

ENVIRONMENTAL ASSESSMENT
STATEMENT OF FINDINGS
AND
FINDINGS OF NO SIGNIFICANT IMPACT

(File Nos. 200800243 and 200800244)

GGP Group

Application for Proposed Riprap Bank Stabilization between Tennessee River Miles
147.2-152.8, Right Bank, Kentucky Lake, Perry County, Tennessee

U.S. ARMY CORPS OF ENGINEERS
Nashville District, Regulatory Branch

Prepared By:

Floyd M. Carnes
Project Manager
U.S. Army Corps of Engineers
Regulatory Branch
3701 Bell Road
Nashville, Tennessee 37214
(615) 369-7503

Date

Contents

Chapter 1.0. Proposed Activity

- 1.1. Background
- 1.2. Decision Required
- 1.3. Other Approvals Required

Chapter 2.0. Public Involvement Process

Chapter 3.0. Environmental and Public Interest Factors Considered

- 3.1. Introduction
- 3.2. Physical/Chemical Characteristics and Anticipated Changes
- 3.3. Biological Characteristics and Anticipated Changes
- 3.4. Human Use Characteristics and Anticipated Impacts
- 3.5. Cumulative and Secondary Impacts

Chapter 4.0. Public Involvement Process

- 4.1. Introduction
- 4.2. Description of Alternatives
- 4.3. Comparison of Alternatives

Chapter 5.0. Findings

- 5.1. Section 404(b)(1) Determination
- 5.2. Water quality Certification
- 5.3. Consideration of Public Comments
- 5.4. Findings of No Significant Impact
- 5.5. Clean Air Act General Conformity Rule Review
- 5.6. Environmental Justice Review
- 5.7. Recommended Special Conditions
- 5.8. Public Interest Determination

- Appendix
- A. MFR Site Inspection
 - B. Pubic Notice
 - C. 404(b)(1) Guidelines Compliance Evaluation
 - D. Public Responses
 - E. Water Quality Certification
 - F. Archeological Survey
 - G. Mussel Survey
 - H. Restrictive Covenants
 - I. Special Conditions

1.0. Proposed Activity

1.1. Background. GGS Group, LLC, submitted an application to the Tennessee Valley Authority (TVA) requesting approval to place riprap bank stabilization and construct two launching ramps along the Tennessee River in Perry County, Tennessee. TVA forwarded the application to the U.S. Corps of Engineers (Corps), Regulatory Branch for a Department of the Army (DA) permit pursuant to Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act (CWA). The application was received by the Corps on February 7, 2008. Additional information was requested concerning the proposed riprap bank stabilization and launching ramp project on February 15, 2008. The additional information was received on February 29, 2008. On March 13, 2008, Public Notice 08-15, was issued advertising the proposed work, see Appendix A.

The work consists of the placement of riprap bank stabilization at two locations along the Tennessee River. The first site, located between Tennessee River Miles 148.9-152.8, right bank, consists of placing approximately 5,000 cubic yards of limestone riprap along 25,664 feet of shoreline to minimize and prevent further erosion along the banks. The bottom of the riprap bank stabilization would be at Elevation 356.0. Elevation 359.0 is the Normal Summer Pool (NSP) elevation for Kentucky Lake. The riprap bank stabilization would be placed along the shoreline from the top of the bank by using a track hoe. The top of the riprap would be at Elevation 366.0. There would be minimal reshaping of the existing bank for the placement of the riprap bank stabilization. The second site, located between Tennessee River Miles 147.2-148.9, right bank, consists of placing approximately 2,500 cubic yards of limestone riprap along 13,200 feet of shoreline to minimize and prevent further erosion along the banks. As with the first site, the bottom of the riprap bank stabilization would be at Elevation 356.0 (Elevation 359.0 is the NSP elevation for Kentucky Lake). The riprap bank stabilization would be placed along the shoreline from the top of the bank by using a track hoe and there would be minimal reshaping of the existing bank for the placement of the riprap bank stabilization. The top of the riprap would be at Elevation 366.0.

In addition to the riprap bank stabilization, applicant also proposes to construct two boat launching ramps. The first ramp would be located at Powell Branch Mile 0.1, Left Bank, Tennessee River Mile 148.9, Right Bank. The second launching ramp would be located at Tennessee River Mile 149.8, Right Bank. The deposit of fill material associated with the launching ramps meets the criteria for Nationwide Permit (NWP) # 36.

An on-site inspection was conducted on March 13, 2008, see Appendix A for the MFR.

1.2. Decision Required. Section 10 of the Rivers and Harbors Act of 1899 prohibits the alteration or obstruction of any navigable waters of the United States unless authorized by the Secretary of the Army acting through the Chief of Engineers. The Tennessee River between miles 147.2-152.8, right bank, Kentucky Lake, is a navigable water of the United States as defined by 33

CFR Part 329. Section 301 of the Clean Water Act prohibits the discharge of dredged or fill material into waters of the United States unless authorized by the Secretary of the Army acting through the Chief of Engineers. The Tennessee River between miles 147.2-152.8, right bank, Kentucky Lake, is a water of the United States as defined by 33 CFR Part 328. A Section 404 permit is required for the work; therefore, the Corps of Engineers must decide on one of the following:

- a. issuance of a permit for the proposal
- b. issuance of a permit with modifications or conditions
- c. deny the permit

1.3. Other Approvals Required. Other federal, state, and local approvals required for the proposed work are as follows:

- a. Tennessee Valley Authority (TVA) approval under Section 26a of the TVA Act.
- b. Water quality certification from the Tennessee Department of Environment and Conservation (TDEC) in accordance with Section 401(a)(1) of the Clean Water Act. TDEC issued water quality certification on July 7, 2008.

2.0. Public Involvement Process. On March 18, 2009, Public Notice 03-85 was issued to advertise the proposed work. All responses are included in Appendix B. A summary of the responses are as follows:

- a. The Tennessee Historical Commission (Commission) responded to the public notice by letter dated, March 19, 2008. The Commission concurred with the need that a detailed archaeological survey be conducted on the area of potential effect in order to complete their review of the undertaking. It should be noted that TVA had previously requested the applicant to perform an archaeological survey of the site. The applicant engaged the services of DuVall & Associates, Inc. from Franklin, Tennessee to conduct the survey. The survey was conducted during the months of February and March 2008. The work consisted of a shoreline survey of approximately 5.8 miles of Tennessee River, White Oak Creek and Powell Branch shoreline scheduled for the bank stabilization and approximately 350 acres within the TVA's 377' flowage easement. The archeological survey revealed the presence of archeological resources potentially eligible for listing on the National Register of Historic Places. In lieu of further archeological testing, the applicant along with TVA developed an avoidance strategy for the site. An avoidance strategy in the form of a restrictive covenants and agreement has been entered into by the GGP, LLC and TVA. The restrictive covenants basically states that lots 152, 153 and 154 of White Oak Landing Development will not be altered. No land-disturbing activities would be conducted and no improvements of any nature would be placed, constructed, located or otherwise maintained, including but not limited to

fill material of any type, which also includes concrete pads for the purpose of parking recreational vehicles. The covenant goes on to state, there would be no excavation, reshaping or sloping operation conducted along the river bank fronting lots 152, 153 and 154. The Commission responded to the proposed covenant in a February 10, 2008, letter. The Commission stated that they have reviewed the proposed activity along with the proposed protective deed covenant and they concur that the covenant avoids effects to the archaeological site and that the revised project area contains no archaeological resources eligible for listing in the National Register of Historic Places

b. The US Fish and Wildlife Service (Service) responded to the public notice by letter dated April 11, 2008. The Service states their concern about the potential for wetland impacts due to ramp construction at Tennessee River Mile 149.0, right bank (Powell Branch Mile 0.1, Left Bank, Tennessee River Mile 148.9, right bank). Additionally, the Service states their concern about the potential impacts from the bank stabilization to endangered mussels. The Service noted the orange-foot pimpleback (*Plethobasus cooperianus*), a federally endangered species, has been found within a mile of the permit area. The Service states that the disturbance of substrate adjacent to the river bank could result in takings of this mussel or other endangered species. The Service recommends that a mussel survey be conducted within the permit area. The Service contacted the applicant for additional information concerning the proposed activity. The Service was informed by the applicant that Elevation 354.0 is the normal winter pool elevation for Kentucky Lake and the lowest extent of the boat ramps would be at Elevation 355.0 and the lowest extent of the riprap would be at Elevation 356.0. In addition, the applicant informed the Service that the work would be conducted during winter pool drawdown of Kentucky Lake and the ramps would be constructed outside the wetland areas. After obtaining the additional information that the work would be conducted when water levels are below the proposed areas of disturbance, the Service responded with an April 21, 2008, letter, which stated that the potential for impacts to mussels is insignificant. Furthermore, the Service stated that the impacts to wetlands would be avoided by locating boat ramps outside of these areas. The letter goes on to state that the project will result in an insignificant level of environmental impacts, based on adequate implementation of measures to avoid disturbance of mussels and wetlands. The Service states that based on their records and the best information available at this time, it is their belief that there are no federally-listed or proposed endangered or threatened plant or animal species in the impact area of the project, and that requirements of Section 7(c) of the Endangered Species Act of 1973, as amended, are fulfilled. The Service does not object to the issuance of the permit.

c. The Tennessee Wildlife Resource Agency (TWRA) responded to the public notice by letter dated April 14, 2008. The TWRA expressed their concerns regarding potential impacts to state and federal endangered mussels and impacts to wetlands. The TWRA stated that the orange-foot pimpleback (*Plethobasus cooperianus*) has been found within a mile of the permit area. In addition, the endangered pink mucket (*Lampsilis abrupta*) has been documented near the project area. The

TWRA requested the applicant to conduct a mussel survey in the area of the launching ramps, including 100 feet upstream and 100 downstream and 30 feet out from the proposed ramps to determine the presence or absence of state and federally listed mussels. In addition, the TWRA stated there is a documented wetland near the location of the ramp on Powell Branch. The TWRA requested the applicant to address potential impacts to wetland resources due to the project. In an April 15, 2008, email, the TWRA stated they had been in contact with the Service and with the applicant. The TWRA was informed that all work would be conducted in the dry and the wetlands would be avoided. Based on this information, the TWRA no longer has concerns regarding the project and rescinds their request for a mussel survey, provided that the work is conducted in the dry and impacts to the wetlands are avoided.

d. TDEC responded to the public notice by letter to the applicant dated May 6, 2008. TDEC stated the application for 401 Water Quality Certification was incomplete due the fact that the riprap bank stabilization could impact wetlands along the river and wetlands along Powell Branch. In addition, TDEC noted to the applicant that the proposed launching ramps should be relocated to avoid impacting wetlands. In response to TDEC's concerns regarding the wetland impacts, the applicant has proposed avoiding placing riprap bank stabilization in an area measuring approximately 4,000 foot between Tennessee River Miles 151.5-152.5 on the right descending bank and proposes to avoid placing riprap in Powell Branch, instead placing riprap bank stabilization at the mouth of Powell Branch. In addition, the applicant proposes to relocate the two launching ramps to the right descending bank of the main channel of the river at Tennessee River Miles 149.1 and 149.9. Since the launching ramps were relocated to the main channel of the Tennessee River, the Service requested that a mussel survey be performed in the area of the launching ramps. The applicant engaged the services of Lewis Environmental Consulting, LLC, to perform the mussel survey. The mussel survey was conducted on August 1, 2008. The survey concluded that the areas along the right descending shoreline of the Tennessee River at Tennessee River Mile 149.1 and 149.9 contained very few mussels. No federally or state listed threatened or endangered species were found during the survey. The Service responded to the survey in a September 24, 2008, letter to TVA. The Service stated the survey is adequate and supports the conclusion of "not likely to adversely affect", which the Service concurs. The Service goes on to state that requirements of Section 7(c) of the Endangered Species Act of 1973, as amended, have been fulfilled.

e. The Corps did not receive any comments requesting a public hearing, and no comments were received from the general public.

3.0. Environmental and Public Interest Factors Considered

3.1. Introduction. 33 CFR 320.4(a) states the decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest. All factors that may be relevant to the proposal must be considered. Public Notice 08-15 listed factors that may be relevant to the proposal. The following sections show which factors that are relevant in this proposal, and if relevant, provides a concise description of the impacts.

3.2. Physical/Chemical Characteristics and Anticipated Changes. The relevant blocks are checked with a description of the impacts.

(X) Substrate. The placement of the riprap bank stabilization at the subject location would permanently impact approximately 38,864 feet of shoreline. The substrate at this location is mostly composed of sandy silt and clay. The magnitude of the impacts to the substrate would be limited to the shoreline.

(X) Currents, circulation or drainage patterns. The placement of the riprap bank stabilization would not change the existing drainage pattern of upland runoff at the proposed location.

(X) Suspended particulates, turbidity. Minor turbidity would be expected during and immediately after the placement of the riprap. However, if the work is performed during winter pool drawdown and/or during dry periods of the year, turbidity would be minimal or non-existent.

(X) Water quality (temperature, color, odor, nutrients, etc). The use of clean materials and good construction practices would reduce anticipated temporary disturbance to water quality. By nature of the proposed work, the riprap bank stabilization would be contained to the shoreline. Any turbidity that is as result of this activity would be quickly dissipated due to river currents. Overall, adverse water quality impacts would be minor. TDEC issued water quality certification on July 7, 2008.

(X) Flood control functions. The proposed work is minor and would not cause any loss of flood storage.

(X) Storm, wave and erosion buffers. The placement of the riprap bank stabilization along the shoreline would serve as a wave and erosion buffer for the shoreline. The riprap bank stabilization would deflect the waves and take away the wave's energy.

(X) Shore erosion and accretion patterns. Since the proposed work would occur in the proximity of the existing shoreline, there is a possibility that the shoreline may become

disturbed. Any permit issued for the work should be conditioned to require the applicant to immediately stabilize any upland disturbed areas.

() Baseflow. No Issues.

3.3. Biological Characteristics and Anticipated Changes. The relevant blocks are checked with a description of the impacts.

(X) Special aquatic sites (wetlands, mudflats, pool and riffle areas, vegetated shallows, sanctuaries and refuges, as defined in 40 CFR 230.40-45). In response to TDEC's concerns to impacting wetlands, the applicant proposes to avoid placing riprap bank stabilization in an area measuring approximately 4,000 foot between Tennessee River Miles 151.5-152.5 on the right descending bank and proposes to avoid placing riprap along Powell Branch, instead placing riprap bank stabilization at the mouth of Powell Branch. In addition, the applicant proposes to relocate the two launching ramps to the right descending bank of the main channel of the river at Tennessee River Miles 149.1 and 149.9.

(X) Habitat for fish and other aquatic organisms. The placement of the riprap bank stabilization would have temporary minor adverse impact on aquatic organisms in the vicinity of the shoreline until the area achieves equilibrium. The riprap bank stabilization would displace approximately 38,864 feet linear of shoreline habitat; however, aquatic organisms would be expected to recolonize along the bottom and in the nooks and crannies of the riprap bank stabilization soon after completion.

(X) Wildlife habitat. The location of the proposed work is a rural river front setting. The site is relatively flat with varying degrees of slope to the river. Trees and shrubs mainly line the top of the bank. Various mammals, birds and reptiles use the site as a home, an area to hunt for food, and an area to find refuge. The presence of construction workers and equipment may frighten any wildlife that is in the vicinity of the project area. After the riprap bank stabilization has been placed along the shoreline, the mammals, birds and reptiles that lived in the area may be apprehensive to return, since the area would be subject to additional human activity with the probability of the construction of concrete slabs for recreational vehicle use. The placement of the riprap bank stabilization along the shoreline would provide a perch for birds and animals for resting and in the pursuit of prey. In addition, the riprap bank stabilization would provide a location for the wildlife, both aquatic and terrestrial, a place to search for food and provide shelter in the nooks and crannies in the riprap bank stabilization. During the National Environmental Policy Act (NEPA) review process, TVA brought to our attention that several kingfisher burrows existed on the project site. TVA requested that these burrows be marked before any placement of riprap and the in the

areas of the burrows the amount of riprap be reduced to maintain the burrows. TVA suggests leaving approximately two feet of shoreline exposed under the entrances.

(X) Endangered or threatened species. Initially both the Service and the TWRA stated their concern about the potential impacts from the bank stabilization to endangered mussels, in particular, the orange-foot pimpleback (*Plethobasus cooperianus*) which has been found within a mile of the permit area. Upon learning that the work would be conducted when water levels are below the proposed areas of disturbance and the potential for impacts to mussels is insignificant, both the Service and the TWRA withdrew their concerns on the mussel impacts. Since the launching ramps were relocated to the main channel of the river, the Service requested that a mussel survey be performed in the area of the launching ramps. A mussel survey was conducted by Lewis Environmental Consulting on August 1, 2008. The survey concluded that the areas along the right descending shoreline of the Tennessee River at Tennessee River Mile 149.1 and 149.9 contained very few mussels and that no federally or state listed threatened or endangered species were located during the survey. The Service responded to the survey in a September 24, 2008, letter to TVA. The Service stated the survey is adequate and supports the conclusion of “not likely to adversely affect” which the Service concurs. The Service goes on to state that requirements of Section 7(c) of the Endangered Species Act of 1973, as amended, have been fulfilled.

(X) Biological availability of possible contaminants in dredged or fill material. Only clean materials would be used in the placement of the riprap bank stabilization.

3.4. Human Use Characteristics and Anticipated Impacts. The relevant blocks are checked with a description of the impacts.

() Existing and potential water supplies; water conservation. No Issues.

(X) Water related recreation. The work would occur along the right descending bank of the Tennessee River between miles 147.2 and 152.8 and is not expected to have any impacts on water related recreation.

(X) Aesthetics. The location of the proposed work is a rural river front setting. The site is relatively flat with varying degrees of slope to the river. Trees and shrubs mainly line the top of the bank. There would be both short-term and long-term impacts to the aesthetics of the site. The placement of the riprap bank stabilization along the shoreline would have a temporary impact upon the aesthetics of the site caused by the presence of construction workers and construction equipment. All of the work would be conducted during daylight hours. The work would be temporary and the site would return to normal conditions after the work has been completed. Subsequently, after the riprap bank stabilization has been placed along the shoreline, there would be

construction workers and construction equipment constructing concrete slabs for recreational vehicle use. The long term impacts would be the presence of limestone riprap bank stabilization along the shoreline. In addition, there would be the possibly recreational vehicles and tourist utilizing the area. Overall scenic values in the project area are good and riprap bank stabilization would not be out of the ordinary for this type of setting.

(X) Traffic/transportation patterns. The placement of the riprap bank stabilization would give the applicant a better opportunity to utilize the area for recreational\tourist use. Vehicular traffic would increase along the roads leading to and from the area.

() Energy consumption or generation. No Issues.

(X) Navigation. The proposed work would occur on the right descending bank between Tennessee River Miles 147.2-152.8. There is both recreational and commercial traffic in the vicinity of the proposed work. However, the area where the work is to occur is located along the right descending bank of the river and is not expected to have any impacts on either recreational or commercial navigation.

() Safety. No Issues.

(X) Air quality. Dust and general construction disturbance may temporarily affect air quality in the vicinity of the construction. However, once construction is finished, air quality levels should return to normal. See Section 5.5.

(X) Noise. In the short term, this section of the Tennessee River would experience an increase in noise levels from construction equipment placing the riprap bank stabilization along the shoreline. The work would be performed during the daylight hours. The equipment would be expected to operate within normal ranges for construction equipment. Placement of the riprap bank stabilization along the shoreline would be short-term. Once the riprap bank stabilization has been placed along the shoreline, noise levels would decrease to normal river front noise.

(X) Historic properties and cultural values. TVA requested that the applicant perform an archaeological survey on the site. In response to the public notice, the Commission concurred with the need that a detailed archaeological survey be conducted on the area of potential effect in order to complete their review of the undertaking. An archaeological survey of the proposed development was conducted during the months of February and March 2008. The archeological survey revealed the presence of archeological resources potentially eligible for listing on the National Register of Historic Places. In lieu of further archeological testing, the applicant along with TVA developed an avoidance strategy for the site. An avoidance strategy in the form of

a restrictive covenants and agreement has been entered into by the GGP, LLC and TVA. The restrictive covenants states that lots 152, 153 and 154 of White Oak Landing Development will not be altered. No land-disturbing activities would be conducted and no improvements of any nature would be placed, constructed, located or otherwise maintained, including but not limited to fill material of any type, including concrete pads for the purpose of parking recreational vehicles. In addition, the covenant states, there would be no excavation, reshaping or sloping operation conducted along the river bank fronting lots 152, 153 and 154. The Commission responded to the proposed covenant by stating that based on the information provided, they concur that the covenant avoids effects to the archaeological site and that the revised project area contains no archaeological resources eligible for listing in the National Register of Historic Places.

Land use classification. No Issues.

Conservation. No Issues.

Economics. During the placement of the riprap bank stabilization, the economic welfare of this immediate area of Perry County, Tennessee would be improved by the presence of construction workers living and spending money in the area. There would be a benefit to the contractor and sub-contractors performing the work. The applicant would be able to go ahead and construct concrete slabs which would be used recreational vehicles. Tourists would use the area as a campground, and in turn the tourists would spend money in the area buying goods and services from local merchants. The applicant would benefit by renting out recreational lots. The county would be able to collect additional tax revenue on the updates to the site.

Food and fiber production. No Issues.

General environmental concerns. No Issues.

Mineral needs. No Issues.

Consideration of private property. CE regulations at 33 CFR 320.4(g) state that authorization of work by the DA does not convey any property rights, either in real estate or material, or any exclusive privileges. Furthermore, a DA permit does not authorize any injury to property or invasion of rights or any infringement of federal, state or local laws or regulations.

Floodplain values. No Issues.

3.5. Cumulative and Secondary Impacts. One of the most important aspects of cumulative effects assessment is that it requires consideration of how actions by others have and will affect the

same resources. In assessing cumulative effects, the key determinant of importance or significance is whether the incremental effect of the proposed action will alter the sustainability of the resource in light of other effects that resource has experienced up until the present and/or will experience in the future.

Cumulative environmental effect for the proposed activity was assessed in accordance with guidance provided by the President's Council on Environmental Quality (USEPA, EPA 315-R-99-002, May 1999).

In this case, the spatial boundary for the assessment has been broadened to consider effects within the corridor of the proposed riprap bank stabilization. The fill associated with the riprap bank stabilization would not be undertaken if not for the need to stabilize the bank at the applicant's location to minimize and prevent further erosion.

Projecting the reasonably foreseeable future actions is difficult at best. Clearly, the proposed action is reasonably foreseeable. However, the actions by others that may affect the same resources are not as clear. Projections of those actions must rely on judgment as to what is reasonable, based on existing trends, and where available, projections from qualified sources. Reasonably foreseeable does not include unfounded or speculative projections. In this case, reasonably foreseeable future actions include:

- Population growth in the area
- Growth in commercial development in the area
- Additional growth in residential development in the area
- Change in economic conditions
- Change of existing land use patterns in the area
- Increase in traffic generated from increased development due to the action
- Maintenance and/or improvement to areas roads
- Construction and maintenance of infrastructure in the area
- Increase of public services such as police and fire protection
- Implementation of various programs to deal with non-point sources of water pollution and to restore degraded environments, and
 - Continued application of environmental requirements such as those under NPDES and/or NEPA

Additional structures and/or future associated work that may be proposed in the vicinity of the site can be identified as cumulative and/or secondary impacts; however, determining the magnitude of cumulative effects; modifying to avoid, minimize or mitigate the cumulative effects, and planning for monitoring and adaptive management would have to be addressed on a case-by-case basis.

The proposed fill associated with the riprap bank stabilization would permanently impact the site. The proposal could have substantial cumulative or secondary effect upon the existing environment with the additional use of the area for recreational/tourists use.

4.0. Alternatives

4.1. Introduction. This section discusses alternatives as required by 33 CFR 320.4(a)(2) and 40 CFR 230.10. The relevant environmental issues identified in Chapter 3.0 were used to formulate the alternatives. The alternatives that were given detailed consideration are listed in the following section.

4.2. Description of Alternatives.

a. No Action. This alternative equates to denial of the DA permit or the applicant modifying the proposal such that a DA permit is not required. This alternative would result in the riprap bank stabilization not being placed along the shoreline. This alternative would result in the applicant not being able to stabilize the shoreline and prevent further shoreline erosion.

b. The Proposed Action. This alternative consists of approving the placement of approximately 7,500 cubic yards of limestone riprap bank stabilization along approximately 38,864 feet of shoreline to minimize erosion and the construction of two launching ramps as described in the attached public notice (Appendix B).

c. The Revised Action. This alternative consists of eliminating approximately 4,000 feet of riprap bank stabilization and relocating the two launching ramps to the main channel of the Tennessee River.

d. The Revised Action with Special Conditions. This alternative would be composed of the applicant's proposal as described in section c. above with the inclusion of additional special conditions that would minimize unavoidable adverse impacts.

4.3. Appropriate Mitigation Included in the Proposed Action. Mitigation measures that would minimize impacts to the environment include placing only clean limestone riprap bank stabilization fill material along the shoreline of Kentucky Lake. Limit the amount of disturbance to the riparian vegetation. Additional means to limit the amount of sedimentation and turbidity would include implementing erosion control measures such as hay bales, silt screens, seeding, mulching and performing the work during winter pool drawdown and dry periods of the year.

4.4. Comparison of Alternatives.

a. No Action. This alternative equates of denial of the DA permit or the applicant modifying the proposal such that a DA permit is not required. This alternative would also result if the applicant withdraws the DA permit applicant being considered. The proposed work would not be performed. With this alternative, the riprap bank stabilization would not be placed along the shoreline and the lake bottom substrate would not be disturbed by the proposed activity. Additionally, there would not be any visual impacts since the riprap bank stabilization would not be placed along the shoreline. The shoreline at this location would not be stable and would continue to erode. This alternative would not meet the needs of the applicant and would result in an economic loss in planning, real estate costs and sale of construction material.

b. The Proposed Action. This alternative would allow the placement of approximately 7,500 cubic yards of limestone riprap bank stabilization along approximately 38,864 feet of shoreline to minimize erosion. The riprap bank stabilization would be placed between Tennessee River Miles 147.2 -152.8, right bank. The bottom of the riprap would be at Elevation 356.0. Elevation 359.0 is the NSP elevation for Kentucky Lake. The riprap would be placed along the shoreline from the top of the bank by using a track hoe. The top of the riprap bank stabilization would be at Elevation 366.0. There would be minimal reshaping of the existing bank for the placement of the riprap bank stabilization. The river bottom substrate adjacent to the shoreline would be permanently impacted by the placement of the riprap bank stabilization. Water quality impacts would be minor, any turbidity as a result from the activity would be quickly dissipated by river currents. The aquatic organisms living in the vicinity of the proposed work would be severely impacted, but they would be expected to recolonize along the bottom and into the nooks and crannies of the riprap soon after completion. Any mammals or birds that use this site as a home may be frightened away due to the presence of construction workers and equipment during the placement of the riprap. Placement of the riprap would be short-term. After the placement of the riprap bank stabilization, the wildlife that lived in the area may be apprehensive to return, since the area would have more human activity with the probability of the presence of recreational vehicles and tourists in the area. The placement of the riprap bank stabilization on the shoreline would provide a perch for birds and animals for resting and in the pursuit of prey. The riprap bank stabilization would provide a location for the wildlife, both aquatic and terrestrial, a place to search for food and provide shelter in the nooks and crannies riprap. The placement of the riprap bank stabilization along the shoreline would have a temporary impact upon the aesthetics of the site caused by the presence of construction workers and construction equipment. All of the work would be conducted during daylight hours. The work would be temporary and the site would return to natural conditions after the work has been completed. After the riprap has been placed along the shoreline, there would be the presence of limestone riprap bank stabilization along the shoreline. In addition, this alternative would allow for the construction of the two launching ramps. The first would be located at Powell Branch Mile 0.1, Left Bank, Tennessee River Mile 148.9, Right Bank while the second would be located at Tennessee River Mile 149.8, Right Bank.

c. The Revised Action. The impacts of this alternative would be similar to the description in b. above. This alternative would eliminate approximately 4,000 feet of riprap bank stabilization between Tennessee River Mile 151.5 - 152.5, right bank. Also riprap bank stabilization would not be placed along the shoreline of Powell Branch, but would be limited to the mouth of Powell Branch. The elimination of the riprap at these locations would avoid impacting wetlands. Approximately 34,864 feet of limestone riprap bank stabilization would be placed along the shoreline to minimize erosion. In addition, this alternative would allow for the relocation of the launching ramps to the main channel of the Tennessee River and river miles 149.1, right bank and 149.9, right bank. The elimination of the riprap bank stabilization and relocating the launching ramps would avoid impacting wetland areas.

d. The Proposed Revised Action with Special Conditions. The impact of this alternative would be similar to the description in c. above. The addition of special conditions to the DA permit would require that the work be constructed in a manner that would minimize adverse impacts to the environment. This would include the following recommended special conditions:

5.0. Findings

5.1. Section 404 (b)(1) Determination

General: The purpose of Section 404(b)(1) of the Clean Water Act is to restore and maintain the chemical and physical, and biological integrity of the waters of the United States through the control of discharges of dredged or fill material. Controls are established through restrictions placed on the discharges in Guidelines published in 40 CFR 230.

Restrictions on the Discharge: Section 230.10 requires that the discharge meet certain restrictions in order to be authorized. The project is to be evaluated and comply with the following restrictions: (a) there would be no other practicable alternatives to the proposal that would have less adverse impacts on the aquatic environment, (b) that the discharge would not adversely impact water quality, violate State water quality standards, toxic effluent standards, or jeopardize the continued existence of a threatened or endangered species as identified under the Endangered Species Act, (c) the discharge would not cause or contribute to the significant degradation of waters of the United States, and (d) the project would be designed in such a manner as to minimize to the extent possible the adverse impacts on the aquatic environment. Evaluation of the guidelines is attached to this document as Appendix C.

Initial Evaluation: An evaluation of the fill material was conducted in accordance with Part 230.61. Environmental consequences of the proposed work are primarily related to a reduction in

biological productivity from the physical displacement of aquatic habitat. The EA did not reveal any practicable alternatives that would have less adverse impacts on the aquatic environment. Since there would be no other practicable alternatives to the proposal, the adverse impacts have been minimized to the extent possible, and no other restrictions have been violated, the proposed work would comply with the restrictions in Section 230.10. In addition, there is no indication that the fill material to be used for the project would be contaminated above background levels. Therefore, the fill material is designated as a category 5 fill and, in accordance with part 230.63(a), no testing of chemical-biological interactive affect is required.

Factual Determination: Based on the probable impacts addressed above, compliance with the restrictions, and all other information concerning the fill materials to be used, the proposed work complies with the Guidelines and the intent of Section 404(b)(1) of the Clean Water Act.

5.2. Water Quality Certification. Water quality certification from the state of Tennessee in accordance with Section 401(a)(1) of the CWA is required for this activity. This office forwarded a copy of Public Notice 03-15 to TDEC on March 13, 2008. Water quality certification was issued on July 7, 2008.

5.3. Consideration of Public Comments. The comments received in response to the public notice have been considered and addressed in this Environmental Assessment and in the decision making process for a permit. Ample opportunity was provided to the commenting agencies and the general public to comment on the proposal through the public notice process. All comments received from the commenting agencies during the public notice period have been given full consideration in the evaluation of this permit. TVA requested that the applicant perform an archaeological survey of the site. In response to the public notice the Commission concurred with the need that a detailed archaeological survey be conducted on the area of potential effect in order to complete their review of the undertaking. An archaeological survey of the proposed development was conducted during the months of February and March 2008. The archeological survey revealed the presence of archeological resources potentially eligible for listing on the National Register of Historic Places. In lieu of further archeological testing, the applicant along with TVA developed an avoidance strategy for the site. An avoidance strategy was in the form of a restrictive covenants and agreement, which has been entered into by the GGP, LLC and TVA. The restrictive covenants states that lots 152, 153 and 154 of White Oak Landing Development will not be altered. No land-disturbing activities would be conducted and no improvements of any nature would be placed, constructed, located or otherwise maintained, including but not limited to fill material of any type, including concrete pads for the purpose of parking recreational vehicles. In addition, covenant states, there would be no excavation, reshaping or sloping operation conducted along the river bank fronting lots 152, 153 and 154. The Commission responded to the proposed covenant stating their concurrence the covenant avoids effects to the archaeological site and that the revised project area

contains no archaeological resources eligible for listing in the National Register of Historic Places. Both the Service and the TWRA stated their concerns about the potential for wetland impacts due to the ramp construction and the placement of the riprap bank stabilization. In addition, both also stated their concerns about the potential impacts from the riprap bank stabilization to endangered mussels. The Service noted the orange-foot pimpleback (*Plethobasus cooperianus*), a federally endangered species, has been found within a mile of the permit area. In addition, the TWRA stated that the endangered pink mucket (*Lampsilis abrupta*) has been documented near the project area. The Service and TWRA requested the applicant to conduct a mussel survey to determine the presence or absence of state and federally listed mussels. Both agencies were informed that Elevation 354.0 is the normal winter pool elevation for Kentucky Lake and the lowest extent of the boat ramps would be at Elevation 355.0 and the lowest extent of the riprap would be at Elevation 356.0. In addition, all of the work would be conducted during winter pool drawdown of Kentucky Lake and the ramps would be constructed outside the wetland areas. After obtaining the additional information that the work would be conducted when water levels are below the proposed areas of disturbance, both the Service and TWRA stated they no longer have concerns regarding the project and based on adequate implementation of measures to avoid disturbance of mussels and wetlands, the project would result in an insignificant level of environmental impacts. TDEC stated their concerns about the riprap bank stabilization impacting wetlands along the Tennessee River. In response to TDEC's concerns, the applicant would avoid placing riprap bank stabilization in an approximately 4,000 foot section between Tennessee River Miles 151.5-152.5, right bank and would avoid placing riprap in Powell Branch. In addition, the applicant would relocate the two launching ramps to the main channel of the river at Tennessee River Miles 149.1 and 149.9, right bank. Since the launching ramps were relocated to the main channel of the river, the Service requested that a mussel survey be performed in the area of the launching ramps. A mussel survey was conducted and concluded that the area along the right descending shoreline of the Tennessee River at Tennessee River Mile 149.1 and 149.9 contained very few mussels. No federally or state listed threatened or endangered species were located during the survey. The Service stated the survey is adequate and supports the conclusion of "not likely to adversely affect" which the Service concurs. During the NEPA review process, TVA brought to our attention that several kingfisher burrows existed on the project site. TVA requested that these burrows be marked before any placement of riprap and the amount of riprap used in these areas be reduced to maintain the burrows. TVA suggests leaving approximately two feet of shoreline exposed under the entrances.

There were no comments received from the general public and no requests for a public hearing.

5.4. Findings of No Significant Impact. Based on a full consideration of the EA, information obtained from cooperating federal/state agencies, and comments received from the interested public, I have concluded that issuance or denial of the requested permit would not constitute a major federal action that would significantly affect the quality of the human environment. This constitutes a

Findings of No Significant Impact (FONSI); therefore, the preparation of an Environmental Impact Statement is not required. This FONSI was prepared in accordance with paragraph 7a of Appendix B, 33 CFR 325 dated February 3, 1988 (effective March 4, 1988).

5.5. Clean Air Act General Conformity Rule Review. The proposed project has been analyzed for conformity applicability, pursuant to regulations implementing Section 176(c) of the Clean Air Act and it has been determined that the activities proposed under this permit will not exceed de minimis levels of direct emissions of a criteria pollutant or its precursors and are exempted by 40 CFR Part 93.153. Any later indirect emissions are generally not within the Corps continuing program responsibility, and cannot be practicably controlled by the Corps, and, for these reasons, a conformity determination is not required for a permit.

5.6. Environmental Justice Review. Executive Order (EO) No. 12898 (February 11, 1994) directs certain federal agencies, including the Department of the Defense, to consider environmental justice, as defined in the order, in the environmental reviews of their programs and activities. Environmental justice refers to the idea that no segment of the population should bear a disproportionate burden of health and environmental impacts of society's activities. Environmental justice concerns relate to the potential effects proposed actions might have on minority communities and low-income communities, and whether or not impacts are likely to fall disproportionately on minority and/or low-income people living in the vicinity of the proposed action.

Such disproportionate impacts, if they would be caused by the proposed project, would most likely affect persons living within the immediate vicinity of the project site, generally, the western portion of Perry County, Tennessee.

Accordingly, the proposed project would not disproportionately impact minority or low-income populations. There are no minority or low-income communities adjacent to the proposed project area. Therefore, the proposed work would not affect minority or low-income populations at any higher rate than others in the project area.

5.7. Recommended Special Conditions. With the applicant's compliance with the special conditions and the implementation of the proposed mitigation, adverse environmental impacts associated with the placement of the riprap bank stabilization would be minimal. The recommended special conditions are as follows:

1. A copy of this permit must be available at the site. All contractors must be aware of its conditions and abide by them. Justification: This would ensure that all of the contractors are aware of the work that is going to be performed and conforms to the approved plans.

2. The work must be performed in accordance with the plans attached to this permit. This office must approve any changes to the plans. Justification: The work being approved is based upon the plans submitted to this office.
3. The permittee shall institute and maintain erosion and sediment control measures for the life of the project and all disturbed areas shall be properly seeded, or otherwise stabilized as soon as practicable to prevent erosion. Justification: So that the disturbed material will not enter the waterway and increase sedimentation.
4. The work must be performed during expected low flow periods and all equipment must be kept out of the water. Justification: Performing the work during low flow periods will minimize the amount of turbidity in the water and will have less of an impact on the aquatic environment.
5. The disturbance to riparian vegetation must be kept to a minimum during construction to reduce bank erosion. Justification: To minimize the amount of disturbance in the work area and surrounding areas.
6. The lots 152, 153 and 154 of White Oak Landing Development would not be altered. No land-disturbing activities would be conducted and no improvements of any nature would be placed, constructed, located or otherwise maintained, including but not limited to fill material of any type, including concrete pads for the purpose of parking recreational vehicles. There would be no excavation, reshaping or sloping operation conducted along the river bank fronting lots 152, 153 and 154. Justification: To ensure that the archeological resources on Lots 152, 153 and 154 are not disturbed.
7. The permittee shall not place riprap bank stabilization between Tennessee River Miles 151.5-152.5 on the right descending bank and avoid placing riprap bank stabilization in Powell Branch, instead placing riprap bank stabilization at the mouth of Powell Branch. Justification: To reduce the potential impacts to wetlands.
8. The permittee shall relocate the two launching ramps to the right descending bank of the main channel of the river at Tennessee River Miles 149.1 and 149.9. Justification: To reduce the potential impacts to wetlands.
9. The permittee shall notify this office (Corps of Engineers-Regulatory Branch) along with TVA's Cultural Resources Office and the Tennessee Historical Commission **immediately** if archeological resources are discovered during construction. Justification: This is to ensure that the disturbance to any archeological site would be minimal and give the agencies the opportunity to coordinate and comply with Section 106 of the National Historic Preservation Act.

10. The permittee shall use clean quarry blasted limestone riprap. Justification: The material that would be used as riprap would be free from contaminants and that the used would be appropriate.

11. The permittee shall notify this office two week before work commences on the riprap. Justification: To give this office an indication that work is about to commence so that this office can perform compliance inspections while the work is taking place.

5.8. Public Interest Determination. I have reviewed the application, responses to the Public Notice, and the EA. Comments from the Commission supported TVA's request that the applicant perform an archaeological survey of the site to determine if any archaeological resources were going to be impacted by the activity. An archaeological survey of the proposed development was conducted and the survey revealed the presence of archeological resources potentially eligible for listing on the National Register of Historic Places. In lieu of further archeological testing, the applicant along with TVA developed an avoidance strategy for the site. An avoidance strategy was in the form of a restrictive covenants and agreement has been entered into by the GGP, LLC and TVA. The restrictive covenants states that lots 152, 153 and 154 of White Oak Landing Development would not be altered, including the construction of concrete pads for parking recreational vehicles. In addition, there would be no excavation, reshaping or sloping operation conducted along the river bank fronting lots 152, 153 and 154. The Commission responded to the proposed covenant stating their concurrence that the covenant avoids effects to the archaeological site and that the revised project area contains no archaeological resources eligible for listing in the National Register of Historic Places. Both the Service and the TWRA stated their concerns about the potential for wetland impacts due to the ramp construction and the placement of the riprap bank stabilization. In addition, both also stated their concerns about the potential impacts from the riprap bank stabilization to endangered mussels. The Service and TWRA requested the applicant to conduct a mussel survey to determine the presence or absence of state and federally listed mussels. Both agencies were informed that Elevation 354.0 is the normal winter pool elevation for Kentucky Lake and the lowest extent of the boat ramps would be at Elevation 355.0 and the lowest extent of the riprap would be at Elevation 356.0. In addition, all of the work would be conducted during winter pool drawdown of Kentucky Lake and the ramps would be constructed outside the wetland areas. After obtaining this additional information, the Service and TWRA state they no longer have concerns regarding the project and based on adequate implementation of measures to avoid disturbance of mussels and wetlands, the project would result in an insignificant level of environmental impacts. TDEC stated their concerns about the riprap bank stabilization and the launching ramps impacting wetlands at the site. In response to TDEC's concerns, the applicant would avoid placing riprap bank stabilization in an approximately 4,000 foot section of shoreline and would relocate the two launching ramps to the main channel of the river. Since the launching ramps were relocated to the main channel of the river, the Service requested a mussel survey be

environmental impacts. TDEC stated their concerns about the riprap bank stabilization and the launching ramps impacting wetlands at the site. In response to TDEC's concerns, the applicant would avoid placing riprap bank stabilization in an approximately 4,000 foot section of shoreline and would relocate the two launching ramps to the main channel of the river. Since the launching ramps were relocated to the main channel of the river, the Service requested a mussel survey be performed in the area of the launching ramps. A mussel survey was conducted and concluded that no federally or state listed threatened or endangered species were located in the vicinity of the proposed launching ramps. The Service stated the survey is adequate and supports the conclusion of "not likely to adversely affect" which the Service concurs. During the NEPA review process, TVA noted several kingfisher burrows existed on the project site. TVA requested that these burrows be marked before any placement of riprap and the amount of riprap used in these areas be reduced to maintain the burrows. TVA suggests leaving approximately two feet of shoreline exposed under the entrances. With adherence to the permit conditions and full implementation of the recommended special conditions, impacts to waters of the United States would be minimal. The special conditions required by this permit deal with adverse impacts to aquatic life and are fully justified and reasonable. The placement of the riprap would stabilize the bank and minimize further bank erosion. The placement of the riprap bank stabilization would provide the applicant a better opportunity to use this site as a recreational/tourist area. The recreational area can be developed and draw tourist to Perry County. In turn, the tourist will buy goods and services from local merchants providing an economic stimulus to the local economy. In addition, the construction of the concrete recreational pads would also provide an economic stimulus to the area through employing construction workers and selling building supplies. Perry County would benefit by collecting revenue on goods and services sold as a result of the tourist and the construction of recreational area. In addition, Perry County would be collect additional property taxes from the improvements to the area. Having weighed these potential benefits that may be accrued against the reasonably foreseeable detrimental effects, I conclude that permit issuance would not be contrary to the public interest.

FOR THE COMMANDER:

2/23/2009
Date

Lisa R. Morris
for Bradley N. Bishop
Chief, Western Regulatory Section
Operations Division