek, WAP-6 Greenville, WAP-7 Hwy 34 bridge, and four marinas. Four water quality sampling events took place during 2019, between April and October. Generally, the water collected at Wappapello Lake, tributaries and tailwater stay within Missouri water quality standards for primary and secondary water contact recreation, which include swimming, boating, fishing, and water skiing (USACE, 2015). During the 2019 sampling season, the following exceedances were observed: iron, manganese, phosphorus, and total suspended solids. Even though phosphorous levels routinely exceed Missouri water quality standards, discharge from the Lake generally has lower concentrations of phosphorous than the incoming tributary flows.

Missouri Department of Natural Resources developed water quality standards for all waterbodies. The level of protection for a waterbody is dependent on the expected, or designated, use assigned to that stream, river, or lake. Wappapello Lake is listed on Missouri's 303(d) list of impaired waterbodies for nonpoint source Chlorophyll-a pollution in Wayne County (MDNR, 2020).

3.4.2 No Action

Under the No Action Alternative shoreline erosion may continue, decreasing water quality within the project area.

3.4.3 Action Alternative

Bank stabilization via placement of stone revetment would reduce sedimentation, improving water quality within the project area. Construction activities associated with proposed dredging may temporarily increase sediment suspended in the water column. Once construction is completed it is anticipated the water quality of the project area is expected to remain similar to or better than the existing conditions. The proposed bank stabilization along the cove area and new parking areas would provide for long term soil stability and reduced local sedimentation within the project area. The proposed action is consistent with the terms and conditions of the Clean Water Act (CWA) Department of Army General Permit for Maintenance of Man-Made Lakes and Ponds in the state of Missouri, including the CWA Section 401 Water Quality Certification requirements (GP-45). Wappapello Lake is not listed as a CWA Section 305 (b) impaired water.

3.5 WETLANDS

3.5.1 Existing Conditions

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. Under Section 404 of the Clean Water Act, wetlands are a protected habitat type and the alteration, or destruction, of wetlands requires mitigation. The National Wetland Inventory (NWI) identified a 0.62 acre freshwater forested/shrub wetland within the project area. During a site visit on 5 January 2022, 0.21 acres of freshwater-forested-shrub wetland, including a marginal Bottom Land Hardwood (BLH) area, were confirmed by USACE Regulatory and Environmental Specialists (Figure 2). The area was primarily composed of silver maple (*Acer saccharinum*) and buttonbush (*Cephalanthus occidentalis*) with hydric soils within the top 12 inches of ground surface.

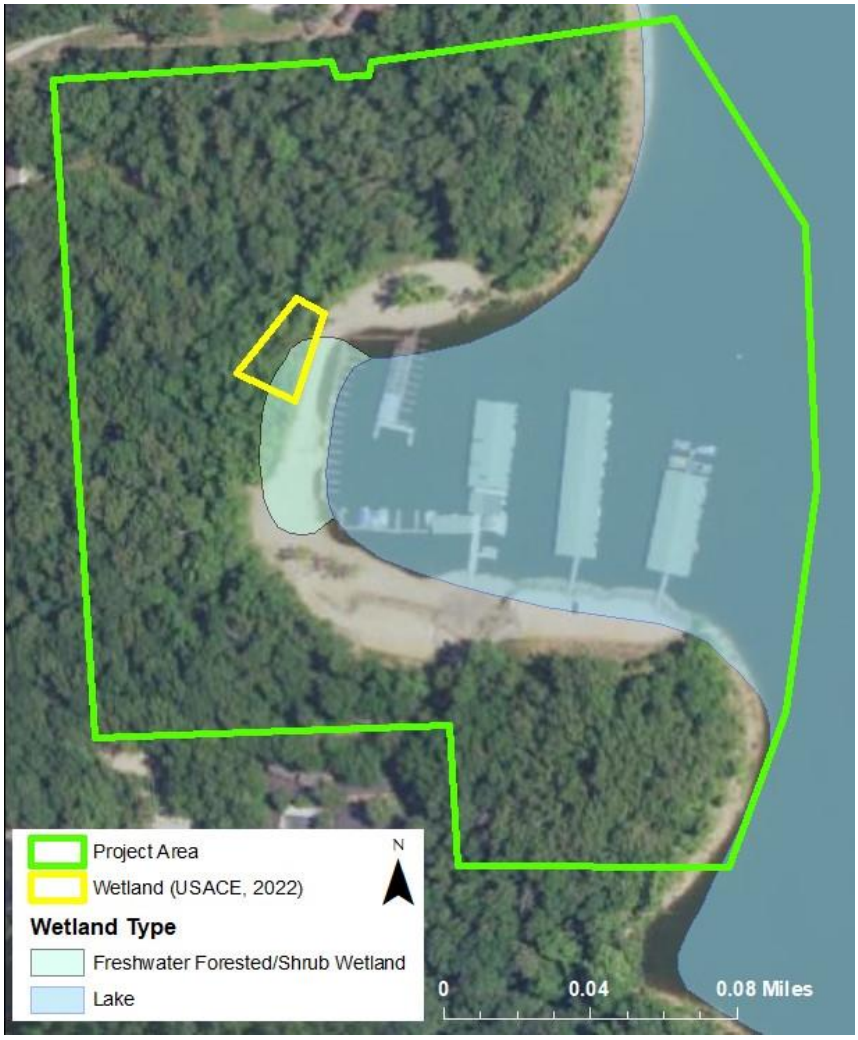

Figure 2. Wetland with Lakeside Marina Expansion project at Wappapello Lake, MO. Imagery from NAIP, National Wetland Inventory wetland type data.

3.5.2 No Action Alternative

Wetlands within the project area would not be expected to change as a result of taking no action.

3.5.3 Action Alternative

All construction activities would avoid the identified jurisdictional wetland within the project area. The proposed bank stabilization would not impact the wetland or BLD habitat nor its environmental functionality within the ecosystem. Therefore, it is anticipated there would be no impacts to wetlands within the project area as a result of the proposed Action Alternative.

3.6 TERRESTRIAL ORGANISMS AND HABITAT

3.6.1 Existing Conditions

Common terrestrial species in the project area include white-tailed deer, coyotes, gray and red fox, bobcats, skunks, river otters, weasels, minks, opossums, eastern cottontail rabbits, eastern gray and fox

squirrels, chipmunks, beavers, muskrats, eastern wild turkeys, bobwhite quail, as well as several mouse, bat, and other species. Common bird species for the area include waterfowl, songbirds, and raptors.

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 was removed from the List of Endangered and Threatened Species in August 2007, but it continues to be 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, 2010). The guidelines recommend: (1) maintaining a specified distance between the activity and the nest (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 bald eagle nests in the project vicinity, one 0.58 miles northeast from the project area (last active in 2014) and one 0.85 miles west of the project area.

3.6.2 No Action Alternative

Under the No Action Alternative, no impacts to terrestrial organisms or their habitat are anticipated. No impacts to eagles or their nests are anticipated.

3.6.3 Action Alternative

Under the Action Alternative 2.1 acres of trees would be removed, decreasing available habitat for terrestrial species within the project area. Common species associated with the proposed project area are likely to avoid the area during construction. No impacts to eagles or their nests are anticipated. If a nest is located within 660 feet of the proposed project area, the USFWS would be contacted immediately.

3.7 AQUATIC ORGANISMS AND HABITAT

3.7.1 Existing Conditions

Common fish in Lake Wappapello include white and black crappie, largemouth bass, white bass, bluegill, redear sunfish, warmouth, green sunfish, longear sunfish, channel catfish, and flathead catfish. Aquatic habitat within the project area is commonly disturbed by current recreational use, bank erosion and associated sedimentation, and Wappapello Lake flooding and water control practices. Boat recreational boating and related moorings are typically associated with reduced cover of aquatic vegetation (Hansen et al., 2019).

3.7.2 No Action Alternative

Under the No Action Alternative erosion would continue to impact aquatic organisms within the marina depositional areas.

3.7.3 Action Alternative

The cove between the west bank and Lakeside Marina docks (1.3 acres) would be dredged to provide boating recreationalists better access to Marina docks. Approximately 0.02% Wappapello Lake would be impacted by the proposed dredging effort. Dredging would likely eliminate the benthic community in the

impacted area, as well as any fish nests that may be present. Mobile aquatic organisms are likely to avoid the proposed project area during construction activities.

3.8 STATE LISTED SPECIES

3.8.1 Existing Conditions

In accordance with the Section 401 Water Quality Certification from the State of Missouri, the proposed project should take into consideration impacts to state listed threatened and endangered species. MDC was contacted via the Missouri Heritage Review website on 4 January 2022, for a list of Missouri State threatened and endangered species that could potentially be located in the project area (MDC project number: 10201; Appendix A). The Missouri Natural Heritage Database generated a Level Three Report due to three State and Federally listed bat species in the project vicinity (see Section 3.8.2-Federally Listed Species). There are numerous State species and communities of conservation concern within the project vicinity (Table 4), however the majority of these occur below the dam in the St. Francis River. Within Wappapello Lake and above the dam there are records of pugnose minnow, long-tailed weasel, mole salamander, and bald eagle.

Table 4. Missouri Department of Conservation species of concern within the proposed project vicinity (2-mi radius), Wappapello Lake, MO.

Common Name	Scientific Name
Bald eagle	*Haliaeetus leucocephalus*
Snuffbox	*Epioblasma triquetra*
Alligator snapping turtle	*Macrochelys temminckii*
Mole Salamander	*Ambystoma talpoideum*
Swamp rabbit	*Sylvilagus aquaticus*
Cotton mouse	*Peromyscus gossypinus*
Western fanshell	*Cyprogenia aberti*
Western sand darter	*Ammocrypta clara*
Long-tailed weasel	*Mustela frenata*
Scaly sand darter	*Ammocrypta vivax*
River darter	*Percina shumardi*
Rock pocketbook	*Arcidens confragosus*
Bankclimber	*Plectomerus dombeyanus*
Pugnose minnow	*Opsopoeodus emiliae*

3.8.2 No Action Alternative

Under the No Action Alternative, no impacts to terrestrial state listed species or their habitat are anticipated. Erosion would continue to impact aquatic state listed species, if they exist within the project area.

3.8.3 Action Alternative

Under the Action Alternative 2.1 acres of trees would be removed, decreasing available habitat for the long-tailed weasel and mole salamander. No impacts to eagles or their nests are anticipated. If a nest is located within 660 feet of the proposed project area, the USFWS would be contacted immediately. The

cove between the west bank and Lakeside Marina docks (1.3 acres) would be dredged to establish a water depth of 4-6 feet at Summer Pool Lake level. Dredging activities would temporarily impact pugnose minnow habitat, however only 0.02% Wappapello Lake would be affected.

3.9 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 4 January 2022, for a list of Federal threatened, endangered and candidate species (Appendix A) that could potentially be located in the project area (Consultation Code: 03E14000-2022-SLI-0624 and Event Code: 03E14000-2022-E-01955; Table 5).

Table 5. List of federally listed threatened and endangered species potentially occurring within the proposed project area.

Common Name	Scientific Name	Listing Status	Habitat
Gray bat	*Myotis grisescens*	Endangered	Roost in caves or mines; Forage and travel near water features and forested riparian corridors
Indiana bat	*Myotis sodalis*	Endangered	Hibernate in caves or mines during winter (November 1 – March 31); Roost in forest and woodland habitats (April 1 – October 31)
Northern long-eared bat	*Myotis septentrionalis*	Threatened	Hibernate in caves or mines during winter (November 1 – March 31); Roost in forest and woodland habitats and human-made structures (April 1 – October 31)
Monarch Butterfly	*Danaus plexippus*	Candidate	North America

Gray bat (*Myotis grisescens*) has been listed as endangered by the USFWS since April 28, 1976 and is still in danger of extinction throughout all or a significant portion of its range. Typically, gray bats roost in caves year-round, with most wintering caves being vertical and deep. During the spring and fall transient periods, a much wider variety of cave types are used. During the summer, maternity colonies prefer caves that provide restricted rooms or domed ceilings that act as warm air traps. There are no known caves within the project area.

Indiana bat (*Myotis sodalis)* has been listed as endangered by the USFWS since March 11, 1967 and is still in danger of extinction throughout all or a significant portion of its range. This species has been noted as occurring in several Missouri counties and are considered to potentially occur in any area with forested habitat (USFWS, 2007b). Indiana Bats migrate seasonally between winter hibernacula and summer

roosting habitats. Winter hibernacula include caves and abandoned mines. Summer roosts include loose bark and cavitied of dead or alive trees. During the summer, Indiana Bats frequent the corridors of small streams with well-developed riparian woods, as well as mature bottomland and upland forests (USFWS, 2019b). They forage for insects within the canopy of floodplain and upland forest, over clearings with early successional vegetation, along the borders of croplands, along wooded fence rows, and over farm ponds and in pastures (USFWS, 2019b). Suitable Indiana Bat summer roost and foraging habitat may be located in the forested areas in within the project area.

Northern long-eared bat (Myotis septentrionalis) has been listed as threatened by the USFWS since April 2, 2015 and is likely to become endangered within the near future throughout all or a significant portion of its range. Over the winter, they typically hibernate in small crevices or cracks within caves and mines with no air currents, high humidity, and constant temperatures. During summers northern long-eared bats roost singly or in colonies underneath exfoliating bark, in crevices, or in cavities of both live and dead trees. Foraging occurs in interior upland forests (USFWS, 2015). Forest fragmentation, logging and forest conversion are major threats to the species (USFWS, 2015). One of the primary threats to the northern long-eared bat is the fungal disease, white-nose syndrome, which has killed an estimated 5.5 million cave hibernating bats in the Northeast, Southeast, Midwest and Canada. Suitable Northern long-eared bat foraging habitat may be located in the forested areas within the project area.

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 require milkweed to rear larvae and provide nectar sources to sustain adults during reproduction. 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.

3.9.1 ESA Determination

Approximately 2.1 acres of forest would be converted to developed open land. Considering suitable bat summer roost and foraging habitat may be located in forested areas within the project area, tree clearing would be limited to the bat non-active period between 1 November and 31 March to minimize potential impacts to bat populations. Therefore, the St. Louis District has determined that the Action Alternative "*may affect, but is not likely to adversely affect*" the Gray bat, Indiana bat, and Northern long-eared bat.

No prairie habitat is present within the project area. Milkweed is unlikely to establish due to the forest's dense overstory and the level of vehicular and pedestrian activity within the non-forested areas. Therefore, the St. Louis District has determined that the Action Alternative "*may affect, but is not likely to adversely affect*" the Monarch Butterfly.

3.10 Recreation and Aesthetics

3.10.1 Existing Conditions

Recreation opportunities within the project vicinity include campgrounds, cabins, resorts, lodges, day-use areas, and nature trails, however recreation within the project area is primarily boating and fishing. Approximately 5.9 acres of the project area is currently managed for and operating as active recreational space. Lakeside Marina facilities include a boat ramp, 154 dock slips, and tackle shop. Lakeside Marina boat slip and parking capabilities reach capacity during summer months. For the 2022 summer recreation season all 154 boating slips are currently reserved. Aesthetic resources are natural and human environments that are pleasing or pleasant for most people to look at and visually enjoy. Primary aesthetic resources, contributing to the recreational value of the project area, are Wappapello Lake and the surrounding forested habitat.

3.10.2 No Action Alternative

Recreational use and aesthetics would remain consistent with the existing conditions as a result of taking no action. Parking facilities would not meet demands anticipated for future summer recreation season, restricting recreational use of Lakeside Marina.

3.10.3 Action Alternative

Under the Action Alternative, proposed parking facility expansion would increase 1.6 acres of gravel parking areas to 3.1 acres, increasing accessibility for recreational users. The conversion of 2.1 acres of forested habitat to developed open area is anticipated to have a negligible impact on the aesthetic value of the project area considering the remaining 17 acres of natural space within the project area would remain in a natural state.

3.11 Air Quality and Noise

3.11.1 Existing Conditions

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 6). The Missouri Department of Natural Resources maintains approximately 50 air monitors across the state to track concentrations of these six pollutants. Wayne County is in attainment for all six criteria pollutants (USEPA, 2019).

Table 6. 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 Pollution ($PM_{2.5}$)	1 year	12.0 µg/m^3	Annual mean, averaged over 3 years
	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

Multiple residential and recreational areas are located within the project vicinity. There are no major population centers near the project area. Residential and recreational 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. Figure 7 illustrates common sounds and their associated noise levels.

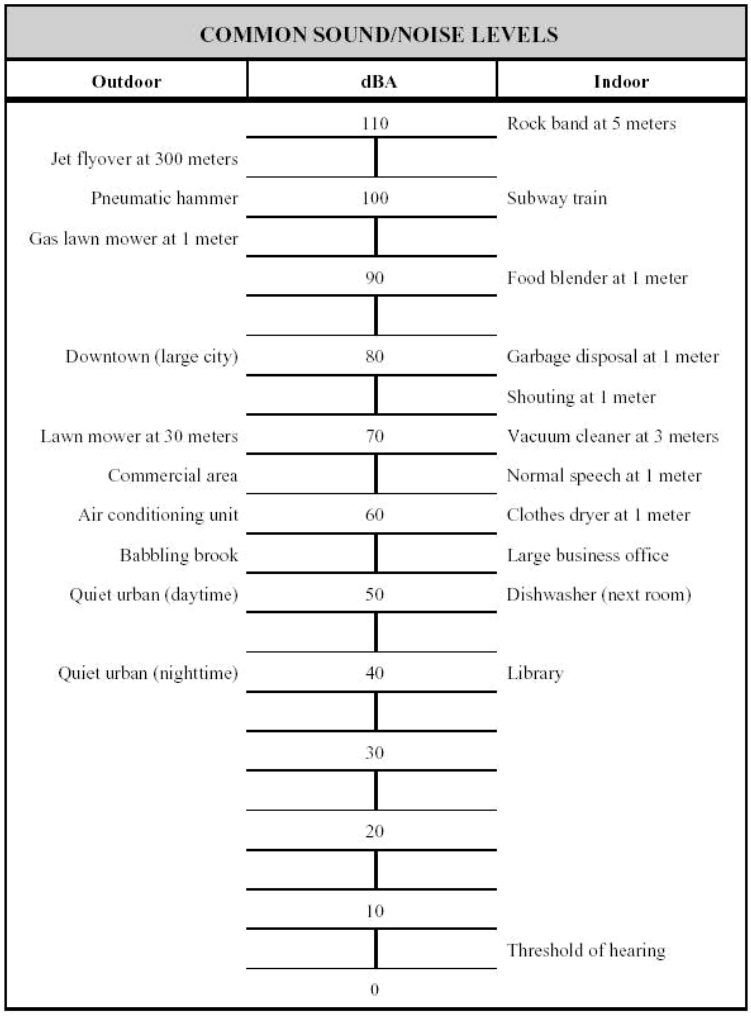

Figure 3. Example indoor and outdoor activities associated with common noise levels ranging 0-110 decibels (dB). Project area and surround noise levels expected to be in the range of 30-80 decibels (dB).

3.11.2 No Action Alternative

Air quality and noise levels within the project area would not be expected to change as a result of taking no action.

3.11.3 Action Alternative

Construction activities associated with the Action Alternative would cause temporary increases in noise and air pollution. Increased vehicle and boat traffic may result in negligible increase in air pollution and noise during the recreation season.

3.12 SOCIOECONOMICS AND TRANSPORTATION

3.12.1 Existing Conditions

Data from the US Census Bureau's 2000 Census, 2010 Census, and the American Community Survey (ACS) 2012 to 2016 5-year Estimate was used to determine the socioeconomic profile of the project area. The project area is within Wayne County, Missouri. The population of Wayne County was 13,341 in 2016 (Table 7). This is a 0.6 percent increase since 2000. During this same period Missouri experienced an approximately eight percent increase in population. There are no homes within the project area, however multiple residential areas and recreational lodging are within the project vicinity. The gender distribution of the project area is very similar to that of the surrounding jurisdictions. However, the age distribution shows a higher percentage of individuals 65 and older and a lower percentage of individuals under 18 in the Census Block containing the project area than in Wayne County and Missouri (Table 8). In 2021, 20,000 vehicles passed through the project area.

Table 7. The project area is within Wayne County, Missouri, which has experienced a population increase between 2000 - 2010 according to the U.S. Census (2000 & 2010) and the ACS 5-year estimates.

Area	2000	2010	% Change 2000 to 2010	2016	% Change 2000 to 2016
Missouri	5,595,211	5,988,927	7.0%	6,059,651	8.3%
Wayne County	13,259	13,521	2.0%	13,341	0.6%

Table 8. The age and gender distribution of the Census Block, Wayne County, and Missouri according to US Census Bureau 2010Census and ACS 5-Year Estimates.

Age/Gender	Census Block Containing the Project Area	Wayne County	Missouri
Total population	29	13,341	6,059,651
Under 18	6.9%	21.0%	23.0%
18 to 64	58.6%	57.0%	61.6%
65 and Older	34.4%	21.9%	15.3%
Male	48.3%	49.8%	49.1%
Female	51.7%	50.2%	50.9%

3.12.2 No Action Alternative

Socioeconomic and transportation statistics within the project area would not be expected to change as a result of taking no action.

3.12.3 Action Alternative

Improved recreation facilities may increase vehicle and boat traffic within the project area. However, socioeconomic statistics would not be expected to change considering additional use of facilities would come primarily from recreationists temporarily visiting the area.

3.13 HISTORIC AND CULTURAL RESOURCES

Cultural resources are locations of past human activity, occupation or use and typically include archaeological sites such as prehistoric lithic scatters, villages, procurement area, rock art, shell middens; and historic era sites such as refuse scatters, homesteads, railroads, ranches, logging camps, and any structures or buildings that are over 50 years old. Cultural resources also include Traditional Cultural Properties (TCPs), which are aspects of the landscape that are part of traditional lifeways and practices and are considered important to a community. The National Historic Preservation Act (NHPA) is the major piece of federal legislation that mandates that federal agencies consider how undertakings could affect significant cultural resources.

3.13.1 Existing Conditions

The 2021 archival review, conducted by USACE archaeologist, Amy Williams, revealed that no sites or previous survey had been conducted within the project area. The 2021 survey consisted of 18 shovel tests on an approximate 15-meter grid over the 1.8-acre project area. The survey did not identify any cultural resources. The terrain was sloped and rocky with areas of erosion and disturbance from previous construction activities.

3.13.2 No Action Alternative

Historic and cultural resources would remain consistent with the existing conditions. No adverse effects would be expected as a result of taking no action.

3.13.3 Action Alternative

A cultural resource survey was conducted on 18 August 2021 in the proposed project location and resulted in a determination that no historic properties would be affected by this project. In a letter dated 15 November 2021, the Missouri SHPO concurred that based on the cultural resource surveys conducted there would be no historic properties affected. However, if the project limits are to be altered in anyway, then the State Historic Preservation Office will need to be notified immediately to determine if additional surveying is necessary.

3.14 TRIBAL RESOURCES

In addition to the consultation with Missouri State Historic Preservation Office (MO SHPO), consultation with Indian Tribal nations is required to ensure compliance with Section 106 of the National Historic Preservation Act of 1966, as amended. The USACE St. Louis District consults with 27 Tribal nations that have interests within the District's area of responsibility.

On 14 October 2021, 24 Tribal nations who have expressed interest in Wayne County, Missouri were contacted via letter in order to initiate consultation in accordance with Section 106 of the National Historic

Preservation Act of 1964, as amended, for the proposed project. A copy of the Phase I archaeological survey, described in Section 3.13, was sent to two of the Tribal nations at their request.

3.14.1 No Action Alternative

Tribal resources would remain consistent with the existing conditions. No adverse effects would be expected as a result of taking no action.

3.14.2 Action Alternative

The Iowa Tribe of Kansas and Nebraska; Nottawaseppi Huron Band of the Potawatomi, Michigan; and the Eastern Shawnee Tribe of Oklahoma replied between 15-28 October 2021. All three concurred with the District's determination of no historic properties effected by the project; however, requested to be notified if human or archaeological remains are inadvertently discovered during construction activities. On 8 November 2021, The Quapaw Nation requested all correspondence between the District and MO SHPO pertaining to this project. The correspondence was sent on 18 November 2021. The Quapaw Nation has not contacted the District further or expressed any concerns related to this project.

3.15 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 is 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:

- E1527-13: Standard Practice for Environmental Site Assessments – Phase I Environmental Site Assessment process
- E1528-06: Standard Practice for Limited Environmental Due Diligence: Transactions Screen Process (interview questionnaires)
- E2247-08: Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process for Forestland or Rural Property

3.15.1 Existing Conditions

A Phase I was last completed on 25 February 2020 by USACE personnel. The purpose of the Phase I Environmental Site Assessment was to identify, to the extent feasible in the absence of sampling and analysis, the range of contaminants within the scope of the U.S. Environmental Protection Agency's (USEPA) Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and petroleum products. The result of the 2020 Phase I assessment revealed no RECs.

3.15.2 No Action Alternative

Bases on Phase I investigation and site visit no environmental impacts associated with hazardous, toxic, or radioactive wastes are anticipated from the No Action Alternative.

3.15.3 Action Alternative

For the purposes of these new Lakeside Marina improvements as described in Section 2.2 a limited HTRW investigation was conducted by USACE. This investigation consisted of a site visit (conducted on 5 January 2022), interviews, and records reviews. As a result of this investigation no new RECs were identified. Therefore, no environmental impacts associated with hazardous, toxic, or radioactive wastes are anticipated from the Action Alternative. However, if any suspect materials were discovered at any point on USACE Wappapello Lake property, the USACE St. Louis District Environmental Quality section would be contacted immediately.

3.16 RESOURCE SUMMARY

When the No Action Alternative and Action Alternatives are compared, there are several similarities and differences (Table 9), however the No Action Alternative would not meet the project objective.

Table 9. Potential impacts for each alternative and construction costs comparison.

Resource	No Action	Action Alternative
Project Objective	Does not meet objective.	Fully meets objective.
Biological Effects	Minimal impacts anticipated.	No impacts to wetlands.
		Minimal impacts to terrestrial and aquatic organisms.
		May affect, but is not likely to adversely affect federally threatened or endangered species.
Physical Effects	Minimal impacts anticipated.	No impacts to geology, soil composition, HTRW.
		Negligible change in topography and hydrology.
		Temporary water quality, air, and noise disturbance due to construction activities.
		2.1 acres deciduous forest converted to developed open area for recreation use.
Social Effects	Restricted recreation use.	Improved recreation opportunities.
	Minimal impacts to transportation and socioeconomic resources.	Minimal impacts to transportation and socioeconomic resources.
	No impacts to cultural, historic, or tribal resources.	No impacts to cultural, historic, or tribal resources.

4 ENVIRONMENTAL JUSTICE

Environmental Justice regulations were established to address disproportionately high and adverse human health or environmental effects that projects funded by the federal government may have on minority and low-income populations. The Environmental Justice requirements were established by Executive Order 12898 in 1994 entitled "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations." This mandates that federal agencies identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of proposed projects on minority and low-income populations. Environmental Justice builds on Title VI of the Civil Rights Act of 1964. Environmental Justice has three guiding principles:

- Avoid, minimize, or mitigate disproportionately high and adverse human health and environmental impacts, including social and economic effects on minority and low-income populations
- Ensure full and fair participation by all potentially affected communities in the decision-making process
- Prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations

Environmental Justice analysis applies to both minority and low-income populations. For the analysis of Environmental Justice, minority populations are defined as any person who is Black, Hispanic, Asian American, American Indian, or Alaskan Native.

The US Department of Transportation (USDOT) recommends using the US Department of Health and Human Services (HHS) poverty guidelines when identifying low-income populations. The HHS poverty guidelines vary by family size and geographic location. The 2022 poverty level in the 48 contiguous states and the District of Columbia is $13,590 for an individual and $27,750 for a household of four (ASPE, 2022).

As mentioned above, there are no homes within the project area, however multiple residential areas and recreational lodging are within the project vicinity. Zero percent of the individuals living in the Census block containing the project area are considered part of a minority population (Table 10). This is lower than the percent of minorities living in Wayne County and much lower than the percent of minorities living the state of Missouri. The median household income is approximately $40,978 within the Census Block Group containing the project area, higher than the HHS 2022 poverty guidelines for a household of four.

The proposed Action Alternative is not anticipated wo disproportionally impact any minority or low-income populations. Any future actions taken by USACE should avoid, minimize, or mitigate disproportionately high or adverse impacts to these populations.

Table 10. Ethnicity and Race of individuals within the Census Block that contains the project area compared to Wayne County and the state of Missouri according to the US Census Bureau, ACS 2012-2016 5-Year Estimate.

Ethnicity and Race	Census Block	Wayne County	Missouri
Total Persons	29	13,341	6,059,651
Total Minority Population	0.0%	4.4%	20.0%
White Population	100.0%	95.6%	80.0%
African American Population	0.0%	0.7%	11.5%
American Indian Population	0.0%	0.4%	0.4%
Asian Population	0.0%	0.1%	1.8%
Native Hawaiian Population	0.0%	0.0%	0.1%
Hispanic Population (all races)	0.0%	1.5%	3.9%
Two or More Races	0.0%	1.8%	2.2%

5 CLIMATE CHANGE

The USACE, Institute of Water Resources (IWR) published a document titled "Recent US Climate Change and Hydrology Literature Applicable to the U.S. Army Corps of Engineers Missions of the Upper Mississippi Region 07 in 2015". The synopsis included in that document generally describes territory within the St. Paul, Chicago, Rock Island, and St. Louis USACE districts. The synopsis evaluated, observed, and projected trends in temperature, precipitation, and stream flow as well as the general consensus in the literature reviewed of the trending parameters.

The USACE IWR (2015) found a general consensus for a moderate to large upward trend in observed average temperature, minimum temperatures, average precipitation, extreme precipitation, and streamflow in the Upper Mississippi Region. There is a reasonable consensus that maximum air temperatures have decreased slightly in the recent past in the region. However, projected extreme precipitation is expected to have only a small increase with moderate consensus in the literature reviewed and forecasts of future hydrology and streamflow are anticipated to be variable, with low overall consensus in the literature reviewed.

6 CUMULATIVE IMPACTS

This chapter identifies possible cumulative effects of the considered alternatives when combined with past trends and other ongoing or expected 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).

In order to identify present and reasonably foreseeable actions, information from resources managers and online resources were complied. Criteria applied to determine reasonably foreseeable actions includes: 1) Actions on an agency's list of proposed actions; 2) Actions where scoping has started; 3)

Actions already permitted; 4) Actions where budgets have been requested. Based on these criteria, the following actions were identifies as being reasonably foreseeable and were included in this cumulative effects analysis:

- **U.S. Forest Service Mark Twain National Forest 2005 Land and Resource Management Plan & Final Environmental Impact Statement** – The U.S. Forest Service manages and administers 1.5 million acres of land in and around Wappapello Lake. The Land and Resource Management Plan guides all natural resource management activities on the Forest; addressed new information and concerns raised since the previous Plan was published; and meets objectives of federal laws, regulations, and policies. These plans are revised every 10 – 15 years to address changed conditions and new information. Based on the alternatives laid out in this plan, the Mark Twain National Forest intends to continue the sale of timber harvests, adaptively manage oak-hickory, shortleaf pine, and oak-pine communities, develop management strategies for restoring and maintaining natural forest ecosystems, use prescribed fire to restore ecosystems, emphasize protecting riparian areas, develop protections for water quality associated with karst features, and improve monitoring.
- **Wappapello Lake Timber Stand Improvement (TSI; 2011)** – An EA/FONSI signed in 2011 outlined the impacts of TSI at Wappapello Lake. TSI occurred in three forest compartments. The TSI work completed in Compartment 2, also known as Browns Hollow, was partially funded by MoDOT as part of their bat mitigation associated with the expansion of Highway 67 at the northern end of Wappapello Lake. The TSI was estimated to occur across 12,000 acres of forested habitats over approximately eight years.
- **Wappapello Lake Master Plan (2019)** – Numerous proposed actions have been included in the updated Master Plan, including land classification changes; assigning land classification to recently acquired land; adjusting acreages as a result of such changes and based on more accurate mapping capabilities; evaluating road raise and/or relocation plans; updating plates to reflect changes since the 2000 Master Plan was prepared; and a listing of future undertakings such as new construction and facility replacement. Actions within the Master Plan would improve recreation at designated areas around Wappapello Lake and define management actions for lands recently acquired by the Wappapello Lake Project.
- **Wappapello Highway D Road Relocation (2019)** – AN EA/FONSI signed in 2020 discussed the impacts of relocating and raising a section of MO Highway D. Located to the east of Wappapello Lake, a 1.6-mile section of Highway D would be relocated and raised above an elevation of 405 feet to prevent it from flooding. The project requires approximately 13 acres of tree clearing, and therefore mitigation in the form of installed fence at the entrance of Slough Bottom Hollow Cave in Ozark County, Missouri, to preserve vital bat habitat. The project requires placement of fill in wetlands, four improvements to existing stream crossing, and the clearing of four acres of bottomland hardwood forests. Wetland and stream mitigation credits are to be purchased from a wetland mitigation bank and Missouri in-lieu fee program.

Within the cumulative effects analysis area, major land cover types include over 2,800 acres of open water; 38,000 acres of forest; 4,400 acres of pasture/hay lands; 1,300 acres of forested wetlands; and 670 acres of emergent wetlands (Yang et al., 2018). The Action Alternative would result in the removal of 2.1 acres of forest for recreational use, which is less than 0.01% of the total available forested habitat within

the cumulative effects analysis area. The high amounts of forested area can be partially attributed to the large amount of federally owned, or managed, lands within the cumulative effects analysis area. Federal agencies that own or manage land include U.S. Army Corps of Engineers (Wappapello Lake), U.S. Forest Service (Mark Twain National Forest), and U.S. Fish and Wildlife Service (Mingo National Wildlife Refuge). Because of the federal ownership of these lands, it is expected that forested habitats will remain as one of the main land uses in this region.

Since this area is highly forested, forestry is one of the dominate operations within the cumulative effects analysis area. Silvicultural systems that improve unhealthy forest conditions can include timber harvest and timber stand improvement. Over-mature forests can be regenerated through even-age and uneven-aged regeneration methods, typically conducted by means of a timber harvest operation. These regeneration methods improve forest health by removing the existing tree canopy to create canopy gaps or openings that allow sufficient light levels to develop a new age class of young healthy tree seedlings. The removal of the tree canopy provides forest products in the form of saw logs and or pulp products. Timber stand improvement (TSI) is broadly defined as an intermediate treatment. Implementation of TSI can enhance individual tree growth, quality, vigor, and composition of a forest stand. Improving unhealthy forests and the removal of understory improve habitat for wildlife, including threatened and endangered bat species.

Proper forest management not only benefits the regions fish and wildlife, it also benefits the economy. The forest products industries contribute approximately $7 billion annually to the state of Missouri's economy. It supports approximately 41,000 jobs related to wood processing and forest products within Missouri.

Based on the long-term, proactive management of the Wappapello Lake forests, no long term adverse cumulative impacts would result dur to the proposed project.

7 ENVIRONMENTAL COMPLIANCE

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

https://www.mvs.usace.army.mil/Portals/54/docs/pm/Reports/EA/LakesideMarinaExpansionProjectEAFONSI2022.pdf

Please note that the Finding of No Significant Impact is unsigned in the draft version of the EA and will only be signed into effect after careful consideration of the comments received as a result of the public review. In addition, to ensure compliance with the National Environmental Policy Act, Endangered Species Act, and other applicable environmental laws and regulations, coordination with these entities and individuals will continue, as required, throughout the execution of the project.

Guidance	Degree of Compliance
Archaeological and Historic Preservation Act, as Amended, 16 U.S.C. 469, et seq.	PC[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	FC
Comprehensive Environmental Response, Compensation, and Liability Act, 42 USC 9601-9675	FC
Endangered Species Act, as Amended, 16 U.S.C. 1531-1543	PC[2]
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.	PC[1]
Noise Control Act, 42 USC 4901, et seq.	FC
Migratory Bird Treaty Act of 1918, 16 USC 703, et seq.	PC[2]
Resource Conservation and Recovery Act, 42 USC 6901-6987	FC
Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (EO 12898)	FC
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	PC[1]
Consultation and Coordination with Indian Tribal Governments, 06 Nov 2000, E.O. 13175	PC[1]
Protection of Migratory Birds (EO 13186)	FC

FC = Full Compliance, PC = Partial Compliance.

1. Full compliance will be attained upon completion of all required archaeological investigations, reports, and coordination.
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.

7.1 LIST OF PREPARERS

- Rachel Steiger, USACE Wildlife Biologist
- Chris Hopfinger, USACE Regulatory Specialist
- Ben Greeling, USACE HTRW Specialist
- Amy Williams, USACE Cultural Specialist
- Meredith Trautt, USACE Tribal Specialist
- Eric Lemons, USACE Wappapello Lake Natural Resource Specialist
- Raymond Flood, Lakeside Marina and Resort

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FINDING OF NO SIGNIFICANT IMPACT

1. In accordance with the National Environmental Policy Act, I have reviewed and evaluated the documents relevant to the Wappapello Lakeside Marina Expansion Project. The Action Alternative would expand entrance road and parking facilities to improve recreational user access to Lakeside Marina. The Action Alternative would also stabilize lake banks to reduce additional erosion and sedimentation near the Marina.

2. As part of this evaluation, I have considered the following project alternatives:

    a. No Action Alternative – Under this alternative, no federal action would take place and Lakeside Marina recreational use would be restricted.

    b. Action Alternative (Tentatively Selected Plan) – USACE would widen, and resurface with concrete, the Marina's entrance road to two lanes and the curved entrance to Lot 1 an additional 12 feet. An additional 1.43 acres of graveled parking would be created by removing, repurposing, and leveling 0.39 acres of material from the project area. An existing waterline would be replaced and a second, identical, pipe would be installed in the same disturbed area. The marina cove (1.3 acres) would be dredged to establish a water depth of 4-6 feet during summer months. Additionally, the Lake's bank within the project area, particularly adjacent to constructed parking lots and dredging sites, would be stabilized with stone revetment to prevent further erosion.

3. The possible consequences of the two alternatives have been studied for physical, environmental, cultural, social, economic, aesthetic, and recreational effects. Significant factors evaluated as part of my review include:

    a. Recreation resources would accrue benefits as a result of the project.

    b. The proposed project would require the clearing of approximately 2.1 acres of trees. Tree clearing would only occur 1 November to 31 March of any year to minimize impacts to federally threatened or endangered bat species.

    c. The proposed project would have no adverse impact upon archaeological remains or historic properties.

    d. The proposed repairs would have no adverse impacts to the physical environment (e.g., noise, air, and water quality) nor would the project adversely impact low-income or minority populations.

    e. Wetland and bottom land hardwood habitat within the project area would be avoided, and therefore would have no adverse impacts.

4. Based on my analysis and evaluation of the alternative courses of action presented in the Environmental Assessment, I have determined that the implementation of the Action Alternative would not have significant effects on the quality of the environment. The proposed action has been coordinated with appropriate resource agencies and there are no significant unresolved issues. Therefore, an Environmental Impact Statement will not be prepared prior to proceeding with this action.

_____ _____

(Date)

Kevin R. Golinghorst
Colonel, U.S. Army
District Commander