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ROCK ISLAND STATE PARK RECREATION EASEMENT

FINAL ENVIRONMENTAL ASSESSMENT

**Great Falls Reservoir
Warren and White Counties, Tennessee**

Prepared by:
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CHAPTER 1 – PURPOSE AND NEED FOR ACTION

Purpose and Need

TVA has received a request by Tennessee Department of Environment and Conservation (TDEC) for an easement allowing their continued management of Rock Island State Park. TDEC's proposal would add new developed recreation opportunities within the state park and improve access to park facilities. Because the area is currently managed under a short-term operating agreement with TDEC, the long-term easement would allow the State to manage the area with greater operational and fiscal certainty.

In considering the request, TVA seeks the appropriate management of its reservoir lands in a manner that maintains the region's quality of life and other important values. The past and current agreement with TDEC for managing TVA's parcels at Great Falls has ensured that the area is actively managed to benefit the public. TVA's interest in considering this proposal also arises from its commitment to improve the area's economic base and support sustainable economic growth and to provide for public infrastructure needs.

The proposed action is also consistent with TVA's land use plan for the area. Completed in 2017, the Great Falls Reservoir Land Management Plan reflects TVA's preference to continue to manage these parcels for recreation use and meets TVA's objective to provide the public with quality, affordable public outdoor recreation opportunities.

Background

In 1971, TVA entered into a 30-year agreement with TDEC to manage the 367 acre area under a recreation easement. This agreement expired in 2001. Since 2001, the area has been managed under short-term license agreements for public recreation purposes, consistent with the previous easement.

TVA addressed the management of the two TVA parcels of lands on Great Falls Reservoir in its Reservoir Land Management Plan (RLMP) (2017). In the RLMP, Parcel 1 (19 acres) is allocated as Zone 2 (Project Operations) and Parcel 2 (343 acres) is allocated as Zone 6 (Developed Recreation). Under TVA's single-use allocation methodology and land planning practices, Zone 2 and Zone 6 are the only zones in which other public agencies or commercial entities may manage TVA land for public or commercial recreation opportunities. Therefore, the proposed action would be consistent with TVA's RLMP and planning policies.

The 1971 agreement with TDEC to manage 367 acres included both the lands above and below the Caney Fork River. However, TVA does not plan land which is below a reservoir's full summer pool elevation. This explains the discrepancy between the acreage figure of 343 acres for Parcel 2 in the Great Falls RLMP and the 367 acres in the easement.

Proposed Action

The State of Tennessee Department of Environment and Conservation (TDEC) has requested a 40-year term recreation easement over 367 acres of TVA-managed public lands for the purposes of public recreation, including up to 5 acres for commercial recreation. Since 1971, the lands have been managed by TDEC in conjunction with its management of the adjacent Rock Island State Park. The land is located on Great Falls

Reservoir, and along the Caney Fork River and Collins River in Warren and White Counties, Tennessee.

There are three main aspects of the proposal:

- Establishing a 40-year public and commercial recreation easement allowing management of the TVA lands by TDEC, including maintenance actions on existing facilities;
- Restoration and use of an historic mill for a mixed use restaurant, meeting space, and inn as well as making associated access improvements (e.g., parking), which together occupy a five acre area; and
- Issuing a separate permanent easement to the State of Tennessee allowing the Department of Transportation (TDOT) to reroute a portion of the state highway (SR 287) away from the historic mill location to provide better public safety, for better development of the property, and to improve access.

The 40-year agreement would provide an easement for public recreation purposes in the area, with the exception of the 5-acre area at the historic mill which would be for commercial recreation purposes. The proposed permanent easement to TDOT would fall within the greater 367 acres being reviewed for the recreation easement.

Since the preparation and public review of the draft EA in 2018, design constraints were identified in the rerouting of SR 287. TDOT requested a modification in the proposed permanent easement to account for a minor shift in the alignment and to conduct geotechnical surveys. The impacts of this minor shift were analyzed and captured in the

Final EA.

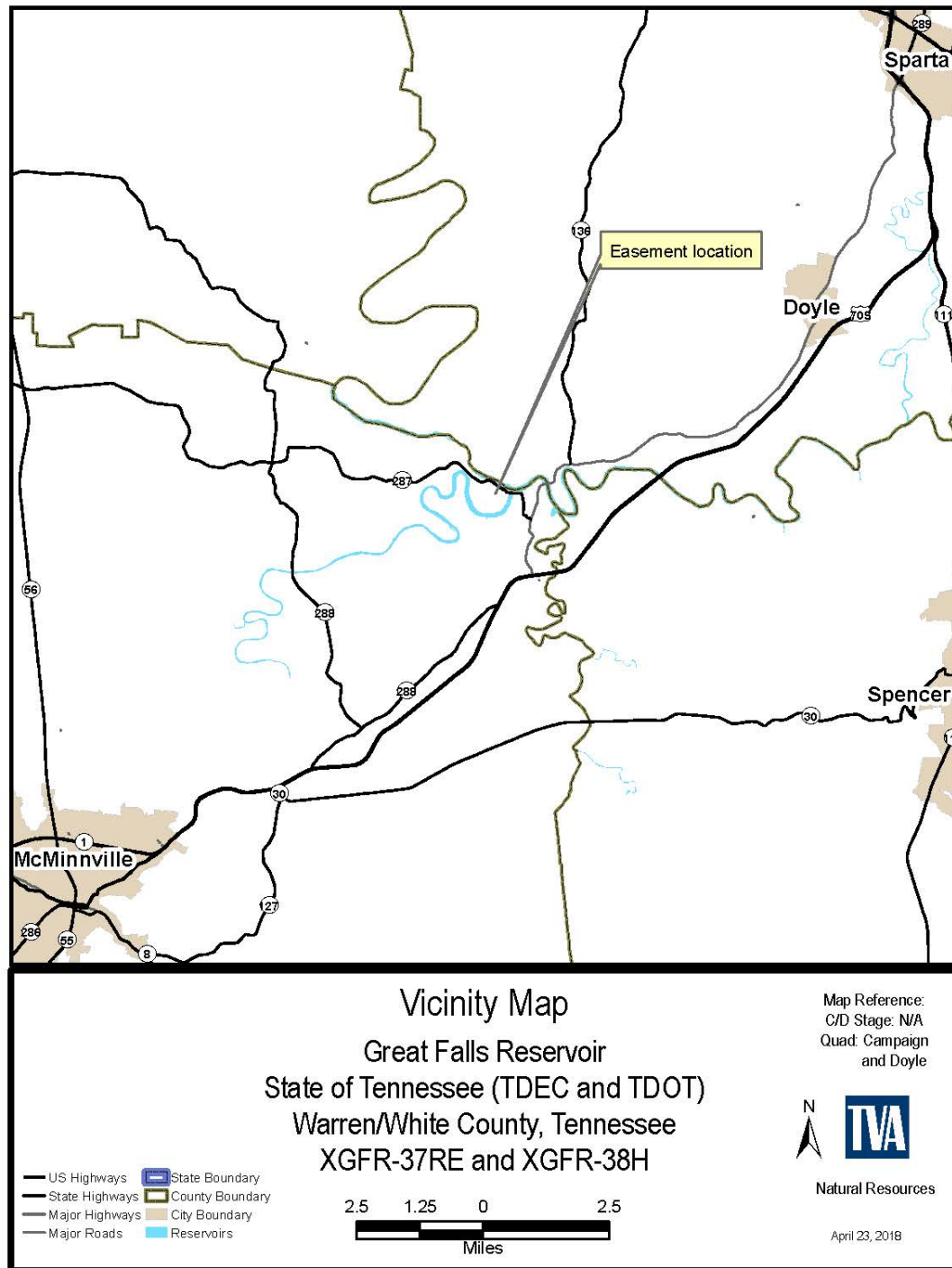


Figure 1. Great Falls Recreation Easement - Vicinity Map

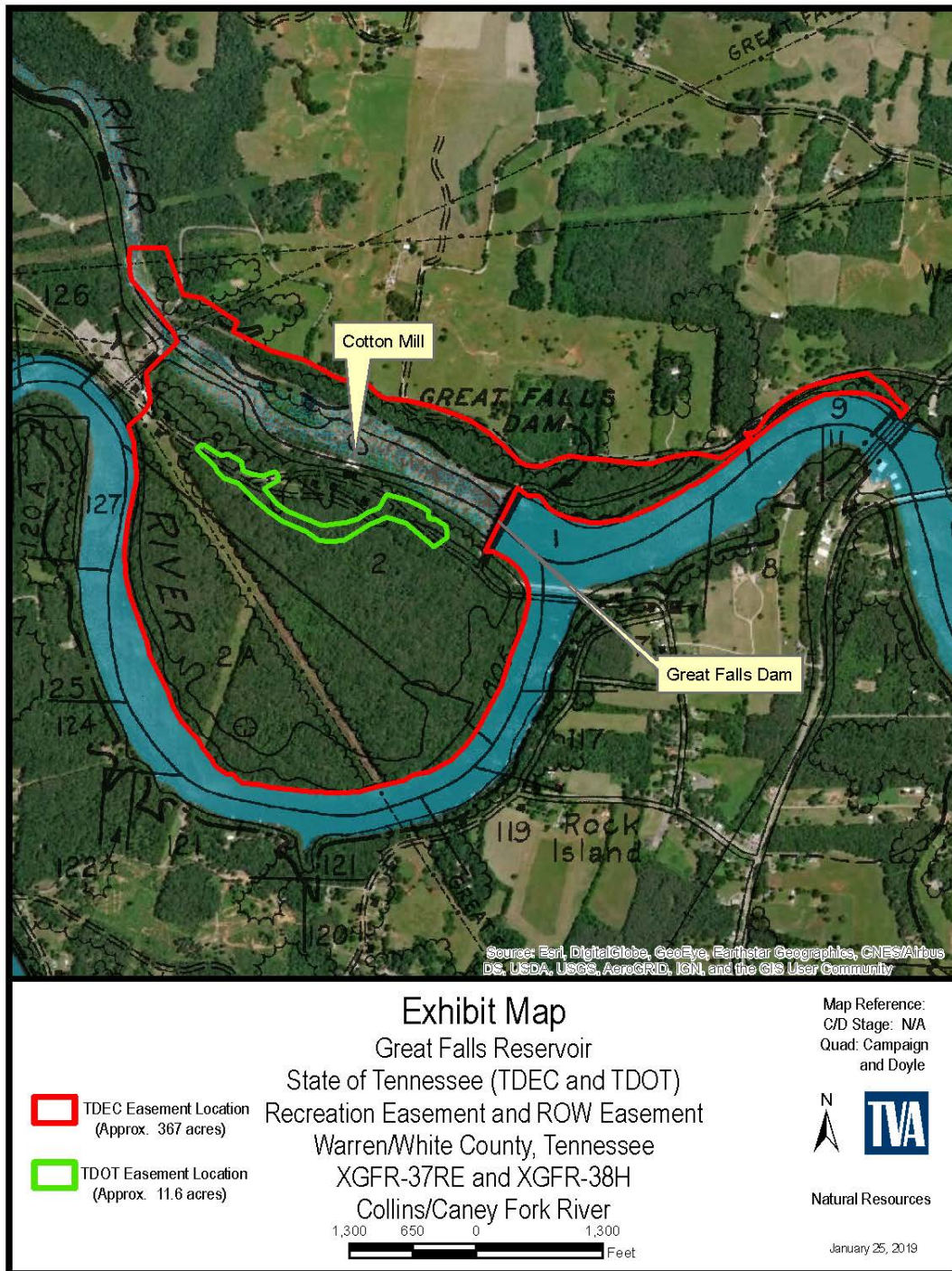


Figure 2. Great Falls Recreation Easement - Aerial Map

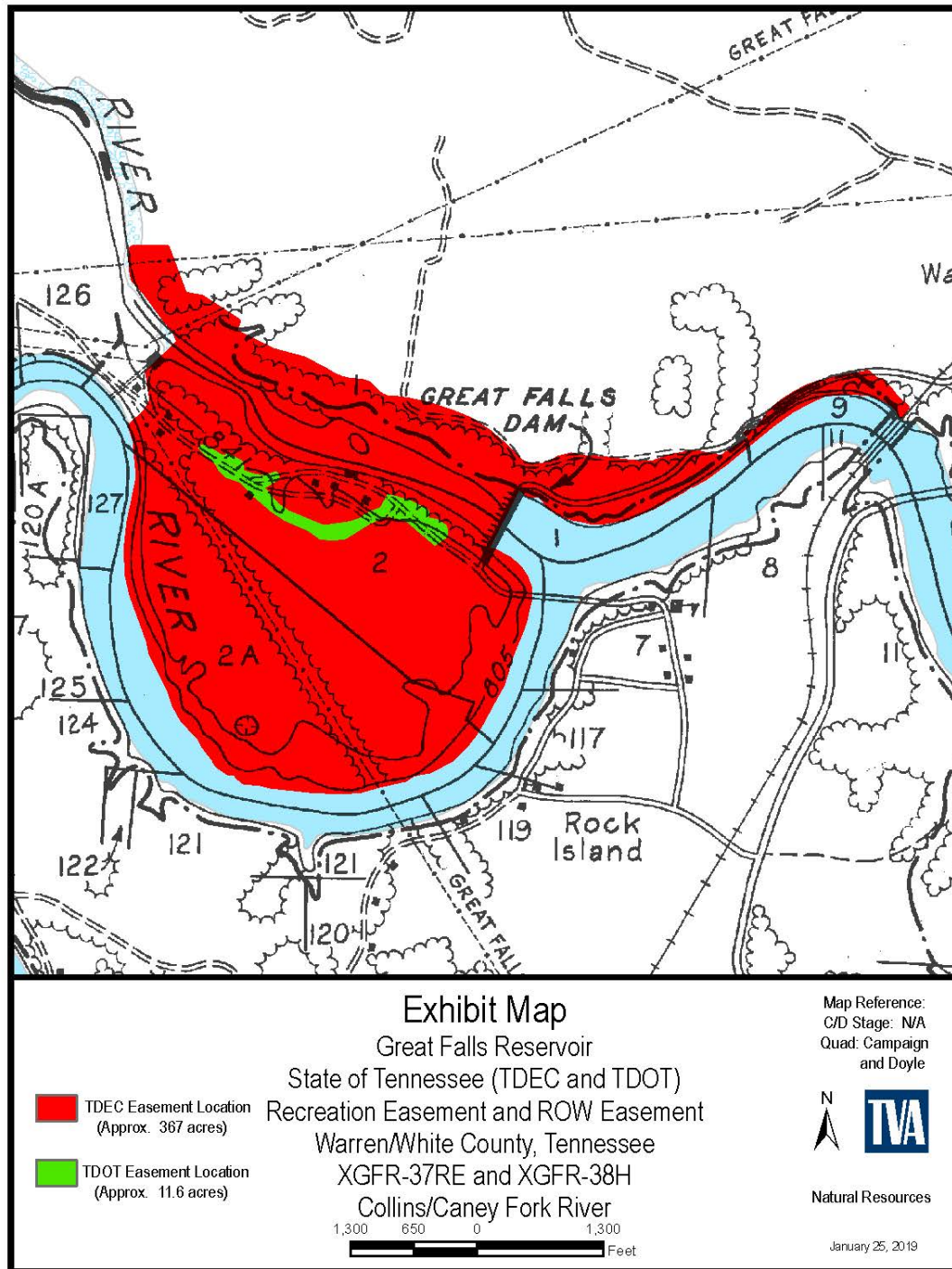


Figure 3. Great Falls Recreation Easement - Exhibit Map

Public Involvement

The proposed use of the historic mill and the potential for development of the State Park has generated interest, particularly within the local community. During the planning process for the Great Falls RLMP, great interest in TDEC's proposal was expressed and numerous requests for additional information were made. Numerous individuals expressed opposition to the proposal to renovate the historic mill and allow commercial use.

On May 14, 2018, TVA published the Draft EA for public review and comment. The availability of the Draft EA was announced in the *Southern Standard*, which serves the White County and Warren County area and the Draft EA was posted on TVA's website. TVA's agency involvement included notification of the Draft EA to local, state, and federal agencies and federally recognized tribes as part of the review. Chapter 5 provides a list of agencies, tribes, and organizations notified of the availability of the Draft EA. Comments were accepted from May 14, 2018, through June 18, 2018, via TVA's website, mail, and email.

At the end of the comment period, TVA had received comment submissions on the Draft EA from 44 members of the public and intergovernmental agencies, totaling 49 comments. Several individuals submitted multiple comments. One comment was received from a state agency and the remaining comments were received from individuals. The comment submissions were carefully reviewed and summarized. These summaries and TVA's responses to them are located in Appendix B.

TVA also coordinated with the United States Fish and Wildlife Service (USFWS) regarding protected species and consulted with the Tennessee State Historical Preservation Officer (SHPO) and federally recognized tribes in relation to historic properties and other cultural resources. The agencies and tribes concurred with findings or had no comment, as reported in relevant subsections of Section 3.0 and as shown in the appendices.

Identification of Relevant Environmental Issues

TVA conducted a preliminary internal review by a network of designated environmental specialists. Based on this internal review, TVA determined that the following resources could be potentially affected by the proposed action and are addressed in this EA.

- Archaeological and Historical Resources
- Threatened and Endangered Species
- Terrestrial Ecology
- Floodplains
- Recreation
- Noise
- Visual Impacts
- Transportation
- Socioeconomic Impacts

TVA also considered potential effects related to aquatic ecology, wetlands, solid and hazardous waste, prime farmland, air quality, and climate change. These resources were eliminated from additional analysis due to either their absence within the study area, or their impacts were determined to be de minimis. Standard construction Best Management Practices (BMPs) and erosion control methods according to TDEC guidelines should prevent direct, indirect, and cumulative impacts to aquatic and wetland resources and air

quality. Therefore, there would be no direct, indirect, or cumulative effects on these resources.

Other Environmental Reviews

No other reviews were identified that are related to the action currently being reviewed.

Permits, Licenses, and Approvals

In addition to the necessary approvals from TVA, the following permits would be required for implementation of the proposed action:

- A Tennessee General National Pollution Discharge Elimination System (NPDES) Construction General Permit from the TDEC would be required as the relocation of SR-287 would disturb more than 1 acre of land. The development and approval of a Stormwater Pollution Prevention Plan (SWPPP) is a component of this permit. Construction Best Management Practices (BMPs) to minimize impacts to water quality would be outlined in the SWPPP.

CHAPTER 2 – DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

Description of Alternatives

This EA evaluates two alternatives: Alternative A – the No Action Alternative, and Alternative B – Proposed Action Alternative. These alternatives are described in more detail below.

Alternative A - The No Action Alternative

Under the No Action Alternative, the area would continue to be managed by TDEC under an existing license agreement. The same or a similar level of public recreation opportunities would continue for all existing facilities within the licensed area, as stated within the existing license agreement. There would be no renovation or maintenance of the historic mill and associated development. The highway segment would remain in its current alignment.

Alternative B - Proposed Action Alternative

Under this alternative, TVA would enter into a 40-year agreement with TDEC to manage 367-acres of TVA-managed public lands in conjunction with TDEC’s management of the Rock Island State Park. Under the agreement, TDEC would manage the TVA lands and be responsible for maintenance actions on existing facilities. TVA would permit TDEC to restore the historic Great Falls Cotton Mill for use as a commercial facility and access improvements at the mill site would be implemented (e.g., parking area, sidewalks). The agreement would allow for commercial recreation within a five acre area surrounding the mill location. In addition, a segment of the state highway would be relocated to move the highway away from the historic mill location for better development of the property and to improve safety for drivers and for pedestrians visiting the area. The state highway proposal would affect approximately 12 acres of vegetated lands just south of the mill location and would require TVA to issue a separate permanent road easement to the State of Tennessee.

Alternative B is the preferred alternative as it meets TVA’s preference to continue management of the parcels for recreation use. Additionally, this alternative meets TVA’s objective to provide the public with quality, affordable public outdoor recreation opportunities.

Comparison of Alternatives

The environmental impacts anticipated under the No Action and the Action Alternative are compared and summarized below in Table 2-1.

Table 2-1. Summary and Comparison of Alternatives by Resource Area

Resource Area	Impacts from No Action Alternative	Impacts from Proposed Action Alternative
Archaeological and Historic Resources	No direct impacts. Potential indirect adverse impacts in the	Potential adverse impacts to the Historic Cotton Mill, two identified

Rock Island State Park Recreation Easement

Resource Area	Impacts from No Action Alternative	Impacts from Proposed Action Alternative
	form of the continued deterioration of the mill.	cemeteries, and identified archaeological sites. Adverse impacts would be mitigated through the execution of a Memoranda of Agreement (MOA).
Threatened and Endangered Species	No impacts	No impacts would occur to aquatic species or habitats. Potential to impact foraging and roosting habitat for federally listed bat species. Appropriate conservation measures would be applied in accordance with TVA's Bat Strategy. With implementation of conservation measures, impacts are expected to be minor.
Terrestrial Ecology	No impacts	Removal of vegetation would occur with the relocation of SR-287. Modifications of the Cotton Mill would displace wildlife. These impacts would not be significant.
Floodplains	No impacts	No impacts
Recreation	No Impacts	Beneficial impacts in the form of increased recreational opportunities with the redevelopment of the cotton mill. Beneficial safety impacts to visitors by relocating SR-287 away from the mill. Insignificant adverse impacts to the Collins River Nature Trail from two new road crossings of SR-287.
Noise	No Impacts	Temporary impacts associated with the restoration of the mill and relocation of SR-287. Reduced noise impacts around the mill from the relocation of SR-287. Insignificant adverse impacts to the Collins River Nature trail from two new road crossings of SR-287.
Visual Resources	No Impacts	Temporary impacts associated with the restoration of the mill and relocation of SR-287. Reduced visual impacts around the mill from the relocation of SR-287. Insignificant adverse impacts to the Collins River Nature trail from two new road crossings of SR-287.
Transportation	No Impacts	Beneficial impacts in safety to drivers and to users of the redeveloped mill and recreation facilities by relocating the road

Resource Area	Impacts from No Action Alternative	Impacts from Proposed Action Alternative
		away from those facilities. Insignificant adverse impacts to the Collins River Nature Trail from two new road crossings of SR-287.
Socioeconomic	No Impacts	Beneficial impacts with the construction activities associated with the redevelopment of the mill and relocation of the roadway. Beneficial impacts from additional tourism associated with the operation of the restored mill.

Identification of Mitigation Measures

TVA would implement the routine environmental protection measures listed in this EA. In addition to those routine measures, the following non-routine measures would be implemented to reduce the potential for adverse environmental effects.

To minimize impacts to cultural resources, the following mitigation measures will be incorporated:

- An MOA will be executed with TVA, TDEC, TDOT, and the Tennessee State Historic Preservation Officer (SHPO) to address adverse effects to 40WR125 and to develop a treatment plan for the mill.
- A 50 foot protective boundary (fence) will be placed around both cemeteries during the proposed undertaking. After construction is complete, a permanent fence will be erected to ensure that both cemeteries are avoided.
- Archeological features associated with 40WR125 could exist under SR 287 and adjacent gravel parking areas. Any proposed disturbance in these areas would be monitored by an archaeologist.

To minimize impacts to threatened and endangered species, the following mitigation measures will be incorporated:

- Several activities associated with the proposed project were addressed in TVA’s programmatic consultation with the USFWS on routine actions and federally listed bats in accordance with ESA Section 7(a)(2) and completed in April 2018. For those activities with potential to affect bats, TVA committed to implementing specific conservation measures. These activities and associated conservation measures are identified in TVA’s Bat Strategy Project Assessment. TVA would document removal of potentially suitable summer bat roost tree habitat and include this information in annual reporting to the USFWS. The project currently plans to conduct the tree removal between November 15 and March 31, when Indiana and northern long-eared bats are not on the landscape. This would avoid any potential direct impact to young bats at a time when they are unable to fly.

To minimize impacts to floodplains, the following mitigation measures will be incorporated:

- Any future facilities or equipment subject to flood damage on the Caney Fork River downstream from Great Falls Dam will be located above elevation 775.0.
- Any future facilities or equipment subject to flood damage on the Caney Fork or Collins River upstream of Great Falls Dam will be located above elevation 821.0.
- Any future development proposed within the limits of the 100-year floodplain will be consistent with the requirements of Executive Order 11988.
- TVA retains the right to permanently flood the easement area upstream of Great Falls Dam to elevation 805, and to temporarily and intermittently flood the entire tract, and TVA will not be liable for damages resulting from flooding.
- No future facilities, including fill, will be constructed, installed, or maintained unless constructed in accordance with plans approved in advance, in writing, by TVA.

To minimize impacts to the recreating public, the following mitigation measures will be incorporated:

- TDOT would install signage and striping at both road crossings of the Collins River Trail, which would meet DOT and TVA design specifications.

Preferred Alternative

TVA's preferred alternative is Alternative B, the Proposed Action Alternative. Under this alternative, TVA would enter into a 40-year agreement with TDEC to manage 367-acres of TVA-managed public lands in conjunction with TDEC's management of the Rock Island State Park. TVA would permit TDEC to restore the historic Great Falls Cotton Mill for use as a commercial recreation facility and access improvements at the mill site would be implemented (e.g., parking area, sidewalks). Finally, TVA would authorize the relocation of a segment of the state highway away from the historic mill location for better development of the property and to improve safety for drivers and pedestrians. Additionally, Alternative B is the preferred alternative because it best suits the applicant's purpose and need and TVA's goal of providing recreational opportunities in the Tennessee Valley region.

CHAPTER 3 – AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

Affected Environment and Anticipated Impacts

This chapter describes the affected environment (existing conditions of environmental resources in the project area) and the anticipated environmental consequences that would occur from the adoption of each of the alternatives described in Chapter 2.

The following resources have the potential to be affected by the proposed actions:

Archaeological and Historical Resources

Affected Environment - Federal agencies are required by the National Historic Preservation Act (NHPA) and NEPA to consider the possible effects of their undertakings on historic properties. The term “undertaking” means any project, activity, or program that is funded under the direct or indirect jurisdiction of a federal agency, or requires a federal license, permit, or federal approval.

An agency may fulfill its statutory obligations under NHPA by following the process outlined in the implementing regulations, Section 106 of NHPS, at 36 CFR Part 800. Under these regulations, considering an undertaking’s possible effects on historic properties is accomplished through a four-step review process: (1) initiation (defining the undertaking and the area of potential effects (APE), and identifying the consulting parties); (2) identification (studies to determine whether cultural resources are present in the APE and whether they qualify as historic properties); (3) assessment of adverse effects (determining whether the undertaking would damage the qualities that make the property eligible for the National Register of Historic Places (NRHP)); and (4) resolution of adverse effects (by avoidance, minimization, or mitigation). Throughout the process, the agency must consult with the appropriate State Historic Preservation Officer (SHPO) and federally recognized Indian tribes that have an interest in the undertaking, and should provide public notice of the undertaking.

Cultural resources include prehistoric and historic archaeological sites, districts, buildings, structures, and objects, and locations of important historic events that lack material evidence of those events. Cultural resources that are included or considered eligible for inclusion in the NRHP and maintained by the Secretary of the Interior are called historic properties. To be included or considered eligible for inclusion in the NRHP, a cultural resource must possess integrity of location, design, setting, materials, workmanship, feeling, and association. In addition, it must also meet one of four criteria: (a) association with important historical events; (b) association with the lives of significant historic persons; (c) having distinctive characteristics of a type, period, or method of construction, or representing the work of a master, or having high artistic value; or (d) having yielded or having the potential to yield information important in history or prehistory.

If the agency determines (in consultation) that the undertaking’s effect on a historic property within the APE would diminish any of the qualities that make the property eligible for the NRHP (based on the criteria for evaluation at 36 CFR 60.4), the effect is said to be adverse. An undertaking may have effects on a historic property that are not considered adverse, if those effects do not diminish the qualities of the property that identify it as eligible for listing

on the NRHP. Examples of adverse effects would be ground disturbing activities in an archaeological site, or erecting structures within the viewshed of a historic building in such a way as to diminish the structure's integrity of feeling or setting. Federal agencies are required to resolve the adverse effects of their undertakings on historic properties. Resolution may consist of avoidance (such as choosing a project alternative that does not result in adverse effects), minimization (such as redesign to lessen the effects), or mitigation. Adverse effects on archaeological sites are typically mitigated by means of excavation to recover the important scientific information contained within the site. Mitigation of adverse effects on historic structures sometimes involves thorough documentation of the structure by compiling historic records, studies, and photographs. Agencies are required to consult with SHPOs, tribes, and others throughout the Section 106 process and to document adverse effects on historic properties resulting from agency undertakings.

The APE is the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if such properties exist. TVA defined the APE for this undertaking to be the proposed approximately 28 acre corridor to be used for the road relocation and commercial development. TVA identified the APE for indirect visual effects as areas within a quarter mile radius of the proposed road corridor that would have a direct line of sight of the road. The remainder of the 367 acres was not surveyed as no ground disturbing impacts are proposed.

The proposed plans call for historic rehabilitation and adaptive reuse of the Great Falls Cotton Mill (Mill). TVA completed a rehabilitation feasibility study for the Great Falls Cotton Mill (Thomason 2016). TVA finds that in order to avoid adverse effects to the Mill, the proposed undertaking should be consistent with the *Secretary's Standards for the Treatment of Historic Properties* (NPS 2017). A Memorandum of Agreement (MOA) has been executed to detail the proposed treatment plan for the building.

TVA conducted a visual survey of the APE (Thomason 2017). Background research was conducted which demonstrated that three previously recorded architectural resources (Collins River Bridge, Great Falls Hydroelectric Station, and the Great Falls Cotton Mill) are located within the APE. The Collins River Bridge (WR-141) was constructed in 1924 and determined eligible for listing on the National Register of Historic Places (NRHP) in 2008. The Great Falls Hydroelectric Station (WR-140) was listed on the NRHP in 1990 within the *Pre-TVA Hydroelectric Development in Tennessee, 1901-1933* multiple property listing. The Great Falls Cotton Mill (WR-138) was listed on the NRHP in 1982 under Criterion A for commerce and Criterion B for important persons due to the enormous contributions of the Faulkner enterprise to Warren County History. The visual survey also evaluated and assessed effects on two early nineteenth-century cemeteries within the APE. One is named Cunningham Cemetery, with five internments, and the other is an unnamed cemetery (40WR117) that contains approximately 12 marked grave locations. A fence was constructed in an attempt to provide a boundary for the Cunningham Cemetery. However, based on the existing site form and visible depressions located outside the fence recently installed by the state park, it is likely the current fence does not encompass the entire cemetery.

TVA conducted an archaeological survey of the APE (Wampler 2016). Background research was conducted and one previously recorded archaeological resource (40WR117), the unnamed historic cemetery mentioned above, is located within the APE. 40WR117 was evaluated during the above mentioned visual survey. The graves associated with

40WR117 were utilized during the time of the Great Falls Cotton Mill's active operations, and is eligible for listing on the NRHP as a contributing element to the Great Falls Cotton Mill site. The archaeological survey identified one previously unrecorded multi-component archaeological site (40WR125). The prehistoric component consisted of approximately 100 lithic artifacts. The historic component of this site consisted of 18 structures visible on the surface as well as intact subsurface deposits. The above ground recorded features correspond with building locations depicted on the Tennessee Power Company's (TEPCO) Camp Map of Great Falls (circa 1912-1922), and with the Tennessee Electric Power Company's 1924 Great Falls Station Map of Camp Rock Island. In addition, 40WR125 represents the remains of Falls City, the mill town that housed mill workers, the mill manager, and structures associated with the operation of the textile enterprise. Site 40WR125 is eligible for listing on the NRHP as a contributing element of the Great Falls Cotton Mill and the Great Falls Hydroelectric Station.

Additional archaeological testing was conducted at 40WR125 (Andrews 2017) to evaluate the previously identified resources eligibility for inclusion on the NRHP. Thirteen structure/artifact concentration areas were identified during the 2016 investigation. Ten of these (Structure area 1, 2-4, 5, 6-9, 10-12, 13, 14-15, 16, AC 1 and 2) were revisited during the phase II testing. Structure 16 and AC 2 are unlikely to yield additional information and are considered non-contributing to the National Register of Historic Places (NRHP) eligibility of the site. Historic features associated with Structure 16 may be located under the pavement of SR 287. The remaining eight structure/artifact concentration areas all yielded intact surface and subsurface features in combination with high artifact densities. All eight have potential to yield further information concerning the late nineteenth century mill town and early twentieth century dam camps. In addition, intact deposits may exist under SR 287 fronting Structures 14-18 and adjacent gravel parking areas.

Since the preparation and public review of the draft SEA in 2018, design constraints were identified in the rerouting of SR 287. TDOT requested a modification in the proposed permanent easement to account for a minor shift in the alignment. In attempts to avoid as many intact deposits as possible the alignment was revised and an additional phase I archaeological survey was conducted over approximately one acre of land that was not previously within the Area of Potential Effects One stone foundation was identified in the survey area. Additional foundation stones and cultural material was recovered directly to the north and just outside of the current survey area.

Environmental Consequences - Under Alternative A, TVA would not issue a 40 year recreation easement to TDEC for continued operation of the recreation facilities on TVA property and TDEC would continue to manage the park under the existing license. Highway 287 would remain in its current location and the historic cotton mill building would not be renovated. TVA would not disturb any land within the 367-acre footprint. There would be no changes in conditions from their current state.

Under Alternative B, TVA would grant TDEC a 40 year easement over 367 acres for the long term management of TVA lands. TVA would also issue a land use permit for the restoration of the historic mill and to continue existing uses on the easement area, and a permanent easement for the relocation of SR-287.

TVA has determined the proposed undertaking would not adversely affect the Collins River Bridge, the Great Falls Hydroelectric Station or the Great Falls Cotton Mill.

TVA finds that in order to avoid adverse effects to the Mill, the proposed undertaking should be consistent with the *Secretary's Standards for the Treatment of Historic Properties* (NPS 2017) and that a Memorandum of Understanding (MOA) has been executed to detail the proposed treatment plan for the building rehabilitation.

A 50 foot buffer would be placed around the unnamed cemetery (40WR117) and the Cunningham Cemetery to ensure they are adequately avoided during the proposed undertaking. Fencing would be erected around both cemeteries including the 50 foot buffer and any depressions that could be potential graves identified during the survey.

TVA finds that 40WR125 is eligible for listing on the NRHP under Criterion D on its own merits in association with both the mill and dam occupants. Sites may be eligible for listing on the NRHP under Criteria D when the site has yielded, or may be likely to yield, important information in prehistory or history. In addition, 40WR125 is eligible as a contributing element to both the NRHP-listed Great Falls Cotton Mill (WR-138) and the NRHP-listed Great Falls Dam (WR-140).

TVA has consulted with the TN SHPO regarding these findings and determinations. On February 12, 2018, the TN SHPO concurred with TVA's findings that as proposed, the undertaking will adversely affect the National Register eligible site of 40WR125.

Additionally, TVA reinitiated consultation after TDOT proposed an alignment shift. On April 23, 2018 the TN SHPO concurred with TVA that intact deposits and contributing structure areas associated with 40WR125 would not be adversely affected by the proposed geotechnical study.

A MOA has been developed to ensure that the mill rehabilitation is consistent with NPS standards mentioned above, and to mitigate adverse effects to 40WR125. The MOA was executed on February 25, 2020.

Threatened and Endangered Species

Affected Environment - The Endangered Species Act (ESA) requires federal agencies to conserve endangered and threatened species and to determine the effects of proposed actions on endangered and threatened species and Designated Critical Habitat. Endangered species are those determined to be in danger of extinction through all or a significant portion of their range. Threatened species are those determined to likely become endangered within the foreseeable future. Section 7 of the ESA requires federal agencies to consult with the U.S. Fish and Wildlife Service (USFWS) when proposed actions may affect endangered or threatened species or Designated Critical Habitat.

Terrestrial Species

A search of the TVA Natural Heritage database in January 2016, January 2018, and May 2019 resulted in records for five state-listed species (Allegheny woodrat, hellbender, little brown bat, Tennessee cave salamander, and tricolored bat), and one federally listed species (gray bat) within three miles of the project footprint. Two additional federally listed species (Indiana bat and northern long-eared bat) are known from Warren County, Tennessee. During field review an additional state-listed species (Rafinesque big-eared bat) was observed in the project footprint (Table 1. Terrestrial Animal T&E Species).

Table 3.1 Federally listed terrestrial animal species reported from Warren County, Tennessee and other species of conservation concern documented within three miles of Rock Island State Park Recreational Easement ¹

Common Name	Scientific Name	Federal Status	State Status ² (Rank ³)
Amphibians			
Hellbender	<i>Cryptobranchus alleganiensis</i>	PS	D(S3)
Tennessee cave salamander	<i>Gyrinophilus palleucus</i>	--	T(S2)
Mammals			
Rafinesque's big-eared bat	<i>Corynorhinus rafinesquii</i>	--	D(S3)
Allegheny woodrat	<i>Neotoma magister</i>	--	D(S3)
Gray bat	<i>Myotis grisescens</i>	LE	E(S2)
Indiana bat ⁴	<i>Myotis sodalis</i>	LE	E(S1)
Northern long-eared bat ⁴	<i>Myotis septentrionalis</i>	LT	T(S1S2)
Little brown bat	<i>Myotis lucifungus</i>	--	T(SCS3)
Tricolored bat	<i>Perimyotis subflavus</i>	--	T(S2S3)

¹ Source: TVA Regional Natural Heritage Database, extracted 5/9/2019; USFWS Information for Planning and Consultation (<https://ecos.fws.gov/ipac>) accessed 5/9/2019.

² Status Codes: E or LE = Endangered; LT or T = Listed Threatened; D = Deemed In Need of Management; PS = Partial Status.

³ State Ranks: S1 = Critically Imperiled; S2 = Imperiled; S3 = Vulnerable.

⁴ Federally listed species with records in Warren County, Tennessee, but not within three miles of the project footprint.

Hellbenders favor fast-flowing, clear, rocky creeks and rivers with water temperatures that are ideally less than or equal to 20°C, where there are large shelter rocks, bedrock shelves, crevices, and logs. Eggs are laid in nests in late summer or fall beneath these large, flat shelter rocks or submerged logs (Natureserve 2016). The nearest known hellbender record occurs approximately 1.2 miles from the project footprint. Suitable habitat for hellbender exists adjacent to, but not within, the project footprint in the Collins and Caney Fork Rivers.

Tennessee cave salamanders are an aquatic amphibian that occurs in and around streams and pools within caves. Water tends to be clear and free of sediment, substrates include rock, gravel, sand, and mud (Natureserve 2018). The nearest known occurrence of this species is from a cave approximately 1.7 miles from the project footprint. Eleven caves are known within three miles of the project footprint, the nearest of which occurs approximately 0.5 miles from the action area. No additional caves were observed during field surveys in 2016, 2018, or 2019. Suitable habitat does not exist for this species within the project footprint.

Allegheny woodrat are associated with rock outcroppings, rocky cliffs, talus slopes with boulders and crevices. This species is also known from cave habitat, especially when found in mixed coniferous-hardwood forests. It occasionally uses abandoned buildings but generally avoids humans. Allegheny woodrat generally occurs at higher elevations (to about 1,000 m) and is rarely found in lowlands or open areas (Lindzey 2008). The nearest known Allegheny woodrat record is from a cave approximately 1.2 miles from the project footprint. Two woodrats were found nesting inside of the historic cotton mill building during surveys on June 23, 2016. Biologists were unable to determine if these were Allegheny woodrats or common woodrats without having the individuals in hand.

Little brown bats typically winter in caves and mines. In summer they are often found in buildings though they have also been documented roosting under bridges. Little brown bats forage over water and around trees (TWRA 2015). The closest known record of little brown bat is from a cave approximately 2.0 miles away.

Tricolored bats use caves, mines, and rock crevices as roosting sites in winter and occasionally as day roosts in summer. In summer they are also found roosting in clumps of live and dead leaves on standing trees. They forage over waterways and forests (TWRA 2015). The closest known record of a tricolored bat is from the same cave as the little brown bat record, approximately 2.0 miles away.

Rafinesque's big-eared bats roost in caves or rock shelters during winter hibernation. In summer this species can be found roosting in hollow trees, abandoned buildings, under bridges, or in culverts near wooded areas. This species forages in mature bottomland hardwood forests, as well as in young pine stands, oak-hickory forests, open field edges, and riparian habitats such as swamps and stream edges. Poplar, beech, and maple stands are actively avoided by this species avoided when foraging, for reasons unknown (Titus 2015). This suggests that the forested habitat proposed for removal in this action area does not provide suitable foraging habitat for Rafinesque's big-eared bat. However, the historic cotton mill does serve as a suitable roost site for this species. In June 2016, one Rafinesque's big-eared bat was observed roosting within an interior closet-like room within the historic cotton mill building during surveys. This individual flushed during surveys of the building. There was no evidence of repeated use of the building by a colony of bats (e.g. guano piles, staining).

Gray bats roost in caves year-round and migrate between summer and winter roosts during spring and fall (Brady et al. 1982, Tuttle 1976). Bats disperse over bodies of water at dusk where they forage for insects emerging from the surface of the water (Harvey 2011). The closest gray bat record is known from the same cave as the tricolored and little brown bat, approximately 2.0 miles from the project footprint.

The northern long-eared bat predominantly overwinters in large hibernacula such as caves, abandoned mines, and cave-like structures. During the fall and spring they utilize entrances of caves and the surrounding forested areas for swarming and staging. In the summer, northern long-eared bats roost individually or in colonies beneath exfoliating bark or in crevices of both live and dead trees. Roost selection by northern long-eared bat is similar to that of Indiana bat, however northern long-eared bats are thought to be more opportunistic in roost site selection. This species also roosts in abandoned buildings and under bridges. Northern long-eared bats emerge at dusk to forage below the canopy of mature forests on hillsides and roads, and occasionally over forest clearings and along

riparian areas (USFWS 2014). The nearest Northern long-eared bat is known from a mist net capture record approximately 4.1 miles from the project footprint.

Indiana bats hibernate in caves in winter and use areas around them in fall and spring (for swarming and staging), prior to migration back to summer habitat. During the summer, Indiana bats roost under the exfoliating bark of dead and living trees in mature forests with an open understory, often near sources of water. Indiana bats are known to change roost trees frequently throughout the season, yet still maintain site fidelity, returning to the same summer roosting areas in subsequent years. This species forages over forest canopies, along forest edges and tree lines, and occasionally over bodies of water (Pruitt and TeWinkel 2007, Kurta et al. 2002, USFWS 2015). The nearest known Indiana bat is a historical record from a cave in White County, Tennessee, approximately 5.9 miles from the action area

Eleven caves are known within three miles of the project footprint, the nearest of which occurs approximately 0.5 miles from the action area. No bats have been documented in this cave. No caves were observed in the project footprint during field reviews in 2016, 2018, or 2019. The historic cotton mill building serves as a potential suitable roost site for little brown and northern long-eared bat species. Though less commonly found in buildings, the site could also provide roosting habitat for Indiana bat, gray bat, and tricolored bat. As mentioned above, one Rafinesque's big-eared bat was observed roosting within an interior closet-like room within the historic cotton mill building during June 2016 surveys.

The forested section of the proposed road relocation was also surveyed for potential summer roosting sites for state and federally listed bat species. Suitable summer roosting habitat for little brown, tricolored, Rafinesque's big-eared, northern long-eared and Indiana bat exists throughout forested areas of the project footprint. Assessment of the project area for presence of Indiana bat and northern long-eared bat summer roosting habitat followed federal guidance and resulted in the identification of approximately 10.3 acres of suitable summer roosting and foraging habitat within the highway relocation footprint, as well as suitable summer and migratory habitat within the historic cotton mill building (USFWS 2014, 2015, 2019). Habitat quality ranged from moderate to high based on the presence of trees with exfoliating bark, crevices, or holes, open forest understory, and proximity to water. Suitable summer roosting areas were comprised of deciduous mature hardwood stands dominated by a mixture of tulip poplar, American beech, eastern red cedar, southern red oak, and white oak. Foraging habitat for all of these bat species also occurs within and alongside the project footprint in forested areas. Additional foraging habitat for these species exists over the Collins River and Caney Fork, adjacent to project area.

Aquatic Species

A query of the TVA Natural Heritage Database on 1/18/2016 for records of listed aquatic animal species indicated two federally listed (one fish, one mussel) and 11 additional state-listed species (one crustacean, nine fishes, and one snail) within the Caney Fork River and Collins River watersheds of the proposed project area. (Table 3.2)

Table 3.2. Records of federal and state-listed aquatic animal species within the Caney Fork River (0513010806) and Collins River (HUC 0513010704) 10-digit HUC watershed of the proposed project ¹

Common Name	Scientific Name	Federal Status	State Status ² (Rank ³)
Crustaceans			
Swamp River Cave Amphipod	<i>Stygobromus sp.22</i>	-	TRKD(S3)
Fishes			
Barrens Darter	<i>Etheostoma forbesi</i>	-	END(S1)
Barrens Topminnow	<i>Fundulus julisia</i>	-	END(S1)
Bedrock Shiner	<i>Notropis rupestris</i>	-	NMGT(S2)
Bluemask Darter	<i>Etheostoma akatulo</i>	LE	END(S1)
Cherry Darter	<i>Etheostoma etneri</i>	-	NMGT(S3)
Flame Chub	<i>Hemitremia flammea</i>	-	NMGT(S4)
Sooty Darter	<i>Etheostoma olivaceum</i>	-	NMGT(S3)
Southern Cavefish	<i>Typhlichthys subterraneus</i>	-	NMGT(S3)
Snails			
Cumberland Pigtoe	<i>Pleurobema gibberum</i>	LE	END(S1)
Ornate Rocksnail	<i>Lithasia geniculate</i>	-	TRKD(S2)

¹ Source: TVA Regional Natural Heritage Database, extracted 1/18/2016; USFWS Ecological

² Status Codes: END or LE = Endangered; LT or THR = Listed Threatened; NMGT = In Need of Management; PS = Partial Status.

³ State Ranks: S1 = Critically Imperiled; S2 = Imperiled; S3 = Vulnerable.

⁴ Federally listed species with records in Warren County, Tennessee, but not within three miles of the project footprint.

The federally endangered bluemask darter is endemic to the Caney Fork River drainage. The bluemask darter is typically found just downstream of riffles or runs over clean sand and fine gravel substrates at depths of 10-50 cm (Layman and Mayden 2009). It is most abundant and widely distributed in the Collins River, a tributary to the Caney Fork, which enters just above Great Falls Dam. Spawning activities of the bluemask darter take place in May and June in gravelly runs (Simmons and Layzer 2004).

The federally endangered Cumberland pigtoe is also endemic to the Caney Fork River drainage. This species inhabits small to medium-sized rivers in riffle areas. It is typically found over clean sand and gravel substrates at depths ranging from 10 cm to 1 m (Gordon and Layzer 1989, Ahlstedt et al. 2004). However, this species is not known to occur below Great Falls.

Environmental Consequences - Under Alternative A, Highway 287 would remain in its current location, the historic cotton mill building would not be renovated, and all vegetation

would remain in its current state. No direct, indirect, or cumulative impacts to terrestrial or aquatic threatened and endangered species would occur as a result of proposed actions.

Under Alternative B, TVA would renovate the historic cotton mill building and relocate a segment of SR 287. Within the proposed footprint, TVA would clear vegetation on some or all of the 18 acres surveyed. Both forested and herbaceous vegetation would be removed in association with the proposed actions. There would be no impacts to aquatic habitats due to the removal of vegetation

Terrestrial Species

Four state-listed terrestrial animal species were assessed based on documented presence within three miles of the project footprint. Additionally, one federally threatened and two federally endangered species have been assessed based on known or potential presence within Warren County, Tennessee. Of these, five species have the potential to utilize the project area. Habitat for hellbender and Tennessee cave salamander does not exist within the project footprint. Neither hellbender nor Tennessee cave salamander would be impacted by the proposed actions.

Suitable habitat exists for Allegheny woodrat within the historic cotton mill building. Additional potentially suitable habitat for this species occurs within the eleven recorded caves and the rocky cliffs immediately adjacent to the project area along the Caney Fork River. As previously mentioned above, the nearest cave occurs 0.5 miles from the action area. Neither this, nor any other cave is expected to be impacted by proposed actions. Proposed actions associated with the recreation easement request by TDEC include restoration of the historic cotton mill building for commercial development. Two woodrats were observed in this building during surveys in June 2016. Exact species of woodrat was not determined as identification to species level requires capture. Individual woodrats using the cotton mill building may be impacted by the proposed renovations if these activities occur during breeding season, between March and September, when young are being born and unable to leave the nest. Juvenile and adult individuals would be able to disperse upon the onset of disturbance, thus likely avoiding direct mortality. In order to avoid direct impacts to young woodrats (potentially state-listed Allegheny woodrats) it is TVA's recommendation that renovation activities of the cotton mill building take place outside of breeding season. Provided proposed actions occur outside of breeding season, Allegheny woodrat would not be directly impacted by the project activities. Should actions occur during Allegheny woodrat breeding season, proposed actions may directly affect some individuals but are not likely to impact populations of this species.

The historic cotton mill building may provide potential summer roosting and transitional (migratory) habitat for gray bat, Indiana bat, little brown bat, northern long-eared bat, Rafinesque's big-eared bat, and tricolored bat. However, of these six species, only one individual Rafinesque's big-eared bat was found utilizing this building during surveys for terrestrial animal species in June 2016. One dead big brown bat was also found during surveys of this building. This species is not state or federally listed. The historic cotton mill may serve as a temporary roost site for individual bats of several species during periods of migration and foraging but is not used as a large roosting site. Based on field survey findings in June 2016, it is the recommendation of TVA that building renovation activities take place during the winter (November 15 through March 31) in order to avoid impacts to roosting or transitional (migrating) bats.

The forest within the proposed road relocation was also surveyed for potential summer roosting sites for state and federally listed bats. Surveys for Indiana and northern long-eared bat habitat followed the USFWS's Range-Wide Indiana Bat Survey Guidelines. The 10.3 acres of forest currently proposed for removal is mature forests with canopy trees measuring 15 inches and greater in diameter at breast height. Roughly 25 percent of these larger, older trees have broken limbs, cracks, and crevices suitable for tree roosting federally listed bats. Snags scattered throughout the project action area provide additional ideal summer roosting habitat for Indiana bat and northern long-eared bat. This habitat is also suitable for tree roosting tricolored bats that roost in clumps of live and dead leaves in trees including oaks, maples, and cedars. Approximately 10.3 acres of suitable summer roosting habitat for Indiana bat, northern long-eared bat, and tricolored bat would be removed in association with the proposed actions. Foraging habitat for these bat species as well as little brown, gray bats, and Rafinesque's big-eared bat also occurs within and alongside the project footprint in forested areas, forest edges, and over the Collins and Caney Fork Rivers adjacent to project area. These aquatic resources would not be impacted by the proposed actions. The project currently plans to conduct tree removal between November 15 and March 31, when the previously mentioned bat species are in winter hibernacula and not on the landscape roosting in trees. An abundance of similarly suitable forested foraging habitat occurs across immediately surrounding the project footprint.

A number of activities associated with the proposed project were addressed in TVA's programmatic consultation with the U.S. Fish and Wildlife Service on routine actions and federally listed bats in accordance with ESA Section 7(a)(2) and completed in April 2018. For those activities with potential to affect bats, TVA committed to implementing specific conservation measures. These activities and associated conservation measures are identified on pages 5 and 6 of the TVA Bat Strategy Project Screening Form (attached) and need to be reviewed/implemented as part of the proposed project. With the use of the identified conservation measures, proposed actions are not expected to significantly impact gray bats, Indiana bats, or northern long-eared bats. As a result of these conservation measures, including the seasonal tree clearing restriction, impacts to little brown, Rafinesque big-eared, and tricolored bats are also minimized such that proposed actions would not significantly impact populations of these species either.

Aquatic Species

As the entire project is land based, there would be no direct impacts to sensitive aquatic species. Indirect impacts to sensitive aquatic species associated from erosion and sedimentation would be avoided by minimizing ground disturbance and conducting all work in accordance with best management practices as described in the project's Stormwater Pollution Prevention Plan (SWPPP). Therefore, with proper implementation of best management practices, no impacts to endangered, threatened, or special status species are anticipated to occur.

Terrestrial Ecology

Affected Environment - Habitat assessments for terrestrial animal species were conducted in the field on January 25 and June 23, 2016, February 13, 2018, and April 3, 2019. This EA focuses on potential impacts that may occur at the site of the historic mill and adjacent lands (up to 5 acres) and where the segment of the relocated state highway would be constructed (approximately 12 acres). Approximately 10.3 acres of forested habitat within

the proposed project footprint have the potential to be cleared and maintained as rerouted state highway (Hwy 287).

Deciduous and mixed deciduous-evergreen forests occupy the majority of the acreage within the project footprint. These forest types provide habitat for an array of common terrestrial animal species. Birds typical of this habitat include Acadian flycatcher, chuck-will's-widow, downy and hairy woodpecker, eastern screech-owl, eastern wood-pewee, great horned-owl, indigo bunting, red-tailed hawk, summer tanager, wild turkey, and yellow-billed cuckoo (National Geographic, 2002). This area also provides foraging and roosting habitat for several species of bat, particularly in areas where the forest understory is partially open. Bat species likely found within this habitat include eastern red bat and evening bat. Eastern chipmunk, gray fox, and woodland vole are other mammals likely to occur within this habitat (Whitaker 1996). Eastern black kingsnake, black ratsnake, eastern box turtle, and ring-necked snake are common reptiles of deciduous forests in this region (Dorcas and Gibbons 2005).

Early successional, herbaceous habitat (i.e., field) comprises only a small portion of the project footprint. Common inhabitants of early successional habitat include brown-headed cowbird, brown thrasher, common yellowthroat, eastern bluebird, eastern kingbird, eastern meadowlark, field sparrow, and grasshopper sparrow (National Geographic 2002). Bobcat, coyote, eastern cottontail, eastern mole, and red fox are mammals typical of fields and cultivated land (Whitaker 1996). Reptiles, including northern copperhead and northern black racer are also known to occur in this habitat type (Dorcas and Gibbons 2005).

Developed areas, and areas otherwise previously disturbed by human activity are home to a large number of common species. American robin, Carolina chickadee, blue jay, European starling, house sparrow, mourning dove, northern cardinal, northern mockingbird, black vulture, and turkey vulture are birds commonly found along road edges, industrial properties, and residential neighborhoods (National Geographic 2002). Mammals found in this community type commonly include eastern gray squirrel, northern raccoon, and Virginia opossum (Whitaker 1996). Road-side ditches provide potential habitat for amphibians including American toad, upland chorus frog, and spring peeper. Reptiles potentially present include eastern black kingsnake, eastern garter snake, and midland brown snake (Dorcas and Gibbons 2005).

Review of the TVA Regional Natural Heritage database in November 2016 and January 2018 indicated 11 caves documented within three miles of the project area. No caves were identified during field review of the project footprint on in 2016, 2018, or 2019. The historic cotton mill building, a three story derelict structure located adjacent to the Caney Fork River, likely provides potentially suitable habitat for multiple terrestrial animal species. No aggregations of migratory birds or wading bird colonies have been documented within three miles of the project area and none were observed during field surveys.

Review of the US Fish and Wildlife Information for Planning and consultation website on May 9, 2019 identified three species of migratory birds of conservation concern that have the potential to occur in the project area: prairie warbler, red-headed woodpecker, and wood thrush. Habitat for all three species occurs in the project footprint.

Environmental Consequences - Under Alternative A, Highway 287 would remain in its current location, the historic cotton mill building would not be renovated, and all vegetation within five acres of the historic cotton mill building would remain in its current state. TVA.

No clearing of vegetation would occur or ground disturbance within the project footprint. Trees and other vegetation would remain in place in their current state. No direct, indirect, or cumulative impacts to wildlife would occur as a result of proposed actions.

Under Action Alternative B, TVA would renovate the historic cotton mill building and relocate a segment of SR 287. On the proposed footprint, TVA would clear vegetation on some or all of the approximate 12 vegetated acres surveyed. Both forested and herbaceous vegetation that may provide habitat for common wildlife species would be removed in association with the proposed actions.

Herbaceous vegetated areas in the action area are restricted to strips of land along the existing highway. Any wildlife (primarily common, habituated species) currently using these previously disturbed areas would be displaced during construction actions, but it is expected that they would return to newly created herbaceous areas along the new highway upon completion of actions.

Clearing of some portion of the approximate 10.3 acres of forested habitat would take place as part of the proposed actions. These areas of forest would be removed and permanently maintained as a state highway. Direct effects to some individuals that are immobile during the time of construction may occur, particularly if construction activities transpire during breeding/nesting seasons. However, the actions are not likely to affect populations of species common to the area, as similarly forested habitat exists in the surrounding landscape. In addition, vegetation removal is proposed between November 15 and March 31 when most common wildlife is not breeding. Therefore direct impacts would be mainly constrained to those individuals using the approximate 12 acre action area as winter grounds (e.g. those hibernating in borrows, under downed vegetation, in hollow trees).

In its current state the historic cotton mill building likely provides habitat for several species, primarily during summer and migratory periods. This building would be subject to renovation related disturbances. Animals currently occupying this derelict structure are expected to be displaced by renovation related disturbance. Such disturbances and habitat removal would disperse wildlife from the project footprint into surrounding areas in an attempt to find new food and shelter sources and to reestablish territories. Similarly suitable derelict buildings may not occur in the adjacent landscape. However natural vegetation that would offer alternative habitat is plentiful surrounding the building.

Proposed actions across the project footprint would permanently remove existing forested habitat and potential render the cotton mill uninhabitable for common wildlife. Due to the availability of quality natural habitat surrounding the proposed actions, cumulative effects of the project on common wildlife species are expected to be negligible. Following completion of the project, the action area would be maintained as highway 287 and the historic cotton mill building and surrounding acreage would be permanently used for commercial recreational purposes.

Some migratory birds of conservation concern identified by the USFWS may be impacted by the proposed action. Habitat exists in the action area for prairie warbler, red-headed woodpecker, and wood thrush. It is expected that these species forage and nest in the action area. Direct effects to individual prairie warblers and wood thrushes would be avoided as tree removal is proposed between November 15 and March 31 (when these species are in wintering grounds further south in Florida, the Caribbean, and Central America). Red-headed woodpeckers are year-round residents in this area and therefore

could be directly affected by tree clearing at any time of year. In winter, it is expected that individuals disturbed by tree clearing actions would be able to flush to adjacent habitats. Due to the avoidance of vegetation removal during breeding seasons, ability of red-headed woodpeckers to flush to adjacent habitats during vegetation removal, the relative abundance of similarly suitable habitat nearby, and the relatively small size of the area of disturbance, it is not expected that populations of these migratory bird species would be impacted.

Floodplains

Affected Environment – A floodplain is the relatively level land area along a stream or river that is subject to periodic flooding. The area subject to a one-percent chance of flooding in any given year is normally called the 100-year floodplain. The area subject to a 0.2 percent chance of flooding in any given year is normally called the 500-year floodplain. Although the reservoir elevation is lowered during the winter months, there is no flood control storage within Great Falls Reservoir. Great Falls is a single-purpose power project and the Power Storage Zone is the volume of space available to store water for use in power generation.

Downstream of Great Falls Dam

No formal flood study has been done of the Caney Fork River downstream of Great Falls Dam. However, TVA does have streamflow and elevation data at the Great Falls powerhouse, at Caney Fork River (CFR) Mile 90.4. Based upon the data available at Great Falls powerhouse, and the contour map supplied by the applicant, the 100-year flood elevation of CFR from Great Falls Powerhouse at CFR Mile 90.4 to Great Falls Dam at CFR Mile 91.1 would vary from about elevation 680.0 at the powerhouse to about elevation 750.0 at the dam. The 500-year flood elevation of CFR from Great Falls Powerhouse at CFR Mile 90.4 to Great Falls Dam at CFR Mile 91.1 would vary from about elevation 686.0 at the powerhouse to about elevation 756.0 at the dam. All elevations are reference to National Geodetic Vertical Datum (NGVD 1929).

The 100- and 500-year flood elevations at the proposed conference center site at CFR Mile 90.8 are estimated to be about 745.0 and 751.0 feet, respectively. The 1971 contract restricted development below the 775.0 contour downstream from Great Falls Dam. TVA therefore concludes that a first floor elevation of the lowest floor of the renovations no lower than 775.0 feet would provide an adequate level of flood protection against the estimated 100- and 500-year floods. Flood Risk also concludes that prohibiting flood-damageable development below elevation 775.0 would provide an adequate level of flood protection against the estimated 100- and 500-year floods.

Upstream of Great Falls Dam

The 100-year flood elevation of the CFR varies from 815.5 feet on the upstream side of Great Falls Dam at CFR Mile 91.1, to 815.7 feet at CFR Mile 91.9. The 500-year flood elevation of the CFR varies from 820.0 feet on the upstream side of Great Falls Dam at CFR Mile 91.1, to 820.3 feet at CFR Mile 91.9. No formal flood study has been done of the Collins River in Great Falls Reservoir. However, the Collins River may be assumed to behave similarly to the CFR during floods. Therefore, flood elevations on the Collins River were estimated from Caney Fork River flood elevations within Great Falls Reservoir.

TVA estimates that the 100-year flood elevation of the Collins River would vary from 815.5 feet on the upstream side of Great Falls Dam at Collins River Mile 0.0, to 816.0 feet at Collins River Mile 1.7. The 500-year flood elevation of the Collins River would vary from 820.0 feet on the upstream side of Great Falls Dam at Collins River Mile 0.0, to 821.0 feet

at Collins River Mile 1.7. The 1971 contract restricted development below the 821.0 contour upstream from Great Falls Dam. TVA therefore concludes that prohibiting flood-damageable development below elevation 821.0 would provide an adequate level of flood protection against the estimated 100- and 500- year floods.

Environmental Consequences - As a federal agency, TVA adheres to the requirements of EO 11988 (Floodplain Management). The objective of EO 11988 is "...to avoid to the extent possible the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative." The EO is not intended to prohibit floodplain development in all cases, but rather to create a consistent government policy against such development under most circumstances. The EO requires that agencies avoid the 100-year floodplain unless there is no practicable alternative.

In 1981, TVA completed a class review of a certain repetitive actions that could occur in floodplains. The purpose of the class review was to (1) determine, for the actions listed, if there are practicable alternatives to siting in the floodplain; and (2) if no practicable alternatives exist, establish review criteria that, if followed, will minimize any adverse impacts that may be associated with the individual actions reviewed. A number of actions which could occur in floodplains were reviewed. As a result of the class review, TVA determined that there were no practicable alternative to the actions that would avoid sitting in the floodplain. This review was published in Federal Register Volume 46 CFR, Number 76, pages 22845-46.

Under Alternative A, TVA would not issue a 40 year recreation easement to TDEC for continued operation of the recreation facilities on TVA property. TDEC would continue to manage the park under the existing license. TDEC would not restore and repurpose the historic cotton mill and TDOT would not relocate SR 287. Therefore, there would be no changes to the conditions within the local floodplains.

Under Alternative B, TVA would grant TDEC a 40-year easement over 367 acres, for the long term management of TVA lands. TVA would also issue a land use permit for the restoration of the historic mill and the relocation of SR 287 as well as a permanent easement to TDOT for the road relocation.

The existing picnic tables, picnic pavilion, restrooms, parking areas, visitors center, SR 287, the proposed re-routing of SR 287, Twin Falls and visitor center overlooks, and a portion of the Collins River Nature Trail are or would be located downstream of Great Falls Dam. The existing facilities are, and the proposed facilities would be located above elevation 775.0, which is well above estimated 100-year flood elevations, which would be consistent with EO 11988.

Portions of the existing Nature Trail may be located within the 100-year floodplain of the Collins River in Great Falls Reservoir. Consistent with EO 11988, walking trails are considered to be repetitive actions within the 100-year floodplain that should result in minor impacts (TVA 1981).

The proposed easement would comply with the Flood Control Storage Loss Guideline because there is no flood control storage on Great Falls Reservoir. There would be no loss of power storage.

Other facilities may be constructed in the future, and those facilities and projects would be evaluated at that time for compliance with floodplain requirements.

Flood Risk has no objection to the proposed 40-year easement over 367 acres to TDEC and the permanent easement to TDOT for the relocation of SR 287, provided the following conditions are included in any transfer document(s):

Easement Conditions:

- Any future facilities or equipment subject to flood damage on the Caney Fork River downstream from Great Falls Dam will be located above elevation 775.0.
- Any future facilities or equipment subject to flood damage on the Caney Fork or Collins River upstream of Great Falls Dam will be located above elevation 821.0.
- Any future development proposed within the limits of the 100-year floodplain will be consistent with the requirements of Executive Order 11988.
- TVA retains the right to permanently flood the easement area upstream of Great Falls Dam to elevation 805, and to temporarily and intermittently flood the entire tract, and TVA will not be liable for damages resulting from flooding.
- No future facilities, including fill, will be constructed, installed, or maintained unless constructed in accordance with plans approved in advance, in writing, by TVA.

By incorporating the above conditions into the easements to minimize adverse impacts, the proposed project would have no significant impact on floodplains and their natural and beneficial values.

Recreation

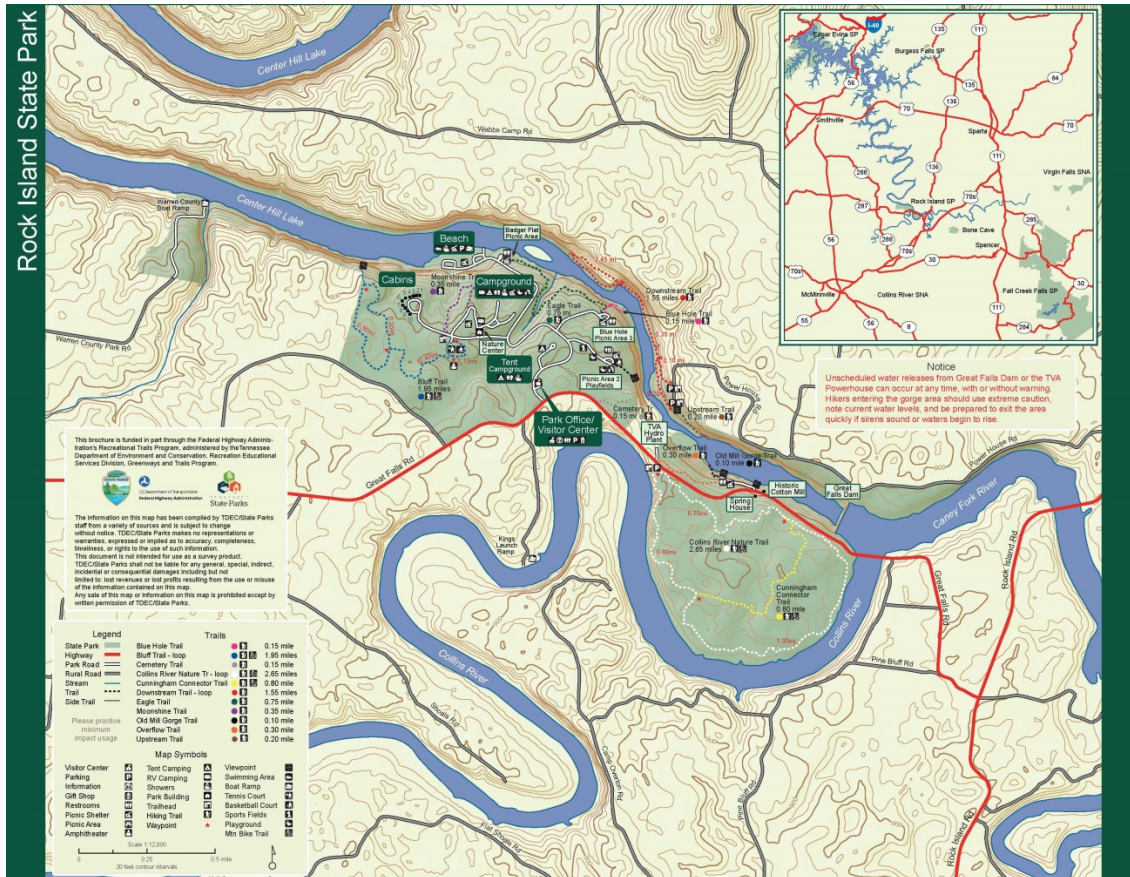
Affected Environment – Great Falls Reservoir is an outdoor recreation resource that attracts visitors from within and outside the region. Rock Island State Park has been developed on Great Falls Reservoir which includes the rugged beauty of the Caney Fork Gorge. The state park is managed by the State of Tennessee. The state park has an observation area, picnic facilities, restrooms, and trails system. The Caney Fork River Gorge contains scenic overlooks, waterfalls, deep pools, and limestone paths perfect for hiking, swimming, fishing, kayaking, and exploring (TVA 2017).

A review of Rock Island State Park indicates numerous recreational opportunities within the survey area. A 19th Century Cotton Mill, Spring House, and associated structures are located on the northern portion of the area, immediately adjacent to SR-287. A paved parking lot with restrooms and picnic tables is provided in this area. This area around the cotton mill provides numerous vantage points of the 30 foot tall horseshoe waterfall and the Caney Fork River. The parking area at the mill and picnic area is popular on weekends and holidays, and is often at capacity. Additionally, visitors to the area must cross SR-287 to view the Spring House and interpretive signage.

Multiple trails are located within the proposed project area. The Collins River Natural Trail is a 2.65 mile long hiking and mountain biking trail which creates a loop on the land paralleled by the Collins River. The 0.80 mile Cunningham Connector Trail has also been developed within the immediate area. Both the Collins River Natural Trail and Cunningham

Rock Island State Park Recreation Easement

Connector Trail are approximately 3 feet wide and traverse through the heavily wooded deciduous and pine forest on the peninsula formed by the confluence of the Collins and Caney Fork Rivers. The natural setting of these trails is disrupted by the high tension power lines which hang overhead the trails. The trails are accessed by a formal trailhead off SR-287, across from the TVA powerhouse. The trailhead parking lot is a small gravel lot which can hold approximately 10 vehicles. Two additional trails, the 0.10 Old Mill Gorge Trail and the 0.30 mile Overflow Trail are accessed from the Cotton Mill parking lot. The Old Mill Gorge Trail is a strenuous trail which accesses different vantage points of the Caney Fork River. The Overflow Trail climbs to the Collins River Nature Trailhead and provides additional parking for this access point.



2017 Rock Island State Park Map

Environmental Consequences - Under Alternative A, TVA would not issue a 40 year recreation easement to TDEC for continued operation of the recreation facilities on TVA property. TDEC would continue to manage the park under the existing license. TDEC would not restore and repurpose the historic cotton mill and TDOT would not relocate SR-287. Recreational opportunities would not change.

Under Alternative B, TVA would grant TDEC a 40 year easement over 367 acres, for the long term management of TVA lands. The easement would provide the State Park certainty in its management of TVA lands, as well as allow the state to secure financing for future improvements.

TVA would allow for the restoration and use of the historic mill for commercial recreation purposes within the five-acre area, and would allow the associated site access improvements. While there will be short term adverse impacts to recreational opportunities during construction, these impacts would be minor and of short duration. And while there may be some adverse impacts to users who prefer a more primitive recreational experience, the restoration of the historic mill also invites new interpretive experiences by increasing educational opportunities for users to learn more about the history of the area. The restoration and reuse of the historic mill would also increase passive recreational opportunities as access improvements would increase access to existing passive recreation opportunities such as the existing trails, overlooks, and picnic areas. TVA would also permit the relocation of SR 287. By relocating the roadway, through traffic would be removed from the cotton mill, spring castle and associated developed recreation facilities. The effects of removing the traffic volume would have a beneficial impact on visitor safety and overall visitor experience.

The relocation of SR 287 would impact the Collins River Natural Trail by bisecting the trail in two locations. Due to the relatively low daily traffic volume, the 25 mph speed posting, and the diminished character of the trail from overhead powerlines, impacts to the trail from the two road crossings would be insignificant. TDOT would install signage and striping at the road crossings which would meet TDOT and TVA design specifications. Additionally, there would be short term construction impacts to trail users as the road is being built, but these impacts would be temporary and of short duration.

Noise

Affected Environment – Noise is generally defined as unwanted sound that disrupts normal activities or that diminishes the quality of the environment. It is usually caused by human activity that adds to the natural acoustic setting of a locale. The perceived loudness or intensity between a noise source and receptor may change as a result of distance, topography, vegetation, water bodies, and structures. Topography, vegetation, and structures can change noise intensity through reflection, absorption, or deflection. Reflection tends to increase the intensity, while absorption and deflection tend to decrease the intensity. Sources of noise along TVA reservoirs include industrial development, power generation facilities, substations, developed recreation sites, recreational watercraft use, navigation use, and automobile traffic.

The project area is currently allocated for developed recreation in the Great Falls Reservoir Lands Plan (TVA 2017). Recreational facilities that support low-intensity uses, such as parks or open spaces, generate less noise than more intensive uses such as marinas and developed recreation areas.

The primary source of noise from the project location is from the waterfalls in the Caney Fork River, visitors to the property, and vehicle traffic on SR 287. Noise from developed recreational use areas could be compared to residential areas with a range between 50 dBA (quiet suburb, not close to major roads) to about 65 dBA (relatively noisy residential area).

Due to the vicinity of the falls to the project locations, motor boats are not able to access this section of the Caney Fork River. Power boats are located on the Collins River, south of the project area. However, the closest power boats could come to the project area would be approximately half a mile away.

Environmental Consequences – Under Alternative A, TVA would not issue a 40 year recreation easement to TDEC for continued operation of the recreation facilities on TVA property. TDEC would continue to manage the park under the existing license. TDEC would not restore and repurpose the historic cotton mill and TDOT would not relocate SR 287. There would be no change in noise impacts from current conditions.

Under Alternative B, TVA would grant TDEC a 40 year easement over 367 acres, for the long term management of TVA lands. The easement would provide the State Park certainty in its management of TVA lands, as well as allow the state to secure financing for future improvements. Noise impacts can be expected during the construction of the facility and the construction of the relocated roadway. Construction noise impacts are anticipated to be temporary and of short duration.

Redeveloping and repurposing the mill would result in minor increases in noise due to the increased visitor usage. These noise levels are anticipated to be within the decibel range associated with activities that would occur on lands zoned for public recreation.

The relocated roadway would result in increased noise impacts to users of the Collins River Nature Trail. These impacts would be isolated to the two locations where the road is proposed to cross the trail. As the proposed relocation of the road does not increase the volume of traffic on the road and the posted speed limit will not be raised, the noise impacts associated with the two new trail crossings would be similar to those at the other recreation areas adjacent to existing SR 287.

While there may be minor adverse noise impacts to the Collins River Nature Trail, relocating the roadway away from mill should result in reduced noise impacts to visitors of the redeveloped mill location, the developed picnic area, and surrounding established trails.

Visual Resources

Affected Environment - TVA has adapted criteria for classifying the quality and value of scenery from a management system developed by the U.S. Forest Service. The classification process is also based on fundamental methodology and descriptions adapted from a Forest Service publication, *Landscape Aesthetics, A Handbook for Scenery Management*. The process and criteria are used to compare the value of scenery to other resource values during inventory and land planning tasks. These are also used to evaluate the extent and magnitude of visual changes that could result from proposed projects. In addition, they can be useful to help establish management objectives for improving or maintaining the scenic quality of managed lands.

The proposed project consists of issuing a long term easement of 367 acres of TVA-managed public lands, the redevelopment of a historic cotton mill, and the relocation of SR 287 on the Caney Fork River (Great Falls Reservoir) in Warren County, Tennessee. The site is mostly undeveloped, with the exception of the cotton mill, state roadway, and recreation amenities such as hiking trails and picnic areas.

The visual character of the project area is of a steep Caney Fork river gorge with numerous waterfalls and rock bluffs. Surrounding the river are heavily vegetated slopes which are mainly unaltered by human development and have the ability to absorb additional minor human alterations. An abandoned, three story brick cotton mill and supporting structures are located on the southern bank of the river. Additionally, SR 287 and a developed picnic area are adjacent to the cotton mill. Further away from the Caney Fork River, the remainder

of the 367 acre parcel is heavily wooded with minimal development. The main exceptions are the powerlines and associated rights of way clearing which stretch along the southeastern portion of the property.

The physical, biological, and cultural features of an area combine to make the visual landscape character both identifiable and unique. Scenic integrity indicates the degree of unity or wholeness of the visual character. Scenic attractiveness is the evaluation of outstanding or unique natural features, scenic variety, seasonal change, and strategic location. Where and how the landscape is viewed would affect the more subjective perceptions of its aesthetic quality and sense of place. Views of a landscape are described in terms of what is seen in foreground, middleground, and background distances. In the foreground, an area within one half mile of the observer, details of objects are easily distinguished in the landscape. In the middleground, normally between a mile and four miles from the observer, objects may be distinguishable but their details are weak and they tend to merge into larger patterns. Details and colors of objects in the background, the distant part of the landscape, are not normally discernible unless they are especially large and standing alone. The impressions of an area's visual character can have a significant influence on how it is appreciated, protected, and used. The scenic attractiveness of the project area was defined as "common"; meaning the area is one where the land forms, rock, vegetation patterns, water, and other features have ordinary or common visual quality. These areas have generally positive but typical attributes, with a basic variety of forms, colors, and textures that are normally seen throughout the landscape. While the waterfalls within the Caney Fork River are a unique and distinctive feature to the area, the surrounding state highway and transmission lines detract from the overall attractiveness.

Visual consequences are examined in terms of visual changes between the existing landscape and proposed actions, sensitivity of viewing points available to the general public, their viewing distances, and visibility of proposed changes. Scenic integrity indicates the degree of intactness or wholeness of the landscape character. These measures help identify changes in visual character based on commonly held perceptions of landscape beauty, and the aesthetic sense of place. The scenic integrity of the project area was defined as "moderate", meaning areas where the valued landscape character appeared to be slightly altered. Noticeable deviations must be visually subordinate to the landscape being viewed, and borrow much of the natural form, line, color, texture, and pattern.

The value class of a landscape is determined by combining the levels of scenic attractiveness, scenic integrity and visibility. The scenic value class for the project site would be defined as "good"; which are areas with attractive but common scenic quality. Minor human alteration may be seen in the foreground but is barely noticeable in the middle ground. These areas have relatively high visibility from both land and water.

Environmental Consequences – Under Alternative A, TVA would not issue a 40 year recreation easement to TDEC for continued operation of the recreation facilities on TVA property. TDEC would continue to manage the park under the existing license. TDEC would not restore and repurpose the historic cotton mill and TDOT would not relocate SR-287. There would be no change in visual impacts from current conditions.

Under Alternative B, TVA would grant TDEC a 40 year easement over 367 acres, for the long term management of TVA lands. The easement would provide the State Park certainty in its management of TVA lands, as well as allow it to secure financing for future

improvements. TVA would also approve the rehabilitation of the cotton mill and the relocation of SR-287 and a permanent easement for the relocated roadway.

The refurbishment of the cotton mill would be seen in the foreground by recreating visitors. However, the overall planned refurbishment for the cotton mill keeps the same shape and dimension of the existing building, so views at middleground distances by recreation users along the river would be unaltered. Through traffic would be moved away from both the cotton mill and from the unique waterfalls with the relocation of SR-287. There still would be parking next to the mill, but the number of spaces would be kept to a minimum. This decrease in traffic would be visually beneficial to park users.

Potential negative visual impacts could occur at the two road crossing on the Collins River Nature Trail. However, as the scenic attractiveness of the trail has already been impacted by the overhead transmission lines, impacts from the road would be insignificant.

The redevelopment of the mill and relocation of the road would likely not reduce the overall scenic class from a value of "good". During the construction period there may be noticeable visual impacts due to an increase in personnel, equipment, and materials on-site. This will be temporary until all activities are complete. Therefore, the proposed actions would result in minor and insignificant visual impacts from the construction, operation, and maintenance of these facilities.

Transportation

Affected Environment - The project area is accessible from SR 287 in Warren County. The proposed project would realign SR 287 away from the historic Great Falls Cotton Mill and spring castle as part of the redevelopment of the Great Falls Cotton Mill. A traffic impact analysis for the proposed realignment of the portion of SR 287 was conducted. The site is located between log mile 38.71 and log mile 39.31, generally located east of Bluff Road to west of the Great Falls Dam.

The traffic impact analysis considered the existing traffic operations along the 1.2-mile long section of SR 287 including the existing and future level of service along the roadway and a review of available motor vehicle collision data. The analysis found that the proposed realignment will maintain the existing level of service (LOS) and should not negatively impact the safety operations of the roadway.

Level of Service (LOS)

Based on traffic data available from the Tennessee Department of Transportation (TDOT) (<https://www.tdot.tn.gov/APPLICATIONS/traffichistory>), the estimated Annual Average Daily Traffic (AADT) on SR 287 in the study area is approximately 1,400 vehicles per day (VPD). The AADT is made up of the average 24-hour traffic volume at a location over an entire year and is a method of reporting the average daily bidirectional traffic crossing a point on a roadway. TDOT and the Federal Highway Administration (FHWA) use LOS standards to represent the overall traffic operations on a roadway. LOS standards are assigned letters to categorize quality of service, with A being the best and F being the worst. The resulting level of service for this anticipated volume and the existing geometric condition on SR 287 is a LOS D, which is acceptable for roadway traffic operations.

The estimated trips from the proposed redevelopment are expected to be minimal and should not adversely impact the current traffic operations of SR 287. The anticipated level of service on the realigned section, based on the previously completed feasibility study

(Florence) and the anticipated trips from the proposed redevelopment, should remain at LOS D.

Roadway safety review

A high-level review of the available motor vehicle collision (MVC) data was conducted as part of this analysis by utilizing the Enhanced Tennessee Roadway Information Management System (ETRIMS) database. MVC data were reviewed from 2012-2017. A total of four MVCs on this section of roadway was reported over the 5-year period, with all incidents occurring in 2016. Out of the four reported MVCs, three of the incidents were related to roadway departures. The proposed realignment plans, which include wider, paved shoulders should help to reduce the opportunity for this type of incident.

Environmental Consequences – Under Alternative A, TVA would not issue a 40-year recreation easement to TDEC for continued operation of the recreation facilities on TVA property. TDEC would continue to manage the park under the existing license. TDEC would not restore and repurpose the historic cotton mill and TDOT would not relocate SR 287. Transportation activity and access would not change.

Under Alternative B, TVA would issue a permanent easement to the State of Tennessee allowing the Department of Transportation (TDOT) to reroute a portion of the SR 287 away from the historic mill location for better development of the property and to improve access.

Based upon the review of the proposed realignment plans, available traffic data, and motor vehicle collision data; the proposed realignment of SR 287 should maintain the existing level of service and provide for a safer corridor operation than what currently exists. It is important to note that the purpose of the realignment of SR 287 is to provide a safer and more accessible environment to visitors of the proposed inn at the historic Great Falls Cotton Mill and is not focused on capacity. While the LOS is projected to remain the same, by relocating the roadway, through traffic would be removed from the cotton mill, spring castle and associated developed recreation facilities. The effects of removing the traffic volume would have a beneficial impact on visitor safety and overall visitor experience.

Socioeconomics

Affected Environment - The population of Tennessee grew by approximately 43 percent between 1980 and 2016, from 4.6 million to about 6.5 million. In comparison, the population of Warren County grew by 23 percent, while White County's population increased by 35 percent. The most rapid growth in each of the populations occurred during the 1990s. Table 3.3 presents the population and percentage change in population for Warren County, White County, and the State of Tennessee. The historical population of the United States is provided for comparison purposes.

Table 3.3. Population of Warren County, White County, Tennessee, and the US, 1980-2016

Place	1980	1990	2000	2010	2016
Warren County	32,653	32,992	38,276	39,839	40,099
<i>Percentage change</i>		1.0%	16.0%	4.1%	0.7%
White County	19,567	20,090	23,102	25,841	26,373
<i>Percentage change</i>		2.7%	15.0%	11.9%	2.1%
United States (thousands)	226,542	248,718	281,422	308,746	318,857
<i>Percentage change</i>		9.8%	13.1%	9.7%	3.3%
Tennessee	4,591,120	4,877,185	5,689,283	6,346,105	6,548,009
<i>Percentage change</i>		6.2%	16.7%	11.5%	3.2%

Source: US Census Bureau's 2012-2016 American Community Survey (ACS) 5-year estimates program (Census, 2017).

Population projections for counties in Tennessee are developed by the Tennessee State Data Center. These projections show Warren and White counties continuing to experience growth over the next several decades, albeit at a slower rate than those projected for the state as a whole. Table 3.4 presents these projections.

Table 3.4. Population Projections for Warren County, White County, and Tennessee, 2020-2070

	2020*	2030	2040	2050	2060	2070
Warren County	40,773	41,068	41,082	41,228	41,759	42,650
<i>Percentage change</i>	2.3%	0.7%	0.0%	0.4%	1.3%	2.1%
White County	27,267	28,360	28,999	29,475	29,908	30,297
<i>Percentage change</i>	5.5%	4.0%	2.3%	1.6%	1.5%	1.3%
Tennessee	6,883,347	7,390,535	7,853,224	8,341,055	8,870,988	9,443,390
<i>Percentage change</i>	8.5%	7.4%	6.3%	6.2%	6.4%	6.5%

Source: Tennessee State Data Center, 2017.

*Change is from the 2010 population shown in Table 3.3.

Table 3.5 presents additional demographic information for the study area. As shown below, the populations of Warren and White counties are predominately white and living in rural areas. The median age in Warren County is 39.9 years, while White County has a slightly older median age of 43.5 years. High school graduation rates in the counties are somewhat lower than that of the state as a whole.

Table 3.5. Demographics of Warren County, White County, and Tennessee

	Warren County	White County	Tennessee
Median Age	39.9	43.5	38.5
High School Graduate or Higher	78.6%	82.2%	86.0%
<i>Rural/Urban, 2010*</i>			
Inside Urban Area	38.6%	21.8%	66.4%
Inside Rural Area	61.4%	78.2%	33.6%
<i>Race and Ethnicity</i>			
White	91.9%	96.2%	77.8%
Black or African American	1.1%	1.8%	16.8%
Other Races	3.1%	0.1%	3.4%
Two or More Races	3.8%	1.9%	2.0%
Hispanic or Latino (any race)	8.5%	2.3%	5.0%

Sources: Unless otherwise noted, data are from the US Census Bureau's 2012-2016 American Community Survey (ACS) 5-year estimates program (Census 2017).

*US Census 2010 decennial census (Census, 2012).

The housing units in White County were slightly older than those of Tennessee as a whole, with a median year built of 1981 and 1982, respectively. Warren County's housing units were somewhat older, with a median year built of 1976. Housing units within White and Warren counties tend to be owner-occupied, rather than renter-occupied, at a higher rate than those in Tennessee as a whole. The median value of owner-occupied housing in Tennessee was more than roughly \$45,000 to \$50,000 greater than the median value of housing in Warren and White counties, which had median values of \$101,800 and \$96,400, respectively. Median gross rent in Tennessee as a whole was \$782 a month. Rents in the local counties were lower: Warren's median rent was \$597 per month, while White's was \$637 a month. Table 3.6 presents the general housing characteristics of the project area.

Table 3.6. Housing Characteristics of Warren County, White County, and Tennessee

	Warren County	White County	Tennessee
Total Housing Units	17,834	11,607	2,873,478
Median Year House Built	1976	1981	1982
Percent Owner-Occupied	69.2%	77.6%	66.3%
Median Value, Owner-occupied Housing	\$101,800	\$96,400	\$146,000
Median Gross Monthly Rent, Renter-occupied Housing	\$597	\$637	\$782

Source: US Census Bureau's 2012-2016 American Community Survey (ACS) 5-year estimates program (Census, 2017).

The Bureau of Labor Statistics (BLS) compiles labor force data at various geographic levels. A member of the labor force is one who is either employed or is actively seeking work. For the project area, the county is the smallest unit of geography for which BLS data are available. In December 2017, Warren County had a labor force of 17,003 persons, with an unemployment rate of 3.2 percent. Median household income during the 2012 through 2016 period was \$36,245. Over that period of time, 20.7 percent of the population was identified as being below the poverty level. White County had a labor force of 11,924 in December 2017, with an unemployment rate of 3.3 percent. During the 2012 through 2016 period, median household income was \$35,989, with 18.1 percent below the poverty level.

Table 3.7 below shows the median household income, percentage of individuals below the poverty level, labor forces, and unemployment rates for Warren and White counties and the State of Tennessee.

Table 3.7. Income, Poverty, and Employment of Warren County, White County, and Tennessee

Place	Warren County	White County	Tennessee
Median Household Income ¹	\$36,245	\$35,989	\$46,574
Individuals Below Poverty Level ¹	20.7%	18.1%	17.2%
Labor Force, BLS December 2017 ²	17,003	11,924	3,202,657
Unemployment Rate, December 2017 ²	3.2%	3.3%	3.1%

Sources:

¹US Census Bureau’s 2012-2016 American Community Survey (ACS) 5-year estimates program (Census, 2017).

²US Bureau of Labor Statistics (BLS, 2018). Data are not available at the town level. Figures are preliminary.

Workers in the study area are most frequently employed in the manufacturing industry. The educational services, health care and social assistance industries are also a common industry of employment within Warren and White counties. Table 3.8 below summarizes the industries of employed workers within Warren and White counties and the State of Tennessee.

Table 3.8. Employment by Industry (a) for Warren County, White County, and Tennessee

	Warren County	White County	Tennessee
Agriculture, forestry, fishing, hunting, mining	3.6%	3.4%	1.0%
Construction	5.9%	6.9%	6.3%
Manufacturing	25.7%	22.3%	13.0%
Wholesale trade	2.2%	2.4%	2.6%
Retail trade	13.6%	12.0%	12.2%
Transportation, warehousing, and utilities	5.3%	7.3%	6.3%
Information	1.4%	1.0%	1.9%
Finance, insurance, real estate, rental, leasing	3.8%	3.2%	5.7%
Professional, scientific, management, administrative, waste management services	5.5%	4.9%	9.5%
Educational services, health care, social assistance	19.8%	20.8%	22.7%
Arts, entertainment, recreation, accommodation, food services	4.9%	7.2%	9.4%
Other services, except public administration	3.6%	3.3%	4.9%
Public administration	4.5%	5.4%	4.4%

Source: US Census Bureau’s 2012-2016 American Community Survey (ACS) 5-year estimates program (Census, 2017).

Environmental Consequences – Under Alternative A, TVA would not issue a 40-year recreation easement to TDEC for continued operation of the recreation facilities on TVA property. TDEC would continue to manage the park under the existing license. TDEC would not restore and repurpose the historic cotton mill and TDOT would not relocate SR-

287. Socioeconomic resources in the vicinity of Rock Island State Park would be unchanged by Alternative A.

Under Alternative B, TVA would grant TDEC a 40-year easement over 367 acres for the long-term management of TVA lands, which would support recreation activities at Rock Island State Park. State Park visitors have a positive economic impact on the local economy. A study on the economic impact of Tennessee State Parks analyzed spending per trip by visitors. The average expenditures in 2009 are shown in Table 3.9 below. Estimates in 2018 dollars, after adjusting for inflation, are also provided.

Table 3.9. Average Expenditure per Trip of Tennessee State Park Visitors

Category	Average Expenditure, 2009	Average Expenditure, Inflated to 2018\$
Food & Beverages	\$56.79	\$65.51
Transportation	\$22.61	\$26.08
Other Expenditures	\$22.45	\$25.90
Lodging	\$17.36	\$20.03
Fishing	\$3.96	\$4.57
Boating	\$3.65	\$4.21
Total	\$126.82	\$146.30

Source: Fly, 2010.

TVA would permit two construction projects under Alternative B: the relocation of SR 287 and the renovation of the historic mill into an inn. The spending associated with these projects would have direct impacts, as well as indirect and induced impacts (also called multiplier impacts), on the state and local economies. Indirect impacts include those that arise from business to business spending, while induced impacts include spending related to changes in consumer income.

A feasibility study prepared for TDOT indicates that the estimated cost of the realignment is \$1,528,600, of which \$25,000 is to obtain a permanent easement on TVA property (Florence and Hutcheson). Such an expenditure would result in purchases from suppliers and direct employment. This spending then would percolate through the economy as multiplier impacts. Thus, the \$1.5 million expenditure on the SR 287 realignment would have an even greater impact on the local and state economy. While a feasibility study was not available for the proposed work at the mill, this multiplier impact would also be seen with the renovation of the historic mill and any ancillary construction. The impacts associated with the construction projects would be short-term ones, limited to the duration of the projects.

While the exact mix of employment that would be associated with the relocation of SR-287 and the renovation of the historic mill is unknown, there are a number of occupations that could reasonably be expected to be involved in the projects. Table 3.10 below presents a sample of these occupations along with the 2016 annual mean wage reported by the BLS for the North Central Tennessee Nonmetropolitan Area in which Warren and White counties lie.

Table 3.10. 2016 Annual Mean Wage by Construction-Related Occupation, North Central Tennessee Nonmetropolitan Area

Occupation	2016 Annual Mean Wage
Civil Engineers	\$65,080
Construction Laborers	\$27,800
Construction Managers	\$90,570
Paving, Surfacing, and Tamping Equipment Operators	\$30,580
Electricians	\$47,580
Painters, Construction and Maintenance	\$30,880
Plumbers, Pipefitters, and Steamfitters	\$46,510

Source: BLS, 2017a.

Note: This table represents a sample of occupations that could reasonably be expected to be associated with the relocation of SR-287 and the renovation of the historic mill.

As noted previously, the effects of removing the traffic volume would have a beneficial impact on visitor safety and overall visitor experience. If this beneficial impact results in an increase in park visitors, then there would be the expectation of positive economic impacts over the long-term, beyond the initial construction period.

The restoration and use of the historic mill for an inn with a restaurant and meeting spaces would have a more significant long-term economic impact on the local economy. As with the construction projects, the exact mix of employment that would be associated with the operation of the inn, restaurant, and meeting rooms is unknown. However, there are a number of occupations that could reasonably be expected to be involved. Table 3.11 below presents a sample of these occupations along with the 2016 annual mean wage reported by the BLS.

Table 3.11. 2016 Annual Mean Wage by Hospitality-Related Occupation, North Central Tennessee Nonmetropolitan Area and State of Tennessee

Occupation	2016 Annual Mean Wage
Building and Grounds Cleaning and Maintenance Occupations ¹	\$23,950
Chef/Head Cook ²	\$33,850
Cook, Restaurant ¹	\$20,810
Diswashers ¹	\$18,850
Food Services Manager ¹	\$40,770
Hotel Desk Clerk ¹	\$18,610
Lodging Manager ²	\$36,670
Maids and Housekeeping Cleaners ¹	\$18,950
Waiters and Waitresses ¹	\$20,880

Sources:

¹BLS, 2017a.

²BLS, 2017b. State of Tennessee data provided. Data were not available for the North Central Tennessee Nonmetropolitan Area.

Note: This table represents a sample of occupations that could reasonably be expected to be associated with the operation of an inn and restaurant.

As described above and shown in Table 3.9, visitors to Tennessee State Parks make expenditures in numerous areas that positively impact local economies. Therefore, it is important to have an estimate of the number of visitors the proposed inn may attract. The average occupancy rates observed at inns at other Tennessee State Parks, along with the average hotel occupancy in the state, were utilized to develop a range of potential occupancy scenarios for the proposed inn at Rock Island State Park. The scenarios used for the evaluation include:

- Low Scenario: Average occupancy rate of 35.6 percent observed during FY 2011-2012 at Tennessee State Park inns. This is considered the low scenario since many inns were considered to be in need of refurbishment at that time, which would have decreased their desirability.¹
- Mid-Range Scenario: Average occupancy rate of 48 percent, as observed at the State Park inn with the highest occupancy rate (Fall Creek Falls).²
- High Scenario: Average statewide hotel occupancy rate of 57 percent.³

The Rock Island Old Mill Site Concept Plan indicates the proposed renovation is anticipated to have 15 rooms, with a mix of rooms with one and two beds.⁴ Based on the scenarios outlined above, a range of occupied nights was developed. To estimate potential revenues associated with the occupied nights, the room rates at other State Park inns, as posted on their websites' reservations systems in March 2018, were examined and averaged. The average nightly rate for a room with a king bed was found to be \$95.25 per night, while the average rate for a room with two double beds was \$83.40 per night. Table 3.12 summarizes the expected number of occupied nights and revenue associated with the inn for each of the scenarios

Table 3.12. Estimated Potential Annual Occupancy Levels and Revenue Associated with 15-Room State Park Inn

Room Type ¹	Low—Average of State Park Inns (36% ²)		Mid-Range—Falls Creek Inn Average (48% ²)		High—Statewide Hotel Average (57% ²)	
	Occupied Nights	Revenue ³	Occupied Nights	Revenue ³	Occupied Nights	Revenue ³
King (6 units)	781	\$74,365	1,051	\$100,127	1,248	\$118,901
2 Doubles (9 units)	1,171	\$97,669	1,577	\$131,505	1,872	\$156,162
Total, Inn	1,952	\$172,034	2,628	\$231,632	3,121	\$275,063
Estimated State Tax (9.75%)		\$16,773		\$22,584		\$26,819
Estimated County Tax (5%)		\$8,602		\$11,582		\$13,753

Sources:

¹Room types from Rock Island Old Mill Concept Site Plan (ESA, 2016).

²Tennessee State Parks, 2013.

¹ Tennessee State Parks, 2013.

² *Ibid.*

³ *Ibid.*

⁴ ESA, 2016.

³Revenue from based on calculated occupied nights shown and rates posted on the Tennessee State Parks web-based reservation system (Tennessee State Parks, 2018).

As shown in Table 3.12, total revenues associated with occupied nights at the inn are expected to be between \$172,034 per year and \$275,063 per year. These revenues will vary directly with room rates and actual occupancy levels achieved. Estimated state taxes, assuming a 9.75 percent tax rate, associated with these revenues would range from \$16,773 to \$26,819 per year. County revenue, assuming a 5 percent tax rate, associated with these revenues would range from \$8,602 to \$13,753 per year.

The estimates of occupied nights were then used to develop an estimate of potential trips, assuming an average of two nights per trip. These trip estimates were combined with the per trip expenditures shown in Table 3.8 to estimate the total potential impact associated with visitors to the proposed inn. These estimates exclude impacts associated with the restaurant and meeting space, as at this time there is not sufficient information available to project such impacts. Table 3.13 presents the potential range of local expenditures, excluding state and local taxes, which could be associated with a 15-room Tennessee State Park inn.

Table 3.13. Estimated Potential Impacts to Economy from Annual Occupancy Levels Associated with 15-Room State Park Inn

	Estimated Occupied Nights	Estimated Trips (2 day average)	Expenditures (Direct Impact)	Indirect and Induced Impact	Total Impact
Low Scenario					
Estimated Inn					
Lodging	1,952	976	\$172,034	\$190,958	\$362,991
Food & Beverages			\$63,935	\$70,968	\$134,904
Transportation			\$25,455	\$28,255	\$53,710
Other Expenditures			<u>\$25,275</u>	<u>\$28,055</u>	<u>\$53,330</u>
<i>Total</i>			\$286,699	\$318,236	\$604,934
Mid-range Scenario					
Estimated Inn					
Lodging	2,628	1,314	\$231,632	\$257,111	\$488,743
Food & Beverages			\$86,085	\$95,554	\$181,639
Transportation			\$34,273	\$38,043	\$72,316
Other Expenditures			<u>\$34,031</u>	<u>\$37,774</u>	<u>\$71,805</u>
<i>Total</i>			\$386,021	\$428,483	\$814,503
High Scenario					
Estimated Inn					
Lodging	3,121	1,560	\$275,063	\$305,320	\$580,383
Food & Beverages			\$102,226	\$113,470	\$215,696
Transportation			\$40,699	\$45,176	\$85,876
Other Expenditures			<u>\$40,411</u>	<u>\$44,857</u>	<u>\$85,268</u>
<i>Total</i>			\$458,399	\$508,823	\$967,223

Source: Based on average trip expenditures shown in Table 3.8 and potential occupancy levels and revenues shown in Table 3.12.

As shown in Table 3.13 above, the total impact from visitors to the proposed inn is estimated to range from roughly \$600,000 to \$970,000 per year. These impacts include spending at the inn, restaurants, convenience and grocery stores, and gas stations. The impacts shown also include multiplier impacts that accrue as spending percolates through the economy.

Cumulative Impacts

Cumulative impacts are defined in the Council on Environmental Quality's regulations at 40 C.F.R. § 1508.7 as follows:

Cumulative impact is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Past actions that have already occurred and present actions are integrated into the existing baseline conditions discussed above. The parcel on which Rock Island State Park is developed was restricted to be used solely for commercial recreation purposes. Future commercial recreation facilities requiring TVA approval at the property could be requested. Additionally, the parcel is zoned for developed recreation in the Great Falls Reservoir Land Management Plan (2017). Due to the deed restrictions in place which ensure the property will be managed within the constraints of commercial recreation and the TVA zoning allocation, the cumulative effects of TVA issuing the recreation easement, redeveloping the mill and relocating SR-287 should be insignificant.

CHAPTER 4 – SUPPORTING INFORMATION

TVA Preparers

Paul Avery, RPA, Cultural Compliance, Archaeologist, BS, Forensic Investigations; BA, Anthropology; MA, Anthropology; 20 years of experience in cultural resource management.

Travis Giles, Project Environmental Planning, NEPA Compliance and Document Development, M.S. in Environmental Science and B.S. in Environmental Policy, 17 years of experience environmental policy and permitting.

Elizabeth Hamrick, Biological Compliance, Terrestrial Zoologist, B.A. in Biology and Anthropology, M.S. in Wildlife and Fisheries Science, 17 years in field biology, 8 years in NEPA analysis.

Sara McLaughlin, Biological Compliance, Terrestrial Zoologist, B.S. in Wildlife and Fisheries Sciences with a minor in Forestry, 11 years in field biology, 5 years conducting habitat surveys and NEPA analysis.

Mark Odom, Aquatic Resources and Threatened and Endangered Species, Watershed Representative, Natural Resources, MS in Biology, 20 years in Aquatic and Terrestrial Biology and Conservation

Kim Pilarski-Hall, Biological Compliance, Wetlands Specialist, M.S. in Geography, Minor in Ecology, 22 years in wetland assessments and delineations.

Craig Philips, Biological Compliance, Aquatic Ecology and Threatened and Endangered Species, M.S. and B.S. in Wildlife and Fisheries Science, 7 years sampling and hydrologic determinations, 5 years in environmental reviews.

Marianne Shuler, Cultural Compliance, Archaeologist, B.A. Religion, emphasis in Middle Eastern Archaeology, 12 years in cultural resource management.

Lesley White, Recreation and Shoreline Management, Recreation Specialist, B.S. and M.S. in Biological Sciences, 13 years in Land Management and Permitting.

W. Doug White, Project Environmental Planning, NEPA Compliance and Document Development, B.S. in Forestry, 15 years in water resources management and NEPA compliance.

Carrie Williamson, Flood Risk, Program Manager, B.S. in Civil Engineering, M.S. in Civil Engineering, Professional Engineer, Certified Floodplain Manager, 5 years in Floodplains and Flood Risk, 3 years in River Forecasting, 11 years in Compliance Monitoring.

Additional Preparers

Diane Reilly, Economist, Socioeconomic Analysis, M.A. in Economics, 23 years in environmental consulting evaluating economic, socioeconomic, and recreation issues. (TRC Environmental Corporation)

Jonathan W. Smith, P.E., IMSA II, Transportation Analysis, 15 years in Civil Engineering specializing in traffic operations, signal design, and traffic studies. (Barge Design Solutions, Inc.)

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CHAPTER 5 – ENVIRONMENTAL ASSESSMENT RECIPIENTS

Following is a list of the agencies, tribes, and organizations who received notice of the final EA's availability with instructions on how to access the EA on the TVA project webpage.

Federal Agencies

Department of Agriculture, Forest Service
Department of Agriculture, Natural Resources Conservation Service, Tennessee
State Conservationist
Department of Army, Corps of Engineers, Nashville District
Department of the Interior, National Park Service

Federally Recognized Tribes

Absentee Shawnee Tribe of Oklahoma
Alabama-Quassarte Tribal Town of the Creek Nation of Oklahoma
Alabama-Coushatta Tribe of Texas
Cherokee Nation of Oklahoma
Chickasaw Nation of Oklahoma
Coushatta Tribe of Louisiana
Eastern Band of Cherokee Indians
Eastern Shawnee Tribe of Oklahoma
Jena Band of Choctaw Indians
Kialegee Tribal Town
Mississippi Band of Choctaw Indians
Muscogee Creek Nation
Poarch Band of Creek Indians
Seminole Nation of Oklahoma
Shawnee Tribe
Thlopthlocco Tribal Town
United Keetoowah Band of Cherokee Indians in Oklahoma

State Agencies/Officials

Tennessee Department of Agriculture
Tennessee Department of Environment and Conservation
 Bureau of Parks and Conservation
 Bureau of Environment
 Division of Natural Areas
 Division of Natural Heritage
 State Parks
Tennessee Historical Commission
Tennessee Wildlife Resources Agency

Individuals and Organizations

Barnes, T.
Binkley, J.
Brown, B.

Brown, H.
Campbell, Be.
Campbell, Bi.
Collier, D.
Collier, J.
Collier, L.
Collier, M.
Collier, P.
Cooper, J.
Creswell, R. and E.
Dawkins, J.
Dobson, A.
Dobson, M.
Fink, R.
Fowler, R.
Fowler, S.
Francescon, K.
Graves, S.
Griffin, K. and S.
Guy, J.
Hash, B.
Hash, D.
Healy, H.
Herbert, D.
Hillis, D.
Hillis, P.
Judkins, B.
MacDonell, R.
Nunley, C.
Perryman, K.
Philpot, E.
Regan, K.
Regan, M.
Robinson, T.
Stratton, S.
Taylor, B.
Taylor, G.
Tidwell, A.
Tidwell, C.
Wright, C.
Young, C.

Appendix A:

Agency Correspondence



Tennessee Valley Authority, 400 West Summit Hill Drive, Knoxville, Tennessee 37902

February 25, 2020

Mr. Reid Nelson
Director
Federal Agency Programs
Advisory Council on Historic Preservation
401 F Street NW, Suite 308
Washington, D.C. 20001-2637

Dear Mr. Nelson:

TENNESSEE VALLEY AUTHORITY (TVA), FINAL MEMORANDUM OF AGREEMENT (MOA) BETWEEN THE TENNESSEE VALLEY AUTHORITY AND THE TENNESSEE STATE HISTORIC PRESERVATION OFFICER REGARDING THE GREAT FALLS COTTON MILL REHABILITATION PROJECT INCLUDING U.S. HIGHWAY 287 ROAD RELOCATION, WARREN COUNTY, TENNESSEE (35.803431, -85.627156)

Enclosed is one copy of the subject final MOA on acid-free paper. Pursuant to 800.6(b)(1)(iv), TVA is filing this final MOA with your office.

We notified you of the adverse effect electronically in April 2018. In your reply, dated April 12, 2018, you notified TVA that your participation in the consultation to resolve adverse effects was not needed.

TVA is also providing copies of this final MOA to the Tennessee State Historic Preservation Officer, Tennessee Department of Environment and Conservation, and Tennessee Department of Transportation.

Please contact Paul Avery by phone, (865) 632-3302 or by email, pgavery@tva.gov with any comments or questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Clinton E. Jones".

Clinton E. Jones
Manager
Cultural Compliance

PGA:ABM
Enclosures

INTERNAL COPIES ONLY, NOT TO BE INCLUDED WITH OUTGOING LETTER:

S. Dawn Booker, BR 2C-C
Michael C. Easley, BR 2C-C
Travis A. Giles, BR 2C-C
Susan R. Jacks, WT 11C-K
Khurshid K. Mehta, WT 6A-K
Paul J. Pearman, BR 2C-C
M. Susan Smelley, BR 2C-C
Rebecca Tolene, WT 7B-K
Lesley M. White, WTB 1A-PAT
ECM, WT CA-K

**MEMORANDUM OF AGREEMENT
BETWEEN
THE TENNESSEE VALLEY AUTHORITY
AND
THE TENNESSEE STATE HISTORIC PRESERVATION OFFICER
REGARDING
THE GREAT FALLS COTTON MILL REHABILITATION PROJECT
INCLUDING U.S. HIGHWAY 287 ROAD RELOCATION,
WARREN COUNTY, TENNESSEE**

WHEREAS, the Tennessee Valley Authority (TVA) proposes to grant to the Tennessee Department of Environment and Conservation (TDEC) a 40-year term easement over approximately 367 acres of land for public recreation and continued management of Rock Island State Park; and

WHEREAS, this easement includes an approximate 5 acres (of the 367) in which the Great Falls Cotton Mill (GFCM) is located, which may be conveyed to a third party for rehabilitation of the GFCM and commercial recreation (Appendix A); and

WHEREAS, to facilitate the rehabilitation of the GFCM, TVA also proposes to grant the Tennessee Department of Transportation (TDOT) an easement which crosses the 367 acres to relocate U.S Highway 287; and

WHEREAS, TVA considers the granting of the 367-acre easement and the easement for the road relocation to be a federal "undertaking" as defined in 36 § CFR 800.16(y); and

WHEREAS, TVA in consultation with the Tennessee State Historic Preservation Officer (TN SHPO), has determined the area of potential effects (APE) to include the approximately 367-acre easement and all areas within a quarter mile radius of the proposed road corridor which are within the viewshed of the completed road; and

WHEREAS, the easement will require the TDEC to obtain prior approval from TVA for any proposed ground disturbing work in the 367-acre easement area; and

WHEREAS, a 27-acre portion of the APE that will be subject to ground-disturbing activities associated with the relocation of U.S. Highway 287, the rehabilitation of the GFCM, and currently proposed commercial recreation was subjected to archaeological identification and evaluation studies; and

WHEREAS, archaeological site 40WR125 within the APE was determined, in consultation, eligible for listing on the National Register of Historic Places (NRHP) and will be adversely affected by the proposed undertaking (Appendix A); and

WHEREAS, the identification and evaluation studies identified two cemeteries (Unnamed Cemetery [40WR117] and the Cunningham Cemetery) within the APE, and TVA and the TN SHPO agree that the Unnamed Cemetery (40WR117) is potentially eligible for the NRHP; and

WHEREAS, identification and evaluation studies conducted within the APE identified three historic architectural resources (Collins Bridge, Great Falls Hydroelectric Station, and the

GFCM), and TVA and the TN SHPO agree that the Collins Bridge and Great Falls Hydroelectric Station would not be adversely affected by the proposed undertaking; and

WHEREAS, a conditions and rehabilitation assessment has been conducted for the GFCM; and

WHEREAS, a specific rehabilitation plan for the GFCM will be developed in accordance with the guidelines of the *Secretary of Interior's Standards for Rehabilitation* and *Section 106*, and consultation would occur prior to the approval of plans for rehabilitation in order to address the potential for adverse effects; and

WHEREAS, TVA consulted with the TDEC and TDOT and both have agreed to participate in the development of this MOA and sign the MOA as invited Signatories; and

WHEREAS, TVA has prepared this MOA in consultation with TDEC, TDOT, and the TN SHPO in order to address the effects to Site 40WR125 and the Great Falls Cotton Mill resulting from the relocation of U.S. Highway 287; and

WHEREAS, pursuant to 36 CFR § 800.6(a)(1), TVA has notified the Advisory Council on Historic Preservation (ACHP) of the finding of adverse effect on Site 40WR125 and the ACHP has chosen not to participate in the consultation; and

WHEREAS, TVA consulted with the Absentee Shawnee Tribe of Oklahoma, Cherokee Nation, Chickasaw Nation, Coushatta Tribe of Louisiana, Eastern Band of Cherokee Indians, Eastern Shawnee Tribe of Oklahoma, Kialegee Tribal Town, Muscogee Creek Nation, and the Shawnee Tribe and invited them to participate in this MOA as concurring parties; and

WHEREAS, there is no evidence that Native American human remains, associated or unassociated funerary objects, sacred objects, or objects of cultural patrimony (collectively termed "cultural items") are present at 40WR125; and

WHEREAS, the possibility still exists that cultural items could be inadvertently discovered when mitigation and construction activities associated with this undertaking are carried out;

NOW THEREFORE, TVA, the TDEC, the TDOT and the TN SHPO agree that the undertaking shall be implemented in accordance with the following stipulations to satisfy TVA's responsibilities under Section 106 of the NHPA. The Federal Preservation Officer, or the designee thereof, shall act for TVA in all matters concerning the administration of this agreement.

STIPULATIONS

TVA shall ensure that the following stipulations are carried out.

I. TREATMENT PLAN: THE GREAT FALLS COTTON MILL REHABILITATION

All rehabilitation work will be conducted by a contractor experienced with the guidelines in the *Secretary of the Interior's Standards for Rehabilitation* and have experience working with historic properties in this manner. The contractor will be reviewed and approved by TVA and

the TN SHPO through examples of previous preservation work. Specific plans have not been developed for the GFCM rehabilitation as of the date of execution of this MOA. Once plans are developed, TVA will submit project details to the TN SHPO to ensure that the rehabilitation is in accordance with the standards mentioned below. TDEC will also seek public comment prior to the implementation of the rehabilitation plan. Final approval from the TN SHPO must be obtained prior to the beginning of all rehabilitation work. As a result of the use of the Historic Preservation Fund (HPF), the SHPO must review all work inside and out until May 2022. Requirements listed in Stipulation I.A. below and the rehabilitation plan will be recorded from this time forward in all conveyances involving the GFCM and surrounding 5 acres for proposed commercial recreation.

A. Great Falls Cotton Mill Rehabilitation Efforts Based on Feasibility Study

A rehabilitation and feasibility study for the GFCM and adjacent spring house was conducted in order to document the condition of the GFCM, determine the original and replaced features and identify areas needing remediation. Based on the study, the rehabilitation efforts will adhere to the following requirements:

1. Exterior brick and limestone masonry will be retained, and will remain visible and unpainted; Masonry repair and repointing shall follow Preservation Brief #2, *The Repointing of Historic Masonry*.
2. Roof flashing and guttering will be installed.
3. Original wooden frames and sills will be repaired and painted, preferably with original paint color. Remaining original window sashes will be repaired, reglazed, repainted and reinstalled in their original openings. Repair of historic wooden windows shall follow *Preservation Brief #9. The Repair of Historic Wooden Windows*. New windows shall match the historic windows in design, scale, and where possible, materials.
4. Original doors will be rebuilt, and new doors will be installed to be compatible with original examples in historic design, scale and materials; they shall match the historic doors in scale, and where possible, materials.
5. Interior work will follow the National Park Service's ten basic principles for rehabilitation of historic interiors outlined in *Preservation Brief 18. Rehabilitating Interiors in Historic Buildings: Identifying and Preserving Character-Defining Elements*.
6. Any replacements or additions (including adding accessibility) must be done with in kind materials to match the original elements as closely as possible. Replacement of historic missing features and materials must be compatible in design, scale, color, texture, and where possible, materials.
7. Additions and new construction shall be differentiated from the historic and shall be compatible with the historic design and materials.

II. AVOIDANCE: UNNAMED CEMETERY (40WR117) AND CUNNINGHAM CEMETERY

TVA has created a 50 foot protective buffer surrounding the boundaries of both cemeteries and recorded the buffers on project plans and drawings. TVA will install temporary construction fencing between each cemetery and the proposed road corridor and will leave the fencing in place throughout the duration of construction. Upon completion of all currently-proposed construction, TVA will, in coordination with TDEC, arrange to install permanent fencing around both cemeteries, including their 50 foot buffers. The permanent fencing will be monitored and maintained by TDEC.

III. MITIGATION: 40WR125

1. Data Recovery

1. TVA shall require archaeological data recovery excavations at site 40WR125 as mitigation for the adverse effect resulting from the undertaking.
2. TVA shall ensure that data recovery of site 40WR125 is conducted as stipulated in a Data Recovery Plan (Appendix A) prepared by TVA in consultation with the concurring parties and Signatories.
3. The Data Recovery Plan will be implemented by or under the direct supervision of a person or persons meeting, at a minimum, the Secretary's *Professional Qualifications Standards* (48 FR 44738) and the TN SHPO's *Standards and Guidelines for Archaeological Resource Management Studies*. The data recovery excavations shall be performed by an archaeological contractor in accordance with the Data Recovery Plan. A written report of the data recovery will be distributed by TVA to the Signatories and concurring parties for review and comments.
4. During the data recovery excavations, the archaeological contractor will submit weekly progress reports to TVA.
5. TVA will submit weekly progress reports to the TN SHPO throughout the data recovery excavations.

2. Reports

1. TVA shall ensure that all investigations carried out in accordance with this MOA are recorded in formal, written reports that meet the Secretary's *Standards and Guidelines for Identification* (48 FR 44720-23) and the TN SHPO *Standards and Guidelines for Architectural and Archaeological Resources Management Studies*. The Signatories and concurring parties shall be afforded thirty (30) days to review, unless otherwise specified elsewhere in this agreement, and provide comments on any reports prepared in furtherance of this MOA.
2. Upon completion of the preliminary analysis of findings, TVA shall prepare a Detailed Management Summary. TVA shall provide copies of the management summary to the Signatories for their review. The Detailed Management Summary shall include the following information for each site.

- (a) Maps showing the locations of all investigative units and identified cultural features.

- (b) Photographs and/or profile drawings of representative stratigraphic profiles.
 - (c) Photographs taken during the data recovery excavations.
 - (d) Documentation that the work specified in the data recovery plan was carried out as agreed upon by the Signatories.
 - (e) Summary of the volume of dirt excavated at 40WR125.
 - (f) Brief discussion of the materials collected and cultural features investigated.
 - (g) A preliminary discussion of the significance of the collected data to the research questions cited in the data recovery plan.
3. Based on their review of the Detailed Management Summary, the Signatories shall provide comments on the adequacy of the data recovery excavations as mitigation for the adverse effect. TVA shall give due consideration to the comments provided in finalizing the data recovery report. No ground disturbing work associated with the construction of newly proposed U.S. Highway 287 shall begin prior to receipt of comments from the TN SHPO and Signatories on the Detailed Management Summary or the end of the 30-day review period, whichever comes first.
 4. TVA shall provide a draft report of the investigations to the Signatories once all analyses have been completed. The draft report will contain a full report of the investigations, including detailed descriptions of the site, full results of analyses, and geomorphological and archaeological interpretations. After receipt of any comments on the draft report and making any needed changes, TVA shall submit a final report to the Signatories.

3. Public Outreach and Interpretation

Following the completion of the data recovery, TVA will consult with TDEC on the following:

1. Development and installation of interpretive signage regarding the excavations, significance of 40WR125, and the GFCM within the proposed easement.
2. Hosting an outreach event for the public to discuss the results of the data recovery and organizing an interpretive tour.
3. If feasible, and through coordination with TDEC, development and installation of a kiosk or display at the Rock Island State Park office.

IV. POST REVIEW DISCOVERIES

Pursuant to 36 CFR § 800.13, TVA, in consultation with the TN SHPO and concurring parties, shall make a reasonable effort to avoid, minimize, or mitigate any adverse effects to archaeological resources that are discovered after the completion of the Section 106 process for the relocation of U.S. Highway 287 and the rehabilitation of the GFCM. This effort will include

three main components: design modifications, construction monitoring, and resolution of adverse effects, as follows:

1. Design Modifications

TVA and the Signatories have agreed upon a corridor design for the new road alignment that avoids as many intact structure areas as possible. Once work is proposed for the GFCM rehabilitation, Signatories will consult on ways to modify any plans that may cause an adverse effect to intact structure areas.

2. Construction Monitoring

TVA shall ensure that a qualified archaeologist is present on site during all ground disturbing activities associated with construction in order to identify any NRHP-eligible archaeological sites or features that were not identified during the identification and evaluation studies, and to stop work in the event of such a discovery. The construction monitoring shall abide by the following conditions:

1. An archaeological monitor meeting, at a minimum, the Secretary's *Professional Qualifications Standards* (48 FR 44738), shall be present on a weekly basis during the new road construction to ensure the agreed upon corridor is followed, temporary construction fencing is maintained, and no archaeological deposits associated with 40WR125 are disturbed.
2. An archaeological monitor meeting, at a minimum, the Secretary's *Professional Qualifications Standards* (48 FR 44738), shall be present, during all ground disturbing work involving the existing Highway 287 and/or parking areas adjacent to the GFCM and the Great Falls Spring Castle.
3. TVA shall prepare, in consultation with the Signatories, a Monitoring and Unanticipated Discovery Plan (Appendix B) that documents appropriate contact names and numbers for the monitor to call during an unanticipated discovery. The plan lays out notification procedures and steps TVA must take in consultation with the TN SHPO. TVA shall provide each archaeological monitor and the on-site construction manager with copies of the Monitoring and Unanticipated Discovery Plan.
4. If at any time unforeseen or unexpected effects occur to historic properties that are eligible for inclusion in the NRHP the archaeological monitor shall stop all work within 50 feet of these deposits and notify TVA Cultural Compliance immediately.
5. TVA will evaluate the nature and magnitude of unexpected effects on historic properties by applying the criteria of adverse effect at 36 CFR Part 800.5(a)(1).
6. If TVA determines the effect constitutes an adverse effect, it will reopen consultation with Signatories and concurring parties. No construction will take place within 50 feet of the inadvertent discovery until after TVA and the concurring parties have agreed formally on a path forward.

V. TREATMENT OF NATIVE AMERICAN CULTURAL ITEMS

No evidence has been found that Native American human remains, associated or unassociated funerary objects, sacred objects, or objects of cultural patrimony (collectively termed “cultural items”) are present at 40WR125. Should any cultural items be found during data recovery or construction, all work will be stopped immediately within 100 feet of the cultural items and TVA will be notified immediately. TVA shall notify the Signatories within 48 hours and shall ensure that their treatment complies with all applicable state and federal laws concerning such cultural items.

VI. AMENDMENTS

This MOA may be amended when such an amendment is agreed to in writing by all Signatories. The amendment will be effective on the date TVA receives signatures from all Signatories.

VII. TERMINATION

If any Signatory to this MOA determines that the terms will not or cannot be carried out, that party shall immediately consult with the other parties to attempt to develop an amendment in accordance with Stipulation VI above. If within thirty (30) days (or another time period agreed to by the Signatories) an amendment cannot be reached, any signatory may terminate the MOA upon written notification to the other Signatories.

Once the MOA is terminated, and prior to work continuing on the Undertaking, TVA must either (a) execute an MOA pursuant to 36 CFR § 800.6 or (b) request, take into account, and respond to the comments provided by the ACHP under 36 CFR § 800.7.

If Stipulation I has not been implemented in ten (10) years from the date of execution, this MOA will be terminated unless TVA and the TN SHPO agree, in writing prior to the termination date, to extend the duration of the MOA an additional ten (10) years.

If Stipulations II and III have not been implemented within five (5) years from the date of execution, this MOA will be terminated unless TVA and the TN SHPO agree, in writing prior to the termination date, to extend the duration of the MOA an additional five (5) years.

If the MOA is terminated prior to TVA’s completion of the undertaking and prior to TVA’s completion of Stipulation III, TVA shall continue to follow the procedures outlined by Subpart B of 36 CFR Part 800 for the resolution of adverse effects on historic properties resulting from the undertaking.

EXECUTION of this MOA by TVA and the TN SHPO, the filing of this MOA with the ACHP, and implementation of its terms evidence that TVA has, in accordance with Section 106 of the National Historic Preservation Act, taken into account the effects of this undertaking on historic properties and afforded the ACHP an opportunity to comment. TVA will submit a copy of the executed MOA, along with the documentation that is specified in 36 CFR § 800.11(f), to the ACHP.

SIGNATORY

TENNESSEE VALLEY AUTHORITY

By: 

Mr. Clinton E. Jones
Deputy Federal Preservation Officer

Date: 2-13-20

SIGNATORY

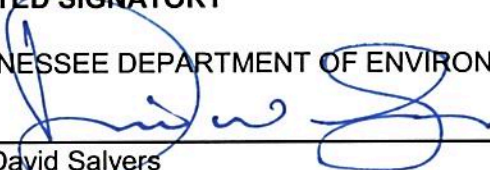
THE TENNESSEE STATE HISTORIC PRESERVATION OFFICER

By: E. Patrick McIntyre, Jr.
Mr. E. Patrick McIntyre, Jr
Tennessee State Historic Preservation Officer

Date: 10/31/2017

INVITED SIGNATORY

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION

By: 
Mr. David Salyers
Deputy Commissioner
DWS

Date: 11/7/19

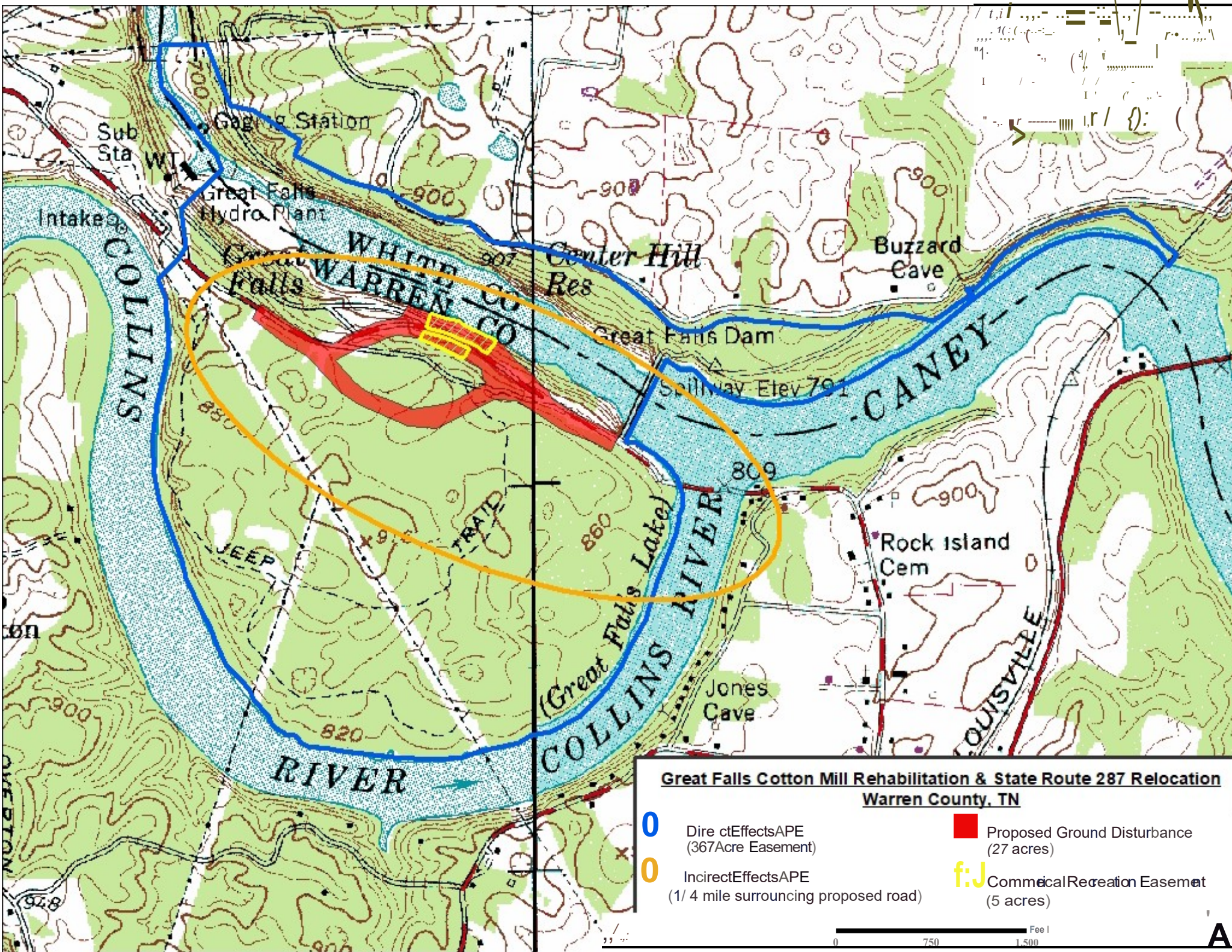
INVITED SIGNATORY

TENNESSEE DEPARTMENT OF TRANSPORTATION

By: Clay Bright
Mr. Clay Bright
Commissioner

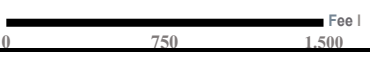
Date: 1/17/2020

Appendix A
Project Maps & APE



**Great Falls Cotton Mill Rehabilitation & State Route 287 Relocation
Warren County, TN**

- 0 Direct Effects APE (367 Acre Easement)
- 0 Indirect Effects APE (1/4 mile surrounding proposed road)
- Proposed Ground Disturbance (27 acres)
- f:j Commercial Recreation Easement (5 acres)



A

Project Review Form - TVA Bat Strategy (06/2019)

*This form should **only** be completed if project includes activities in Tables 2 or 3 (STEP 2 below). This form is not required if project activities are limited to Table 1 (STEP 2) or otherwise determined to have no effect on federally listed bats. If so, include the following statement in your environmental compliance document (e.g., add as a comment in the project CEC): "Project activities limited to Bat Strategy Table 1 or otherwise determined to have no effect on federally listed bats. Bat Strategy Project Review Form NOT required." This form is to assist in determining required conservation measures per TVA's ESA Section 7 programmatic consultation for routine actions and federally listed bats.¹*

Project Name: Rock Island State Park Recreation Easement **Date:** 11/20/2019
Contact(s): Doug White, Lesley White **CEC#:** _____ **Project ID:** 2017-01
Project Location (City, County, State): Warren and White Counties, TN

Project Description:

There are 3 elements to this project. 1) Establish a 40-year public and commercial recreation easement allowing the management of 367 acres of TVA lands by TDEC. 2) Restoration and use of a historic mill and improvements within the adjacent 5 acres. 3) Issue a permanent easement to TDOT for the relocation of a portion of SR-287. Please see EA for a more detailed project description.

SECTION 1: PROJECT INFORMATION - ACTION AND ACTIVITIES

STEP 1) Select TVA Action. If none are applicable, contact environmental support staff, Environmental Project Lead, or Terrestrial Zoologist to discuss whether form (i.e., application of Bat Programmatic Consultation) is appropriate for project:

- | | |
|---|--|
| <input type="checkbox"/> 1 Manage Biological Resources for Biodiversity and Public Use on TVA Reservoir Lands | <input type="checkbox"/> 6 Maintain Existing Electric Transmission Assets |
| <input type="checkbox"/> 2 Protect Cultural Resources on TVA-Retained Land | <input type="checkbox"/> 7 Convey Property associated with Electric Transmission |
| <input checked="" type="checkbox"/> 3 Manage Land Use and Disposal of TVA-Retained Land | <input type="checkbox"/> 8 Expand or Construct New Electric Transmission Assets |
| <input type="checkbox"/> 4 Manage Permitting under Section 26a of the TVA Act | <input type="checkbox"/> 9 Promote Economic Development |
| <input type="checkbox"/> 5 Operate, Maintain, Retire, Expand, Construct Power Plants | <input type="checkbox"/> 10 Promote Mid-Scale Solar Generation |

STEP 2) Select all activities from Tables 1, 2, and 3 below that are included in the proposed project.

TABLE 1. Activities with no effect to bats. Conservation measures & completion of bat strategy project review form NOT required.

<input type="checkbox"/> 1. Loans and/or grant awards	<input type="checkbox"/> 8. Sale of TVA property	<input type="checkbox"/> 19. Site-specific enhancements in streams and reservoirs for aquatic animals
<input type="checkbox"/> 2. Purchase of property	<input type="checkbox"/> 9. Lease of TVA property	<input type="checkbox"/> 20. Nesting platforms
<input type="checkbox"/> 3. Purchase of equipment for industrial facilities	<input type="checkbox"/> 10. Deed modification associated with TVA rights or TVA property	<input type="checkbox"/> 41. Minor water-based structures (this does not include boat docks, boat slips or piers)
<input type="checkbox"/> 4. Environmental education	<input type="checkbox"/> 11. Abandonment of TVA retained rights	<input type="checkbox"/> 42. Internal renovation or internal expansion of an existing facility
<input type="checkbox"/> 5. Transfer of ROW easement and/or ROW equipment	<input type="checkbox"/> 12. Sufferance agreement	<input type="checkbox"/> 43. Replacement or removal of TL poles
<input type="checkbox"/> 6. Property and/or equipment transfer	<input type="checkbox"/> 13. Engineering or environmental planning or studies	<input type="checkbox"/> 44. Conductor and overhead ground wire installation and replacement
<input checked="" type="checkbox"/> 7. Easement on TVA property	<input type="checkbox"/> 14. Harbor limits delineation	<input type="checkbox"/> 49. Non-navigable houseboats

TABLE 2. Activities not likely to adversely affect bats with implementation of conservation measures. Conservation measures and completion of bat strategy project review form REQUIRED; review of bat records in proximity to project NOT required.

<input checked="" type="checkbox"/> 18. Erosion control, minor	<input type="checkbox"/> 57. Water intake - non-industrial	<input type="checkbox"/> 79. Swimming pools/associated equipment
<input type="checkbox"/> 24. Tree planting	<input type="checkbox"/> 58. Wastewater outfalls	<input type="checkbox"/> 81. Water intakes – industrial
<input type="checkbox"/> 30. Dredging and excavation; recessed harbor areas	<input type="checkbox"/> 59. Marine fueling facilities	<input type="checkbox"/> 84. On-site/off-site public utility relocation or construction or extension
<input type="checkbox"/> 39. Berm development	<input type="checkbox"/> 60. Commercial water-use facilities (e.g., marinas)	<input type="checkbox"/> 85. Playground equipment - land-based
<input type="checkbox"/> 40. Closed loop heat exchangers (heat pumps)	<input type="checkbox"/> 61. Septic fields	<input type="checkbox"/> 87. Aboveground storage tanks
<input type="checkbox"/> 45. Stream monitoring equipment - placement and use	<input type="checkbox"/> 66. Private, residential docks, piers, boathouses	<input type="checkbox"/> 88. Underground storage tanks
<input type="checkbox"/> 46. Floating boat slips within approved harbor limits	<input type="checkbox"/> 67. Siting of temporary office trailers	<input type="checkbox"/> 90. Pond closure
<input type="checkbox"/> 48. Laydown areas	<input type="checkbox"/> 68. Financing for speculative building construction	<input type="checkbox"/> 93. Standard License
<input type="checkbox"/> 50. Minor land based structures	<input type="checkbox"/> 72. Ferry landings/service operations	<input type="checkbox"/> 94. Special Use License
<input type="checkbox"/> 51. Signage installation	<input type="checkbox"/> 74. Recreational vehicle campsites	<input type="checkbox"/> 95. Recreation License
<input type="checkbox"/> 53. Mooring buoys or posts	<input type="checkbox"/> 75. Utility lines/light poles	<input type="checkbox"/> 96. Land Use Permit
<input type="checkbox"/> 56. Culverts	<input type="checkbox"/> 76. Concrete sidewalks	

Table 3: Activities that may adversely affect federally listed bats. Conservation measures AND completion of bat strategy project review form REQUIRED; review of bat records in proximity of project REQUIRED by OSAR/Heritage eMap reviewer or Terrestrial Zoologist.

<input type="checkbox"/> 15. Windshield and ground surveys for archaeological resources	<input checked="" type="checkbox"/> 34. Mechanical vegetation removal, includes trees or tree branches > 3 inches in diameter	<input checked="" type="checkbox"/> 69. Renovation of existing structures
<input checked="" type="checkbox"/> 16. Drilling	<input checked="" type="checkbox"/> 35. Stabilization (major erosion control)	<input type="checkbox"/> 70. Lock maintenance/ construction
<input type="checkbox"/> 17. Mechanical vegetation removal, does not include trees or branches > 3" in diameter (in Table 3 due to potential for woody burn piles)	<input checked="" type="checkbox"/> 36. Grading	<input type="checkbox"/> 71. Concrete dam modification
<input type="checkbox"/> 21. Herbicide use	<input type="checkbox"/> 37. Installation of soil improvements	<input type="checkbox"/> 73. Boat launching ramps
<input checked="" type="checkbox"/> 22. Grubbing	<input type="checkbox"/> 38. Drain installations for ponds	<input checked="" type="checkbox"/> 77. Construction or expansion of land-based buildings
<input type="checkbox"/> 23. Prescribed burns	<input type="checkbox"/> 47. Conduit installation	<input type="checkbox"/> 78. Wastewater treatment plants
<input checked="" type="checkbox"/> 25. Maintenance, improvement or construction of pedestrian or vehicular access corridors	<input type="checkbox"/> 52. Floating buildings	<input type="checkbox"/> 80. Barge fleeting areas
<input type="checkbox"/> 26. Maintenance/construction of access control measures	<input type="checkbox"/> 54. Maintenance of water control structures (dewatering units, spillways, levees)	<input type="checkbox"/> 82. Construction of dam/weirs/ levees
<input type="checkbox"/> 27. Restoration of sites following human use and abuse	<input type="checkbox"/> 55. Solar panels	<input type="checkbox"/> 83. Submarine pipeline, directional boring operations
<input type="checkbox"/> 28. Removal of debris (e.g., dump sites, hazardous material, unauthorized structures)	<input type="checkbox"/> 62. Blasting	<input type="checkbox"/> 86. Landfill construction
<input type="checkbox"/> 29. Acquisition and use of fill/borrow material	<input type="checkbox"/> 63. Foundation installation for transmission support	<input type="checkbox"/> 89. Structure demolition
<input type="checkbox"/> 31. Stream/wetland crossings	<input type="checkbox"/> 64. Installation of steel structure, overhead bus, equipment, etc.	<input type="checkbox"/> 91. Bridge replacement
<input type="checkbox"/> 32. Clean-up following storm damage	<input type="checkbox"/> 65. Pole and/or tower installation and/or extension	<input type="checkbox"/> 92. Return of archaeological remains to former burial sites
<input type="checkbox"/> 33. Removal of hazardous trees/tree branches		

STEP 3) Project includes one or more activities in Table 3?

YES (Go to Step 4)

NO (Go to Step 13)

STEP 4) Answer questions a through e below (applies to projects with activities from Table 3 ONLY)

- a) Will project involve continuous noise (i.e., ≥ 24 hrs) that is greater than 75 decibels measured on the A scale (e.g., loud machinery)? **NO** (NV2 does not apply) **YES** (NV2 applies, subject to records review)
- b) Will project involve entry into/survey of cave? **NO** (HP1/HP2 do not apply) **YES** (HP1/HP2 applies, subject to review of bat records)
- c) If conducting **prescribed burning (activity 23)**, estimated acreage: and timeframe(s) below; **N/A**

STATE	SWARMING	WINTER	NON-WINTER	PUP
GA, KY, TN	<input type="checkbox"/> Oct 15 - Nov 14	<input type="checkbox"/> Nov 15 - Mar 31	<input type="checkbox"/> Apr 1 - May 31, Aug 1 - Oct 14	<input type="checkbox"/> Jun 1 - Jul 31
VA	<input type="checkbox"/> Sep 16 - Nov 15	<input type="checkbox"/> Nov 16 - Apr 14	<input type="checkbox"/> Apr 15 - May 31, Aug 1 - Sept 15	<input type="checkbox"/> Jun 1 - Jul 31
AL	<input type="checkbox"/> Oct 15 - Nov 14	<input type="checkbox"/> Nov 15 - Mar 15	<input type="checkbox"/> Mar 16 - May 31, Aug 1 - Oct 14	<input type="checkbox"/> Jun 1 - Jul 31
NC	<input type="checkbox"/> Oct 15 - Nov 14	<input type="checkbox"/> Nov 15 - Apr 15	<input type="checkbox"/> Apr 16 - May 31, Aug 1 - Oct 14	<input type="checkbox"/> Jun 1 - Jul 31
MS	<input type="checkbox"/> Oct 1 - Nov 14	<input type="checkbox"/> Nov 15 - Apr 14	<input type="checkbox"/> Apr 15 - May 31, Aug 1 - Sept 30	<input type="checkbox"/> Jun 1 - Jul 31

- d) Will the project involve vegetation piling/burning? **NO** (SSPC4/SHF7/SHF8 do not apply) **YES** (SSPC4/SHF7/SHF8 applies, subject to review of bat records)

- e) If **tree removal (activity 33 or 34)**, estimated amount: **ac** **trees** **N/A**

STATE	SWARMING	WINTER	NON-WINTER	PUP
GA, KY, TN	<input type="checkbox"/> Oct 15 - Nov 14	<input checked="" type="checkbox"/> Nov 15 - Mar 31	<input type="checkbox"/> Apr 1 - May 31, Aug 1 - Oct 14	<input type="checkbox"/> Jun 1 - Jul 31
VA	<input type="checkbox"/> Sep 16 - Nov 15	<input type="checkbox"/> Nov 16 - Apr 14	<input type="checkbox"/> Apr 15 - May 31, Aug 1 - Sept 15	<input type="checkbox"/> Jun 1 - Jul 31
AL	<input type="checkbox"/> Oct 15 - Nov 14	<input type="checkbox"/> Nov 15 - Mar 15	<input type="checkbox"/> Mar 16 - May 31, Aug 1 - Oct 14	<input type="checkbox"/> Jun 1 - Jul 31
NC	<input type="checkbox"/> Oct 15 - Nov 14	<input type="checkbox"/> Nov 15 - Apr 15	<input type="checkbox"/> Apr 16 - May 31, Aug 1 - Oct 14	<input type="checkbox"/> Jun 1 - Jul 31
MS	<input type="checkbox"/> Oct 1 - Nov 14	<input type="checkbox"/> Nov 15 - Apr 14	<input type="checkbox"/> Apr 15 - May 31, Aug 1 - Sept 30	<input type="checkbox"/> Jun 1 - Jul 31

- If warranted, does project have flexibility for bat surveys (May 15-Aug 15): **MAYBE** **YES** **NO**

*** For **PROJECT LEADS** whose projects will be reviewed by a Heritage Reviewer (Natural Resources Organization only), **STOP HERE**. Click File/Save As, name form as "ProjectLead_BatForm_CEC-or-ProjectIDNo_Date", and submit with project information. Otherwise continue to Step 5. ***

SECTION 2: REVIEW OF BAT RECORDS (applies to projects with activities from Table 3 ONLY)

STEP 5) Review of bat/cave records conducted by Heritage/OSAR reviewer?

- YES** **NO** (Go to Step 13)

Info below completed by: **Heritage Reviewer** (name) Date

OSAR Reviewer (name) Date

Terrestrial Zoologist (name) Elizabeth Hamrick Date Nov 21, 2019

- Gray bat records: None Within 3 miles* Within a cave* Within the County
- Indiana bat records: None Within 10 miles* Within a cave* Capture/roost tree* Within the County
- Northern long-eared bat records: None Within 5 miles* Within a cave* Capture/roost tree* Within the County
- Virginia big-eared bat records: None Within 6 miles* Within the County
- Caves: None within 3 mi Within 3 miles but > 0.5 mi Within 0.5 mi but > 0.25 mi* Within 0.25 mi but > 200 feet* Within 200 feet*

- Bat Habitat Inspection Sheet completed? **NO** **YES**

- Amount of **SUITABLE** habitat to be removed/burned (may differ from STEP 4e): (**ac** **trees**)* **N/A**

STEP 6) Provide any additional notes resulting from Heritage Reviewer records review in Notes box below then
 **Go to Step 13**

Notes from Bat Records Review (e.g., historic record; bats not on landscape during action; DOT bridge survey with negative results):

There is a historic Indiana bat record 5.9 miles away but the nearest extant record is Hubbards cave 17.6 mi away. Therefore the project is in "Potential Habitat".

STEPS 7-12 To be Completed by Terrestrial Zoologist (if warranted):

STEP 7) Project will involve:

- Removal of suitable trees within 0.5 mile of P1-P2 Indiana bat hibernacula or 0.25 mile of P3-P4 Indiana bat hibernacula or any NLEB hibernacula.
- Removal of suitable trees within 10 miles of documented Indiana bat (or within 5 miles of NLEB) hibernacula.
- Removal of suitable trees > 10 miles from documented Indiana bat (> 5 miles from NLEB) hibernacula.
- Removal of trees within 150 feet of a documented Indiana bat or northern long-eared bat maternity roost tree.
- Removal of suitable trees within 2.5 miles of Indiana bat roost trees or within 5 miles of Indiana bat capture sites.
- Removal of suitable trees > 2.5 miles from Indiana bat roost trees or > 5 miles from Indiana bat capture sites.
- Removal of documented Indiana bat or NLEB roost tree, if still suitable.
- N/A

STEP 8) Presence/absence surveys were/will be conducted: YES NO TBD

STEP 9) Presence/absence survey results, on NEGATIVE POSITIVE N/A

STEP 10) Project WILL WILL NOT require use of Incidental Take in the amount of acres or trees proposed to be used during the WINTER VOLANT SEASON NON-VOLANT SEASON N/A

STEP 11) Available Incidental Take (prior to accounting for this project) as of

TVA Action	Total 20-year	Winter	Volant Season	Non-Volant Season
3 Manage Land Use and Disposal of TVA-Retained Land	12,587.63	6,292.33	3,775.3	2,520

STEP 12) Amount contributed to TVA's Bat Conservation Fund upon activity completion: \$ OR N/A

TERRESTRIAL ZOOLOGISTS, after completing SECTION 2, review Table 4, modify as needed, and then complete section for Terrestrial Zoologists at end of form.

SECTION 3: REQUIRED CONSERVATION MEASURES

STEP 13) Review Conservation Measures in Table 4 and ensure those selected are relevant to the project. If not, manually override and uncheck irrelevant measures, and explain why in ADDITIONAL NOTES below Table 4.

Did review of Table 4 result in ANY remaining Conservation Measures in **RED**?

- NO (Go to Step 14)
- YES (STOP HERE; Submit for Terrestrial Zoology Review. Click File/Save As, name form as "ProjectLead_BatForm_CEC-or-ProjectIDNo_Date", and submit with project information).

Table 4. TVA's ESA Section 7 Programmatic Bat Consultation Required Conservation Measures

The Conservation Measures in Table 4 are automatically selected based on your choices in Tables 2 and 3 but can be manually overridden, if necessary. To Manually override, press the button and enter your name.

Manual Override

Name: Elizabeth Hamrick

Check if Applies to Project	Activities Subject To Conservation Measure	Conservation Measure Description
		<p>NV1 - Noise will be short-term, transient, and not significantly different from urban interface or natural events (i.e., thunderstorms) that bats are frequently exposed to when present on the landscape.</p> <hr/> <p>SHF2 - Site-specific conditions (e.g., acres burned, transport wind speed, mixing heights) will be considered to ensure smoke is limited and adequately dispersed away from caves so that smoke does not enter cave or cave-like structures.</p> <hr/> <p>SHF4 - If burns need to be conducted during April and May, when there is some potential for bats to present on the landscape and more likely to enter torpor due to colder temperatures, burns will only be conducted if the air temperature is 55° or greater, and preferably 60° or greater.</p> <hr/> <p>SHF7 - Burning will only occur if site specific conditions (e.g. acres burned, transport wind speed, mixing heights) can be modified to ensure that smoke is adequately dispersed away from caves or cave-like structures. This applies to prescribed burns and burn piles of woody vegetation.</p> <hr/> <p>TR4* - Removal of suitable summer roosting habitat within potential habitat for Indiana bat or northern long-eared bat will be tracked, documented, and included in annual reporting. Project will therefore communicate completion of tree removal to appropriate TVA staff.</p>

Project Review Form - TVA Bat Strategy (06/2019)

<p>AR1 - Projects that involve structural modification or demolition of buildings, bridges, and potentially suitable box culverts, will require assessment to determine if structure has characteristics that make it a potentially suitable unconventional bat roost. If so a survey to determine if bats may be present will be conducted. Structural assessment will include:</p> <ul style="list-style-type: none">○ Visual check that includes an exhaustive internal/external inspection of building to look for evidence of bats (e.g., bat droppings, roost entrance/exit holes); this can be done at any time of year, preferably when bats are active.○ Where accessible and health and safety considerations allow, a survey of roof space for evidence of bats (e.g., droppings, scratch marks, staining, sightings), noting relevant characteristics of internal features that provide potential access points and roosting opportunities. Suitable characteristic may include: gaps between tiles and roof lining, access points via eaves, gaps between timbers or around mortise joints, gaps around top and gable end walls, gaps within roof walling or around tops of chimney breasts, and clean ridge beams.○ Features with high-medium likelihood of harboring bats but cannot be checked visually include soffits, cavity walls, space between roof covering and roof lining.○ Applies to box culverts that are at least 5 feet (1.5 meters) tall and with one or more of the following characteristics. Suitable culverts for bat day roosts have the following characteristics:<ul style="list-style-type: none">● Location in relatively warm areas● Between 5-10 feet (1.5-3 meters) tall and 300 ft (100 m) or more long● Openings protected from high winds● Not susceptible to flooding● Inner areas relatively dark with roughened walls or ceilings● Crevices, imperfections, or swallow nests○ Bridge survey protocols will be adapted from the Programmatic Biological Opinion for the Federal Highway Administration (Appendix D of USFWS 2016c, which includes a Bridge Structure Assessment Guidance and a Bridge Structure Assessment Form).○ Bat surveys usually are NOT needed in the following circumstances:<ul style="list-style-type: none">● Domestic garages /sheds with no enclosed roof space (with no ceiling)● Modern flat-roofed buildings● Metal framed and roofed buildings● Buildings where roof space is regularly used (e.g., attic space converted to living space, living space open to rafters) or where all roof space is lit from skylights or windows. Large/tall roof spaces may be dark enough at apex to provide roost space
<p>SSPC2 - Operations involving chemical/fuel storage or resupply and vehicle servicing will be handled outside of riparian zones (streamside management zones) in a manner to prevent these items from reaching a watercourse. Earthen berms or other effective means are installed to protect stream channel from direct surface runoff. Servicing will be done with care to avoid leakage, spillage, and subsequent stream, wetland, or ground water contamination. Oil waste, filters, other litter will be collected and disposed of properly. Equipment servicing and chemical/fuel storage will be limited to locations greater than 300-ft from sinkholes, fissures, or areas draining into known sinkholes, fissures, or other karst features.</p>
<p>SSPC5 (26a, Solar, Economic Development only) - Section 26a permits and contracts associated with solar projects, economic development projects or land use projects include standards and conditions that include standard BMPs for sediment and contaminants as well as measures to avoid or minimize impacts to sensitive species or other resources consistent with applicable laws and Executive Orders.</p>
<p>L1 - Direct temporary lighting away from suitable habitat during the active season.</p>

Project Review Form - TVA Bat Strategy (06/2019)

L2 - Evaluate the use of outdoor lighting during the active season and seek to minimize light pollution when installing new or replacing existing permanent lights by angling lights downward or via other light minimization measures (e.g., dimming, directed lighting, motion-sensitive lighting).
--

¹Bats addressed in consultation (02/2018), which includes gray bat (listed in 1976), Indiana bat (listed in 1967), northern long-eared bat (listed in 2015), and Virginia big-eared bat (listed in 1979).

Hide All Unchecked Conservation Measures

- HIDE
- UNHIDE

Hide Table 4 Columns 1 and 2 to Facilitate Clean Copy and Paste

- HIDE
- UNHIDE

NOTES (additional info from field review, explanation of no impact or removal of conservation measures).

Project has agreed to clear trees in winter (Nov 15-March 31) to avoid potential impacts to summer roosting bats.

STEP 14) Save completed form (Click File/Save As, name form as "ProjectLead_BatForm_CEC-or-ProjectIDNo_Date") in project environmental documentation (e.g. CEC, Appendix to EA) AND send a copy of form to batstrategy@tva.gov
Submission of this form indicates that Project Lead/Applicant:

(name) is (or will be made) aware of the requirements below.

- Implementation of conservation measures identified in Table 4 is required to comply with TVA's Endangered Species Act programmatic bat consultation.
- TVA may conduct post-project monitoring to determine if conservation measures were effective in minimizing or avoiding impacts to federally listed bats.

For Use by Terrestrial Zoologist Only

Terrestrial Zoologist acknowledges that Project Lead/Contact (name) has been informed of any relevant conservation measures and/or provided a copy of this form.

For projects that require use of Take and/or contribution to TVA's Bat Conservation Fund, Terrestrial Zoologist acknowledges that Project Lead/Contact has been informed that project will result in use of Incidental Take ac trees and that use of Take will require \$ contribution to TVA's Conservation Fund upon completion of activity (amount entered should be \$0 if cleared in winter).

For Terrestrial Zoology Use Only. Finalize and Print to Noneditable PDF.

Appendix B:

Public Comments and Responses

APPENDIX B – PUBLIC COMMENTS AND RESPONSES

TVA Public Comment Period

The proposed use of the historic mill and the potential for development of the State Park has generated interest, particularly within the local community. During the planning process for the Great Falls RLMP, interest in TDEC's proposal was expressed and numerous requests for additional information were made. Numerous individuals expressed opposition to the proposal to renovate the historic mill and allow commercial use.

On May 14, 2018, TVA published the Draft EA for public review and comment. The availability of the Draft EA was announced in the *Southern Standard*, which serves the White County and Warren County area and the Draft EA was posted on TVA's website. Comments were accepted from May 14, 2018 through June 18, 2018 via TVA's website, mail, and email. Four comments were received after the comment period closed and were accepted for the record.

At the end of the comment period, TVA had received comment submissions on the Draft EA from 44 members of the public and intergovernmental agencies, totaling 49 comments. Several individuals submitted multiple comments. One comment was received from a state agency and the remaining comments were received from individuals. The comment submissions were carefully reviewed and subdivided into 25 comment statements.

Comments in Support of the Proposed Actions:

Comment 1. I am in favor of the recreation easement to TDEC for the continued operation of the state park. (Barnes, Binkley, M. Collier, K. and S. Griffin, MacDonell, Tidwell, Young, Dawkins, and Wright)

Response: *Thank you for your comment.*

Comment 2. I am in favor of the restoration of the mill. (Be. Campbell, Bi. Campbell, D. Collier, L. Collier, M. Collier, Cooper, Fink, R. Fowler, S. Fowler, Graves, K. and S. Griffin, Guy, D. Hills, P. Hills, Judkins, Nunley, Perryman, K. Regan, M. Regan, Robinson, B. Taylor, G. Taylor, Young, Stratton, P. Collier, and J. Collier)

Response: *Thank you for your comment.*

Comment 3. I am in favor of the relocation of the State Route 287. (Binkley, Be. Campbell, Bi. Campbell, D. Collier, L. Collier, Graves, K. and S. Griffin, Healy, D. Herbert, MacDonell, Perryman, and Young)

Response: *Thank you for your comment.*

Comments in Opposition to some or all of the Proposed Actions:

Comment 4. I am opposed to the commercial operator redeveloping and running the mill. (Francescon)

Response: *Thank you for your comment.*

Comment 5. I am opposed to the entire Alternative B unless I can be assured that no other developed recreation will be allowed on the 367 acres other than the mill renovation area. (Dobson)

Response: *Thank you for your comment.*

As described in Chapter 2 of the EA, the proposed actions under review consists of the restoration of the historic mill and approximately 5 acres immediately around it and the relocation of SR-287. Any additional requests for development by TDEC would be subject to additional programmatic and environmental reviews to ensure actions are consistent with the TVA Land Policy and do not cause significant impacts to the environment.

Comment 6. Don't destroy the trails, nature, or natural areas. Please do not take our hometown nature way from us. (Healy, B. Hash, and D. Hash)

Response: *Thank you for your comment.*

Comment 7. We have seen many changes in the volume of tourism, which has brought with it more than the community's share of issues. Large boats that make huge wakes are eroding the banks; the rivers here – Caney Fork, Collins, and Rocks Rivers – are so full of trash that the debris is ruining boat engines and prohibiting enjoyable use of the water; water levels are tampered with much more than in the past, leading to debris collection in the rivers; ...TVA should focus on solutions to the river water issues rather than yielding to outside private investors who have a different agenda altogether. If the water levels and resulting debris in the water are not addressed and remedied, no one – tourists or residents – will find the area an attractive locale to visit or inhabit! The rivers and banks are in the worst shape we have seen them in 50+ years! A shame! (H. and B. Brown)

Response: *Thank you for your comment.*

As part of its mission of environmental stewardship, TVA monitors conditions in the Valley waterways and supports a broad range of clean-water initiatives to protect and improve water resources.

Within the Great Falls watershed specifically, TVA has conducted a considerable amount of monitoring work for an endangered fish, the Bluemask Darter, which occurs in four tributaries to Great Falls Reservoir (a section of the Caney Fork upstream of the reservoir, Cane Creek, Rocky River, and Collins River). TVA has been monitoring populations since 2008 and is currently involved in an effort to re-introduce this species to the Calfkiller River where it was last collected in 1968.

Another project TVA is conducting within the Great Falls area is in enhancing pollinator habitat within approximately 13 acres of transmission line rights-of-way. Pollinators are a diverse group of organisms that visit flowers to feed on pollen and nectar or to collect oils and resins. Pollinators support healthy ecosystems that improve air quality, stabilize soils, and support other wildlife.

Comment 8. Tourists do not practice safe use of the park grounds and almost daily (especially during weekend times), ambulances and paramedics are called to rescue careless people. (H. and B. Brown)

Response: *Thank you for your comment. However, this comment is outside of the scope of this review.*

Comment 9. TDOT has difficulty maintaining the roads in existence, yet is spending millions on cutting a road through a nature hiking trail in Rock Island. (H. and B. Brown)

Response: *Thank you for your comment. Impacts to trails and recreational opportunities are discussed in the Recreation section on pages 20-22 of the EA.*

While the road will be relocated from its current location, it would continue to be a state maintained road and would pass through TVA property within an easement. The mission of TDOT is to provide a safe and reliable transportation system for people, goods and services that supports economic prosperity in Tennessee. The state route on TVA easement would be maintained within TDOT's goals of maintaining the state transportation system to protect the long term investment in infrastructure assets as well as to operate and manage Tennessee's transportation system to provide a high level of safety and service.

Comment 10. What some people fail to see is that this area in a TN State Park is a nature area – NOT A RESORT/RECREATIONAL AREA (like Dollywood, for instance)! Why is private enterprise wielding so much power when some of us, as tax payers, have serious problems with privatizing part of the area? And making a historic site a resort-like venue? (H. and B. Brown)

Response: *Thank you for your comment.*

As described in Chapter 2 of the EA, the proposed actions under review consists of the restoration of the historic mill and approximately 5 acres immediately around it and the relocation of SR-287. Any additional requests for development by TDEC would be subject to additional programmatic and environmental reviews.

The practice of having a third party operate within a state or federal public lands is fairly common. All TVA campgrounds are currently operated by other entities through licenses and contracts. Third party operators are generally able to invest more money in projects and are able to offer more amenities and better service to the public. In this case, allowing a third party operator to invest money in the historic mill will allow for restoration of the structure that would otherwise continue to deteriorate.

Comment 11. While there are good ideas reflected in these plans, commercialization of the old mill for retail and restaurant use is a terrible idea. With virtually zero need for more eating establishments in the area, no close satellite cities from which to draw, no labor pool from which to hire, and the tremendous negative environmental impact it would have, this creates a situation that the majority of the people simply won't support. The area is wildly popular, yet still struggles to support local small businesses. Why exacerbate the problem by increasing taxes, and bringing in large competition that's

backed by the very tax dollars we provide? The area's not broken – don't try to fix it. (Philot)

Response: *Thank you for your comment. The environmental impacts of the proposed project are discussed in Chapter 3 of the Environmental Assessment (EA). A socioeconomic analysis to determine how the restoration of the mill would impact the local community is included in the EA. However, this review does not perform an economic review of the proposal to determine if such development is needed or sustainable.*

During the process of soliciting proposals to design and operate the restored mill, TDEC will be responsible for requesting economic analysis to support the individual proposals.

Comment 12. I live across the lake, bike the Collins Loop often, and kayak the gorge regularly. While I appreciate the extra opportunities for the mill, I do not support any development on the Collins Loop Trail or upstream of the dam on either side. The natural beauty drew me to move here and is what draws people to the park. (Wright)

Response: *Thank you for your comment.*

Comments Related to TVA Land Allocations

Comment 13. Can TVA amend the Land Use Plan for the land immediately around the dam so the dam can be accessed by the public? (Binkley)

Response: *The parcel immediately around the dam is currently designated as Zone 2, Project Operations. These lands are used for TVA operations and public works projects. While public access is not restricted as result of the zoning, access to certain areas within Zone 2 parcels is restricted for public safety.*

Comment 14. Why is the entire 367-acres parcel classified for commercial recreation? (Dobson, Creswell, Herbert, A. Tidwell, and Wright)

Response: *TVA completed the Great Falls RMLP in 2017. During that planning process and environmental review, public concern was raised to TVA regarding the zoning of Parcel 2 as Zone 6 – Developed Recreation.*

As was discussed in the Multiple Reservoir Land Management Plan EIS, when developing the Final Great Falls RLMP, lands currently committed to a specific use were allocated to a zone compatible with that use. Committed land uses are determined by the covenants and provisions of easements, licenses, and sale and transfer agreements. TVA's decision to allocate Parcel 2 to Zone 6 reflects TDEC's existing agreements and TVA's preference to continue to allow TDEC to manage these parcels for recreation use.

TDEC's management of the state park includes protecting the natural resources that make this TVA land enjoyable to the public. The Zone 6 land use allocation allows for a broad range of permissible recreation uses on TVA lands, however, it is the preexisting land use agreement between TVA and TDEC that identifies specific land uses to be considered and approved by TVA.

Comment 15. If this development is approved, what is to stop additional development on TVA lands? (A. Tidwell, and Wright)

Response: *TVA acknowledges the public's concerns regarding allowable uses on lands allocated for Zone 6 – Developed Recreation.*

All proposed uses of TVA public land must be approved by TVA. In the case of the parcel under review in this EA, it is being used for state park purposes. Tennessee State Parks were established to protect and preserve the unique natural, cultural and historic resources of Tennessee. TDEC manages this parcel consistent with its mission, as stewards of the resources in the parks, to preserve and protect valued resources, and to provide a balance of services and benefits for the enjoyment of the people. The property currently used for public dispersed recreation purposes such as hiking, fishing, and nature watching would remain to be used for these purposes in future land use agreements.

Comment 16. The remainder of the Great Falls property outside of the five acres for the mill project should not be developed. The lands should remain undeveloped and used for passive recreation. (Dobson and Creswell)

Response: *As discussed in the responses to comments 14 and 15, the land is allocated under Zone 6 – Developed Recreation as determined by the covenants and provisions of existing easements, leases, licenses, and sale and transfer agreements.*

Further, when parcels fall under a public recreation agreement, those lands would be allocated as Zone 6, regardless of whether the entire area would be managed for concentrated recreational activities. Under TVA's land planning guidelines, an allocation change to Zone 4 - Natural Resource Conservation would eliminate the option for TDEC to manage the land or portions of parcels as part of Rock Island State Park. Dispersed recreation is a suitable and common use within Zone 6.

Aside from relocating a portion of SR-287, TDEC has not identified any additional requests to modify any portion of the peninsula at the confluence of the Collins and the Caney Fork Rivers. And any potential future request would be subject to its separate TVA environmental and programmatic review.

Comment 17. I do not believe commercial use of the land is not consistent with TVA's mission and specifically with the preservation of the historic and conservation values now characterizing the entire 367 acre tract. (Creswell)

Response: *TVA's mission is to provide affordable electric power throughout the Tennessee Valley Region, to act as a steward of the Tennessee Valley's natural resources, and to serve as a catalyst for sustainable economic development.*

The proposed project described in this EA meets the environmental stewardship goals of the TVA mission as it would provide additional recreational opportunities on TVA public lands as well as preserve cultural resources which are listed on the National Register of Historic Places.

Comment 18. I believe strongly that the public interest is best served by minimizing the changes to the present usage of the peninsula acreage and by writing that restriction

into the lease. Even if the mill building is developed for commercial use (restaurant, gift shop, etc.), the remainder of the peninsula should be retained for passive recreation only. The environmental and historic values of the acreage would be sacrificed if the new lease allows for commercial development or active recreation development on the peninsula. An unrestricted lease would permit a marina, a lodge, cabins, a golf course, parking lots, a water park and other intensive usages by TDEC that would be totally incompatible with the historic and conservation values sustained by the present practice of limiting TDEC to passive facilities for limited, passive recreation usages. (Creswell)

Response: *Aside from relocating a portion of SR-287, TDEC has not identified any additional requests to modify any portion of the peninsula at the confluence of the Collins and the Caney Fork Rivers. And any potential future request would be subject to its separate TVA environmental and programmatic review.*

Comment 19. TVA should deny the request by the Tennessee Department of Environment and Conservation (TDEC) for a 40 year public and commercial easement of 397 acres currently under license agreement unless TDEC's future use is restricted by lease to continued use as a state park forbidding commercial uses of the existing historical mill or relocating the existing state highway because such commercial use will destroy the environmental and historical character of TVA's property. Except for existing buildings, the 397 acres should remain undisturbed and accessible for exclusive recreational uses such as swimming, fishing, hiking and bicycle. TVA should not condone TDEC's intended plans of turning over a portion to the proposed leased property to private developers who will be answerable to neither TVA or TDEC. The legacy of TVA is a steward for the benefit of the public and not private interests. (C. Tidwell)

Response: *Thank you for your comment.*

Comments Related to the Redevelopment of the Mill

Comment 20. How will the mill project handle sewage and waste water? Is there sufficient infrastructure? (Binkley)

Response: *TVA does not require the project design to be completed at this level of detail to conduct the environmental review. There is an existing septic system at the overlook picnic area and parking lot immediately adjacent to the mill, but it is unknown at this time if that septic system is of adequate size to treat sewage and waste water from the mill. The treatment of all waste water will be regulated under applicable federal, state, and local regulations. TVA has concluded that compliance with these applicable regulations will prevent a significant impact to the environment.*

Comment 21. Why is the development and management of the mill being privatized? (Brown, Francescon, and Healy)

Response: *TDEC manages the TVA lands as Rock Island State Park. As the manager of the park, TDEC is proposing to solicit input and designs from a third party developer on what would be the best way to develop and operate the restored mill. Allowing a third party operator to invest money in the historic mill will allow for restoration of the structure that would otherwise continue to deteriorate.*

The practice of having a third party operate within a state or federal public lands is fairly common. All TVA campgrounds are currently operated by other entities through licenses and contracts. Third party operators are generally able to invest more money in projects and are able to offer more amenities and better service to the public.

Comment 22. Will TVA perform a more in-depth economic need for a commercial operation? Currently there are five restaurants operating within a five-mile radius of the mill. The area is popular but struggles to support local small businesses. (Binkley and Philpot)

Response: *As stated in the response to questions 13, a socioeconomic analysis to determine how the restoration of the mill would impact the local community was included in the Environmental Assessment. However, this review does not perform an economic review of the proposal to determine if such development is needed or sustainable.*

During the process of soliciting proposals to design and operate the restored mill, TDEC will be responsible for requesting economic analysis to support the individual proposals.

Comment 23. The mill should be restored and used as a gathering place for the community. Or a museum or nature center (Brown, B. Hash, Healy, and Herbert)

Response: *Thank you for your comment. While TVA does not make the decision in what type of business will occupy the historic mill, TVA will pass the communities preferences along to TDEC. If TDEC wishes to change the proposed use of the historic mill, additional programmatic and NEPA reviews will need to be conducted.*

Comment 24. What kind of commercial operation will occupy the old mill? (Herbert)

Response: *TDEC requested that TVA perform a programmatic and environmental review for a mixed use hotel and convention operation be built in the historic mill. If TDEC wanted to change the use of the proposed building, additional programmatic and NEPA reviews will need to be conducted.*

Comments from Governmental Agencies

Comment 25. The Tennessee Department of Environment and Conservation (TDEC) appreciates the opportunity to provide comments on the Tennessee Valley Authority (TVA) Draft Environmental Assessment (EA) for the Rock Island State Park Recreation Easement. Please note that these comments are not indicative of approval or disapproval of the proposed action or its alternatives. (TDEC)

TDEC has reviewed the Draft EA and determined that it has no additional comments regarding the preferred action or alternative at this time. TDEC appreciates the opportunity to comment on this Draft EA. Please note that these comments are not indicative of approval or disapproval of the proposed action or its alternatives, nor should they be interpreted as an indication regarding future permitting decisions by TDEC. (TDEC)

Complete comment letter attached.

Response: *Thank you for your comments.*

