



**US Army Corps
of Engineers** ®
Nashville District

ENVIRONMENTAL ASSESSMENT

Buzzard Rock Resort and Marina Wastewater System Installation
Lake Barkley Reservoir
Lyon County, Tennessee

November 2, 2015



**For Further Information
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ACRONYMS

BMP – Best Management Practice
CEQ – Council on Environmental Quality
Corps- U.S. Army Corps of Engineers
CWA – Clean Water Act
CY – Cubic Yards
dB- Decibels
°F- Degrees Fahrenheit
EA – Environmental Assessment
EPA – Environmental Protection Agency
FONSI – Finding of No Significant Impact
HTRW – Hazardous, Toxic or Radioactive Waste
MSL – Mean Sea Level
LF- Linear Feet
mgd- Million Gallons per Day
NAAQS – National Ambient Air Quality Standards
Nashville District – U.S. Army Corps of Engineers, Nashville District
NEPA – National Environmental Policy Act
NHPA – National Historic Preservation Act
NRCS-Natural Resources Conservation Service
NRHP – National Register of Historic Places
RM- River Mile
Service – U.S. Fish and Wildlife Service
sq-ft – Square Feet
TDEC - Tennessee Department of Environment and Conservation
TWRA – Tennessee Wildlife Resource Agency

1 PURPOSE AND NEED FOR ACTION

1.1 Authorization

This Environmental Assessment (EA) is being conducted under Operation and Maintenance authority for Lake Barkley. Lake Barkley Lock and Dam is a multiple-purpose project that was authorized by the Flood Control Act of 1954 and the River and Harbor Act of September 4, 1954 (Public Law 780, 84rd Congress, 2nd Session) for the purposes of navigation, flood control, and hydroelectric power. Additional authorized project purposes included; water quality, recreation, and fish/wildlife.

This EA was prepared pursuant to the National Environmental Policy Act (NEPA), CEQ regulations (40 CFR, 1500–1508), and the U.S. Army Corps of Engineers (Corps) implementing regulation, Policy and Procedures for Implementing NEPA, ER 200-2-2, 1988.

1.2 Background

Operated by Leisure Cruise, Inc., Buzzard Rock Resort and Marina (Buzzard Rock) is located near Cumberland River Mile (RM) 49.2, Kuttawa, Lyon County, Kentucky (Figure 1). Buzzard Rock currently leases approximately 71.1 acres of land and 51.8 acres of water for a total of 122.9 acres from the Corps. Buzzard Rock submitted an after the fact request on August 11, 2014 to replace their 15 year old failing on-site septic system.

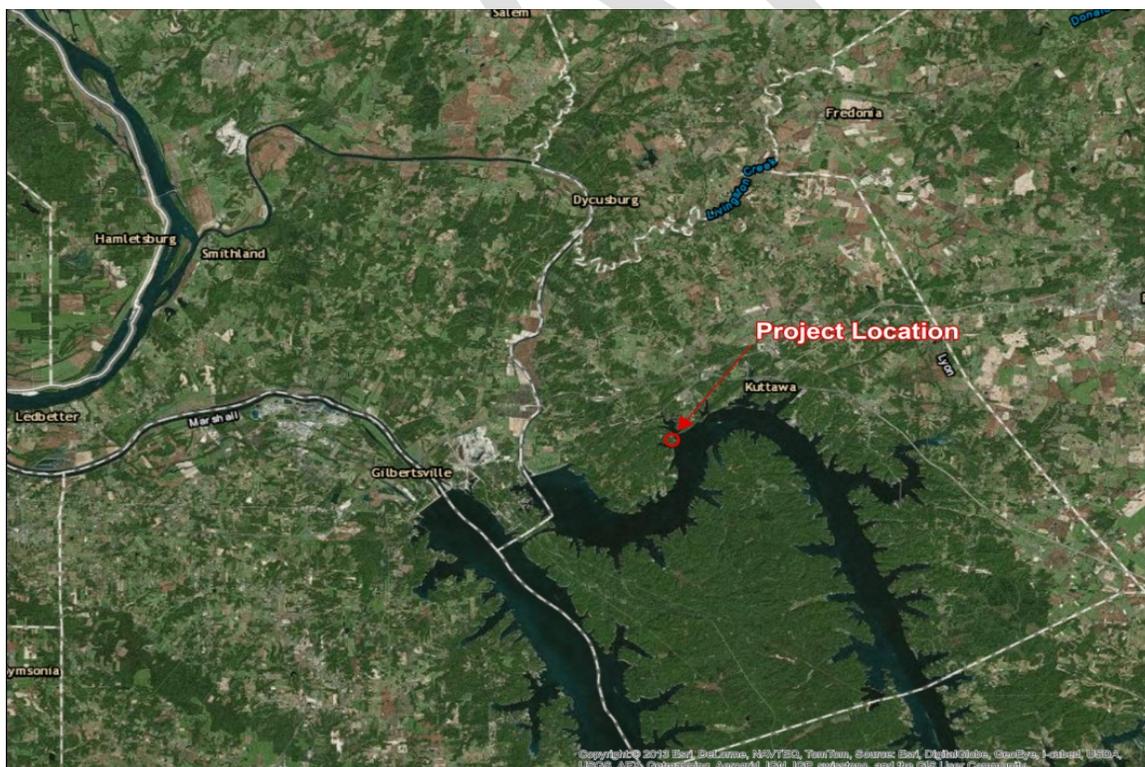


Figure 1. Project Vicinity Map

On July 12, 2014, Corps Park Rangers discovered soil disturbance on government property within the Buzzard Rock leased area. During their investigation they determined that a new, unauthorized septic system was installed. During construction Buzzard Rock removed a minimum of 117 trees (>4 inch diameter at breast height (DBH)) by either cutting trees at the base and/or pushing them over with construction equipment in an area of approximately 1.25 acres. Buzzard Rock admitted they should have coordinated with the Corps, but stated that it was imperative to act quickly to avoid further release of untreated wastewater into the surrounding area. The Lyon County Health Department conducted a final inspection of the septic system on July 14, 2014. A copy of the Lyon County Health Department letter stating that deficiencies have been corrected can be found in Appendix A. The wastewater septic system that was installed is discussed in detail in Section 2.1 of this document. Further investigation and coordination with the City of Kuttawa, KY, revealed that Buzzard Rock was offered the alternative to connect to the City's sewer system. The existing conditions and potential impacts of the proposed alternatives as related to granting the request to Buzzard Rock are presented in this EA.

1.3 Purpose and Need

The Lyon County Health Department determined that the old septic system was in a state of failure and evidence showed untreated wastewater being released into the surrounding lands and water. Untreated wastewater is known to promote the spread of disease caused by waterborne pathogens, deplete the dissolved oxygen in streams, and seriously affect or even eliminate aquatic life. If not addressed, the Lyon Health Department would have required Buzzard Rock to close until the wastewater deficiencies were resolved.

1.4 Issues and Opportunities

Buzzard Rock had been operating its facilities on a 15 year old failing septic system that consisted of a 1,000 gallon septic tank, pump tank, and field lines. If not addressed, Buzzard Rock would continue to have a failing septic system on Corps property that could potentially affect human health and safety, as well as the natural environment. The Lyon County Health Department required the marina to take action in rectifying the wastewater system issue. This action could have required the temporary closure of the marina resulting in a loss in revenue and potentially limit slip rental patrons access to their vessels.

In a letter dated April 9, 2012, the Pennyriple District Health Department (Pennyriple District) referenced 902 KAR 45:005 5-403.11, 902 KAR 10:085 Section 13(2)(a), and 902 KAR 7:010 Section 5 (Appendix A). 902 KAR 45:005 5-403.11 states "Sewage shall be disposed through an approved facility that is: (A) A public sewage treatment plant; or (B) An individual sewage disposal system that is sized, maintained, and operated according to law." 902 KAR 10:085 Section 13(2)(a) states "The repair or alteration of an on-site sewage treatment system shall be permitted if: a municipal or public sewage treatment system is not available." According to the City of Kuttawa, sewer is and has been available to Buzzard Rock. 902 KAR 7:010 Section 5

states “All sewage and waste matter shall be disposed of into a public sewerage system, if available. In the event a public sewerage system is not available, disposal shall be made into a private system designed, constructed, and operated in accordance with the requirements of the cabinet; provided, however, if a public sewerage system subsequently becomes available, connections shall be made thereto and the hotel sewerage system shall be discontinued.”

2 ALTERNATIVES CONSIDERED

Without Corps approval, Buzzard Rock has updated and expanded their failing septic system. In order to update and expand the septic system, approximately 1.25 acres of forested land was cleared of all vegetation to include approximately 117 trees. Trees are defined be greater than and/or equal to 4 inches diameter at breast height (DBH).

Regardless of the alternative chosen, Buzzard Rock would be required to comply with the Endangered Species Act (ESA) and mitigate for the loss of the trees that potentially provided summer roosting habitat for the endangered Indiana (*Myotis sodalis*) and Northern long-eared bats (*Myotis septentrionalis*). Per a letter dated November 12, 2014 the U.S. Fish and Wildlife Service (Service) would require Buzzard Rock to either (Refer to Appendix B):

1. Request a formal section 7 consultation to analyze the effects of the action on listed species and recommend strategies to minimize those effects; or
2. Enter into a Conservation Memorandum of Agreement (MOA) with the Service to account for the incidental take of Indiana bats habitat.

2.1 Alternative 1 - No Action Alternative

Without Corps approval, Buzzard Rock updated and expanded their failing septic system. Since the new septic system is already constructed and in operation, Alternative 1 is considered the No Action Alternative. Under this Alternative, Buzzard Rock would be required to operate the new septic system under existing conditions (Figure 2). The existing condition for Buzzard Rock includes:

- Three, 1,500 gallon primary tanks with risers,
- A commercial filter,
- Three 1,500 dosing tanks with risers,
- The existing septic tank C was equipped with
 - 4 inch submersible Flotec 2 wire with float switch,
 - Quick disconnect,
 - High water float alarm,
- 1,000 gallon discharge tank with riser
- Five discharge boxes,
- Five, six foot wide by 200 foot long leaching chamber beds with curtain drain.

- Approximately 1.25 acres of disturbance to include the removal of approximately 117 trees.

In addition to ESA compliance, under Alternative 1 Buzzard Rock would be required by the Corps to mitigate for the loss of habitat on Corps Property without appropriate approval.

Mitigation for the 1.25 acres of disturbance/removal of forest habitat could include:

- A payment for the loss of habitat
- 300 linear feet of bank stabilization
- Replanting of Corps approved tree species in a Corps specified location
- Combination of the above list mitigation options



Figure 2. Depiction of Previously Unapproved Septic System Upgrades.

2.2 Alternative 2 - Connect to the City of Kuttawa Sewer System

Alternative 2 is to connect Buzzard Rock to the City of Kuttawa sewer system. This alternative would include the installation of one or more lift station(s) placed within Buzzard Rock's lease area. Gravity sewer lines from Buzzard Rock's facilities would connect to the existing lift station where a four inch force sewer line, approximately 540 linear feet (LF), would connect to the city's sewer system. The installation of the lift station, gravity line connections, and force main sewer line would require new ground disturbance and minimal tree removal resulting in minimal

habitat loss (Figure 3). The unauthorized new septic system described under Alternative 1, would either be (1) left in place and professionally filled or (2) professionally removed. One large oak species would be removed to install/connect to the sewer system. However this tree does not appear to meet the criteria of a Indiana and/or Northern long-eared bat summer roost habitat.

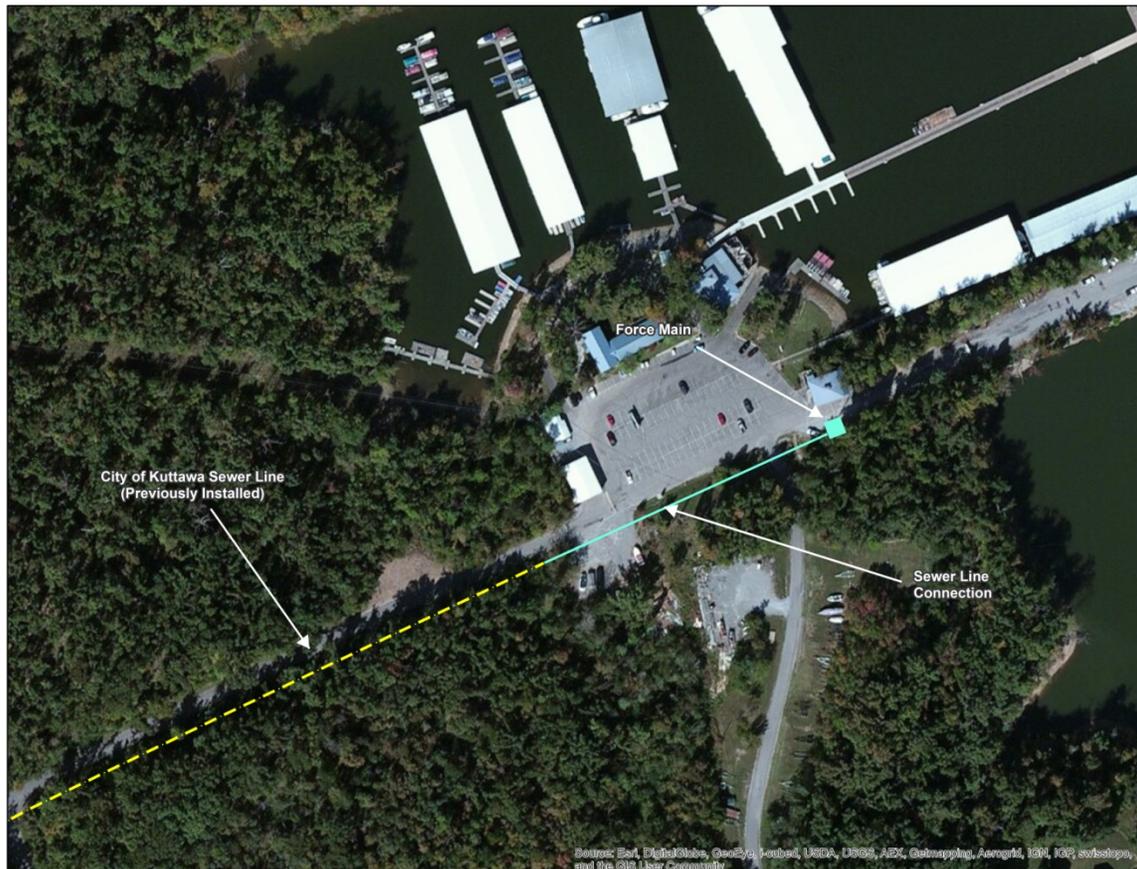


Figure 3. Alternative 2 - Connecting to the City of Kuttawa's Sewer System

In addition to ESA compliance, under Alternative 2 Buzzard Rock would be required by the Corps to mitigate for the loss of habitat on Corps Property without appropriate approval. Buzzard Rock is to work with the Lake Barkley Project to produce a Mitigation and Monitoring Report. Below are Corps guidelines for the mitigation and monitoring report.

Mitigation and Monitoring Guidelines

1. Replanting of approximately 200 trees per acre of Corps approved tree species within the previously disturbed area of the unauthorized septic tank drain field.
2. Trees must be 1 inch in diameter at breast height or Root Production Method trees
 - a. Corps approved tree species includes:
 - i. White Oak (*Quercus alba*)

- ii. Southern Red Oak (*Quercus falcata*)
 - iii. Northern Red Oak (*Quercus rubra*)
 - iv. Black Oak (*Quercus velutina*)
 - v. Pin Oak (*Quercus palustris*)
 - vi. Shagbark Hickory (*Carya ovata*)
 - vii. Pignut Hickory (*Carya glabra*)
 - viii. Bitternut Hickory (*Carya cordiformis*)
 - ix. Blackgum (*Nyssa sylvantica*)
- b. Applicant is to choose three – four of the species from the above list. All of the trees listed above are typical of upland forest. Several trees listed above have features (i.e. exfoliating bark, crevices, and cavities) that could be suitable for summer roosting habitat for bat species.
3. Trees are to be planted on a 10 ft x 10 ft grid.
4. Annual monitoring of the planted trees must be carried out for a minimum of two years.
- a. Must have 70% or greater survivability of planted trees
 - i. If the survival of planted species does not meet the 70 % or greater survivability, Buzzard Rock would have plant additional trees (from Corps approved list) to meet the 70% survivability. If planted trees do not meet the survival rate specified, additional monitoring would be required
 - b. Annual monitoring reports to include survival percentage of planted trees and photographs documenting the restoration site would be submitted to the Lake Barkley Project Office for their review

3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 Physiography and Topography

Lake Barkley is located in north-western Tennessee and south-western Kentucky, in an area that varies from gentle to moderately rolling hills. Lake Barkley is located within the Western Highland Rim 71f shown in Figure 4 (Woods et. al. 2002). Buzzard Rock, located in Lyon County, Kentucky, physiography and topography is characterized as a gentle sloping.

Alternative Impacts: The No Action Alternative would not affect existing landscape or land use. Alternative 2 would have minor to no effect on altering the existing land cover and use.

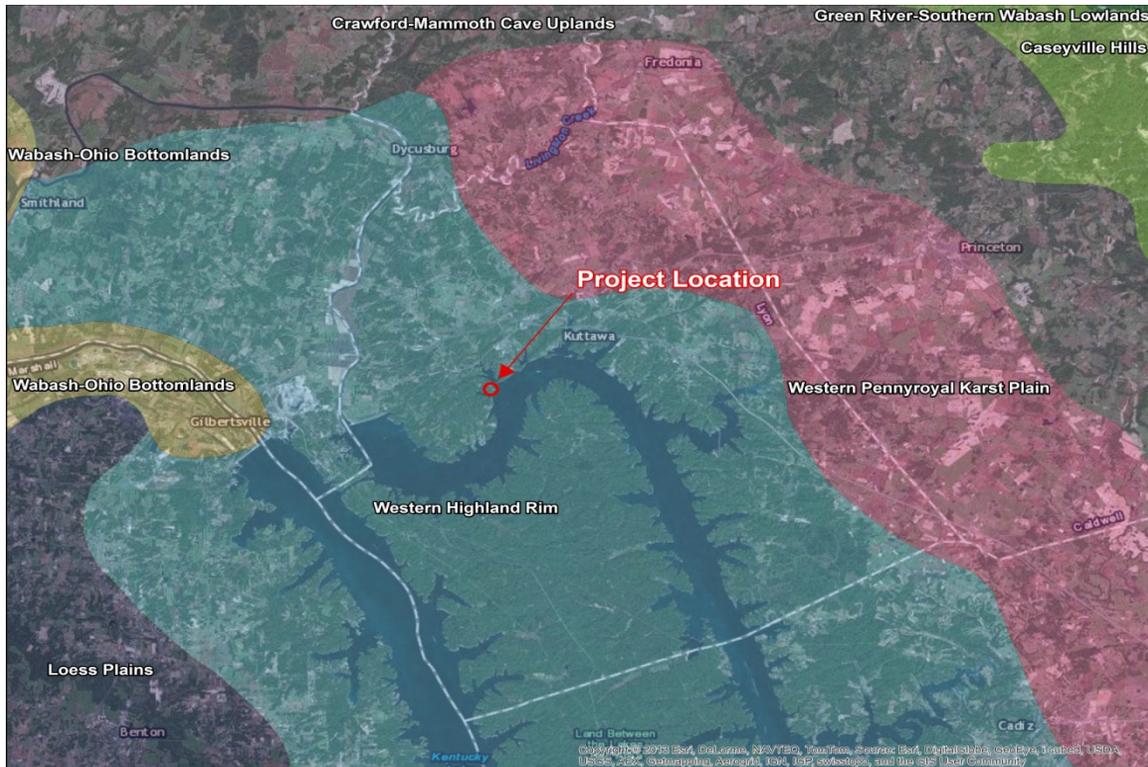


Figure 4. Ecoregions for Buzzard Rock Resort and Marina

3.2 Aquatic Resources

The fishery of Lake Barkley is typical of Kentucky and Tennessee reservoirs with diverse native and introduced species. The lake provides warm water aquatic habitat for sport fish: smallmouth bass (*Micropterus dolomieu*), largemouth bass (*M. salmoides*), spotted bass (*M. punctulatus*), white and black crappie (*Pomoxis annularis*, *P. nigromaculatus*), yellow perch (*Perca flavescens*), bluegill (*Lepomis macrochirus*) and other species of sunfish (*Lepomis spp.*), sauger (*Sander canadense*), white bass (*Morone chrysops*), striped bass (*M. saxatilis*), flathead catfish (*Pylodictis olvaris*), channel catfish (*Ictalurus punctatus*), and blue catfish (*I. furcatus*). Other important species of fish within the lake include gizzard shad and threadfin shad (*Dorosoma cepedianum*, *D. petense*), alewife (*Alosa pseudoharengus*), various minnows and shiners (Cyprinidae), carp (*Cyprinus carpio*), freshwater drum (*Aplodinotus grunniens*), smallmouth buffalo (*Ictiobus bubalus*), various suckers (Catostomidae), and longnose gar (*Lepisosteus osseus*). Lake Barkley also contains the invasive silver carp (*Hypophthalmichthys molitrix*) and bighead carp (*Hypophthalmichthys nobilis*).

Alternative Impacts: No alternative would affect the existing aquatic resources.

3.3 Wetlands

The project area was examined for wetlands through a combination of in-house research and field investigations. In-house research included a review of published information sources such

as U.S. Geological Survey (USGS) 7.5 minute quadrangle topographic maps, Natural Resources Conservation Service (NRCS) Soils mapping, and National Wetlands Inventory (NWI) information. No wetland areas are located within the proposed project footprint.

Alternative Impacts: No wetland areas are located within the proposed project footprint; therefore, no alternative would have any effect on the wetlands.

3.4 Water Quality

The Kentucky 303(d) report listed Lake Barkley and its tributaries as partially supporting all uses, which include warm water aquatic habitat and primary and secondary contact recreation (KYDOW, 2008).

Currently, Lake Barkley is listed by the Kentucky Department of Fish and Wildlife Resources (KDFWR) as a discharge lake. Therefore, treated sewage from installed Type I and II marine sanitation devices on recreation vessels can be discharged into the lake

The Clean Water Act (CWA), as amended in 1977, established the basic framework for regulating discharge of pollutants into the waters of the United States. Lake Barkley is located in the Lake Barkley Watershed of the Cumberland River Basin identified as USGS Hydrologic Unit Code 05130205. According to the 2012 Kentucky 305(b) and 2010, 303(d) report, in the region of Lyon County, Kentucky, the most commonly identified pollutants in Lake Barkley are sedimentation/siltation, pathogens (bacteria), nutrient/eutrophication biological indicators, organic enrichment (sewage) biological indicators, and cause unknown. Primary sources of these pollutants are identified as source unknown, agriculture, crop production, municipal point source discharges, and livestock (grazing or feeding operations).

Alternative Impacts: No alternative would affect the existing water quality. Alternatives 1 and 2 would greatly reduce human exposure to wastewater pathogens, decrease the possibility of future failures, and increase reliability of the wastewater removal/treatment.

3.5 Terrestrial Resources

3.5.1 Vegetation

Buzzard Rock is bordered by forested areas, but much of the land is maintained with ornamental trees, shrubs, and grass in and around its facilities with paved/gravel parking areas. Cabins and other buildings are positioned throughout the leased area. A tree survey for the 1.25 acres of cleared forest (Figure 2) was conducted by Corps Ranger, Kayl Kite on August 3, 2014; and verified by Corps Biologist, Tadd Potter on February 10, 2015. The survey found that the cleared forested area was predominately covered by a stand of American elm (*Ulmus americana*), Persimmon (*Diospyros virginiana*), Green ash (*Fraxinus pennsylvanica*), and Black Cherry (*Prunus serotina*). Other species found in the area included Shagbark hickory (*Carya ovata*), Honey locust (*Gleditsia tricanthos*), Oak species (*Quercus spp.*), Hackberry (*Celtis occidentalis*), Sugar maple (*Acer saccharum*), and Sweetgum (*Liquidambar styraciflua*).

Approximately 117 trees were removed within the 1.25 acre disturbed area. Figures 5 and 6 show the existing condition of the area.



Figure 5. Photograph of the 1.25 acre Area Cleared without Approval for the Corps



Figure 6. Photograph of the Discharge Tanks

Alternative Impacts: The No Action Alternative would have no effect on the existing vegetation as the new septic system is in operation on land cleared of all vegetation. However, 117 trees were removed; and 1.25 acres were disturbed to construct the existing new septic system. No

trees would likely be allowed to re-grow in the new leach field area to prevent root damage to the system.

Under Alternative 2, the area of the unauthorized tree removal would be replanted and monitored for. Buzzard Rock Marina is to submit a Mitigation and Monitoring Plan to the Lake Barkley Project Office for their review and concurrence. The Corps submitted Mitigation and Monitoring Guidelines to aid Buzzard Rock Marina in their drafting of the required Mitigation and Monitoring Plan. The Corps Mitigation and Monitoring Guidelines are specified in Section 2.2.

3.5.2 Wildlife

Lake Barkley has a various array of wildlife species. Typical species found within the vicinity of the proposed project area include; white-tailed deer (*Odocoileus virginianus*), squirrel (*Sciurus spp*), eastern cottontail (*Sylvilagus floridanus*), raccoon (*Procyon lotor*), red fox (*Vulpes vulpes*) and various other small mammals. Bird species are also abundant with a variety of songbirds, woodpeckers, owls, and hawks. Wild turkey (*Meleagris gallopova*), and bald eagles (*Haliaeetus leucocephalus*) are also commonly seen. Waterfowl common on the lake include wood duck (*Aix sponsa*), mallard (*Anas platyrhynchos*), American coot (*Fulica americana*), and bluewinged teal (*A. discors*) and an array of songbirds can also be found within the project location.

Alternative Impacts: The No Action Alternative would have no effect on wildlife species.

Alternative 2 would have minor to no effect on wildlife species. Under Alternative 2, the sewer lines and lift station would be installed along adjacent roads, parking lots, or in mowed areas where little wildlife would be found. Tree restoration would be a positive, long-term effect for the drain field area.

3.6 Archeological and Historic Resources

Prehistoric and historic period archaeological sites exist along the banks and floodplains of the Cumberland River and document activities by Native Americans and early European-American descendants that lived in Lyon County, Kentucky. There are two historic properties listed on the National Register of Historic Places (NRHP) in Lyon County, KY. Portions of an abandoned rail road and old surface roads were identified during a 2006 Phase I archaeological survey of Buzzard Rock Resort and Marina's lease area. They were determined not to be eligible for listing in the National Register of Historic Place (NRHP). An archaeological site was also identified in the marina's lease area but was also determined not to be eligible for listing in the NRHP.

Had the after-the-fact septic system been properly coordinated, Corps would have defined the physical Area of Potential Effects (APE) as the footprint of the septic system and its associated components. In addition, Corps believes the clearing of 1.25 acres of a heavily wooded area to accommodate septic field lines may have posed potential visual effects to historic properties. Therefore, Corps would have defined the visual APE as the immediate viewshed extending

outward from the location of the septic field lines. No historic properties listed or eligible for listing in the NRHP are located in the physical and visual APEs.

The primary requirements for the consideration of cultural resources stem from Section 106 of the National Historic Preservation Act of 1966 (NHPA) as implemented by regulations at 36 CFR 800. The after-the-fact septic system is considered an undertaking with the potential to cause effects on historic properties; therefore, the effects of its implementation on historic properties must be considered. Historic properties are properties, including archeological sites and standing structures that have been determined eligible for or are listed on the NRHP.

Section 106 consultation with the Kentucky Heritage Council (KHC) was initiated via a letter dated Mar 30, 2015. The letter addressed the after-the-fact septic system but did not expound upon the preferred action alternative since it was not identified at the time. The Corps made a determination of "no effects to historic properties". In a letter dated April 13, 2015, the KHC concurred with the Corps findings.

Consultation with the KHC was then continued via letter dated March 30, 2015, concerning the proposed possibility of stabilizing two sections of eroding shorelines within Buzzard Rock Marina's lease area as potential mitigation for the unauthorized work. The Corps made a determination of "no effects to historic properties". The KHC concurred with the Corp's determination in a letter dated April 13, 2015.

Consultation with the KHC was again continued in a letter dated May 15, 201, which addressed proposed measures involving the installation of a sewer line and associated lift station. USACE made a determination of, "no effects to historic properties". The KHC concurred with USACE's determination in a letter dated June 9, 2015.

Consultation with seven federally recognized Native American tribes was initiated via letter dated April 6, 2015. These included the, United Keetoowah Band of Cherokee Indians, Oklahoma Absentee-Shawnee Tribe of Indians of Oklahoma, Cherokee Nation, Chickasaw Nation, Eastern Band of Cherokee Indians, Eastern Shawnee Tribe of Oklahoma, and the Shawnee Tribe. The letter addressed the unauthorized after-the fact septic sewage system. USACE made a determination of, "no effects to historic properties". United Keetoowah Band of Cherokee Indians, Oklahoma, provided a response on April 22, 2015, stating no objection to the proposed project, but in the event remains or artifacts or other items of cultural significance are inadvertently discovered, construction is to cease and request to contact them telephonically or by letter.

USACE did not receive a response from the following tribes; Oklahoma Absentee-Shawnee Tribe of Indians of Oklahoma, Cherokee Nation, Chickasaw Nation, Eastern Band of Cherokee Indians, Eastern Shawnee Tribe of Oklahoma, and the Shawnee Tribe. In reference to 36 CFR 800.4(d)(1)(i) no response from the remaining tribes after 30 days, implies concurrence with

USACE's original findings and fulfills consultation requirements under Section 106 of the National Historic Preservation Act. This action is in compliance with the National Historic Preservation Act.

Consultation with the above mentioned federally recognized Native American tribes was continued in a letter dated May 15, 2015. The letter addressed proposed mitigation measures involving shoreline stabilization and the installation of a sewer line and lift station. USACE made a determination of, "no effects to historic properties". United Keetoowah Band of Cherokee Indians of Oklahoma provided a response on June 10, 2015, stating no objection to the proposed project, but in the event remains or artifacts or other items of cultural significance are inadvertently discovered, construction is to cease and request to contact them telephonically or by letter.

USACE did not receive a response from the following tribes; Oklahoma Absentee-Shawnee Tribe of Indians of Oklahoma, Cherokee Nation, Chickasaw Nation, Eastern Band of Cherokee Indians, Eastern Shawnee Tribe of Oklahoma, and the Shawnee Tribe. In reference to 36 CFR 800.4(d)(1)(i) no response from the remaining tribes after 30 days, implies concurrence with the Corp's original findings and fulfills consultation requirements under Section 106 of the National Historic Preservation Act. Please reference Appendix C for information regarding Section 106 consultation with the KHC and federally recognized Native American tribes.

Alternative Impacts: Under the No Action Alternative, no historic properties, listed or eligible for listing would be affected. The second alternative would involve additional sewage infrastructure causing further physical and visual disturbances to the viewshed. This alternative has been coordinated with the SHPO and seven federally recognized Native American tribes. The Corps made a "no effect to historic properties" determination. No objections were received from the KHC or the federally recognized Tribes. Section 106 is complete and no further coordination is required under Section 106. NHPA compliance is complete.

3.7 Threatened and Endangered Species

A review of the Service's website for listed species in Lyon County, Kentucky identified the Indiana bat, Northern long-eared bat, and the Price's potato-bean (*Apios priceana*) as the only federally listed species that could occur within the proposed project footprint.

Once recognizing the unauthorized impacted acreage, the Corps coordinated with the Service to determine if any Threatened & Endangered (T&E) species could have been impacted by the project. The Service responded by letter on November 12, 2014. A copy of the Service's response can be found in Appendix B. The Service provided the following comments regarding the previously disturbed area in accordance with the Endangered Species Act and Fish and Wildlife Coordination Act;

1. The Service determined that the federally endangered Indiana bat may have inhabited the project area between April 1st through October 15th. This time of year is referred to as the “occupied” time. Based on the Corps correspondence the 1.25 acres of forested habitat was removed between July and August prior to Section 7 consultation. These trees were removed during the timeframe when the species would be utilizing the habitat if present. Since this action occurred prior to consultation and additional analysis is no longer possible, the Service offered the remaining available options that apply to both Alternative 1 – No Action and Alternative 2 – Connect to the City of Kuttawa Sewer System :
 - a. The project proponent could request Formal Consultation through the lead federal agency associated with the proposed project.
 - b. The project proponent may choose to enter into a Memorandum of Agreement (MOA) with the Service to account for the incidental take of Indiana bats. The contribution amount that the MOA requires would be based on the 1.25 acres that were removed.

Alternative Impacts: The No Action Alternative would have no additional effect on threatened or endangered species and their habitat since the area has been previously cleared.

Alternative 2 would have little to no effect to threatened or endangered species and depending on plans could require additional coordination with the Service. Tree restoration, depending on species replanted, could provide long-term restoration of habitat.

3.8 Hazardous, Toxic, and Radioactive Waste

Based on site visits no known Hazardous, Toxic, and Radioactive Waste (HTRW) sites exist at the proposed locations.

Alternative Impacts: Contamination from HTRW would have no effect on any alternative.

3.9 Health and Safety

Lake Barkley is a popular vacation destination in western Tennessee and Kentucky. Each year, Lake Barkley provides recreational opportunities to millions of visitors resulting in intensive use of the lake and recreation areas. Corps, state, and local law enforcement personnel provide visitor assistance and work to educate visitors about water and boating safety. The proposed project area is accessible by the public by land and boat. A failing septic system with wastewater actively leaching into the surrounding soil and water increases the risk for humans to be exposed to and negatively affected by pathogens (bacteria).

Alternative Impacts: Alternatives 1 and Alternative 2 would protect public health and safety. Under Alternative 1, Buzzard Rock is completely responsible for monitoring, maintenance, and repairs of the septic system. Any malfunction or over-load of the system that releases raw sewage would jeopardize the health and safety of the public. Alternative 1 septic system is

adequately sized to treat waste water generated. Under Alternatives 2, the City of Kuttawa would be completely responsible for monitoring, maintenance, and repairs of the sewer system. As a utility, the city would provide reliable, around-the clock service to minimize any risk of public exposure to raw sewage. The sewer system under Alternative 2 would be adequately sized to handle waste water generated from Buzzard Rock.

3.10 Recreation and Scenic Resources

Lake Barkley supports eight marinas, ten recreation areas; four Corps managed campgrounds, one state park, and one national recreation area managed by the U.S. Forest Service. Because of the temperate climate and relatively long recreation season, visitors have many opportunities to fish, hunt, camp, picnic, boat, canoe, hike, and enjoy the outdoors. In addition, visitors can see a Civil War monument, a number of historic sites, several public parks, and wildlife refuges.

Alternative Impacts: Alternative 1, as constructed; and Alternative 2, connection to the City sewer, provide sanitary facilities to support existing recreation. Both alternatives would greatly reduce the risk of public exposure to wastewater pathogens. Under Alternative 1, the septic system would require extensive new ground disturbance to expand to meet any significant future increases in public use. Alternative 2 is more reliable as it is managed continuously by a utility. Under Alternative 2, short-term and minimal adverse impacts are expected due to construction and connection to the city sewer. Alternative 2 would restore the 1.25 acres of mixed-stand forest that was eliminated to construct the existing new septic system in accordance to Buzzard Rock's restitution agreement with the Corps. Alternative 2 can be expanded to meet future public growth with equipment upgrades resulting in little or no additional ground disturbance. The infrastructure for both Alternative 1 and 2 are underground and therefore there are no visual impacts to recreation and scenic resources.

3.11 Socioeconomics

Lake Barkley is a significant economic factor in the region. In addition to the recreation (i.e. fishing and recreational boating), hydropower, flood damage reduction, and navigation benefits discussed above, the lake provides municipal water supply, increased property values, increased tax revenues, and employment opportunities.

In 2014, the total population of Lyon County was 8,451. Lyon County maintains a relatively diversified employment base with educational services, health care, and social assistance as the primary industries followed by retail trade, construction, arts, entertainment, recreation, accommodations, and food service.

Executive Order (EO) 12898 (*Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*) requires federal agencies, departments, and their contractors to consider any potentially disproportionate human health or environmental risks their activities, policies, or programs may pose to minority or low-income populations. A review

of Table 1 shows that Lyon County has a lower percentage of minorities (8.7%) than the state percentage (14.4%).

Low-income populations are those that live below poverty. As shown in Table 1, Lyon County has a lower poverty level (16.8%) than the state (18.8%). The median income (\$40,112) for Lyon County was slightly below the state median income (\$43,036).

EO 13045 (*Protection of Children from Environmental Health Risks and Safety Risks*) requires federal agencies to identify and assess health risks and safety risks that may disproportionately affect children as part of the NEPA compliance process. Agencies must ensure that its policies, programs, activities, and standards address disproportionate risks to children that results from environmental health risks or safety risks.

Table 1. Socioeconomic Statistics

Parameter*	Lyon County	Kentucky
Population Estimate (2013)	8,463	4,399,583
Median Household Income (2009-2013)	\$40,112	\$43,036
Percent Minorities (2013)	8.7%	14.4%
Percent Below Poverty (2009-2013)	16.8%	18.8%

*Source: U.S. Census Bureau FactFinder: <http://quickfacts.census.gov/qfd/states/21/21143.html>

Alternative Impacts: Alternatives 1 and 2 would maintain localized positive socioeconomic benefits to Lyon County by providing the public (marina users) with safe wastewater treatment. A reliable system would support long term increases to recreational opportunities within Buzzard Rock. Buzzard Rock and the surrounding community would benefit from a safe and reliable wastewater treatment system that protects the public including children from exposure to wastewater pathogens. The lands required for this project are all Corps-owned with the exception of sewer routes along public roads. Both Alternatives (1 and 2) would comply with EO 12898 and EO 13045.

3.12 Air Quality

The proposed project site is considered in attainment with the National Ambient Air Quality Standards (NAAQS) for which attainment and designations have been issued.

Alternative Impacts: No alternative would affect air quality attainment. Alternative 2 would have some minimal potential for dust generation but this would be minor and short-term in duration.

3.13 Noise

Increases in noise levels would occur primarily during construction activities; however the increase would be short-term and confined to the Buzzard Rock location.

Alternative Impacts: The No Action alternative would have no effect on current noise levels. Under Alternative 2 there would be some minor noise from vehicle, equipment, and construction activities. Construction noise at Buzzard Rock would be short-term and localized, and would be limited to daylight hours and on weekdays. The change in noise levels would be negligible when compared to existing noise levels from the marina, roads, and lake. Construction noise would cease on project completion.

3.14 Navigation

Lake Barkley has substantial navigation traffic throughout the year. The proposed project area is located just off the main navigation channel on the Cumberland River. Access to the marina is located within a jetty protected inlet.

Alternative Impacts: The No Action Alternative and Alternative 2 would have no effect on navigation.

4 CUMULATIVE IMPACTS

Cumulative impact is defined as the impact on the environment which is the result of the incremental impact of the proposed marina wastewater expansion project when added to those of other past, present, or reasonable foreseeable future actions. Geographical boundary considered for this discussion of cumulative impacts is Lake Barkley Project found within Kentucky and immediately adjacent lands. The temporal boundary established spans from Lake Barkley impoundment (1965) to fifty (50) years future projection.

Past, present and reasonably foreseeable future activities contributing with the proposed action to cumulative impacts in the area include the proposed wastewater system installation, as well as the likelihood of other proposed facility expansions and existing and future residential and commercial development. Impacts of the requested action that relate to these other actions in the vicinity are as follows.

Water Quality/Aquatic Life.

Water quality and aquatic resources within Lake Barkley have been determined to be impaired due to a number of factors. During recent droughts within the Cumberland River drainage basin, water quality stresses challenge water management entities with respect to improving water quality conditions. Recent climatic trends would also tend to add additional degradation potential due to anticipated higher water temperatures and lower flow levels, and would serve to create stronger thermal stratification and lower dissolved oxygen levels in the lake. Logging, municipal discharges, and increased residential development have been and continue to be

primary factors negatively affecting water quality and aquatic life. Improvements to on-site and public utility wastewater management practices should serve to improve water quality conditions by preventing raw sewage spills on land and in surface water. Public education regarding the use of marina sanitation pump-out facilities would help to improve local conditions.

It is anticipated that water quality improvements initiated by Kentucky would serve to improve water quality conditions, and therefore, improve aquatic habitat. One program initiated by Kentucky is the Nonpoint Source (NPS) Pollution Control Program. The goals of this program are to protect the quality of Kentucky's surface and groundwater for NPS pollutants, abate NPS threats and restore degraded waters to the extent that water quality standards are met and beneficial uses are supported. Best Management Practices and local and state ordinances and regulations would be the primary control measures for protecting water quality. More recently Asian silver carp (*Hypophthalmichthys molitrix*) have been found within Lake Barkley. In addition, the Corps would continue to manage lands and waters in accordance with Operational Management Plans (OMPs), which includes consideration of water quality and aquatic resources.

Health & Safety.

With continuing expansion of lake use and numbers of lake users, health and safety for visitors to Lake Barkley would continue to be a primary concern. Protecting the health and safety of the public from raw sewage exposure would require an adequate number of reliable sanitation facilities. Public utility connections provide the most reliable and expandable wastewater management. Wastewater would be immediately collected in lines and pumped to a wastewater treatment plant. On-site septic systems can work well provided they are installed, monitored, and maintained correctly, however, the life span of a septic system is typically shorter than sewer systems. Failure of an on-site septic system would introduce raw sewage on land or into a water surface. State laws, administered by the local county health department, require that all sewage and waste matter shall be disposed of into a public sewerage system, if available.

In addition continued expansion of lake use and numbers of lake users, health and safety for visitors to Lake Barkley would continue to be a primary concern. Boater education and environmental awareness have been measures used to inform lake users of the resource available as well as how to protect themselves and the resource. Recent boating education program and laws have been initiated, and involve informing boaters of potential boating hazards and lake characteristics. Corps would continue to provide services for health and safety of project visitors.

Socio-economics.

Farming historically was a major source of employment but has declined, most significantly in the last fifteen years. Manufacturing and service employment have had the most dynamic fluctuation in the adjoining Kentucky counties. Tourism and revenues generated by facilities on and around Lake Barkley have been and remain vital to the local economies in Kentucky;

reliance on these revenues is expected to continue. As revenues continue to grow, expansions of tourism and recreation facilities would likely continue in order to meet customer demands. The Resource Manager at Lake Barkley would have the primary responsibility to ensure customer requests are in agreement with natural resources management goals and objectives.

Terrestrial Resources and Land Use.

Adjacent private development has continued at a steady pace. As property around Lake Barkley continues to experience adjacent residential growth from private development, terrestrial resources surrounding the reservoir become even more important. With the loss of vegetated land area outside Corps boundaries, wildlife uses would change, and more pressure would be placed on public lands to balance wildlife resources with facility developments and the recreational amenities they provide. Lands under management by the Corps would continue to be managed in accordance with the Lake Barkley OMPs and Master Plan.

Recreation.

Visitation and recreation on Lake Barkley has shown increases in use and is expected to continue. With increased residential development in surrounding areas, more people are brought closer to the lake and its amenities. Continued growth in recreational demand on Lake Barkley marinas and recreational facilities increases the need for reliable sanitary facilities to protect the health and welfare of the public and the land and water resources.

4.1 Combined Cumulative Effects

The need for reliable sanitation facilities is expected to increase as visitation increases. Old existing on-site septic systems are expected to become overwhelmed by high usage and lack of maintenance. On-site septic systems can be increased in size to accommodate high usage, but expansion requires several acres of cleared land to maintain a leach field lines. Failed septic systems expose the public, land surface, and waterways to spilled raw sewage.

As marinas, recreational facilities, and visitation continue to grow, the need for a reliable sewer collection and treatment system would be expected to increase. Alternative 1 replaced a failed on-site septic system. Without replacement, exposure to raw sewage and associated pathogens endangered public health and safety. The No Action Alternative (Alternative 1) is to continue to operate the new septic system. However, construction and operation of the new system did impact resources noted in the EA. Approximately 1.25 acres of forest habitat was permanently cleared and 117 trees were removed to construction Alternative 1. The new septic system is likely sized to a specific capacity and would be expected to function correctly in the short-term as long as the system is maintained and not overwhelmed by tying in additional buildings or facilities.

Alternative 2 alleviates any concerns related to monitoring and maintenance of systems on Corps lands. These actions are part of the continuous operation of the collection lines, force main, and pump station by the City of Kuttawa. The public system could be expanded to accommodate increased public use with relatively little loss of habitat as the infrastructure is installed along

road and utility right-of-ways that are often mowed. Wastewater contained in collection lines and pumped immediately to a wastewater plant significantly reduces the risk of public exposure to untreated sewage. It is reasonable to assume that as city sewer becomes available, marinas, and facilities would be added on to the city sewer system. A closed pipe system, managed and maintain around the clock, by the City of Kuttawa's trained wastewater collection and treatment personnel would be the most reliable system to manage sewage waste. Installing a dependable public sewer system in combination with other sewer extension projects within the watershed would cumulatively provide the greatest protection to water quality, human health and safety, recreation, fish and aquatic life, and the terrestrial environment. Alternative 2 is the most dependable alternative to meet the existing condition and future expansions of the sanitary system. When combined with other past, present, and foreseeable future actions, the overall impacts from Alternative 1 or 2 are relatively minor. Tree restoration would ultimately replace the terrestrial impacts of the unauthorized work.

5 ENVIRONMENTAL COMMITMENTS, PERMITS, AND APPROVALS

The following commitments, permits, and approvals are made regarding implementation of the action alternatives:

1. All planned designs for proposed and future development would be subject to review and approval by the Lake Barkley Resource Manager prior to implementation.
2. It would be the responsibility of Buzzard Rock to obtain all necessary permits and comply with regulations.
3. An individual National Pollutant Discharge Elimination System (NPDES) Storm water permit would be required if the proposed project disturbs more than one acre prior to commencement of construction activities. Construction BMPs would be followed to minimize environmental impacts. Examples of general construction BMPs are listed below.
 - Minimize Disturbance – minimize disturbed areas within the project area to those being actively worked.
 - Sediment Control Devices – sediment control devices such as silt fences, fiber rolls, geotextile filter fabric, and rock filters would be used as temporary erosion control barriers to capture storm water runoff from project area.
 - Inspection and Maintenance - inspect and verify activity-based BMPs are in place prior to commencement of associated activities and regular inspect erosion control devices to assure they are functioning properly.
4. No additional trees would be able to be removed until consultation with the Service has taken place.

5. Buzzard Rock must comply with ESA. Buzzard Rock must enter into a MOA with the Service to account for the incidental take of Indiana bats or request a formal section 7 consultation.

6. Consultation under Section 106 of the NHPA has led to a “no effect on historic properties” determination. However, should unanticipated cultural resources be encountered during construction, Buzzard Rock would be required to stop all work and contact the Corps. A Corps archaeologist would assess the project area; consult under Section 106, NAGPRA, or other cultural resource laws as necessary, before construction is resumed.

6 ENVIRONMENTAL COMPLIANCE

6.1 Executive Order 11990-Wetlands

No wetland areas have been identified adjacent to the proposed project area.

6.2 Farmland Policy Protection Act

No private agricultural lands or prime and unique farmlands are located in the proposed project area.

6.3 Executive Order 11988-Floodplain Management

A small portion of the marina lease area is located within the 100-year floodplain. However, the proposed alternative sites are not located within the 100-year floodplain. All alternatives would have minor to no effect on increasing a “base flood.”

6.4 Clean Water Act Compliance

Waters of the United States are not present within the proposed project footprint. Therefore, coordination with State and Federal Agencies regarding Clean Water Act compliance is not required.

6.5 Endangered Species Act and Fish and Wildlife Coordination Act

The Endangered Species Act (ESA) requires the determination of possible effects on or degradation of habitat critical to Federally-listed endangered or threatened species. Because the unauthorized tree removal occurred prior to consultation with the Service and additional analysis of the habitat is no longer possible. To alert the Service of the potential impacts to suitable summer roost habitat used by T&E species, the Corps coordinated with the Service by a letter issued on November 7, 2014 (Appendix B).

The Service responded by letter dated November 12, 2014; that the removal of potential Indiana bat and Northern Long-eared bat summer habitat would require compliance with the ESA and the Service would typically recommend: 1) avoidance; 2) seasonal tree clearing with additional analysis of indirect and cumulative effects; 3) surveying; 4) completion of a biological assessment and effects analysis; formal consultation; or 5) the execution of an Indiana bat Conservation MOA. However, because tree removal occurred prior to consultation with the

Service and additional analysis of the habitat is no longer possible, Buzzard Rock now only has two options 1) Buzzard Rock can request a formal section 7 consultation through the Corps and the Service can prepare a Biological Opinion to analyze the effects of the action on listed species and recommend strategies to minimize those effects; or 2) Buzzard Rock entering into a MOA with the Service to account for the incidental take of Indiana bats. Execution of an MOA typically involves Buzzard Rock to contribute to the Indiana Bat Conservation Fund and would allow the marina to be in compliance with the ESA (Appendix B).

6.6 National Historic Preservation Act

Section 106 of the National Historic Preservation Act requires Federal agencies to take into account the effects of their actions on historic properties and afford the Advisory Council of Historic Preservation the opportunity to comment on undertakings. Had the after-the-fact septic system been properly coordinated, Corps would have defined the physical Area of Potential Effects (APE) as the footprint of the septic system and its associated components. In addition, Corps believes the clearing of 1.25 acres of a heavily wooded area to accommodate septic field lines may have posed potential visual effects to historic properties. Therefore, Corps would have defined the visual APE as the immediate viewshed extending outward from the location of the septic field lines. No historic properties listed or eligible for listing in the NRHP are located in the physical and visual APEs.

Appendix C summarizes the Section 106 consultation. This project also complies with cultural resource laws such as Section 110 of the National Historic Preservation Act, the Archaeological Resources Protection Act, Native American Graves and Repatriation Act, American Indian Religious Freedom Act, and Executive Orders 13006.

6.7 Executive Order 12898 – Environmental Justice

Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations* requires Federal agencies to promote “nondiscrimination in Federal programs substantially affecting human health and environment”. In response to this directive, Federal Agencies must identify and address disproportionately high and adverse human health and environmental effects of their programs, policies, and activities on minority and low-income populations. The final step in the environmental justice evaluation process is to evaluate the impact of the project on the population and to ascertain whether target populations are affected more adversely than other residents. The marina provides public service to customers without bias to race or income; therefore there are no environmental justice concerns.

6.8 Clean Air Act

The proposal is in an attainment area with regard to the NAAQS and would not jeopardized maintaining an air quality standards.

6.9 Comprehensive Environmental Response, Compensation, and Liability Act

No Comprehensive Environmental Response, Compensation, and Liability Act sites were identified within the proposed project boundaries.

6.10 Resource Conservation and Recovery Act

All alternatives would be in compliance with the Resource Conservation and Recovery Act.

7 PUBLIC AND AGENCY COORDINATION

7.1 Coordination with Service

The Service's letter dated November 12, 2014, stated that Buzzard Rock had two options to comply with the ESA since tree removal has already occurred. Because tree removal occurred prior to consultation with the Service and additional analysis of the habitat is no longer possible, Buzzard Rock now only has two options 1) Buzzard Rock can request a formal section 7 consultation through the Corps and the Service can prepare a Biological Opinion to analyze the effects of the action on listed species and recommend strategies to minimize those effects; or 2) Buzzard Rock entering into a MOA with the Service to account for the incidental take of Indiana bats. Execution of an MOA involves Buzzard Rock to make a contribution to the Indiana Bat Conservation Fund and would allow the marina to be in compliance with the ESA (Appendix B).

7.2 Public and Agency Involvement

This EA is being made available to Federal and state natural resources agencies, other interested agencies, and the general public for a thirty (30) day review period. The EA will also be posted to the Nashville District webpage for public review at <http://www.lrn.Corps.army.mil/Media/PublicNotices/tabid/6994/Category/154/environmental-assessments>.

A Notice of Availability (NOA) has been prepared and is being made available to local media outlets regarding this document. All comments received during the thirty (30) day comment period will be considered in the EA.

8 CONCLUSION

Two alternatives were evaluated in detail throughout this EA; Alternative 1 (No Action Alternative) and Alternative 2 (Connect to the City of Kuttawa's Sewer System).

Alternative 1 (No Action Alternative) would require the marina to operate under existing conditions described in Section 2. The unauthorized septic system would be used. The Corps would require compensation in the form of payment for the loss of habitat, bank stabilization along a 300 foot section of bank, replanting of Corps approved tree species in a Corps specified location, and/or a combination of the above listed mitigation measures. In addition, Buzzard Rock would be required to mitigation for potential impacts to the Indiana and Northern long-eared bat summer roost habitat to finalize ESA coordination. A copy of the Memorandum of Agreement and payment into the Indiana Bat Conservation Fund would be required. Over an

extended period of time this alternative could see similar failures arise allowing for the chance of harmful pathogens to be released to the area.

Alternative 2 (Connect to the City of Kuttawa's Sewer System) would allow Buzzard Rock to connect to the city's sewer system. This alternative would include the installation of a lift station placed within Buzzard Rock's lease area. Gravity sewer lines from Buzzard Rock's facilities would connect to the existing lift station where a four inch force main sewer line, approximately 540 linear feet, would connect to the city's sewer system. The installation of the lift station, gravity line connections, and force main sewer line would require new ground disturbance and could have minimal tree removal along the shoulder of the existing parking lot resulting in minimal habitat loss. The unauthorized septic system, would be left in place, and professionally filled or professionally removed. One large oak species would be removed to install/connect to the sewer system. However this tree does not appear to meet the criteria of a Indiana and/or Northern long-eared bat summer roost habitat.

Alternative 2 (Connect to the City's Sewer System) is the environmentally preferred alternative since it would have no additional impacts to Threatened and Endangered Species, wildlife, and no habitat would be lost. In addition, local laws 902 KAR 45:005 5-403.11, 902 KAR 10:085 Section 13(2)(a), and 902 KAR 7:010 Section 5 (Appendix A). 902 KAR 45:005 5-403.11 states "Sewage shall be disposed through an approved facility that is: (A) A public sewage treatment plant; or (B) An individual sewage disposal system that is sized, maintained, and operated according to law." 902 KAR 10:085 Section 13(2)(a) states "The repair or alteration of an on-site sewage treatment system shall be permitted if: a municipal or public sewage treatment system is not available." According to the City of Kuttawa, sewer is and has been available to Buzzard Rock. 902 KAR 7:010 Section 5 states "All sewage and waste matter shall be disposed of into a public sewerage system, if available. In the event a public sewerage system is not available, disposal shall be made into a private system designed, constructed, and operated in accordance with the requirements of the cabinet; provided, however, if a public sewerage system subsequently becomes available, connections shall be made thereto and the hotel sewerage system shall be discontinued." By connecting the sewer system to the City's Sewer lines would greatly reduce the chance of failure in the future.

For all alternatives, Buzzard Rock would be required to either enter into formal consultation with the Service or enter into a Conservation MOA with the Service to account for the incidental take of Indiana bats. Execution of an MOA involves Buzzard Rock to make a contribution to the Indiana Bat Conservation Fund and would allow the marina to be in compliance with the ESA.

In addition to mitigating for impacts to T&E species, Buzzard Rock would be required, by the Corps, to mitigate for the removal of habitat/trees.

9 REFERENCES

- Council for Environmental Quality. 1996. Draft Guidance for Addressing Environmental Justice under NEPA. 1996.
- US Army Corps of Engineers, Nashville District. 1991. Operational Management Plan. Nashville, Tennessee.
- Kentucky Energy and Environment Cabinet, Division of Water 2012, *Volume I 405(b) Report; Integrated Report to Congress on the Condition of Water Resources in Kentucky*
- Federal Emergency Management Agency. 2015. Floodplain Maps Website:
<http://fema.maps.arcgis.com/home/webmap/viewer.html?webmap=cbe088e7c8704464aa0fc44eb99e7f40>
- U.S. Census Bureau. 2015. State and County Quick Facts Website: www.quickfacts.census.gov
- U.S. Department of Agriculture, Natural Resources Conservation Service. 2015. Soil Survey website: <http://websoilsurvey.nrcs.usda.gov>
- Kentucky Department of Fish and Wildlife Resources. 2015. Species Information Website:
<http://app.fw.ky.gov/speciesinfo/countyListSpecies.asp>
- U.S. Fish and Wildlife Service. 2015. Listed species listed by Kentucky County, website:
http://ecos.fws.gov/tess_public/reports/species-by-current-range-county?fips=21144
- U.S. Environmental Protection Agency. 2015. Noise Information Website:
<http://www2.epa.gov/aboutepa/epa-identifies-noise-levels-affecting-health-and-welfare>
- U.S. Fish and Wildlife Service. 2015. National Wetlands Inventory website:
<http://www.fws.gov/Wetlands/Data/Mapper.html>

10 LIST OF PREPARERS

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Jordan McIntyre, Archaeologist, Environmental Section, Project Planning Branch, Nashville District, EA Preparation – Cultural and Historic Resources.

Timothy Higgs, Environmental Engineer, Environmental Section, Project Planning Branch, Nashville District, Supervisory Review.

DRAFT

APPENDIX A

DRAFT

MEMORANDUM THRU: OP-R

MEMORANDUM FOR: RE-M

SUBJECT: After-The-Fact Request for Installation of Septic System at Buzzard Rock Marina, Lease # DACW62-1-99-0111

1. Mr. Wayne Pederson of Buzzard Rock Marina requests an after-the-fact approval for the installation of a new septic system. The new system was necessary to replace their existing, leaking system.
2. On June 12, 2014, Buzzard Rock Marina's certified septic installer obtained a permit from the local Health Department to install new septic tanks near the boat ramp and leaching chamber field lines in a wooded area at the top of the ridge (see Exhibits A1-A6). Mr. Pederson did not submit plans to the Lake Barkley Resource Manager's Office. After noticing the dirt work on July 12, 2014, Rangers Kite and Davenport went to investigate and determined that the septic system had been installed. During the installation, a minimum of 117 trees (>4" DBH) were cut and/or pushed down clearing a 1.25 acre area. Mr. Pederson admitted that he knew he should have coordinated the work with the Corps, but he did not submit a request or plans because he could not afford for the project to be delayed or denied. According to Mr. Pederson, the local Health Department would have been shut his business down unless the new system was installed. The Health Department conducted a final inspection of the septic system on July 31, 2014.
3. Further investigation and coordination with the City of Kuttawa, revealed that Buzzard Rock Marina could have connected to the city sewer system as an alternative to installing a new septic system; this option would have resulted in very limited, if any, tree removal.
4. Since Buzzard Rock Marina's old system was leaking, creating an environmental hazard, the Lake Barkley Resource Management Office recommends after-the-fact approval of the new system pending mitigation for 117 trees. Project recommended mitigation involves bank stabilization/erosion control on approximately 350 feet of shoreline in Buzzard Rock Marina's lease area (see Exhibits B1& B2).
5. Please contact Ranger Kayl Kite of this office if you have any further questions.



C. Michael Looney
Natural Resource Program Manager

Encls.

August 11, 2014

Wes Davenport
Park Ranger
USACE
Lake Barkley, Kentucky

RE: Sewer System

Wes:

As per your request, this letter is intended to explain the reason for our new septic system. Brevity will be implemented rather than detailed for ease and time of reading. Further details are readily available should the need or interest require.

Our sewer/septic system was in need of repair. The local Health Department deemed it necessary to completely change our present system that lasted 15 years.

We suggested many possible sites for our drain field . . . All of which required few if any trees to be removed. All were rejected by the Health Department. The ultimate site . . . the only site . . . was selected by the State and local Health Department while I was out of town. There was no alternative site.

The Health Department gave us the description of the total system . . . Size and Construction and where the drain field and tanks would be installed. We and the contractor simply tried to fit the system into the smallest foot print possible.

This system was an "over build". It is substantially larger than our 15 year old system and probably one of the largest in this state given our annual usage.

Simply put: The Health Department would shut us down, force us out of business, if we did not comply. The local health department made this quite clear several times.

This septic system has been quite an ordeal. The Health Department told three (3) sewer contractors not to work on our new system. . . That it would get "very messy"! They feared retaliation. We had to hire a contractor from another county whose day-to-day activity was not reviewed by the local health department.



We have been told that written permission was needed. The Health Department did call the Corps office and reported that a building permit was being issued to us for a septic/sewer system. I have not been told if anything in writing was received back from the Corps.

We are asking for this permission now, after the event, for compliance purposes.

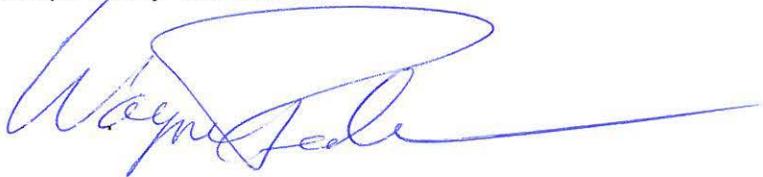
I have always asked for Permission rather than Forgiveness. Present and prior Park Rangers and Resource Managers will attest to this.

Several items to consider:

- * We had no other choice. We would have been put out of business if this did not get installed immediately. As soon as the final design was provided to the contractor, his drawing was approved shortly thereafter, and construction started immediately. We were threatened that they would shut us down. If this happened:
 - * Employees unemployed
 - * Tourists displaced
 - * USACE's mandate to provide access and services to Lake Barkley would fail.
- * The State of Kentucky Health Department required this system and chose the sites and sizes.
- * We are the first (possibly the only) Clean Marina in the Nashville District. We diligently try to preserve and respect the environment.

Please call should you have any questions, comments, or if additional information is needed.

Respectfully Submitted:



Wayne Pederson
Owner/Operator

Enclosures: Building Permit
Site Plan
Final Inspection

**ON-SITE SEWAGE DISPOSAL SYSTEM
CONSTRUCTION APPLICATION AND PERMIT**

6-12-14
Date
072-13-033
Site Evaluation No.

Lyon
County or District Health Department
172-14-035
Permit Number

Name of Applicant: David Ford Name of Owner: Buzzard Rock

Location/Address of Property: 985 Buzzard Rock

1. Work to be performed by: Homeowner ; Certified Installer
Name David Ford Certification No. 6895

2. New System Existing System: Alteration Repair

If new system, draw system layout on back of this sheet showing: All system components; their size, length, or type as applicable; and the system in relation to the property lines and the structure it serves. Note: System must be placed in the area staked off on the property for this purpose. All system or site modifications required for site approval must be included.

If existing system, draw system layout on back of this sheet showing: System as it presently exists, with altered, added, repaired, or replaced components, lateral lines, etc., circled; show their size, length, or type as applicable.

Using (2) 1,000 existing tanks, 1 1/4" pump line

3. Type of System Proposed: (3) 1500 gal primary tanks with risers, Commercial filter,
(3) 1500 gal dosing tanks w/risers, Submersible Flotec 2 wire (9.6 gpm @ 6') pump
installed w/ quick disconnect, riser on pump tank, high water alarm - connected to visible
1,000 gal oil sump tank w/ riser, (5) bulkside boxes (5) 6' x 300' leaching chambers
(if low pressure pipe system, design, and materials worksheets must be submitted with this application.)
Curtain drain 4" deep (3) installed 8" deep with 10" plus 3/4" additional deep for each
& daylighted

NOTE TO APPLICANT: This sheet as well as all attachments, or drawings, constitutes the permit to install, alter, or repair an onsite sewage disposal system. Any changes made to the system without the written approval of the above listed health department shall void this permit.

AFFIDAVIT FOR HOMEOWNER INSTALLED SYSTEM ONLY

I propose to install my own onsite sewage disposal system in accordance with 902 KAR 10:081, and 902 KAR 10:085, and I fully understand my responsibilities under the applicable Law and Regulations as to the installation of my system. I agree to the terms and restrictions of this permit, and further agree to notify the above listed health department to request inspection of my work at the initial and final stages of installation.

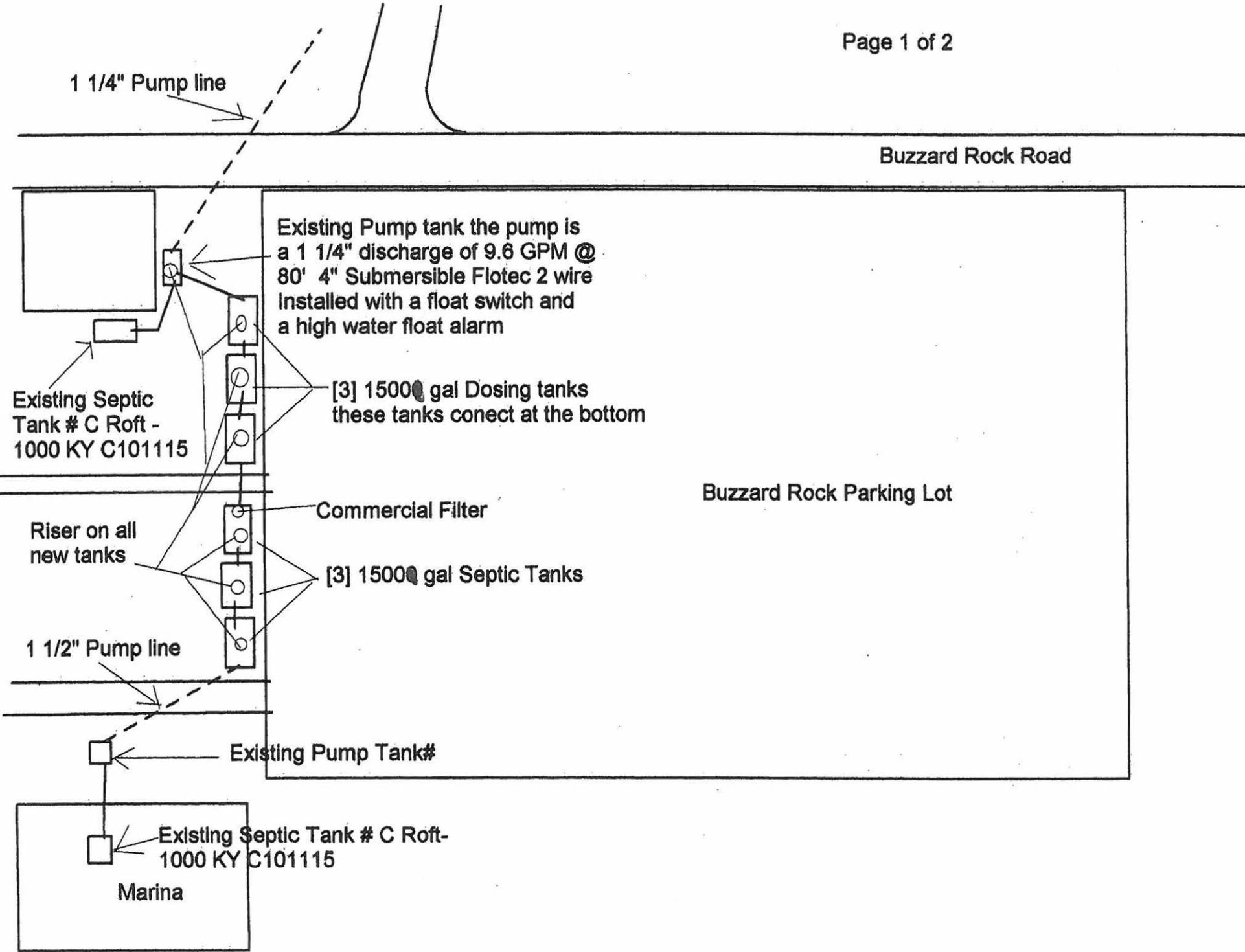
Date: _____ Signed: _____

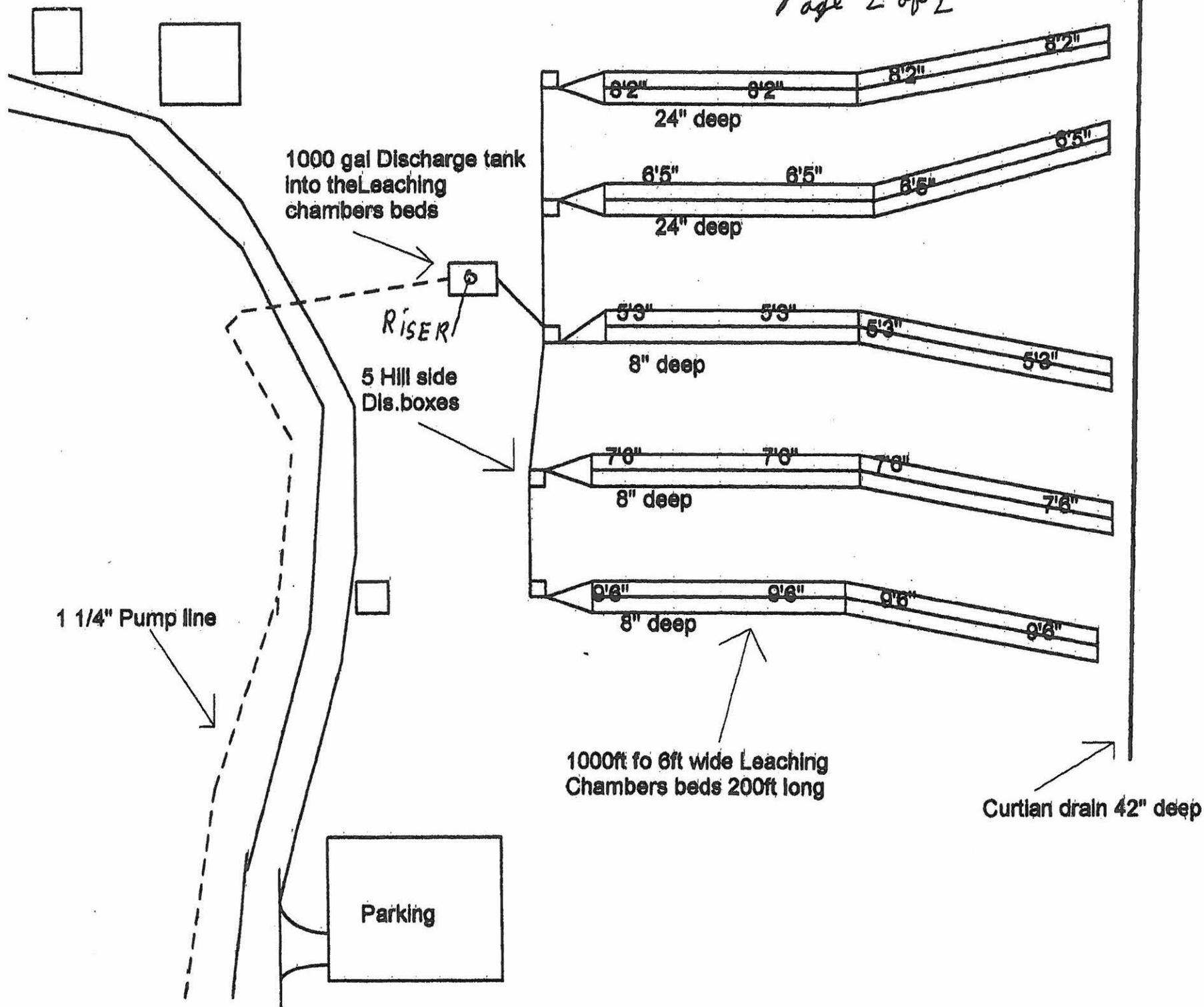
FOR DEPARTMENT FOR HEALTH SERVICE USE ONLY
Not to be filled out by Applicant

Permit Fee	Method of Payment	<input type="checkbox"/> Approved for Permit -- ACTION CODE P
State Fee: \$ _____	<input type="checkbox"/> Cash <input type="checkbox"/> Check	<input type="checkbox"/> Approved with Modifications (shown on drawing)
Local Fee: \$ _____	<input type="checkbox"/> Money Order	<input type="checkbox"/> Disapproved
Total Fee: \$ <u>250⁰⁰</u>		

Modifications Required/Reason for Disapproval Trench depths may change
Installer shall call for inspection of backhoe
pits prior to lateral installation to verify
installation depth - to be coordinated with Chris Edwa

Russ R. It 11113 6-12-14





ONSITE SEWAGE DISPOSAL SYSTEM
CONTINUOUS INSTALLATION INSPECTION REPORT

172-14-037
Permit No.

Location/Address of Property: 985 Buzzard Rock County: 072

Name of Owner: Buzzard Rock Name of Installer: David Ford

Private Installation: Commercial Installation: Other: _____

Excavation (Service Type - 05)

- | | YES | NO | | YES | NO |
|--|--------------------------|--------------------------|---|--------------------------|--------------------------|
| 1. Area staked off for system, undisturbed, not regraded. | <input type="checkbox"/> | <input type="checkbox"/> | 4. System layout complies with design as approved. | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. System laid out in this area. | <input type="checkbox"/> | <input type="checkbox"/> | 5. Soil moisture check made by installer before excavation (Group IV Soils Only); and passed (no smearing). | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. System laid out on surface and grades shot before excavation. | <input type="checkbox"/> | <input type="checkbox"/> | 6. Excavation work meets standards for grade, depth, lateral(s) length, spacing, etc. | <input type="checkbox"/> | <input type="checkbox"/> |

Deficiencies to be corrected before approval is granted (if any): _____

Deficiencies Corrected (if any): Yes No Initial Installation Approved Yes No

inspected by: _____ Certificate Number: _____ Date: _____

NOTE: If the excavation inspection is waived, installer's affidavit must be attached. ACTION CODE #K

Installation (Service Type - 01)

- Excavation installation work undisturbed, unaltered Yes No
- System properly installed as to grade (to be checked by certified inspector with transit and leveling rod), size, type, length of laterals, curtain drains, other site modifications, etc. Yes No
- List component code number(s) for:

SEE FILE FOR SYSTEM INFO.

A. Septic Tank(s) _____	C. Dosing Tank/Holding Tank _____
B. Aerobic Unit _____	
D. Alternating Valve _____	
E. Distribution Box(es) _____	
F. Non-Perforated Piping _____	Pipe Manufacturer's Name _____
G. Perforated Lateral Piping _____	Pipe Manufacturer's Name _____
H. Pump(s) Model No. <u>1 1/2 hp WE 1512H</u>	Manufacturer's Name <u>Conrad's Int. Tech.</u>
I. Switches, Controls, Model No's: <u>2-39v</u>	
Manufacturer's Name: <u>15-720p</u>	
J. Other (Describe) _____	Code or Model No. _____
K. Type of trench fill material used: Crushed Limestone <input type="checkbox"/> ; Gravel <input type="checkbox"/> ; Crushed Furnace Slag <input type="checkbox"/> ; Pea Gravel <input type="checkbox"/> ; Sand <input type="checkbox"/> ; Average Diameter of Trench Fill Material _____ in.	
L. Type of trench barrier material used: Straw <input type="checkbox"/> ; Hay <input type="checkbox"/> ; Spun Polyester <input type="checkbox"/> ; Other Synthetic Material <input type="checkbox"/> . Thickness of barrier material used _____ in.	

Deficiencies to be corrected before approval is granted (if any): _____

Deficiencies Corrected (if any): Yes No Final Installation Approved: Yes (Action Code A) No (Action Code Y)

Inspected By: Greg Hodge Certificate Number: RJ629

County or District Health Department _____ Date: 7-31-14

APPENDIX B

DRAFT



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Kentucky Ecological Services Field Office
330 West Broadway, Suite 265
Frankfort, Kentucky 40601
(502) 695-0468

November 12, 2014

Mr. Tim Higgs
Chief, Environmental Section
Project Planning Branch
U.S. Army Corps of Engineers

Re: FWS 2015-B-0068; USACE; Buzzard Rock Marina; installation of a new septic tank;
located in Lyon County, Kentucky

Dear Mr. Higgs:

Thank you for the opportunity to provide comments on the above-referenced project. The U.S. Fish and Wildlife Service (Service) has reviewed this proposed project and offers the following comments in accordance with the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 *et seq.*). This is not a concurrence letter. Please read carefully, as further consultation with the Service may be required.

Indiana bat

The Service has determined that the federally endangered Indiana bat (*Myotis sodalis*) may inhabit the project area from April 1st through October 15th. This time of the year is referred to as the "occupied" time. During this period, Indiana bats roost in trees that are greater than 5 inches diameter-at-breast-height and exhibit any of the following characteristics: exfoliating bark, cracks, crevices, cavities, dead portions. According to your email correspondences and a phone conversation, the applicant has removed approximately 1.25 acres of forested habitat prior to section 7 consultation. These trees were removed in July or August when the species would be utilizing the habitat.

Typically, for projects that involve the removal of potential Indiana bat summer habitat, the Service would recommend the following options to ensure compliance with the ESA: 1) avoidance; 2) seasonal tree clearing with additional analysis of indirect and cumulative effects; 3) surveying; 4) completion of a biological assessment and effects analysis; 5) formal consultation; or, 6) the execution of an Indiana bat Conservation Memorandum of Agreement (MOA). However, because these actions have occurred prior to consultation with the Service and additional analysis of the habitat is no longer possible, the project proponent has limited their available options to ensure that the project is in full compliance with the ESA. The remaining available options are as follows:

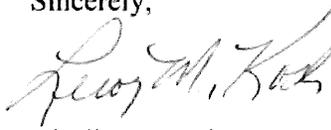
- The project proponent can request formal section 7 consultation through the lead federal action agency associated with the proposed project. To request formal consultation, the project proponent would need to submit a Biological Assessment that describes the action and evaluates the effects of the action on the listed species in the project area. After formal consultation is initiated, the Service has 135 days to prepare a Biological Opinion that analyzes the effects of the action on the listed species and recommends strategies to minimize those effects.
- The project proponent may choose to enter into a Conservation Memorandum of Agreement (MOA) with the Service to account for the incidental take of Indiana bats. Execution of an MOA involves a contribution to the Indiana Bat Conservation Fund (IBCF) and would allow the project proponent to be in compliance with the ESA. The contribution amount that the MOA requires would be based on the 1.25 acres that were removed.

Northern long-eared bat

The northern long-eared bat was proposed for federal listing under the ESA on October 2, 2013. The Service has extended the deadline for the final determination to April 2, 2015. The entire state of Kentucky is considered potential habitat for the northern long-eared bat. During the summer, northern long-eared bats typically roost singly or in colonies in a wide-variety of forested habitats, where they seek shelter during daylight hours underneath bark or in cavities/crevices of both live trees and snags, including relatively small trees and snags that are less than 5 inches in diameter at breast height (DBH). Although species proposed for listing are not afforded protection under the ESA, the federal action agency must consult with the Service if a project is expected to jeopardize the continued existence of the proposed species.

Thank you again for your request. Your concern for the protection of endangered and threatened species is greatly appreciated. If you have any questions regarding the information that we have provided, please contact Jessi Miller at (502) 695-0468 extension 104.

Sincerely,


for Virgil Lee Andrews, Jr.
Field Supervisor

APPENDIX C

DRAFT

Appendix C

Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA), and its implementing regulations at 36 CFR 800 require consideration of cultural resources prior to a federal undertaking and requires consultation with the State Historic Preservation Officer (SHPO), Federally recognized tribes with a connection to the project location and other consulting parties defined at §800.3. The NHPA only affords protection to sites, buildings structures, or objects listed in or determined eligible for listing in the National Register of Historic Places (NRHP). In addition, under the Archaeological Resources Protection Act and section 110 of the NHPA, the Corps has responsibilities to protect and preserve significant archaeological sites. Archival research for this project involved a search of the National Register of Historic Places, historic USGS topographic maps, county records and a review of cultural resources survey reports. Table 1 summarizes the parties consulted, the mechanisms for consultation, and responses to the consultation. The Section 106 consultation has lead to a “no effects to historic properties” determination for the proposed project.

Table 1. Summary of Section 106 of the National Historic Preservation Act Consultation.

Consulting Party	Initiation date	Initiation mechanism	No Effect letter sent	Concurrence to No Effect determination
Tennessee State Historic Preservation Officer	30 March 2015	Section 106 letter	30 March 2015	13 April 2015
	15 May 2015	Continued Section 106 consultation	15 May 2015	9 June 2015
Absentee-Shawnee Tribe of Indians of Oklahoma	06 April 2015	Section 106 letter	06 April 2015	NR
	22 May 2015	Continued Section 106 consultation		NR
Cherokee Nation	06 April 2015	Section 106 letter	06 April 2015	NR
	22 May 2015	Continued Section 106 consultation		NR
Eastern Band of Cherokee Indians	06 April 2015	Section 106 letter	06 April 2015	NR
	22 May 2015	Continued Section 106 consultation		NR
Eastern Shawnee Tribe of Oklahoma	06 April 2015	Section 106 letter	06 April 2015	NR
	22 May 2015	Continued Section 106 consultation		NR
Shawnee Tribe	06 April 2015	Section 106 letter	06 April 2015	NR
	22 May 2015	Continued Section 106 consultation		NR
United Keetoowah Band of Cherokee	06 April 2015	Section 106 letter	06 April 2015	22 April 2015
	22 May 2015	Continued Section 106 consultation		10 June 2015
Chickasaw Nation	06 April 2015	Section 106 letter	06 April 2015	NR
	22 May 2015	Continued Section 106 consultation		NR

*Response date reflects the end of the 30 day comment period. No Response (NR) implies concurrence with the Corps finding of “no historic properties affected” as per 36 CFR 800.4(d).

- Consultation with the Kentucky State Historic Preservation Officer (SHPO) was initiated via letter dated March 30, 2015, concerning an After-the-Fact septic sewage system. USACE made a determination of "no effects to historic properties". The SHPO concurred with USACE's determination in a letter dated April 13, 2015.

Consultation with the Kentucky State Historic Preservation Officer (SHPO) was also initiated via letter dated March 30, 2015, concerning the proposed possibility of stabilizing two sections of eroding shorelines within Buzzard Rock Marina's lease area. USACE made a determination of "no effects to historic properties". The SHPO concurred with USACE's determination in a letter dated April 13, 2015.

Consultation with the Kentucky State Historic Preservation Officer (SHPO) was continued in a letter dated May 15, 2015. The letter addressed proposed mitigation measures involving the proposed installation of a sewer line and lift station. USACE made a determination of, "no effects to historic properties". The SHPO concurred with USACE's determination in a letter dated June 9, 2015. This action is in compliance with the National Historic Preservation Act.

- Consultation with seven federally recognized Native American tribes was initiated via letter dated April 6, 2015. These included the, United Keetoowah Band of Cherokee Indians, Oklahoma Absentee-Shawnee Tribe of Indians of Oklahoma, Cherokee Nation, Chickasaw Nation, Eastern Band of Cherokee Indians, Eastern Shawnee Tribe of Oklahoma, and the Shawnee Tribe. The letter addressed the unauthorized after-the fact septic sewage system. USACE made a determination of, "no effects to historic properties".

United Keetoowah Band of Cherokee Indians, Oklahoma – provided a response on April 22, 2015, stating no objection to the proposed project, but in the event remains or artifacts or other items of cultural significance are inadvertently discovered, construction is to cease and request to contact them telephonically or by letter.

USACE did not receive a response from the following tribes; Oklahoma Absentee-Shawnee Tribe of Indians of Oklahoma, Cherokee Nation, Chickasaw Nation, Eastern Band of Cherokee Indians, Eastern Shawnee Tribe of Oklahoma, and the Shawnee Tribe. In reference to 36 CFR 800.4(d)(1)(i) no response from the remaining tribes after 30 days, implies concurrence with USACE's original findings and fulfills consultation requirements under Section 106 of the National Historic Preservation Act. This action is in compliance with the National Historic Preservation Act.

- Continued consultation with the above mentioned federally recognized Native American tribes was continued via letter dated May 22, 2015, addressing proposed mitigation measures involving shoreline stabilization and the installation of a sewer line and lift station. USACE made a determination of, "no effects to historic properties".

United Keetoowah Band of Cherokee Indians, Oklahoma – provided a response on June 10, 2015, stating no objection to the proposed project, but in the event remains or artifacts or other

items of cultural significance are inadvertently discovered, construction is to cease and request to contact them telephonically or by letter.

USACE did not receive a response from the following tribes; Oklahoma Absentee-Shawnee Tribe of Indians of Oklahoma, Cherokee Nation, Chickasaw Nation, Eastern Band of Cherokee Indians, Eastern Shawnee Tribe of Oklahoma, and the Shawnee Tribe. In reference to 36 CFR 800.4(d)(1)(i) no response from the remaining tribes after 30 days, implies concurrence with USACE's original findings and fulfills consultation requirements under Section 106 of the National Historic Preservation Act. This action is in compliance with the National Historic Preservation Act.



DEPARTMENT OF THE ARMY
NASHVILLE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1070
NASHVILLE, TENNESSEE 37202-1070

IN REPLY REFER TO

Project Planning Branch

MAR 30 2015

Mr. Craig Potts
State Historic Preservation Officer
Kentucky Heritage Council
300 Washington Street
Frankfort, Kentucky 40601

Dear Mr. Potts:

The U.S. Army Corps of Engineers (USACE), Nashville District has become aware of an after-the-fact incident involving the construction of an unauthorized septic system on USACE Fee property currently leased to Buzzard Rock Resort and Marina Inc., Kuttuwa, Lyon County, Kentucky. USACE believes the purported incident had the potential to cause effects to historic properties and wishes to initiate consultation under Section 106 of the National Historic Preservation Act to address this issue. Enclosure 1 depicts a topographic map of the proposed project area on portions of the Grand Rivers, KY U.S.G.S. topographic quadrangle (7.5' series).

The incident occurred at Buzzard Rock Resort and Marina Inc., located approximately 1.4 miles southwest of Kuttawa, Lake Barkley, Kentucky. In July of 2014 the applicant had constructed a septic system without prior approval or coordination with Barkley Lake's Resource Manager. USACE Rangers only learned of the unauthorized incident on 12 July 2014, after the project had been completed. The unauthorized septic system involved burying six 1,500 gallon septic and dosing tanks that tied in with the existing 1,000 gallon septic tank. A sewage pump line that connected with the original septic system was then extended and buried along the north bound shoulder of an access road before veering off into a recently cleared wooded area to connect with sewage field lines situated approximately 100 meters west of the access road. The septic field lines consisted of a 1,000 gallon storage tank that distributed sewage among five field lines that covered an area approximately 1.25 acres.

If the incident had been properly coordinated, USACE would have defined the physical Area of Potential Effects (APE) as the footprint of the proposed project which would have included the six septic tanks, the sewage pump line, the field lines and associate storage tank. USACE does not believe the burial of the septic system introduced new visual elements to the viewshed that would otherwise cause potential effects to historic properties. However, USACE believes the clear cutting of 1.25 acres of a wooded area to accommodate the

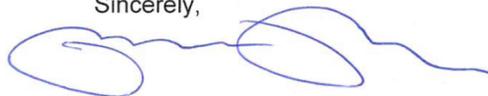
project's field lines posed potential visual effects to historic properties. Therefore, had USACE been given the opportunity, USACE would have defined the visual APE as the surrounding viewshed uninhibited by dense wooded areas. Enclosure 2 presents maps of the physical and visual APEs and photographs taken of the project area post construction activities.

A Phase I archaeological survey was completed in 2006 of the entire lease area by TRC Inc. The consultant identified [REDACTED]. The site lies [REDACTED]. Based on the [REDACTED] recovered from the archaeological survey and the [REDACTED], TRC believes the site is not eligible for listing in the National Register of Historic Places (NRHP). USACE concurs with TRC's findings and believes that the unauthorized septic system project had no effects to historic properties. USACE recommends no further archaeological investigations. Results of TRC's Phase I archaeological survey can be found in the report titled, [REDACTED].

A search of the National Register and USGS historic topographic maps of USACE site files and records returned no findings of historic properties listed or eligible for listing in the NRHP within the visual APE. Based on these findings, USACE believes there is low potential for visual effects to historic properties. Furthermore, the visual APE is tightly bounded by dense wooded areas, which constrains the visual APE to the immediate viewshed. USACE recommends no further cultural resources investigations and seeks your comments in approving this after-the-fact septic system.

USACE requests a review of the proposed project and finding of "no historic properties affected". Please contact Jordan C. McIntyre at (615) 736-7837 or jordan.c.mcintyre@usace.army.mil, if you require additional information.

Sincerely,



Russ L. Rote, P.E., PMP, CFM
Chief, Project Planning Branch

Enclosures



STEVEN L. BESHEAR
GOVERNOR

**TOURISM, ARTS AND HERITAGE CABINET
KENTUCKY HERITAGE COUNCIL**

BOB STEWART
SECRETARY

THE STATE HISTORIC PRESERVATION OFFICE
300 WASHINGTON STREET
FRANKFORT, KENTUCKY 40601
PHONE (502) 564-7005
FAX (502) 564-5820
www.heritage.ky.gov

CRAIG A. POTTS
EXECUTIVE DIRECTOR AND
STATE HISTORIC PRESERVATION OFFICER

April 13, 2015

Department of the Army
Nashville District, Corps of Engineers
ATTN: Jordan McIntyre
P.O. Box 1070
Nashville, TN 37202-1070

Re: Buzzard Rock Resort and Marina, Inc. Septic Tank Installation, After the fact Section 106 Consultation

Dear Mr. McIntyre:

Thank you for your correspondence concerning the above referenced project. I concur with your finding of no adverse effect to historic properties.

Should you have any questions, feel free to contact Yvonne Sherrick of my staff at 564-7005, ext. 113.

Sincerely,

Craig A. Potts
Executive Director and
State Historic Preservation Officer

CP:43806



DEPARTMENT OF THE ARMY
NASHVILLE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1070
NASHVILLE, TENNESSEE 37202-1070

IN REPLY REFER TO

Project Planning Branch

MAR 30 2015

Mr. Craig Potts
State Historic Preservation Officer
Kentucky Heritage Council
300 Washington Street
Frankfort, Kentucky 40601

Dear Mr. Potts:

The U.S. Army Corps of Engineers (USACE), Nashville District has received a request for approval from Buzzard Rock Resort and Marina Inc., Kuttuwa, Lyon County, Kentucky to stabilize two sections of stream banks within their lease area on USACE fee property. USACE defines the proposed project as an undertaking with the potential to cause effects to historic properties and wishes to initiate consultation under Section 106 of the National Historic Preservation Act. Enclosure 1 depicts a topographic map of the proposed project area on portions of the Grand Rivers, KY U.S.G.S. topographic quadrangle (7.5' series).

The proposed project would involve stabilizing two sections of shoreline measuring a combined total of 300 linear feet. The sections of shoreline (A and B) are located in the eastern boundaries of the marina's lease area on the banks of Lake Barkley. Both sections would involve emplacing approximately 150 linear feet of rip-rap in a effort to stabilize the shorelines and halt further bank erosion. USACE defines the physical Area of Potential Effect (APE) as the footprints of the proposed shoreline sections requiring stabilization. USACE also believes the addition of rip-rap may have the potential to cause visual effects to historic properties. Therefore, USACE defines the visual APE as the surrounding viewshed which would be limited to an 800 meter non-obstructed line of sight buffer from the physical APE. Enclosure 2 presents maps of the physical and visual APEs and photographs depicting the eroding shorelines.

A Phase I archaeological survey was completed in 2006 of the entire lease area by TRC Inc. [REDACTED]

[REDACTED]
an abandoned road in addition to an abandoned rail bed once operated by the Illinois Central Railroad. [REDACTED] Based on the archaeological findings of TRC's report titled, [REDACTED]

[REDACTED] USACE believes the proposed bank stabilization project would have no effects to historic properties. USACE recommends no further archaeological investigations.

A search of the National Register, and USGS historic topographic maps returned no findings of historic properties listed or eligible for listing in the National Register of Historic Places (NRHP) within the visual APE. A search of USACE site files and reports also returned negative findings for historic properties listed or eligible for listing in the NRHP. Based on these findings, USACE believes there is a low potential for visual effects to historic properties. USACE recommends no further cultural resources investigations and seeks your comments to approve this undertaking.

USACE requests a review of the proposed project and finding of "no historic properties affected". Please contact Jordan C. McIntyre at (615) 736-7837 or jordan.c.mcintyre@usace.army.mil, if you require additional information.

Sincerely,



Russ L. Rote, P.E., PMP, CFM
Chief, Project Planning Branch

Enclosures



STEVEN L. BESHEAR
GOVERNOR

**TOURISM, ARTS AND HERITAGE CABINET
KENTUCKY HERITAGE COUNCIL**

BOB STEWART
SECRETARY

THE STATE HISTORIC PRESERVATION OFFICE
300 WASHINGTON STREET
FRANKFORT, KENTUCKY 40601
PHONE (502) 564-7005
FAX (502) 564-5820
www.heritage.ky.gov

CRAIG A. POTTS
EXECUTIVE DIRECTOR AND
STATE HISTORIC PRESERVATION OFFICER

April 13, 2015

Department of the Army
Nashville District, Corps of Engineers
ATTN: Jordan McIntyre
P.O. Box 1070
Nashville, TN 37202-1070

Re: Buzzard Rock Resort and Marina, Inc. Stream Bank Stabilization in Two Area

Dear Mr. McIntyre:

Thank you for your correspondence concerning the above referenced project. I concur with your finding of no adverse effect to historic properties.

Should you have any questions, feel free to contact Yvonne Sherrick of my staff at 564-7005, ext. 113.

Sincerely,

Craig A. Potts
Executive Director and
State Historic Preservation Officer

CP:43805



DEPARTMENT OF THE ARMY
NASHVILLE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1070
NASHVILLE, TENNESSEE 37202-1070

IN REPLY REFER TO

Project Planning Branch

MAY 15 2015

Mr. Craig Potts
State Historic Preservation Officer
Kentucky Heritage Council
300 Washington Street
Frankfort, Kentucky 40601

Dear Mr. Potts:

The U.S. Army Corps of Engineers (USACE), Nashville District has received a request for approval from Buzzard Rock Resort and Marina Inc., Kuttuwa, Lyon County, Lake Barkley, Kentucky, to install a new sewer line and sanitary lift station on USACE fee property. The proposed structures serve as a mediation measure for an unauthorized septic system, which was previously coordinated with your office in a letter dated 30 March 2015. USACE believes the proposed sewer line would be more environmentally friendly than the unauthorized septic system. Consequently, the after-the-fact septic system would be sealed and abandoned in place. The associated septic field would be replanted with trees and other vegetation. USACE defines the proposed project as an undertaking with the potential to cause effects on historic properties and wishes to initiate consultation under Section 106 of the National Historic Preservation Act. Enclosure 1 depicts a topographic map of the proposed project area on portions of the Grand Rivers, KY U.S.G.S. topographic quadrangle (7.5' series).

The proposed project is situated on USACE fee property located on Lake Barkley, approximately 1.3 miles southwest of Kuttuwa, Kentucky. The proposed project would involve installing a section of sewer line that would connect the Marina's existing septic sewer line with the City of Kuttuwa's Municipal sewer line located approximately 360 feet to the west of the existing line. The proposed sewer line would be buried to a depth of approximately 3 feet below ground surface and would extend approximately 360 feet along the westbound shoulder of Buzzard Rock Road. The project would also involve installing a proposed sanitary lift station at one of two proposed locations set along the path of the proposed sewer line. The two locations are still being evaluated, and the most suitable location will be chosen. Lastly, the unauthorized septic system would be abandoned in place and the previously cleared leach field covering 1.25 acres would be replanted with native tree species and other vegetation.

USACE defines the physical Area of Potential Effect (APE) as the footprint of the proposed sewer line, sanitary lift station and the previously cleared leach field. Since the proposed sanitary lift station would only be installed at one of two proposed locations, USACE will include both locations as part of the physical APE. USACE defines the visual APE as the surrounding viewshed which would be limited to immediate tree line. Enclosure 2 presents maps of the physical and visual APEs and photographs depicting the eroding shorelines.

A Phase I archaeological survey titled, [REDACTED] was completed in 2006 of the entire lease area by TRC Inc. [REDACTED]

[REDACTED] would not be affected by the proposed project. The archaeological survey also [REDACTED]

[REDACTED] Buzzard Rock Road and two adjacent parking lots were constructed over the rail bed causing extensive subsurface disturbance which extends into the footprints of the proposed sewer line and associated sanitary lift station. Based on the extent of disturbance USACE believes the rail bed lacks integrity to be considered eligible for listing in the National Register of Historic Places (NRHP).

The footprint of the previously cleared septic leach field has incurred extensive disturbance and has a very low potential for intact cultural deposits. In 2006 TRC [REDACTED]

[REDACTED] USACE concurs with TRC's recommendation and believes the road features are not historically significant. Based on the extent of disturbance found throughout the physical APE, USACE believes no historic properties would be affected and recommends no additional archaeological investigations.

A search of the National Register and USGS historic topographic maps of USACE site files and records returned no findings of historic properties listed or eligible for listing in the NRHP within the visual APE. Based on these findings, USACE believes there are no historic properties within the visual APE. USACE recommends no further cultural resources investigations and seeks your comments in approving the proposed sewer line, sanitary lift station and the replanting of the previously cleared 1.25 acre septic field.

USACE requests a review of the proposed project and finding of "no historic properties affected". Please contact Jordan C. McIntyre at (615) 736-7837 or jordan.c.mcintyre@usace.army.mil, if you require additional information.

Sincerely,



Russ L. Rote, P.E., PMP, CFM
Chief, Project Planning Branch

Enclosures



STEVEN L. BESHEAR
GOVERNOR

**TOURISM, ARTS AND HERITAGE CABINET
KENTUCKY HERITAGE COUNCIL**

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www.heritage.ky.gov

CRAIG A. POTTS
EXECUTIVE DIRECTOR AND
STATE HISTORIC PRESERVATION OFFICER

June 9, 2015

Department of the Army
Nashville District, Corps of Engineers
ATTN: Jordan McIntyre
P.O. Box 1070
Nashville, TN 37202-1070

Re: Proposed Sewer Line Connection Buzzard Rock Marina

Dear Mr. McIntyre:

Thank you for your correspondence concerning the above referenced project. I concur with your finding of no adverse effect to historic properties.

Should you have any questions, feel free to contact Yvonne Sherrick of my staff at 564-7005, ext. 113.

Sincerely,

Craig A. Potts
Executive Director and
State Historic Preservation Officer

CP: 44130



DEPARTMENT OF THE ARMY
NASHVILLE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1070
NASHVILLE, TENNESSEE 37202-1070

IN REPLY REFER TO

Project Planning Branch

APR 06 2015

Chairperson Ron Sparkman
Shawnee Tribe

Dear Chairperson Sparkman:

The U.S. Army Corps of Engineers (USACE), Nashville District has become aware of an after-the-fact incident involving the construction of an unauthorized septic system on USACE Fee property currently leased to Buzzard Rock Resort and Marina Inc., Kuttuwa, Lyon County, Kentucky. If USACE had received a request for the septic system in advance, then we would have defined the construction as an undertaking with the potential to cause effects on historic properties. USACE would like to initiate consultation under Section 106 of the National Historic Preservation Act to address this issue as an after-the-fact review.

In July of 2014 the applicant constructed a septic system without prior consent and approval from Lake Barkley's Resource Manager or the Nashville District Office. The unauthorized septic system involved burying six 1,500 gallon septic and dosing tanks that tied in with the existing 1,000 gallon septic tank. A sewage pump line associated with the existing septic system was extended and buried along the north bound shoulder of an access road before veering off into a recently cleared wooded area to connect with sewage field lines situated approximately 100 meters west of the access road. The septic field lines consist of a 1,000 gallon storage tank that distribute sewage among five field lines within an area approximately 1.25 acres. All components of the septic system are buried below the ground surface.

Had the incident been properly coordinated, USACE would have defined the physical Area of Potential Effects (APE) as the footprint of the proposed septic system and its associated components. In addition, USACE believes the clearing of 1.25 acres of a heavily wooded area to accommodate septic field lines may have posed potential visual effects to historic properties. Therefore, USACE would have defined the visual APE as the immediate viewshed extending outward from the location of the septic field lines.

TRC, Inc. completed a Phase I Archaeological Survey at the Buzzard Rock Resort Marina, Lyon County, Kentucky of the marina's lease area in 2006. The

consultant identified [REDACTED]

[REDACTED] TRC recommended the site as not eligible for listing in the National Register of Historic Places (NRHP). Given the results of the previous survey and the specific location of the installed septic system, USACE believes that the unauthorized septic system project did not affect any known or unknown listed or eligible archaeological sites. USACE recommends no further archaeological investigations.

A search of the National Register, USGS historic topographic maps, USACE site files and records returned no findings of historic properties listed or eligible for listing in the NRHP within the visual APE. Furthermore, the visual APE is tightly bounded to the perimeter of the septic field lines due to dense stands of trees inhibiting the immediate viewshed. USACE recommends no further cultural resources investigations and seeks your comments in approving this after-the-fact septic system.

A copy of this letter and, supporting documentation including project maps with the APE is being forwarded to your historic preservation staff. Please provide us with your comments regarding a finding of "no historic properties affected" and any recommendations. If you require additional information please contact Jordan C. McIntyre at (615) 736-7837 or jordan.c.mcintyre@usace.army.mil.

Sincerely,

A handwritten signature in black ink, appearing to read "Russ L. Rote". The signature is stylized with large loops and a long horizontal stroke extending to the right.

Russ L. Rote, P.E., PMP, CFM
Chief, Project Planning Branch



DEPARTMENT OF THE ARMY
NASHVILLE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1070
NASHVILLE, TENNESSEE 37202-1070

IN REPLY REFER TO

Project Planning Branch

APR 06 2015

Chief George Wickliffe
United Keetoowah Band of Cherokee Indians

Dear Chief George Wickliffe:

The U.S. Army Corps of Engineers (USACE), Nashville District has become aware of an after-the-fact incident involving the construction of an unauthorized septic system on USACE Fee property currently leased to Buzzard Rock Resort and Marina Inc., Kuttuwa, Lyon County, Kentucky. If USACE had received a request for the septic system in advance, then we would have defined the construction as an undertaking with the potential to cause effects on historic properties. USACE would like to initiate consultation under Section 106 of the National Historic Preservation Act to address this issue as an after-the-fact review.

In July of 2014 the applicant constructed a septic system without prior consent and approval from Lake Barkley's Resource Manager or the Nashville District Office. The unauthorized septic system involved burying six 1,500 gallon septic and dosing tanks that tied in with the existing 1,000 gallon septic tank. A sewage pump line associated with the existing septic system was extended and buried along the north bound shoulder of an access road before veering off into a recently cleared wooded area to connect with sewage field lines situated approximately 100 meters west of the access road. The septic field lines consist of a 1,000 gallon storage tank that distribute sewage among five field lines within an area approximately 1.25 acres. All components of the septic system are buried below the ground surface.

Had the incident been properly coordinated, USACE would have defined the physical Area of Potential Effects (APE) as the footprint of the proposed septic system and its associated components. In addition, USACE believes the clearing of 1.25 acres of a heavily wooded area to accommodate septic field lines may have posed potential visual effects to historic properties. Therefore, USACE would have defined the visual APE as the immediate viewshed extending outward from the location of the septic field lines.

TRC, Inc. completed a Phase I Archaeological Survey at the Buzzard Rock Resort Marina, Lyon County, Kentucky of the marina's lease area in 2006. The

consultant identified [REDACTED]

[REDACTED] TRC recommended the site as not eligible for listing in the National Register of Historic Places (NRHP). Given the results of the previous survey and the specific location of the installed septic system, USACE believes that the unauthorized septic system project did not affect any known or unknown listed or eligible archaeological sites. USACE recommends no further archaeological investigations.

A search of the National Register, USGS historic topographic maps, USACE site files and records returned no findings of historic properties listed or eligible for listing in the NRHP within the visual APE. Furthermore, the visual APE is tightly bounded to the perimeter of the septic field lines due to dense stands of trees inhibiting the immediate viewshed. USACE recommends no further cultural resources investigations and seeks your comments in approving this after-the-fact septic system.

A copy of this letter and, supporting documentation including project maps with the APE is being forwarded to your historic preservation staff. Please provide us with your comments regarding a finding of "no historic properties affected" and any recommendations. If you require additional information please contact Jordan C. McIntyre at (615) 736-7837 or jordan.c.mcintyre@usace.army.mil.

Sincerely,

A handwritten signature in black ink, appearing to read "Russ L. Rote", with a stylized flourish extending to the right.

Russ L. Rote, P.E., PMP, CFM
Chief, Project Planning Branch



DEPARTMENT OF THE ARMY
NASHVILLE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1070
NASHVILLE, TENNESSEE 37202-1070

IN REPLY REFER TO

APR 06 2015

Project Planning Branch

Dr. Timothy Baugh
Chickasaw Nation

Dear Dr. Baugh

The U.S. Army Corps of Engineers (USACE), Nashville District has become aware of an after-the-fact incident involving the construction of an unauthorized septic system on USACE Fee property currently leased to Buzzard Rock Resort and Marina Inc., Kuttuwa, Lyon County, Kentucky. If USACE had received a request for the septic system in advance, then we would have defined the construction as an undertaking with the potential to cause effects on historic properties. USACE would like to initiate consultation under Section 106 of the National Historic Preservation Act to address this issue as an after-the-fact review.

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Please provide us with your comments regarding a finding of "no historic properties affected" and any recommendations. If you require additional information please contact Jordan C. McIntyre at (615) 736-7837 or jordan.c.mcintyre@usace.army.mil if you require additional information.

Sincerely,



Russ L. Rote, P.E., PMP, CFM
Chief, Project Planning Branch



DEPARTMENT OF THE ARMY
NASHVILLE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1070
NASHVILLE, TENNESSEE 37202-1070

IN REPLY REFER TO

Project Planning Branch

APR 06 2015

Governor George Blanchard
Absentee-Shawnee Tribe of Indians of Oklahoma

Dear Governor Blanchard:

The U.S. Army Corps of Engineers (USACE), Nashville District has become aware of an after-the-fact incident involving the construction of an unauthorized septic system on USACE Fee property currently leased to Buzzard Rock Resort and Marina Inc., Kuttuwa, Lyon County, Kentucky. If USACE had received a request for the septic system in advance, then we would have defined the construction as an undertaking with the potential to cause effects on historic properties. USACE would like to initiate consultation under Section 106 of the National Historic Preservation Act to address this issue as an after-the-fact review.

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cal

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Sincerely,



Russ L. Rote, P.E., PMP, CFM
Chief, Project Planning Branch



DEPARTMENT OF THE ARMY
NASHVILLE DISTRICT, CORPS OF ENGINEERS
P. O. BOX 1070
NASHVILLE, TENNESSEE 37202-1070

IN REPLY REFER TO

Project Planning Branch

APR 06 2015

Principal Chief Bill John Baker
Cherokee Nation

Dear Principal Chief Bill John Baker:

The U.S. Army Corps of Engineers (USACE), Nashville District has become aware of an after-the-fact incident involving the construction of an unauthorized septic system on USACE Fee property currently leased to Buzzard Rock Resort and Marina Inc., Kuttuwa, Lyon County, Kentucky. If USACE had received a request for the septic system in advance, then we would have defined the construction as an undertaking with the potential to cause effects on historic properties. USACE would like to initiate consultation under Section 106 of the National Historic Preservation Act to address this issue as an after-the-fact review.

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Sincerely,

A handwritten signature in black ink, appearing to read "Russ L. Rote". The signature is stylized with a large initial "R" and a long horizontal stroke extending to the right.

Russ L. Rote, P.E., PMP, CFM
Chief, Project Planning Branch



DEPARTMENT OF THE ARMY
NASHVILLE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1070
NASHVILLE, TENNESSEE 37202-1070

IN REPLY REFER TO

Project Planning Branch

APR 06 2015

Principal Chief Michell Hicks
Eastern Band of Cherokee Indians
Qualla Boundary

Dear Chief Hicks:

The U.S. Army Corps of Engineers (USACE), Nashville District has become aware of an after-the-fact incident involving the construction of an unauthorized septic system on USACE Fee property currently leased to Buzzard Rock Resort and Marina Inc., Kuttuwa, Lyon County, Kentucky. If USACE had received a request for the septic system in advance, then we would have defined the construction as an undertaking with the potential to cause effects on historic properties. USACE would like to initiate consultation under Section 106 of the National Historic Preservation Act to address this issue as an after-the-fact review.

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Sincerely,



Russ L. Rote, P.E., PMP, CFM
Chief, Project Planning Branch



DEPARTMENT OF THE ARMY
NASHVILLE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1070
NASHVILLE, TENNESSEE 37202-1070

IN REPLY REFER TO

Project Planning Branch

APR 06 2015

Ms. Robin DuShane
Tribal Historic Preservation Officer
Eastern Shawnee Tribe of Oklahoma

Dear Ms. DuShane:

The U.S. Army Corps of Engineers (USACE), Nashville District has become aware of an after-the-fact incident involving the construction of an unauthorized septic system on USACE Fee property currently leased to Buzzard Rock Resort and Marina Inc., Kuttuwa, Lyon County, Kentucky. If USACE had received a request for the septic system in advance, then we would have defined the construction as an undertaking with the potential to cause effects on historic properties. USACE would like to initiate consultation under Section 106 of the National Historic Preservation Act to address this issue as an after-the-fact review.

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[REDACTED]

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Please provide us with your comments regarding a finding of "no historic properties affected" and any recommendations. If you require additional information please contact Jordan C. McIntyre at (615) 736-7837 or jordan.c.mcintyre@usace.army.mil.

Sincerely,

A handwritten signature in black ink, appearing to read "R. Rote", with a long horizontal stroke extending to the right.

Russ L. Rote, P.E., PMP, CFM
Chief, Project Planning Branch

Mcintyre, Jordan C LRN

From: Lisa LaRue-Baker - UKB THPO [ukbthpo-larue@yahoo.com]
Sent: Wednesday, April 22, 2015 3:44 PM
To: McIntyre, Jordan C LRN
Cc: Holly Noe
Subject: [EXTERNAL] Buzzard Rock Resort and Marina Inc., Kuttuwa, Lyon County, KY

The United Keetoowah Band of Cherokee Indians in Oklahoma has reviewed your letter and information of April 6, 2015, regarding the above captioned project, and concurs with the findings and recommendations. However, should any human remains be inadvertently discovered, please cease all work and contact us immediately.

Thank you,

Lisa C. Baker
Acting THPO
United Keetoowah Band of Cherokee Indians in Oklahoma

[REDACTED]

[REDACTED]

This email and any files transmitted with it are confidential and intended solely for the use of the individual or entity to whom they are addressed. If you have received this email in error please notify the system manager. This message contains confidential information and is intended only for the individual named. If you are not the named addressee you should not disseminate, distribute or copy this e-mail. Please notify the sender immediately by e-mail if you have received this e-mail by mistake and delete this e-mail from your system. If you are not the intended recipient you are notified that disclosing, copying, distributing or taking any action in reliance on the contents of this information is strictly prohibited.

[REDACTED]

Mcintyre, Jordan C LRN

From: Lisa LaRue-Baker - UKB THPO [ukbthpo-larue@yahoo.com]
Sent: Wednesday, April 08, 2015 11:58 AM
To: McIntyre, Jordan C LRN
Cc: Holly Noe
Subject: [EXTERNAL] Re: Buzzard Rock After the Fact septic system (UNCLASSIFIED)

My response is below, but please let me know if any inadvertent discoveries were encountered, or if they let you know that. Have they been questioned on that?

The United Keetoowah Band of Cherokee Indians in Oklahoma has reviewed your project under Section 106 of the NHPA, and at this time, have no comments or objections. However, should any human remains be inadvertently discovered, please cease all work and contact us as soon as possible. The United Keetoowah Band reserves the right to re-enter consultation at any time during the duration of this project.

Best regards,

Lisa C. Baker
Acting THPO
United Keetoowah Band of Cherokee Indians in Oklahoma

[REDACTED]

[REDACTED]

This email and any files transmitted with it are confidential and intended solely for the use of the individual or entity to whom they are addressed. If you have received this email in error please notify the system manager. This message contains confidential information and is intended only for the individual named. If you are not the named addressee you should not disseminate, distribute or copy this e-mail. Please notify the sender immediately by e-mail if you have received this e-mail by mistake and delete this e-mail from your system. If you are not the intended recipient you are notified that disclosing, copying, distributing or taking any action in reliance on the contents of this information is strictly prohibited.

[REDACTED]



DEPARTMENT OF THE ARMY
NASHVILLE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1070
NASHVILLE, TENNESSEE 37202-1070

McIntyre/7837
23-Jun-15

CELRN-PM-P

MEMORANDUM FOR RECORD

SUBJECT: Tribal comment review period regarding After-the- Fact Sewage Septic System, Lyon County, Kentucky.

1. On April 6, 2015, the U.S. Army Corps of Engineers (USACE) sent correspondence to the following tribes; United Keetoowah Band of Cherokee Indians, Absentee-Shawnee Tribe of Indians of Oklahoma, Cherokee Nation, Chickasaw Nation, Eastern Band of Cherokee Indians, Eastern Shawnee Tribe of Oklahoma and the Shawnee Tribe. The correspondence addressed an After-the Fact septic sewage system at Buzzard Rock Marina, Lyon County, Kentucky, which was installed without USACE's permission.
2. United Keetoowah Band of Cherokee Indians was the only Tribal group to comment on this proposed action. USACE did not receive comments from the other remaining tribes within the 30 Day comment period. According to 36 CFR 800.4(d)(1)(i) no response from the tribes after the 30 day comment period, implies concurrence with the Corps's original findings and fulfills consultation requirements under Section 106 of the National Historic Preservation Act. This action is in compliance with the National Historic Preservation Act.

MCINTYRE.JORDAN.C.1241690403
AN.C.1241690403

Jordan C. McIntyre,
Archaeologist

Digitally signed by
MCINTYRE.JORDAN.C.1241690403
DN: c=US, o=U.S. Government, ou=DoD,
ou=PKI, ou=USA,
cn=MCINTYRE.JORDAN.C.1241690403
Date: 2015.06.23 12:25:12 -05'00'



DEPARTMENT OF THE ARMY
NASHVILLE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1070
NASHVILLE, TENNESSEE 37202-1070

IN REPLY REFER TO

Project Planning Branch

MAY 22 2015

Chairperson Ron Sparkman
Shawnee Tribe

Dear Chairperson Sparkman:

The U.S. Army Corps of Engineers (USACE), Nashville District has received a request for approval from Buzzard Rock Resort and Marina Inc., Kuttuwa, Lyon County, Lake Barkley, Kentucky, to install a new sewer line and sanitary lift station on USACE fee property. The marina is also considering stabilizing two sections of banks situated within their lease area. The proposed actions serve as a mediation measure for an unauthorized septic system, which was previously coordinated with your office in a letter dated 6 April 2015. USACE believes the proposed sewer line would be more environmentally friendly than the unauthorized septic system. Consequently, the after-the-fact septic system would be sealed and abandoned in place. The associated septic field would be replanted with trees and other vegetation. USACE defines the proposed project as an undertaking with the potential to cause effects on historic properties and wishes to initiate consultation under Section 106 of the National Historic Preservation Act.

The proposed project is situated on USACE fee property located on Lake Barkley, approximately 1.3 miles southwest of Kuttuwa, Kentucky. The proposed project would involve installing a section of sewer line that would connect the Marina's existing septic sewer line with the City of Kuttuwa's Municipal sewer line located approximately 360 feet to the west of the existing line. The proposed sewer line would be buried to a depth of approximately 3 feet below ground surface and would extend approximately 360 feet along the westbound shoulder of Buzzard Rock Road. The project would next involve installing a proposed sanitary lift station at one of two proposed locations set along the path of the proposed sewer line. The two locations are still being evaluated, and the most suitable location will be chosen. The unauthorized septic system would then be abandoned in place and the previously cleared leach field covering 1.25 acres would be replanted with native tree species and other vegetation.

The proposed project may also involve stabilizing two sections of shoreline measuring a combined total of 300 linear feet. The proposed bank stabilization

serves as an alternative mitigation measure currently under consideration for the environmental impacts previously incurred from the unauthorized septic system. The sections of shoreline (A and B) are located in the eastern boundaries of the marina's lease area on the banks of Lake Barkley. Both sections would involve emplacing approximately 150 linear feet of rip-rap in an effort to stabilize the shorelines and halt further bank erosion. USACE defines the physical Area of Potential Effect (APE) as the footprint of the proposed project undertaking which includes all components associated with the sewer line installation and the proposed alternative bank stabilization measures. USACE defines the visual APE as the surrounding viewshed which would be limited to 800 meters extending from the Physical APE unless immediately obstructed by dense wooded areas.

A Phase I archaeological survey titled, [REDACTED]

[REDACTED] The archaeological survey also identified two segments of an abandoned road in addition to an abandoned rail bed once operated by the Illinois Central Railroad. Buzzard Rock Road and two adjacent parking lots were constructed over the rail bed causing extensive subsurface disturbance which extends into the footprints of the proposed sewer line and associated sanitary lift station. Based on the extent of disturbance USACE believes the rail bed lacks integrity to be considered eligible for listing in the National Register of Historic Places (NRHP).

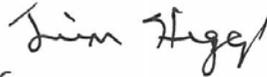
The footprint of the previously cleared septic leach field has incurred extensive disturbance and has a very low potential for intact cultural deposits. In 2006 TRC identified abandoned sections of road that led into to the area but recommended the features as not eligible for listing in the NRHP. USACE concurs with TRC's recommendation and believes the road features are not historically significant. Based on the extent of disturbance found throughout the physical APE, USACE believes no historic properties would be affected and recommends no additional archaeological investigations.

A search of the National Register and USGS historic topographic maps of USACE site files and records returned no findings of historic properties listed or eligible for listing in the NRHP within the visual APE. Based on these findings, USACE believes there is a low potential for visual effects to historic properties. USACE recommends no further cultural resources investigations and seeks your comments in approving the proposed sewer line, sanitary lift station, re-

vegetation of the previously cleared 1.25 acre septic field and the alternative bank stabilization areas.

A copy of this letter and supporting documentation including project maps with the APE is being forwarded to your historic preservation staff. Please provide us with your comments regarding a finding of "no historic properties affected" and any recommendations. If you require additional information please contact Jordan C. McIntyre at (615) 736-7837 or jordan.c.mcintyre@usace.army.mil.

Sincerely,



LR Russ L. Rote, P.E., PMP, CFM
Chief, Project Planning Branch



DEPARTMENT OF THE ARMY
NASHVILLE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1070
NASHVILLE, TENNESSEE 37202-1070

IN REPLY REFER TO

Project Planning Branch

MAY 22 2015

Chief George Wickliffe
United Keetoowah Band of Cherokee Indians



Dear Chief George Wickliffe:

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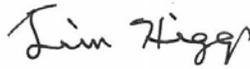
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A search of the National Register and USGS historic topographic maps of USACE site files and records returned no findings of historic properties listed or eligible for listing in the NRHP within the visual APE. Based on these findings, USACE believes there is a low potential for visual effects to historic properties. USACE recommends no further cultural resources investigations and seeks your comments in approving the proposed sewer line, sanitary lift station, re-

vegetation of the previously cleared 1.25 acre septic field and the alternative bank stabilization areas.

A copy of this letter and, supporting documentation including project maps with the APE is being forwarded to your historic preservation staff. Please provide us with your comments regarding a finding of "no historic properties affected" and any recommendations. If you require additional information please contact Jordan C. McIntyre at (615) 736-7837 or jordan.c.mcintyre@usace.army.mil.

Sincerely,



ed Russ L. Rote, P.E., PMP, CFM
Chief, Project Planning Branch



DEPARTMENT OF THE ARMY
NASHVILLE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1070
NASHVILLE, TENNESSEE 37202-1070

IN REPLY REFER TO

Project Planning Branch

MAY 22 2015

Dr. Timothy Baugh
Chickasaw Nation

Dear Dr. Baugh:

The U.S. Army Corps of Engineers (USACE), Nashville District has received a request for approval from Buzzard Rock Resort and Marina Inc., Kuttuwa, Lyon County, Lake Barkley, Kentucky, to install a new sewer line and sanitary lift station on USACE fee property. The marina is also considering stabilizing two sections of banks situated within their lease area. The proposed actions serve as a mediation measure for an unauthorized septic system, which was previously coordinated with your office in a letter dated 6 April 2015. USACE believes the proposed sewer line would be more environmentally friendly than the unauthorized septic system. Consequently, the after-the-fact septic system would be sealed and abandoned in place. The associated septic field would be replanted with trees and other vegetation. USACE defines the proposed project as an undertaking with the potential to cause effects on historic properties and wishes to initiate consultation under Section 106 of the National Historic Preservation Act.

The proposed project is situated on USACE fee property located on Lake Barkley, approximately 1.3 miles southwest of Kuttuwa, Kentucky. The proposed project would involve installing a section of sewer line that would connect the Marina's existing septic sewer line with the City of Kuttuwa's Municipal sewer line located approximately 360 feet to the west of the existing line. The proposed sewer line would be buried to a depth of approximately 3 feet below ground surface and would extend approximately 360 feet along the westbound shoulder of Buzzard Rock Road. The project would next involve installing a proposed sanitary lift station at one of two proposed locations set along the path of the proposed sewer line. The two locations are still being evaluated, and the most suitable location will be chosen. The unauthorized septic system would then be abandoned in place and the previously cleared leach field covering 1.25 acres would be replanted with native tree species and other vegetation.

The proposed project may also involve stabilizing two sections of shoreline measuring a combined total of 300 linear feet. The proposed bank stabilization

serves as an alternative mitigation measure currently under consideration for the environmental impacts previously incurred from the unauthorized septic system. The sections of shoreline (A and B) are located in the eastern boundaries of the marina's lease area on the banks of Lake Barkley. Both sections would involve emplacing approximately 150 linear feet of rip-rap in an effort to stabilize the shorelines and halt further bank erosion. USACE defines the physical Area of Potential Effect (APE) as the footprint of the proposed project undertaking which includes all components associated with the sewer line installation and the proposed alternative bank stabilization measures. USACE defines the visual APE as the surrounding viewshed which would be limited to 800 meters extending from the Physical APE unless immediately obstructed by dense wooded areas.

A Phase I archaeological survey titled, [REDACTED]

[REDACTED] The archaeological survey also identified two segments of an abandoned road in addition to an abandoned rail bed once operated by the Illinois Central Railroad. Buzzard Rock Road and two adjacent parking lots were constructed over the rail bed causing extensive subsurface disturbance which extends into the footprints of the proposed sewer line and associated sanitary lift station. Based on the extent of disturbance USACE believes the rail bed lacks integrity to be considered eligible for listing in the National Register of Historic Places (NRHP).

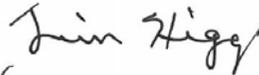
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Sincerely,



for Russ L. Rote, P.E., PMP, CFM
Chief, Project Planning Branch



DEPARTMENT OF THE ARMY
NASHVILLE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1070
NASHVILLE, TENNESSEE 37202-1070

IN REPLY REFER TO

Project Planning Branch

MAY 22 2015

Governor George Blanchard
Absentee-Shawnee Tribe of Indians of Oklahoma

Dear Governor Blanchard:

The U.S. Army Corps of Engineers (USACE), Nashville District has received a request for approval from Buzzard Rock Resort and Marina Inc., Kuttuwa, Lyon County, Lake Barkley, Kentucky, to install a new sewer line and sanitary lift station on USACE fee property. The marina is also considering stabilizing two sections of banks situated within their lease area. The proposed actions serve as a mediation measure for an unauthorized septic system, which was previously coordinated with your office in a letter dated 6 April 2015. USACE believes the proposed sewer line would be more environmentally friendly than the unauthorized septic system. Consequently, the after-the-fact septic system would be sealed and abandoned in place. The associated septic field would be replanted with trees and other vegetation. USACE defines the proposed project as an undertaking with the potential to cause effects on historic properties and wishes to initiate consultation under Section 106 of the National Historic Preservation Act.

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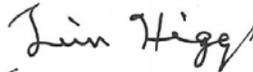
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Sincerely,



LR Russ L. Rote, P.E., PMP, CFM
Chief, Project Planning Branch



DEPARTMENT OF THE ARMY
NASHVILLE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1070
NASHVILLE, TENNESSEE 37202-1070

IN REPLY REFER TO

Project Planning Branch

MAY 22 2015

Principal Chief Bill John Baker
Cherokee Nation



Dear Principal Chief Bill John Baker:

The U.S. Army Corps of Engineers (USACE), Nashville District has received a request for approval from Buzzard Rock Resort and Marina Inc., Kuttuwa, Lyon County, Lake Barkley, Kentucky, to install a new sewer line and sanitary lift station on USACE fee property. The marina is also considering stabilizing two sections of banks situated within their lease area. The proposed actions serve as a mediation measure for an unauthorized septic system, which was previously coordinated with your office in a letter dated 6 April 2015. USACE believes the proposed sewer line would be more environmentally friendly than the unauthorized septic system. Consequently, the after-the-fact septic system would be sealed and abandoned in place. The associated septic field would be replanted with trees and other vegetation. USACE defines the proposed project as an undertaking with the potential to cause effects on historic properties and wishes to initiate consultation under Section 106 of the National Historic Preservation Act.

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The footprint of the previously cleared septic leach field has incurred extensive disturbance and has a very low potential for intact cultural deposits. In 2006 TRC identified abandoned sections of road that led into to the area but recommended the features as not eligible for listing in the NRHP. USACE concurs with TRC's recommendation and believes the road features are not historically significant. Based on the extent of disturbance found throughout the physical APE, USACE believes no historic properties would be affected and recommends no additional archaeological investigations.

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vegetation of the previously cleared 1.25 acre septic field and the alternative bank stabilization areas.

A copy of this letter and, supporting documentation including project maps with the APE is being forwarded to your historic preservation staff. Please provide us with your comments regarding a finding of "no historic properties affected" and any recommendations. If you require additional information please contact Jordan C. McIntyre at (615) 736-7837 or jordan.c.mcintyre@usace.army.mil.

Sincerely,



sol Russ L. Rote, P.E., PMP, CFM
Chief, Project Planning Branch



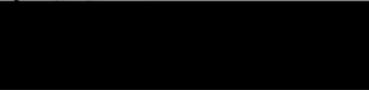
DEPARTMENT OF THE ARMY
NASHVILLE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1070
NASHVILLE, TENNESSEE 37202-1070

IN REPLY REFER TO

Project Planning Branch

MAY 22 2015

Principal Chief Michell Hicks
Eastern Band of Cherokee Indians



Dear Chief Hicks:

The U.S. Army Corps of Engineers (USACE), Nashville District has received a request for approval from Buzzard Rock Resort and Marina Inc., Kuttuwa, Lyon County, Lake Barkley, Kentucky, to install a new sewer line and sanitary lift station on USACE fee property. The marina is also considering stabilizing two sections of banks situated within their lease area. The proposed actions serve as a mediation measure for an unauthorized septic system, which was previously coordinated with your office in a letter dated 6 April 2015. USACE believes the proposed sewer line would be more environmentally friendly than the unauthorized septic system. Consequently, the after-the-fact septic system would be sealed and abandoned in place. The associated septic field would be replanted with trees and other vegetation. USACE defines the proposed project as an undertaking with the potential to cause effects on historic properties and wishes to initiate consultation under Section 106 of the National Historic Preservation Act.

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A Phase I archaeological survey titled, [REDACTED]
the Buzzard Rock Resort Marina, Lyon C [REDACTED]

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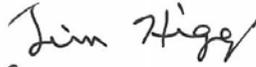
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Sincerely,



sd Russ L. Rote, P.E., PMP, CFM
Chief, Project Planning Branch



DEPARTMENT OF THE ARMY
NASHVILLE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1070
NASHVILLE, TENNESSEE 37202-1070

IN REPLY REFER TO

Project Planning Branch

MAY 22 2015

Ms. Robin DuShane
Tribal Historic Preservation Officer

Dear Ms. DuShane:

The U.S. Army Corps of Engineers (USACE), Nashville District has received a request for approval from Buzzard Rock Resort and Marina Inc., Kuttuwa, Lyon County, Lake Barkley, Kentucky, to install a new sewer line and sanitary lift station on USACE fee property. The marina is also considering stabilizing two sections of banks situated within their lease area. The proposed actions serve as a mediation measure for an unauthorized septic system, which was previously coordinated with your office in a letter dated 6 April 2015. USACE believes the proposed sewer line would be more environmentally friendly than the unauthorized septic system. Consequently, the after-the-fact septic system would be sealed and abandoned in place. The associated septic field would be replanted with trees and other vegetation. USACE defines the proposed project as an undertaking with the potential to cause effects on historic properties and wishes to initiate consultation under Section 106 of the National Historic Preservation Act.

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A Phase I archaeological survey titled [REDACTED]

[REDACTED] The archaeological survey also identified two segments of an abandoned road in addition to an abandoned rail bed once operated by the Illinois Central Railroad. Buzzard Rock Road and two adjacent parking lots were constructed over the rail bed causing extensive subsurface disturbance which extends into the footprints of the proposed sewer line and associated sanitary lift station. Based on the extent of disturbance USACE believes the rail bed lacks integrity to be considered eligible for listing in the National Register of Historic Places (NRHP).

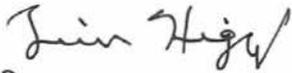
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Sincerely,


for Russ L. Rote, P.E., PMP, CFM
Chief, Project Planning Branch

Mcintyre, Jordan C LRN

From: Lisa LaRue-Baker - [REDACTED]
Sent: Tuesday, May 26, 2015 5:36 PM
To: McIntyre, Jordan C LRN
Cc: [REDACTED]
Subject: [EXTERNAL] Re: Buzzard Rock Marina proposed sewer installation (UNCLASSIFIED)

The United Keetoowah Band of Cherokee Indians in Oklahoma has reviewed your project under Section 106 of the NHPA, and at this time, have no comments or objections. However, should any human remains be inadvertently discovered, please cease all work and contact us immediately.

The UKB reserves the right to re-enter consultation at any time regarding this project.

Thank you,

Lisa C. Baker
Acting THPO
United Keetoowah Band of Cherokee Indians in Oklahoma

[REDACTED]

[REDACTED]

This email and any files transmitted with it are confidential and intended solely for the use of the individual or entity to whom they are addressed. If you have received this email in error please notify the system manager. This message contains confidential information and is intended only for the individual named. If you are not the named addressee you should not disseminate, distribute or copy this e-mail. Please notify the sender immediately by e-mail if you have received this e-mail by mistake and delete this e-mail from your system. If you are not the intended recipient you are notified that disclosing, copying, distributing or taking any action in reliance on the contents of this information is strictly prohibited.

[REDACTED]

On Friday, May 22, 2015 9:38 AM, "McIntyre, Jordan C LRN" <Jordan.C.McIntyre@usace.army.mil> wrote:

Classification: UNCLASSIFIED
Caveats: NONE

Ms. Lisa Baker,

Please find attached a letter to Chief George Wickliffe, addressing a proposed sewer line installation on USACE fee property currently leased to Buzzard Rock Resort and Marina Inc., Kuttuwa, Lyon County, Kentucky. The marina is also considering stabilizing two sections of banks that are eroding into Lake Barkley. Could you please review the provided documentation and provide us with any recommendations or comments? Please let me know if you require additional information. Thanks.

Enclosure 1 depicts a map of the project area on a portion of the Grand Rivers, KY U.S.G.S. topographic quadrangle (7.5' series).

Enclosure 2 presents maps of the physical and visual APEs and photographs taken of the project area.
Respectfully,

Jordan McIntyre

Jordan C. McIntyre
Archaeologist
Project Planning Branch
U.S. Army Corps of Engineers
Nashville District

(615) 736-7837

Internet: <http://www.lrn.usace.army.mil> <<http://www.lrn.usace.army.mil/>>
Facebook: <http://www.facebook.com/nashvillecorps>

Classification: UNCLASSIFIED
Caveats: NONE

Mcintyre, Jordan C LRN

From: Lisa LaRue-Baker - [REDACTED]
Sent: Wednesday, June 10, 2015 10:08 AM
To: McIntyre, Jordan C LRN
Cc: [REDACTED]
Subject: [EXTERNAL] Buzzard Rock Resort and Marina Inc., Kuttuwa, Lyon County, Lake Barkley, KY

The United Keetoowah Band of Cherokee Indians in Oklahoma has reviewed your project under Section 106 of the NHPA, and at this time, have no comments or objections. Should any human remains be inadvertently discovered, please cease all work and contact us immediately. In addition, the UKB reserves the right to re-enter consultation on this project at any time.

Thank you,

Lisa C. Baker
Acting THPO
United Keetoowah Band of Cherokee Indians in Oklahoma

[REDACTED]

[REDACTED]

This email and any files transmitted with it are confidential and intended solely for the use of the individual or entity to whom they are addressed. If you have received this email in error please notify the system manager. This message contains confidential information and is intended only for the individual named. If you are not the named addressee you should not disseminate, distribute or copy this e-mail. Please notify the sender immediately by e-mail if you have received this e-mail by mistake and delete this e-mail from your system. If you are not the intended recipient you are notified that disclosing, copying, distributing or taking any action in reliance on the contents of this information is strictly prohibited.

Please FOLLOW our historic preservation page and LIKE us on FACEBOOK



DEPARTMENT OF THE ARMY
NASHVILLE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1070
NASHVILLE, TENNESSEE 37202-1070

McIntyre/7837
22-Jun-15

CELRN-PM-P

MEMORANDUM FOR RECORD

SUBJECT: Tribal comment review period regarding proposed developments at Buzzard Rock Marina, Lyon County, Kentucky.

1. On May 22, 2015, the U.S. Army Corps of Engineers (USACE) sent correspondence to the following tribes; United Keetoowah Band of Cherokee Indians, Absentee-Shawnee Tribe of Indians of Oklahoma, Cherokee Nation, Chickasaw Nation, Eastern Band of Cherokee Indians, Eastern Shawnee Tribe of Oklahoma and the Shawnee Tribe. The correspondence addressed proposed developments at Buzzard Rock Marina, Lyon County, Kentucky, which include proposed bank stabilization in two areas along the shoreline and a proposed sewer line connection.
2. United Keetoowah Band of Cherokee Indians was the only Tribal group to comment on this proposed action. USACE did not receive comments from the other remaining tribes within the 30 Day comment period. According to 36 CFR 800.4(d)(1)(i) no response from the tribes after the 30 day comment period, implies concurrence with the Corps's original findings and fulfills consultation requirements under Section 106 of the National Historic Preservation Act. This action is in compliance with the National Historic Preservation Act.

MCINTYRE.JORDA
N.C.1241690403

Digitally signed by
MCINTYRE.JORDAN.C.1241690403
DN: c=US, o=U.S. Government, ou=DoD,
ou=PKI, ou=USA,
cn=MCINTYRE.JORDAN.C.1241690403
Date: 2015.06.22 09:17:54 -05'00'

Jordan C. McIntyre,
Archaeologist