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FINAL SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT

**PROPOSED DEVELOPMENT OF TRACT XNJR-3PT
(NICKAJACK SHORES)**

**NICKAJACK RESERVOIR
MARION COUNTY, TENNESSEE**

TENNESSEE VALLEY AUTHORITY

SEPTEMBER 2005

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CHAPTER 1

1.0 PROPOSED ACTION AND NEED

Tennessee Valley Authority (TVA) has received a proposal from Thunder Enterprises, a Chattanooga, Tennessee based real estate company to acquire and develop approximately 578-acres currently held by the TVA on Nickajack Reservoir. The parcel is identified in the TVA Nickajack Reservoir Land Management Plan as a portion of XNJR-3PT (Tract 3) and is allocated for commercial/public recreation and residential development purposes (see Figure 1-1).

TVA is proposing to sell this property at public auction restricted to the three allocated uses. Based on the current application and information from local officials, the foreseeable use of Tract 3 is a mixed-use development that includes some number of private residences. In general, only the property located above the 640-ft contour would be sold and TVA would retain shoreline property located below this elevation to the reservoir normal pool level (634 msl). Minor deviations from the 640-ft contour may be included in the property sale to accommodate a proposed development or for TVA to protect and retain identified resources. TVA proposes to make Tract 3 available at public auction and to sell the property to the successful bidder, whether it is Thunder Enterprises or any other qualified bidder (see Appendix A for bidder qualifications).

1.1 Background

TVA considers the potential environmental impacts of actions it proposes to take in accordance with the National Environmental Policy Act (NEPA) and implementing procedures. In December 1996, TVA completed a Final Environmental Assessment (EA) for a proposal to add residential and commercial recreation as permissible uses for a 620-acre (251-ha) portion of Tract XNJR-3PT (Tract 3). The EA also evaluated allocating the 40-acre (16-ha) Tract XNJR-4PT (Tract 4) for commercial recreation and the 498-acre (202-ha) Tract XNJR-1PT (Tract 1) for wildlife management.

Based on the 1996 EA, TVA determined that reallocating and using the three tracts as proposed, consistent with identified environmental protection measures, would not significantly impact the environment. TVA issued a Finding of No Significant Impact (FONSI) on January 21, 1997. Two years later, TVA decided not to go forward with the specific development proposal under consideration at that time. In light of the recent Thunder Enterprises proposal, TVA has decided to supplement the 1996 EA to examine whether any new information may be available regarding the site that could affect the 1996 analysis of environmental impacts.

One factor that has changed since the issuance of the 1996 EA is that Thunder Enterprises offers to offset the loss of public property under TVA's control with other private property that would be transferred to TVA. TVA is requesting that other potential bidders for Tract 3 also identify offsetting or "exchange" property that the bidder would transfer to TVA (see Appendix A). The availability of exchange property provides wildlife habitat, wetlands, and publicly accessible land, and this supplemental EA considers these enhanced attributes.

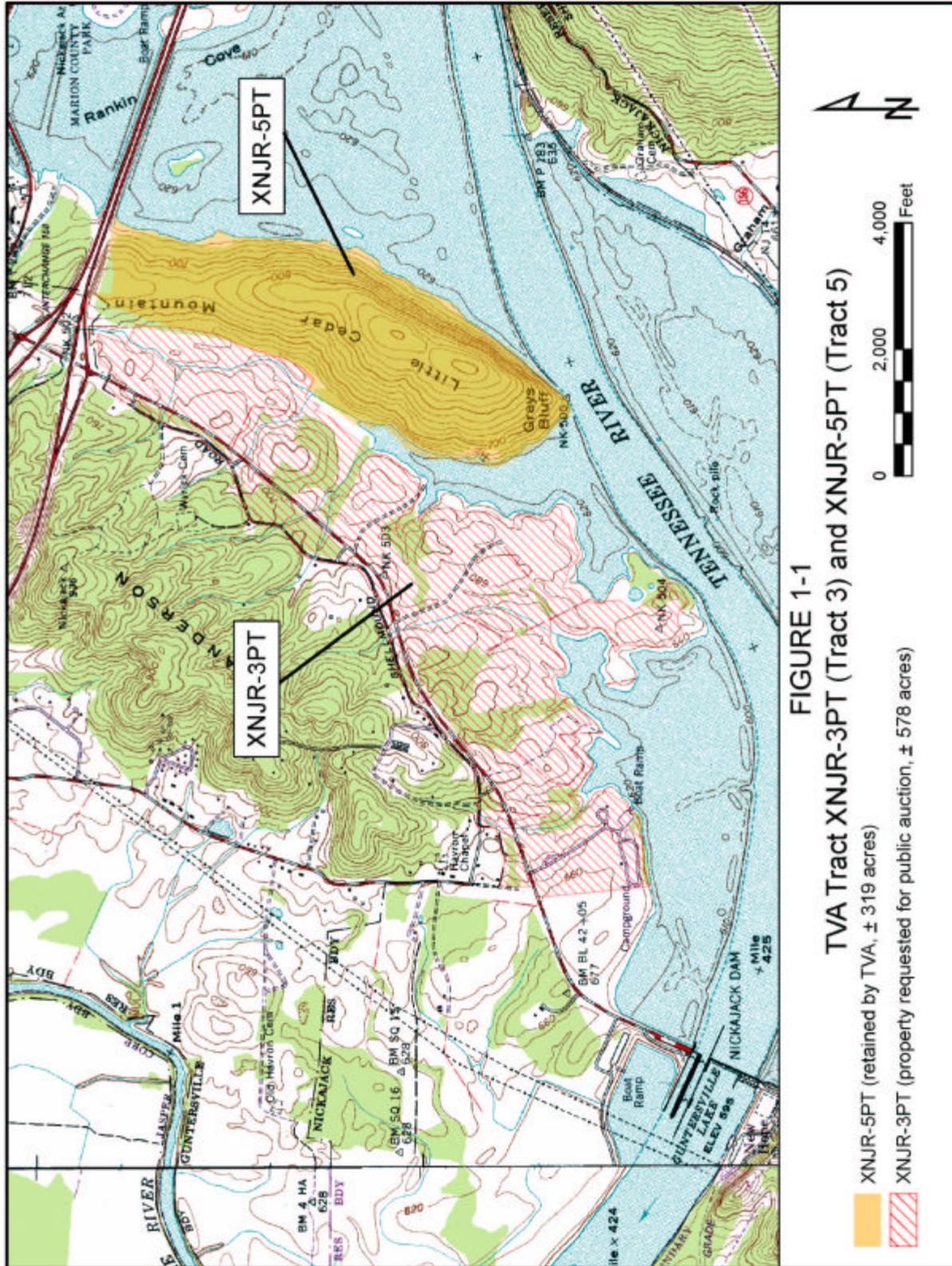


Figure 1-1. TVA Tracts XNJR-3PT (Tract 3) and XNJR-5PT (Tract 5)

The supplemental EA identifies generic acceptability criteria (see Appendix D) that TVA would utilize to evaluate any identified exchange property from an environmental standpoint.

Because TVA has received a specific proposal from Thunder Enterprises (see Appendix C) including proposed exchange lands, Appendix D specifically applies the generic acceptability criteria to those exchange lands. If someone else is the successful bidder, assuming TVA decides to proceed with auctioning the property, the generic acceptability criteria would be applied to that proposal in a similar manner. Thunder Enterprises also proposes to fund the development of an interpretive trail on the adjacent Little Cedar Mountain (Tract 5). TVA would require a different successful bidder similarly to fund such development that would include a parking lot, educational kiosk, interpretive trail, directional signs, and an interpretive overlook sign on Tract 5.

A description of a development concept plan, "Nickajack Shores," from Thunder Enterprises is found in Appendix C. Under this plan, approximately 578-acres of Tract 3 would be developed with mixed uses. Included in this concept plan are private residences, golf course, wellness center, bass lake, marina, and a hotel. Any one or all of these components would be consistent with the allocated uses of Tract 3.

TVA anticipates that any development of Tract 3 would contain similar features, but there could be fewer or more of these features. For example, the concept plan in Appendix C includes 615 private residences and a golf course. According to Thunder Enterprises, the requested 578-acres could be developed with more emphasis on private residences with up to 1000 homes if the golf course is eliminated. TVA would require any successful bidder, including Thunder Enterprises, to include a minimum number of recreational facilities, and to add or avoid features that are determined to be necessary to mitigate or avoid potential environmental impacts. As long as a development is consistent with the uses allocated for Tract 3 and reflects adherence to the environmental commitments, it would be approvable by TVA. The EA, as supplemented, identifies such mitigation requirements and examines the potential impacts that could result from a development that conforms to Tract 3 allocated uses with required mitigation features. The variation in development components identified by Thunder Enterprises has been used to help set the scope of the environmental analyses.

The 1996 EA evaluated the environmental consequences of three alternatives to promote recreation development and one alternative that would retain the tracts in their existing status, with interim use as open space for wildlife habitat or agricultural land. Under Alternative 1, TVA would have designated Tracts 3 and 4 for commercial recreation and allocated Tract 1 for wildlife management. Under Alternative 2, TVA would have designated Tract 3 for commercial/public recreation and residential uses and Tract 4 for commercial recreation, and allocated Tract 1 for wildlife management. Under Alternative 3, TVA would transfer Tracts 3 and 4 to a state or local government agency to develop, and allocate Tract 1 for wildlife management. Under Alternative 4, the designation of all tracts would have remained unchanged with the possibility that development could still have occurred on the tracts in the future consistent with their then designated land uses (the No Action Alternative). TVA's chosen alternative was Alternative 2.

In November 1995, TVA provided public notice of the proposed land allocation changes for the Nickajack Reservoir tracts and notified interested state and federal agencies of the proposed action. In April 1996, TVA issued a draft EA for public review and comment and

held a public meeting on April 26, 1996 at Marion County High School to receive public comments. Public comments received either strongly supported the proposed development or strongly opposed development of this area. TVA considered and responded to all comments received, either by modifying the 1996 EA or by a separate response in an appendix to the EA (Section 6).

1.2 Other Environmental Reviews

- Recreation Development Alternatives for the Little Cedar Mountain Tracts, Nickajack Reservoir, Marion County, Tennessee, Final Environmental Assessment, December 1996. This 1996 EA is available for review at <http://www.tva.gov/environment/reports/>.
- Nickajack Reservoir Land Management Plan, TVA Resource Development Group, Reservoir Lands Planning, January 1990. The plan was developed to guide resource management and property administration decisions on 3,171 acres of land under TVA custody and control on Nickajack Reservoir. The 1990 plan identified Tract 3 for recreation development only.
- Shoreline Management Initiative (SMI), An Assessment of Residential Shoreline Development Impacts in the Tennessee Valley, Final Environmental Impact Statement (FEIS), June 1999. As a result of this review, TVA adopted a policy for use of and access across TVA-controlled shorelines for residential uses. This included establishing standards for constructing water use facilities and a “maintain and gain” policy that requires offsetting proposed residential uses on TVA shoreline not currently open to such uses with restrictions of such uses on property where they are allowed. Based on comments received from several environmental constituency groups during the program review, the TVA Board modified TVA staff’s proposed policy to include a 50-foot Shoreline Management Zone (an increase from 25 feet) in order to protect the Tennessee River system further.
- Little Cedar Mountain, TVA Natural Area Resource Stewardship Plan, August 2000. TVA developed resource management plan for Tract 5.
- Lower Sequatchie River Management Unit Plan and EA, November 1999. The Plan identified public expectations regarding the use for Tract 1 and identified actions to enhance use opportunities including wildlife management and public recreation.

1.3 Supplemental Public Review

TVA conducted an open house style public meeting at South Pittsburg High School on December 13, 2004 to inform the public about the October 2004 proposal from Thunder Enterprises to buy and develop approximately 700-acres on Nickajack Reservoir of TVA-public land and to seek public comment. Notice of the public meeting was provided on November 29, 2004, in the *Jasper Journal*, the *South Pittsburg Hustler*, and the *Chattanooga Times*. Thunder Enterprises personnel were available at the public meeting to discuss their proposal. The proposal identified the “Little Cedar Mountain Development” mixed-use development plan, which is located near Little Cedar Mountain and Nickajack Dam. Thunder Enterprises proposed to exchange two properties totaling approximately

835-acres – one tract along Guntersville Reservoir known as “Burns Island” (220 acres) and the other along Nickajack Reservoir known as “Cedar Mountain” (615-acres) - for the TVA property.

Subsequent to the December 2004 public meeting, Thunder Enterprises revised its request and now wants to purchase approximately 578-acres of Tract 3 (the revised proposal with the development re-named “Nickajack Shores”). Thunder Enterprises also offered an additional third exchange property known as “Boyd Farm” (257-acres). The three exchange tracts total approximately 1,100-acres.

Approximately 225 comments were received from the public meeting and in response to news articles. Similar to the initial proposal to re-designate the tracts and make them available for development consistent with the revised designations, approximately half of the comments were in favor of the proposal and half were in opposition. Comments received in favor of the proposal did so because of the potential to increase the local tax base, additional revenues and increased land values, added jobs and economic development and tourism and enhanced recreation. Comments received in opposition were based on environmental resource issues related to wildlife, hunting and habitat loss, sensitive plant and animal species potentially located in the project area, historical and cultural resource protection, Native American ancestry concerns, change in recreational opportunity due to development, water quality and aesthetics.

TVA also received comments pertaining to eminent domain concerns, the suggested transfer of Tract 3 to the State of Tennessee for utilization as a state park, a previous 1999 TVA Board decision regarding TVA’s management of Tract 3 and, and the potential for TVA entering into a lop-sided deal regarding the exchange properties. All substantive environmental comments were taken into account as appropriate in completing the additional analyses for the EA supplement.

Several comments referred to a 1999 decision by the TVA Board not to develop the Nickajack Reservoir property. In March 1999, TVA Chairman Craven Crowell issued a statement that TVA would not continue to pursue development of the Little Cedar Mountain project, which was proposed by the Hines Development, asserting that the proposal would not result in the maximum benefit for the people who use the property. Chairman Crowell also stated that TVA would continue to evaluate requests for use of TVA lands, but that proposals must be compatible with TVA’s objective of managing public assets to benefit future generations and the environment.

Several comments stated that TVA would be accepting a lop-sided trade deal as a part of the proposal included for the sale and development of Tract 3. Exchange properties were not previously offered to TVA in the 1996 negotiation for sale of Tract 3. TVA has decided that offsetting the loss of properties under its control that are open to the public by obtaining lands in exchange has substantial merit, especially if the exchange lands have certain features and natural resources. Accordingly, TVA has developed generic acceptability criteria to evaluate any exchange properties. These criteria are further discussed and the exchange properties identified by Thunder Enterprises are evaluated in Appendix D using these criteria. TVA released the Supplemental EA for public review on May 17, 2005. A public meeting was held on May 24, 2005 in South Pittsburg to update the public on the proposal. A total of 332 comments were received by the comment deadline of June 17, 2005. These comments strongly mirrored the scoping comments in the issues raised. A compilation of these comments, with TVA responses, is contained in Section 7 of this SEA.

1.4 Necessary Federal Permits and Licenses

Any successful bidder for Tract 3 will be required to obtain the necessary permits and licenses.

Section 26a of the TVA Act requires that TVA approval be obtained prior to construction, operation, or maintenance of any obstruction potentially affecting navigation, flood control, or public land or reservations along the Tennessee River or any of its tributaries. A Section 26a approval is required for any water use facilities and shoreline alteration.

Section 404 of the Clean Water Act prohibits discharge of dredged or filled materials into waters of the U.S. unless authorized by the Department of the Army. Proposed development plans, including strategies for protecting fringe and aquatic bed wetlands will be submitted to the U.S. Army Corps of Engineers for determination of permit requirements. Section 10 of the Rivers and Harbors Act of 1899 prohibits the unauthorized alteration or construction of navigable waters of the U.S. A permit from the U.S. Army Corps of Engineers under these statutes would be required.

CHAPTER 2

2.0 SUPPLEMENTAL TECHNICAL ANALYSES

In December 1996, TVA completed a Final EA for changing the land use allocation for a 620-acre (251-ha) portion of Tract 3 to make it available for commercial recreation, public recreation and residential development. This chapter contains updated review information and additional technical analyses not presented in the 1996 EA.

2.1 Vegetation and Wildlife

Vegetation and wildlife resources were previously described in Sections 3.1 and 4.1 of the 1996 EA.

All project lands were examined during field surveys in 2005. Overall habitat quality and presence of unique wildlife habitats were the primary focus of field investigations. Acreages of available wildlife habitat were quantified using aerial photo interpretation.

The description of wildlife contained in the 1996 EA is generally still adequate. However, additional waterfowl species should be added in the wildlife section. These include gadwall, ruddy ducks, and ring-neck duck. These species of waterfowl are abundant in the embayment around Tracts 3 and 5 during the winter.

The 1996 EA describes a heron colony on an island near Interstate 24. This colony is no longer active. During field investigations, a great blue heron colony containing 32 nests was discovered on a forested portion of Tract 3, just east of the campground. TVA would transfer this portion of Tract 3 but would prohibit any disturbance of the six acres in order to protect the heron colony. However if, in the future, it is determined by TVA that the blue heron has abandoned the site for two consecutive years, then the prohibition against disturbance would be lifted. Abandonment by the heron colony would be determined by TVA wildlife biologists.

Wildlife habitats on Tract 3 remain in excellent quality, especially for species that favor early successional habitats. However, the quality of wildlife habitat, especially forested portions of Tract 3, is lessened due to the prevalence of invasive species of plants such as kudzu and Chinese privet. Erosion due to over use of the area by ATV's was also noted, especially at informal camping sites in several embayments.

Habitats vary on Tract 3, but can be lumped into three categories: early successional, forested, and wetland habitats. Early successional habitats are dominated by pasture and cropland. Forested habitats are the most abundant habitat type on Tract 3 (see table below). Types of forest include deciduous hardwoods, pine and mixed hardwood/pine stands.

Wetlands were noted at various sites on Tract 3. The pond just east of the pine plantation is used as a breeding site by a variety of amphibians. The integrity of these wetlands would be protected as discussed later.

Table 2-1. Habitat Acreage Estimates for Tract 3

Habitat Type	Tract 3
Early Successional*	285
Forested	365
Wetlands	23
Other	39
Access	Good
Wildlife Value	Excellent
Presence of Invasive Plants	High

* Early successional habitat estimates includes nonforested wetlands. Forested habitat estimates include forested wetlands.

Habitat loss from the development of Tract 3 has been previously discussed in Section 4.1 of the 1996 EA. TVA had previously identified habitat protect zones to reduce overall impacts to loss of suitable wildlife habitat under the 1996 development proposal. While TVA would no longer require the habitat protection zones identified in the 1996 EA, TVA expects that the loss of suitable habitat on Tract 3 would be more than offset by the acquisition of exchange properties and the net increase in suitable wildlife habitat (see Appendix D).

As a result of the 1996 EA, the allocated use for Tract 1 was changed to wildlife management. TVA recognized the potential on this adjacent tract for enhancing recreational and hunting opportunities and prepared the *Lower Sequatchie River Management Unit Plan* (November 1999) to detail planned management activities for Tract 1. This should result in some reduced impact to displaced wildlife, if Tract 3 is developed.

The Thunder Enterprises development proposal includes a reduction in the shoreline buffer zone set in the 1996 EA from 100-feet to 50-feet. It is consistent with the 50-foot shoreline buffer that TVA established in 1999 as part of its Shoreline Management Initiative (SMI) policy for residential shoreline. TVA will consider a Vegetation Management Plan within this area. Vegetation shall not be removed from TVA property without the development of a Vegetation Management Plan and without prior written approval by TVA.

The following elements could be incorporated into a Vegetation Management Plan which would be submitted to TVA for approval:

- Removal of invasive understory plants such as Chinese privet, poison ivy, Japanese honeysuckle, kudzu, and other approved non-native or exotic plants.
- Maintenance pruning of established vegetation and selected removal of non-desirable trees or vegetation under 3-inches in diameter (measured at ground level).
- Any restoration or replacement planting included in the Plan shall include regionally native plant material of acceptable size and hardiness.
- No mowing, burning, and/or mechanical trimming or propagation of non-native turf or naturalized warm season grasses will be permitted within the 50-foot shoreline buffer. The forest floor shall be left undisturbed except as otherwise approved in a Vegetation Management Plan.

- Fertilizers and herbicides shall not be applied unless specifically approved in a Vegetation Management Plan and shall be applied by a state certified applicator.

Botanically, the proposed project area lies within the Oak-Chestnut Forest Region as defined by Braun (1950). Forests of this region have a large component of various oak species. Within the Oak-Chestnut Forest Region, the proposed development is in the Southern Appalachians Section. In this section, the canopy dominance is shared by numerous tree species including several oaks, hickories, hemlock, tulip poplar, various pines, basswood, and yellow buckeye.

Existing plant communities observed during a field review in early March on the project site includes successional communities, such as old fields and pastures as well as communities recognized as Mixed mesophytic which includes North slope upland hardwood and mesic oak and calciphilic sub-xeric communities, xeric calciphilic communities (glades), and pine plantations.

Successional communities: The majority of successional communities on Tract 3 (32 percent) are represented by old fields and pastures. The agricultural fields found on this tract were planted with soybeans and corn. The pastures on Tract 3 consisted mainly of tall fescue. The edges of the fields were occupied by several exotic invasive species such as Chinese privet, Japanese honeysuckle, and kudzu. In addition to the agricultural species present, many native and non-native weedy species were observed in the fallow fields during the field survey in early March.

Mixed Mesophytic communities: This community type can be divided into several sub-communities such as North Slope-Mixed Mesophytic community and Oak-Pine sub-xeric community, which include the xeric calciphilic or glade community. Tract 3 has 98 percent and Tract 5 has 99 percent of these types of mixed mesophytic community types. The Oak-Pine xeric glade-like habitats is exposed limestone at the surface usually surrounded by a tall canopy of oaks. Characteristic herbaceous plants of these areas are false aloe, thimble-flower, woods sunflower, summer bluet, hoary pucoon, prairie coneflower, and Indian pink. This is the type of community on Tract 5 where several state listed threatened species occur such as spreading rockcress (*Arabis patens*), slender blazing star (*Liatris cylindracea*), hairy false gromwell (*Onosmodium molle* ssp. *hispidissima*), and yellow honeysuckle (*Lonicera flava*).

Large boulder field areas on Tract 3 and Cedar Mountain are potential habitat for American Smoketree (*Cotinus obovatus*), a state listed species of special concern and Huntsville vasevine (*Clematis morefieldii*) listed as endangered by USFWS. *Clematis morefieldii* occurs locally near seeps within a juniper-hardwoods community with *Cotinus obovatus* (smoketree) as the principal indicator species. Other associated hardwoods include shagback hickory (*Carya ovata*), oaks (*Quercus shumardii*, *Q. muhlenbergia*, *Q. alba*, *Q. stellata*), American elm (*Ulmus americana*), and white ash (*Fraxinus americana*) (USFWS, 2002). All of these species are known to occur in this area. TVA staff visited the area on May 24, 2005 and did not observe smoketree or Huntsville vasevine on Tract 3.

Palustrine Forest: Palustrine forest are wetlands comprised of woody vegetation that is six meters (20 ft) tall or taller. The most common forested wetlands found long Nickajack Reservoir are temporarily flooded riparian zones. These areas are dominated by red and silver maple, slippery elm, boxelder, sycamore, and green ash. Sycamore, water, and

white oak may also be members of these types of communities. Palustrine forest can be found on Tract 3 (3 percent).

Pine plantations: An area on Tract 3 has been planted with Loblolly pine (*Pinus taeda*) which makes up less than 12 percent of the vegetated landscape. Due to the closed canopy of these trees, little understory vegetation exists in these stands.

Disturbed areas at the edges of woods, roads, pastures, and fields are habitat for various species of non-native plants, many of which are also non-invasive. However, species such as kudzu, Japanese honeysuckle, Tree-of-Heaven, Nepal grass, and Chinese privet are highly invasive species that can out-compete native vegetation.

With development of Tract 3, some disturbance of existing plant communities would occur in conjunction with the construction. No uncommon terrestrial communities or otherwise unusual vegetation occurs on Tract 3 lands that would be disturbed. Therefore, impacts to the terrestrial ecology of the remaining project area are expected to be insignificant as a result of the proposed activities.

2.2 Forest Resources

Forest resources were previously discussed in Sections 3.2 and 4.2 of the 1996 EA and this discussion is still adequate.

2.3 Prime Farmland

Prime farmland resource has previously been discussed in Sections 3.3 and 4.3 of the 1996 EA and this discussion is still adequate.

2.4 Wetlands

Wetland resources were previously discussed in Sections 3.4 and 4.4 of the 1996 EA.

The 1996 EA was evaluated to determine if the discussion of wetlands was consistent with current conditions on the site. Additional analysis of Tract 3 was conducted primarily by photo interpretation of digital orthophotos taken March 10, 2003, at a scale of 1:24,000 using color infrared photography; a target-mapping unit of 0.25 acre was used to develop a land use/land cover dataset. In addition, National Land Cover Data (NLCD), (<http://www.mrlc.gov/index.asp>), a land cover dataset derived from early 1990s Landsat TM data at 30m resolution was used to estimate the extent of wetlands in the larger project area (Marion County). National Wetland Inventory (NWI) maps and focused field surveys were also used to confirm the location of potential wetlands. Selected wetlands were evaluated using a TVA version (TVARAM) of the Ohio Rapid Assessment Method (ORAM v.5.0) (Mack 2001) specific to the TVA region.

The 1996 EA describes two wetlands that are present on Tract 3. These two wetlands are depression wetlands (sinkhole ponds) located in wooded sections of Tract 3 totaling 1.08 acres and are described in an appendix of the 1996 EA. A field survey conducted in March 2005 indicated these wetlands have not changed in character from the original description in the 1996 EA. TVARAM was conducted on these wetlands, and they were determined to be wetlands of high quality. The wetlands and a 100-foot buffer area of Tract 3 would be retained by TVA. The 1996 EA also discusses in general fringe and aquatic bed wetlands located along the shoreline fronting Tract 3. A field survey conducted in March of 2005

verified the presence of one small (< .10 acre) emergent fringe wetland located along the shoreline of Tract 3. Aquatic bed wetlands or vegetated areas of shallow water also occur in extensive areas along the shoreline of Tract 3.

National Wetland Inventory (NWI) maps and aerial photography indicate a forested wetland along an unnamed tributary stream immediately west of Little Cedar Mountain. A field survey of this area was conducted in March 2005. The dominant vegetation species included green ash (*Fraxinus pennsylvanica*), box elder (*Acer negundo*), red maple (*A. rubrum*), and sweet gum (*Liquidambar styraciflua*), with an extensive understory of Chinese privet (*Ligustrum sinense*) and Japanese honeysuckle (*Lonicera japonica*). Using the TVARAM scoring method, this wetland was determined to be moderate in quality. Land use/land cover analysis of aerial photography also indicates two areas of forested wetlands present along two other unnamed tributary streams near the middle area of Tract 3. Total forested wetland acreage as determined by photo interpretation is 21.6 acres. Photo interpretation also indicated 0.1 acre of scrub-shrub wetlands, 0.3 acre of forested/scrub-shrub wetlands, and 1.2 acres of open water/ponds (these are the depression wetlands/sinkhole ponds discussed above). Three percent of the total land area of Tract 3 is wetland.

The United States Department of Agriculture (USDA) Soil Survey for Marion County, TN (Elder 1958) was also used to determine potential wetland areas on Tract 3; it indicates there are approximately 46-acres of hydric soils present on Tract 3. These areas in general correspond to areas identified as wetlands by land use/land cover analysis.

The environmental consequences and impacts to wetlands associated with the development on Tract 3 have been previously discussed in the 1996 EA. The two depression wetlands (sinkhole ponds) located on Tract 3 would be retained by TVA and preserved along with a 100-foot buffer to protect the ecological integrity of these areas. As described in the 1996 EA, fringe and aquatic bed wetlands would be protected by requiring preparation and implementation of a detailed shoreline management plan for shoreline areas that would be disturbed by construction of community or public water use facilities. The plan would identify strategies for avoiding any identified wetlands or proposing appropriate mitigation, if wetland impacts would be unavoidable.

The 1996 EA does not discuss specific impacts to the forested wetlands identified by the land use/land cover analysis. The 1996 EA only included those wetlands that met the USACE criteria for jurisdictional wetlands as described in the 1987 Wetlands Delineation Manual (Environmental Laboratory 1987). These forested areas did not meet the three criteria (hydric soils, prevalence of wetland vegetation, and wetland hydrology) needed to classify them as jurisdictional wetlands. While not regulated by USACE guidelines, these areas may meet the U.S. Fish and Wildlife Service (USFWS) criteria for wetlands. Although the proposed development would adversely impact two forested wetlands, the loss of these nonjurisdictional wetlands is insignificant and the public benefits received from placing valuable wetlands on the exchange properties under federal protection fulfills the goals of Executive Order 11990, Protection of Wetlands.

TVA would require that a 100-foot vegetation management zone be maintained surrounding any identified jurisdictional wetlands. No clearing or removal of vegetation would be permitted within a vegetated management zone.

The Thunder Enterprises development proposal includes a reduction in the shoreline buffer zone set in the 1996 EA from 100-feet to 50-feet. This change would not affect the conclusions in the 1996 EA regarding impacts to wetlands. Field surveys indicated the presence of only one small emergent wetland located along the shoreline of Tract 3; reduction of the size of the buffer zone will not affect this wetland, due to its small size and habitat value. Reduction of the buffer zone may have some minor, localized effect on aquatic bed wetlands due to nutrient enrichment. This impact is expected to be insignificant overall.

The development of Tract 3 will result overall in insignificant impacts to wetlands. The two most ecologically significant wetlands present on the site (depression/sinkhole wetlands) will be retained by TVA, and while there may be some minor impacts to forested wetlands associated with development, the overall ecological condition of these wetlands is somewhat degraded. The approximately 20 acres of wetlands present on Tract 3 represent less than 1 percent of the total amount of wetlands present in Marion County, thus localized impacts to these wetlands will not be significant.

2.5 Threatened and Endangered Species

Threatened and endangered species were previously discussed in Sections 3.5 and 4.5 of the 1996 EA.

2.5.1 Plants

A review of the TVA Natural Heritage database indicated four federally listed and 29 Tennessee state-listed plant species known to occur within the distances identified from Tract 5 (Table 2-2). TVA's initial review identified two species that could be newly discovered to science which may potentially occur on the proposed development tracts. One is a member of the sunflower genus, *Helianthus* that is known to occur on the "glade" areas of Tract 5. The other undescribed species is a *Trillium* species that grows in mesic hardwood forest where habitats can be found on Little Cedar Mountain (Tract 5) and the area where Tract 3 and Tract 5 meet. TVA conducted an additional field survey during the flowering season in May 2005 and did not locate either of these plants on the proposed Tract 3. The member of the sunflower genus, *Helianthus*, does occur in the Gray's Bluff area of Tract 5, the tract TVA will retain. Areas on Tract 3 and Tract 5 contain habitat for the federally listed endangered Huntsville vasevine (*Clematis morefieldii*). Plants flower from late May to June; however, field surveys made in May 2005 did not find sensitive plants on Tract 3.

Several commenters expressed concerns about herbicide drift from golf course operations. In order to protect rare plants on Little Cedar Mountain from unanticipated or unlikely impacts such herbicide drift or other indirect impacts related to golf course management, TVA will require that any golf course developed on Tract 3 follow guidelines in the Tennessee Handbook for Golf Course Environmental Management.

Table 2-2. Threatened and Endangered Plant List for Little Cedar Mountain (Tract 5)

Scientific Name	Common Name	Status	Within 5 miles	Within 8 miles	Found in the county
<i>Acer saccharum</i> ssp <i>leucoderme</i>	Chalk maple	SPCO	X		
*<i>Apios priceana</i>	Price's Potato-Bean	Fed: LT State: THR			X
*<i>Asplenium scolopendrum</i> var. <i>americanum</i>	Hart's tongue fern	Fed: LT State: END			X
<i>Arabis patens</i>	Spreading rockcress	END	X		
<i>Aureolaria patula</i>	Spreading false-foxglove	THR		X	
<i>Castanea dentate</i>	Amer. Chestnut	SPCO			X
<i>Clematis morefieldii</i>	Huntsville vasevine	Fed: LE State: END	?	?	?
<i>Cotinus obovatus</i>	Smoke Tree	SPCO	X		
<i>Diervilla lonicera</i>	Northern Bush honeysuckle	THR			X
<i>Diervilla rivularis</i>	Mt. Bush Honeysuckle	THR			X
<i>Eriophorum virginicum</i>	Tawny Cotton Grass	THR			X
<i>Erythronium rostratum</i>	Yellow trout lily	SPCO			X
<i>Gelsemium sempervirens</i>	Yellow jasmine	SPCO		X	
*<i>Helianthus eggertii</i>	Eggert's Sunflower	Fed: LT State: THR			X
<i>Hottonia inflata</i>	Featherfoil	SPCO			X
<i>Hypericum adpressum</i>	Creeping St. John's wort	PE	X		
<i>Liatrix cylindracea</i>	Slender Blazing star	THR	X		
<i>Lonicera flava</i>	Yellow Honeysuckle	PT	X		
<i>Onosmodium molle</i> spp. <i>hispidissimum</i>	Hairy False Gromwell	PE	X		
<i>Onosmodium molle</i> spp. <i>occidentale</i>	Western False Gromwell	THR			X
<i>Panax quinquefolius</i>	Ginseng	S-CE	X		
<i>Paronychia argyocoma</i>	Silverling	THR			X
<i>Rhynchospora perplexa</i>	Beakrush	THR			X
*<i>Scutellaria montana</i>	Large-flowered skullcap	Fed: LT State: THR		X	
<i>Sedum nevii</i>	Nevius' stonecrop	END	X		
<i>Silene ovata</i>	Ovate catchfly	END			X
<i>Silphium brachiatum</i>	Cumberland rosinweed	END			X
<i>Solidago tarda</i>	Late goldenrod	SPCO			X
<i>Stewartia ovata</i>	Mt. Camellia	THR			X
<i>Talinum mengesii</i>	Fame-Flower	THR			X
<i>Trillium lancifolium</i>	Lance-leaf Trillium	END			X
<i>Viola tripartata</i>	Three-parted Violet	SPCO		X	
<i>Woodwardia virginica</i>	Virginia chain fern	SPCO			X

Note: Names in bold are federally listed species.

SPCO = Special Concern; Fed: LT = Federal Listed Threatened; State: END = State Endangered; END = Endangered; THR = Threatened; Fed: LE = Listed Endangered; State: THR = State Threatened; PT = Proposed threatened; PE = Proposed Endangered; S-CE = Special Concern Commercially Exploited; END = Endangered

2.5.2 Terrestrial Animals

In the 1996 EA, TVA committed to work with USFWS to determine if Little Cedar Mountain Cave should be gated to protect endangered gray bats that may roost at the site. Results of subsequent bat surveys at the cave indicate that small numbers of gray bats (50-75 individuals) use Little Cedar Mountain Cave on a limited basis, usually as a temporary night roost and they migrate between hibernacula in middle Tennessee and north Alabama. Because the cave is used on a limited basis by a small number of gray bats, TVA biologists determined that the site no longer warrants gating. However, TVA would implement the following measures to limit human disturbance to any gray bats that might temporarily use the cave:

1. Place signs, as described in the Gray Bat Recovery Plan, in the entrance of the cave indicating that the cave is closed to human entry between March 1 and November 1.
2. Monitor bat usage at the cave annually for 3 years.
3. Monitor the temperature profile and levels of human disturbance at the cave for 3 years.

Implementation of these measures would help insure that the proposed development would not likely adversely affect gray bats that may use Little Cedar Mountain Cave.

The proposed project would likely result in an increase in boater visitation to view bats at Nickajack Cave. This cave is used by a large gray bat maternity colony (60,000-108,000 individuals) during the summer months and is contained within TWRA's Nickajack Cave Wildlife Refuge. The refuge currently allows people to visit the site to view bats as they exit the cave. Appropriate protective measures are in place to ensure that visitation to the cave does not result in impacts to the bats that roost there. The proposed project is not expected to result in adverse impacts to gray bats at Nickajack Cave.

The 1996 EA indicated that one eagle nest was located in the vicinity of the project area. Recently, several bald eagles have built nests within 3 miles of the project site. However, these nests are all restricted to areas downstream of Nickajack Dam, near the mouth of the Sequatchie River. Although suitable nesting habitat exists on project site, especially on Tract 5, there are no known bald eagle nests on the property. The project as described in the new proposal is not likely to affect wildlife or threatened or endangered terrestrial species of animals adversely. By letter of July 28, 2005, the U.S. Fish and Wildlife Service concurred with this finding.

2.5.3 Aquatic Animals

Consistent with the 1996 EA, there are no protected aquatic animal resources in the vicinity of Tract 3 and Tract 5, and, therefore, there would be no impacts from development on Tract 3. Data from the TVA Natural Heritage database were used in reaching this conclusion.

2.6 Natural Areas

Tract 3 is immediately adjacent to Tract 5, which TVA has designated as the Little Cedar Mountain TVA Habitat Protection Area/Small Wild Area. This area is a 320-acre ridge at an

elevation of 900 feet on the northwestern shoreline of Nickajack Reservoir and is described as Tract 5. It has been previously described in Section 3.1 of the 1996 EA. It is immediately adjacent to the proposed Tract 3 development, abutting approximately one mile of the proposed development site's eastern boundary. This area is managed for resource and scenic protection and hiking and nature appreciation. A review of the TVA Natural Heritage database indicates that Tract 3 is also within three miles of seven Ecologically Significant or Managed Areas and one Nationwide Rivers Inventory stream.

Development of Tract 3 would eliminate some of the visual and ecological buffer adjacent to the Little Cedar Mountain TVA HPA/SWA and the adjacent Gunter'sville Reservoir State Mussel Sanctuary and would indirectly threaten the integrity of these natural areas over the long-term. Currently, the Tract 3 lands, as well as the reservoir, provide a buffer that plays an important role in helping to meet the ecological, recreational, cultural, and visual management objectives for Little Cedar Mountain TVA HPA/SWA. These indirect threats include a reduction in the surrounding scenic quality, encroachment of invasive exotic plant species, and potential overuse of the Little Cedar Mountain TVA HPA/SWA.

Gunter'sville Reservoir State Mussel Sanctuary starts below Nickajack Dam at Tennessee River Mile (TRM 424.7) and continues downstream to the Tennessee-Alabama state line (TRM 416.5). The southernmost tip of the proposed development near the dam is adjacent to the mussel sanctuary. A mussel sanctuary designation prohibits the taking of aquatic mollusks by any means and/or willful destruction of their habitat. To address this in part, TVA would require construction related best management practices (TVA General and Standard Conditions) be used to protect water quality and further safeguard against impacts to the nearby Gunter'sville Reservoir State Mussel Sanctuary. Additionally, TVA will require a 50-foot buffer along the shoreline of the development properties, consistent with TVA's 1998 Shoreline Management Initiative.

Potential impacts to the Little Cedar Mountain TVA HPA/SWA would be addressed by the implementation of two commitments:

- Development of a trail to help control and channel people recreating on Tract 5, and,
- Unless a golf course is identified for along the border between Tract 3 and Tract 5 that would provide an open space buffer, a 100-foot vegetated buffer zone shall be established along the length of the border between Tracts 3 and 5.

Thunder Enterprises has proposed funding for an interpretive trail on Tract 5 to serve the HPA/SWA. The trail would be designed and developed by TVA as previously planned in the Little Cedar Mountain TVA Natural Area Resource Stewardship Plan, August 2000 (see proposed trail map - Appendix B). The trail would promote directed and interpretive public use of natural area and thereby manage the increase in informal recreational use anticipated from the development of Tract 3. TVA would develop the 3.2-mile interpretive trail system to focus users hiking in the area on a defined route in order to reduce impacts to the area. The trail would be built in the least invasive way as to avoid any sensitive resources on the mountain. Protective buffer zones for sensitive resources would be established and appropriate signage and interpretive features would be erected. If Tract 3 is auctioned and a different developer is the successful bidder, TVA would condition sale of Tract 3 on funding this kind of trail system on Tract 5.

Unless a golf course is identified for along the border between Tract 3 and Tract 5 that would provide an open space buffer, a 100-foot vegetated buffer zone shall be established along the length of the border between Tracts 3 and 5. This buffer will be maintained in a natural state without altering the existing vegetation, with the exception of the removal of invasive exotic plants and the subsequent re-establishment with native plant species. This buffer will serve to offset the indirect effects posed by the reduction in the surrounding scenic quality and encroachment of invasive exotic plant species, and will help to preserve the aesthetics of the natural area as it relates to recreational use.

Impacts to Natural Areas will vary with the relative intensity of development on Tract 3. Higher percentages of retained open/green space will likely serve to help preserve the integrity of the nearby natural areas, while increasing amount of area occupied by structural development will likely serve to further threaten the integrity of the natural areas.

Overall impacts to natural areas as a whole resulting from Tract 3 development are expected to be insignificant with a properly planned and routed trail with directed and interpretive benefits, and with the establishment of the buffer between Tracts 3 and 5. However, monitoring of use of the HPA/SWA by TVA will help to identify if any additional measures should be taken to further reduce impacts to the area that occur as a result of more intensive use. These measures could include closing undeveloped trails on the tract or additional signage.

2.7 Water Quality

Water quality was previously discussed in Section 3.6 and 4.7 of the 1996 EA.

Potential impacts to water quality include discharge of sediment during construction and increased loading of pollutants in runoff due to the change in land use to residential and/or a golf course. An increase of nutrient loading could contribute to higher algal mass in the reservoir, which could in turn lead to decreased dissolved oxygen in the reservoir during periods of stratification. Increases in sediment discharge contribute to the muddy appearance of the water and interfere with the quality of aquatic habitat, and toxic materials (such as metals, hydrocarbons, and pesticides) in storm water runoff from residential and golf course areas can be toxic to aquatic organisms.

Minor discharges of eroded soil are likely during construction. These impacts would be minimized by maintaining buffers and employing effective erosion control Best Management Practices (BMPs). Construction storm water would be managed in accordance with current storm water regulations and permit requirement under the National Pollutant Discharge Elimination System (NPDES) program and managed by TDEC.

If TVA chooses to dispose of Tract 3 at public auction, a successful bidder could put a range of development on the property. Residential development could vary greatly depending on final construction plans and could include up to around 1000 homes. This could result in approximately 25 percent of the land surface covered with impervious surfaces (roofs, streets, and parking) (Corbitt, 1990). Development increases storm water volume and peak flows, and thereby tends to increase stream and drainage channel erosion. TVA would require existing drainage stream channels will be stabilized to carry the post-development discharge without significant erosion. Pollutant loads (including nutrients, pesticides, and metals) increase from the materials that are washed off of impervious surfaces and from lawn runoff. The developer should consider and apply

appropriate low impact development techniques to reduce imperviousness, reduce storm runoff volume, and minimize pollutant loads leaving the site. If a golf course is built, residential density would be approximately as high, but there would be fewer total units, and therefore proportionately less total pollutant loading from this source.

Golf courses use amounts of fertilizer and pesticides that are similar to, and sometimes higher than, cultivated agriculture (Tennessee Handbook for Golf Course Environmental Management). However, the amount of these chemicals that escape into waterways from golf courses is usually much lower, because golf courses are managed to maintain turf that completely covers the soil surface. The turf acts as a filter for surface flow, and prevents the erosion of soil and the chemicals that are bound to the soil particles. In addition, golf course roughs do not receive chemical treatment and act as sinks for chemicals, and the storm water flow from the course is dispersed enough that buffers can be effective. Golf courses can also use additional management practices to reduce the export of pollutants, such as enhanced buffers; use of water hazards or constructed wetlands to collect and hold runoff; and the use of pesticides that decay rapidly in the environment. Few studies have been done that specifically quantify pollutant loadings from golf courses, but the impact of a golf course with average management is likely to be similar to a residential area on a loading/area basis.

The Thunder Enterprises development proposal includes a reduction in the shoreline buffer zone set in the 1996 EA from 100-feet to 50-feet. This change would not affect the conclusions in the 1996 EA regarding impacts to water quality. It is consistent with the 50-foot shoreline buffer that TVA established in 1999 as part of its Shoreline Management Initiative (SMI) policy for residential shoreline. A 50-foot buffer width has been determined to be adequate for the protection of water quality; however, buffer width is not critical for water quality on this site because most storm water from an area with the proposed level of imperviousness flows in a pipe or channel, so it bypasses the buffer.

This site contains no perennial streams and storm water could discharge almost directly to the main body of Nickajack Reservoir. The Thunder Enterprises proposal states that the trophy bass lake would also be utilized as a stormwater detention basin. Minor local impact to water quality is possible, but total loads will be small and incremental compared to the total load entering Nickajack Reservoir from off site sources.

TVA will not permit onsite disposal of wastewater from any development on Tract 3. The proximity of sewer lines to Tract 3 would allow wastewater from a development to be treated at the Jasper POTW (publicly owned treatment works). This POTW normally currently operates at less than half of its design capacity of 0.78 MGD and is able to accommodate 0.39 MGD of additional wastewater. The Jasper plant discharges to the Tennessee River downstream of Nickajack Dam.

Estimates of domestic wastewater from residential dwellings range from 75-150 gallons per person per day. For a home with four residents that would be 300-600 gallons per residence per day. Many health departments use an average of 450 gallons per residence per day for a 3-bedroom home. For a development of 615 homes, that would result in a total load of 276,750 gallons per day, which would still leave the Jasper POTW with 0.113 MGD of capacity. The estimate does not include any load from commercial buildings.

A higher density development (e.g., a development of 1,000 homes without the golf course) could result in a total load of 0.45 MGD, which exceeds the available capacity of the Jasper

POTW. Before a higher density development could be constructed, a developer would need to ensure available offsite waste water treatment availability and work with the City of Jasper to add additional capacity to the Jasper POTW. The Jasper POTW can be expanded up to 1.5 MGD at the current site.

Adherence to construction related BMPs, appropriate golf course and storm water management activities and handling of the development domestic wastewater at an offsite POTW should result in insignificant impacts to water quality.

2.8 Aquatic Biology

Aquatic life was previously discussed in Sections 3.8 and 4.9 of the 1996 EA.

Nickajack Reservoir is a healthy reservoir and it supports an abundance and variety of aquatic life. Recent sampling not far upstream from Nickajack Dam indicated that 20 or more types of bottom-dwelling aquatic species and 40 or more fish species occur near Tract 3. The bottom dwelling aquatic species include many types of insects, some crustaceans, a few types of worms, and the Asiatic clam. Some thin-shelled freshwater mussels also occur in the shallows but no stocks of thick-shelled (commercially valuable) mussels are known to exist in this part of Nickajack Reservoir. Sport fish that are relatively abundant in this part of the reservoir include bluegill, largemouth bass, black and white crappie, yellow bass, redbreast sunfish, channel catfish and spotted bass.

The embayment and other shallow water habitats in Nickajack Reservoir near Tract 3 provide spawning and feeding sites for many aquatic species, especially the sunfish, bass, crappie, and catfish which sportsman value. Vegetation contained within the aquatic bed and shoreline fringe wetlands provide habitat for prey species and cover for young fish and larger predators. The lacustrine fringe and aquatic bed wetlands are important nursery areas for fish and aquatic invertebrates.

Runoff of excess nutrients from fertilized lawns and golf courses presents an additional threat from development of shoreline and back-lying lands. Runoff from golf courses, particularly excess fertilizers, is especially harmful to aquatic ecology. Any golf course developed on Tract 3 will follow guidelines in the Tennessee Handbook for Golf Course Environmental Management to reduce these impacts.

Any on-site development that could alter any stream segments located on Tract 3 should be coordinated with TDEC under the Aquatic Resource Alteration Program (ARAP) and the necessary permit received.

Impacts to aquatic resources are directly related to changes of the existing natural shoreline conditions. Aquatic resources can be impacted by changes to shoreline (riparian) vegetation, vegetation on back-lying lands, and land uses. Shoreline vegetation, particularly trees, provides shade, organic matter (a food source for benthic macroinvertebrates), and shoreline stabilization; and trees provide aquatic habitat (cover) as they fall into the reservoir. Shoreline vegetation and vegetation on back-lying land provide a riparian zone that which functions to filter pollutants from surface runoff while stabilizing erodible soils. A 50-foot shoreline buffer managed in accordance with TVA Shoreline Management Initiative policy is sufficient to protect aquatic resources.

Shoreline development can alter the physical characteristics of adjacent fish and aquatic invertebrate habitats, which can result in dramatic changes in the quality of the fish community. One of the most detrimental effects of shoreline development is the removal of riparian zone vegetation, particularly trees. Removal of this vegetation can result in loss of fish cover and shade, which elevates surface water temperatures. In addition, fish spawning habitat, such as gravel and woody cover, can be rendered unsuitable by excessive siltation and erosion, which can occur when riparian vegetation is cleared. While the current Tract 3 transfer would not include any shoreline alteration, there would likely be some degradation of aquatic habitats associated with future commercial recreational development (e.g., a marina) along the reservoir shoreline. TVA would review any shoreline alteration when a water use facilities permit is requested in accordance with Section 26a (of the TVA Act) and would minimize shoreline habitat alteration and any associated habitat impacts to acceptable levels.

2.9 Floodplains

Floodplains were previously discussed in Sections 3.7 and 4.8 of the 1996 EA.

The area potentially impacted by the proposed development would extend from upstream of Nickajack Dam at Tennessee River Mile (TRM) 424.7 to the Interstate 24 crossing (TRM 429.2). In this reach, the 100- and 500-year (or critical action) floodplains are the areas below elevation 635.0. Nickajack Reservoir is operated to fluctuate between a normal minimum pool elevation of 632.0 and normal maximum pool elevation of 634.5 year round. The top-of-gate elevation at Nickajack Dam is 635.0. The TVA Flood Risk Profile (FRP) elevation is 639.0. The FRP is based on the 500-year flood and is used to control residential and commercial development on TVA lands. Marion County participates in the National Flood Insurance Program and has adopted the 100-year flood as the basis for its floodplain regulations. There is an adopted floodway along this reach of the Tennessee River.

Tract 3 would be developed with commercial and public recreational facilities and residential development. For the most part, land below the Maximum Shoreline Contour (elevation 640-feet) would be not included in any transfer agreement. However, the only portions of the area that are within the 100-year floodplain, elevation 635.0, are immediately adjacent to the shoreline and would not likely impact the design of the development. All development within the 100-year floodplain would be consistent with Executive Order No. 11988.

TVA would require any non-water use facilities either to be located on ground above the TVA Flood Risk Profile elevation 639.0 or flood proofed to this elevation. In addition, TVA would follow local floodplain requirements resulting from implementation of the National Flood Insurance Program. The placement of fill or other obstructions within the limits of the floodway would be avoided to prevent increases in flood elevations. Activities proposed in the adopted floodway would be accompanied by a "No Rise Certification" indicating that the development would result in no increase in the 100-year flood and "with floodway" elevations and floodway widths.

Any shoreline development within the floodplain would likely be water use facilities and would require additional review and approval under Section 26a (of the TVA Act). Potential floodplain impacts would be reviewed at that time, but generally, water use facilities would result in insignificant floodplain impacts.

To ensure that any potential future development of this tract would not adversely impact floodplains and flood control, TVA would include the following commitments in any transfer agreement:

- Any future facilities or equipment subject to flood damage will be located above or flood proofed for the TVA Flood Risk Profile elevation 639.0.
- Any future development proposed within the limits of the 100-year floodplain, elevation 635.0, will be consistent with the requirements of Executive Order 11988.
- You are advised that TVA retains the right to flood this area and that TVA will not be liable for damage resulting from flooding.

2.10 Navigation

The discussion of navigation impacts in Sections 3.9 and 4.10 of the 1996 EA remains adequate. Proposals to construct public or community water use facilities potentially impacting navigation would require TVA approval under Section 26a (and USACE approval) and would be subject to additional review. In a letter dated June 21, 2005, the U.S. Army Corps of Engineers expressed continuing concerns about potential recreational boat traffic in the vicinity of the navigation lock. Based upon further discussions with U. S. Army Corps of Engineers staff, it has been determined that the recreational facilities proposed upstream of the earth fill portion of the dam (fishing piers and swimming beach) would result in insignificant impact to navigation operations at Nickajack Lock.

2.11 Recreation

Recreation was previously discussed in Sections 3.10 and 4.11 of the 1996 EA.

Under the preferred alternative discussed in the 1996 EA (Alternative 2), Shellmound Recreation Area would continue to exist, and could be operated as part of the commercial resort development. However, under the current proposal the recreation resources provided at Shellmound Recreation Area (Table 2-3) would be replaced, with the facilities listed below (Table 2-4) on twenty-five acres of property closer to the northern edge of the dam. TVA would retain the property and manage the facilities.

Table 2-3. (Existing) Shellmound Public Recreation Area

Land Based
15 grills (in pine tree picnic area near the shoreline and scattered throughout day-use area)
55 total campsites with picnic tables and fire rings
20 sites with water and electricity (9 are pull-through)
9 sites with electric only
26 sites without water or electricity (10 are pull-through)
Dump station
Campground manager residence
Amphitheater (stage with benches – accommodates approximately 50 – people in day-use area)
1 toilet building (restrooms only in day-use area) (3 stalls in women's, 2 stalls in men's)
1 toilet building with showers in (camping area) (3 stalls in women's, 2 stalls in men's and 1 shower in each)
3-picnic gazebo (four tables)
Play Courts and Areas:
Children's playground equipment
Toddler playground equipment
Paved basketball court also used as children's skating area
Volleyball court (sand)
Tetherball court (sand)
2 Horseshoe pits (regulation size)
Softball field (fixed back-stop with movable bases)
Camper storage (will accommodate 4-6 campers)
Benches scattered through out area
Scenic viewing area – in the overflow camping area (view of the dam/mountains)
Refreshment area (vending machines)
Access road with 48 parking spaces
Informal recreation area for hunting, hiking, bank fishing, wildlife viewing, etc., Lands--1089 acres
Water Based
Paved boat ramp (double-lane)
40 car and trailer parking spaces (associated with boat ramp)
Fish cleaning table (flat metal table – located by ramp)
2 fishing piers, ADA accessible with electricity (used during fall color cruise by larger boats and vendors)
Swimming beach
Drinking fountain and water faucet/shower (close to swimming beach)

Table 2-4. (Proposed) Nickajack Shores Public Recreation Area

Land Based
20 grills (scattered throughout the day-use area)
60 total campsites with picnic tables and fire rings
20 RV sites with water and electricity
40 tent/pull through sites 25 with electricity
Dump station
Campground manager residence
Amphitheater (stage with benches – accommodates approximately 50 – people in day-use area)
1 toilet building (restrooms only in day-use area) (3 stalls in women’s, 2 stalls in men’s)
1 toilet building with showers in (camping area) (3 stalls in women’s, 2 stalls in men’s and 1 shower in each)
1-picnic gazebo (four tables)
1 large picnic pavilion (six tables), ADA accessible with grills
Play Courts and Areas:
Children’s playground equipment
Toddler playground equipment
Paved basketball court also used as children’s skating area
Volleyball court (sand)
Tetherball court (sand)
2 Horseshoe pits (regulation size)
Softball field (fixed back-stop with movable bases)
Camper storage (will accommodate 4-6 campers)
Benches scattered through out area
Scenic viewing area – in the overflow camping area (view of the dam/mountains)
Refreshment area (vending machines)
Access road with day-use parking area and ADA spaces
Informal recreation area for hunting, hiking, bank fishing, wildlife viewing, etc., Lands--578 acres
Water Based
Paved boat ramp (triple-lane)
50 car and trailer parking spaces (associated with boat ramp)
Fish cleaning table (flat metal table – located by ramp)
2 fishing piers, ADA accessible with electricity (used during fall color cruise by larger boats and vendors)
Swimming beach
Drinking fountain and water faucet/shower (close to swimming beach)

Completion of the replacement of public recreation facilities as proposed in Table 2-4 would result in recreation resources of equivalent public usefulness and represent no loss of water-based or land-based recreation user-days. Management and maintenance of these public recreation areas/facilities would remain with TVA and be essentially unchanged from current levels.

The applicant’s concept provides for a range of private recreation facilities which, if developed could be available solely for residences of “Nickajack Shores,” as discussed in

Appendix C). A successful competing proposal might also include a similar range of private recreation facilities, to meet recreation demands from the planned residential community. This would increase recreational resources in this area. Any water-use facilities proposed would require TVA and USACE approval and would be a community-type facility. No individual boat slips or boathouses would be permitted.

The *Tennessee State Recreation Plan, 2003-2008*, as approved by the National Park Service and the *National Survey on Recreation and the Environment, 2000-2001*, report recreation demand for “hiking” as one of the higher participation rates for any outdoor activity in Tennessee. These studies estimate participation rates of 34.2 and 28.8 percent respectively with around 1.52 million Tennessee participants annually and an annual growth rate of around 0.6 million new participants. Consequently, TVA anticipates some increase in demand for trail-based recreation activities potentially affecting Tract 5 as a result of locating a residential development on Tract 3. Assuming an increase in population on the adjacent tract, plus anticipated general growth in demand, the resulting increase in recreational hiking in the area would lead to an annual increase in demand for trail-related recreation activity days. While there is speculation involved in projecting such an increase, TVA has considered how to mitigate or address the potential impacts of this additional recreation demand on Tract 5. Tract 5 is a TVA publicly owned and managed multiple-use Habitat Protection Area/Small Wild Area and would continue with public access for passive/informal recreation activities, with or without the proposed development. Therefore, a properly planned and developed interpretive trail (see Appendix B) with appropriate public parking and signage (kiosk) would better accommodate both public recreation and local residential use of this resource, while affording protection to the sensitive areas, which the trail would be designed to avoid. User-day demand for various other forms of recreation opportunities would be addressed with the replaced facilities and their associated increased capacities. TVA would designate a public parking and access corridor (trail route) to and on Little Cedar Mountain (Tract 5).

2.12 Cultural Resources

Cultural resources were previously discussed in Section 3.12 and 4.13 of the 1996 EA.

For preparation of the 1996 EA, TVA relied on archaeological data that was collected in 1987 by the University of Alabama (Driskell and Mistovich, 1990). Results of this survey indicated that one archaeological site (40MI197) was potentially eligible for listing in the National Register of Historic Places (National Register) within the tract that is currently being proposed for transfer. Avoidance of this site was recommended at that time. No additional resources were recommended as potentially eligible. One historic cemetery (40MI194) was to be avoided and would be protected by Tennessee state law regarding cemeteries.

The 1996 EA included a commitment to conduct Phase II testing at site 40MI197. TVA completed the testing in 1997 and it was determined in consultation with the SHPO, that the site did not meet the criteria of eligibility for the National Register (Jones 1997). Changes in Tennessee survey standards and archaeological techniques since 1996, the need for a historic architectural survey, and the amount of public concern surrounding the historic significance of this tract prompted TVA to complete an additional Phase I archaeological and historical survey to determine if any historic properties were present.

Concern generated from TVA's initial public meeting included a considerable number of comments regarding the historic significance of the proposed development tract. Specific concerns included the presence of Native American burials, the use of the land by the Chickamauga Indians during the late 18th century, and the tract's involvement with historic events that occurred during the Civil War. Phase I archaeological investigations failed to identify any significant archaeological resources related to these occupations. Several comments were also made about adverse effects to inundated archaeological sites. While it is possible that unrecorded archaeological sites could be located below the reservoir on the north side of the original river channel and adjacent to the proposed development, these resources would not be affected by the proposed land transfer. Any water use facilities or subsequent proposal for any proposed development received by TVA would have to undergo additional environmental review, including evaluating the potential disturbance of any underwater cultural resources.

Results of Phase I Cultural Resources Survey

The Phase I survey was conducted by Alexander Archaeological Consultants, Inc. in January and February of 2005 (Alexander and Trudeau, 2005). Alexander included a comprehensive written history of the parcel and its surrounding environs to assist TVA in assessing the historic significance of this area. Research conducted for the report confirmed the historic significance of this region.

In particular, the Chickamauga towns of Nickajack and Running Water, as well as the town of Shellmound, were located across the Tennessee River from the development tract, Tract 3. However, these towns were likely inundated because of the Nickajack Dam construction.

In addition, Love's Ferry, a significant Civil War site, has been identified as being located along the river near this tract; however, it too is located underwater. The Phase I survey indicates that no archaeological evidence of the Civil War or any other historic event is present on the development tract.

Public comments also suggested that the proposed development parcel consisted of a sacred burial ground that should not be developed. Systematic archaeological survey failed to identify any evidence of burials on Tract 3.

Archaeological investigations revisited the seven previously recorded archaeological sites and identified seven new archaeological sites on the proposed development tract. Newly identified sites include five historic homesteads. Two of the 14 archaeological sites investigated were recommended as potentially eligible for listing in the National Register (40MI249 and 40MI192). TVA has removed the potentially eligible archaeological sites from the proposed transfer tract. These sites, along with a 100 ft. buffer, will be avoided by all ground disturbing activities. A historic cemetery (40MI194) will be included in the TVA retained land and will continue to be protected under Tennessee state cemetery laws.

Twenty historic standing structures were identified as a result of the historic architectural survey. Seven of these sites were located within the viewshed of the proposed development tract and were recommended as potentially eligible for listing in the National Register. Visual impacts to these resources would be reduced by the installation of vegetation on the exterior boundaries of the development where historic structures are visible. The SHPO has concurred with this approach. Final plans for the vegetation screening would be submitted to TVA and coordinated with the SHPO prior to initiating construction.

Thunder Enterprises has proposed funding an interpretive trail on Tract 5. TVA would require any potential developer to fund a public interpretive trail system on Tract 5 (Little Cedar Mountain). The trail system would be constructed by TVA or by a TVA contractor under TVA's supervision. This tract contains several significant archaeological resources. Consultation with the SHPO and appropriate federally recognized Indian tribes would be conducted in the final design of a trail system. A Phase I Archaeological survey of the interpretive trail would be completed and all significant resources would be avoided and/or protected with such measures as gating.

TVA has consulted with the following nine federally recognized Indian tribes: Cherokee Nation, Eastern Band of Cherokee Indians, United Keetoowah Band, Muscogee (Creek) Nation of Oklahoma, Thlopthlocco Tribal Town, Alabama Quassarte Tribal Town, Alabama Coushatta Tribe of Texas, Kilagee Tribal Town, and the Chickasaw Nation. Other potentially interested parties contacted regarding the proposal include Tennessee Commission of Indian Affairs, Chattanooga Intertribal Association, Intertribal Sacred Land Trust, Marion County Genealogical and Historical Group, Tennessee Division Sons of Confederate Veterans.

On June 10, 2005, TVA hosted a Native American Tribal Consultation meeting on the proposed development. Representatives from the Muscogee (Creek) Nation, Chickasaw Nation, Seminole Nation of Oklahoma, Cherokee Nation, and the Tennessee SHPO were present to discuss the undertaking. As agreed in this meeting, TVA will execute a Memorandum of Agreement (MOA) for dealing with inadvertent and post-review discoveries that could occur during construction of the development's infrastructure. A copy of the MOA is in Appendix E. The SHPO concurs that the proposed sale of Tract 3 would not adversely affect historic properties.

2.13 Visual Resources

The visual setting and potential impacts were adequately discussed in Section 3.11 and 4.12 of the 1996 EA. The existing scenic attractiveness for Tract 3 is common and the scenic integrity is moderate.

Any proposal for development that would include a mix of recreational and residential development would potentially impact existing visual resources adversely. Development proposals incorporating context sensitive design measures that would screen major structures, maintain adequate shoreline and primary roadway buffers to preserve the rural aesthetic, minimize the production of waste light, promote the preservation of the native landscape, and generally reduce the cumulative impact to visual resources through properly integrating development with the environment would greatly reduce the probability for adverse impacts.

The Thunder Enterprises proposal requests that the shoreline buffer along portions of Tract 3 be reduced from the 100-foot depth referenced in the 1996 EA to a depth of 50 feet. This proposed reduction in the buffer would have potentially adverse impacts to the existing scenic value, in direct correlation to the extent that development occurred with no sensitivity to the existing aesthetic qualities. Additionally, any proposed mixed-use development would potentially increase the existing night sky brightness above levels currently discernable to reservoir users, shoreline and near shore residents, and motorists in the immediate vicinity. These adverse impacts would be minimized by the required 50-foot buffer and by use of lighting equipped with full cut-off optics throughout the development.

In light of Tract 3's land use allocation and the measures described above, the impacts to visual resources would be insignificant including potential impacts associated with the Thunder Enterprises proposal.

2.14 Socioeconomic

Socioeconomic conditions were previously discussed in Sections 3.13 and 4.14 of the 1996 EA.

The land affected by the proposed action is located in Marion County, which has close economic ties to Chattanooga, as shown by its inclusion in the Chattanooga Metropolitan Statistical Area. According to U.S. Census Bureau estimates, the population of Marion County was 27,880 in 2003. The population of the county grew 12.5 percent from 1990-2000. The labor market area, identified on the basis of commuting patterns, includes Marion County, along with Franklin, Grundy, Hamilton, and Sequatchie counties in Tennessee, Jackson County, Alabama, and Dade County, Georgia. The estimated 2003 labor market area population was 473,960.

According to the U.S. Census, minorities constituted an estimated 6.1 percent of the population of Marion County in 2003. The labor market area population consisted of 18.3 percent minorities, compared with 20.3 percent for Tennessee. The 1999 poverty rate in Marion County was 14.1 percent, compared with 12.8 percent for the labor market area, and 13.5 percent for Tennessee.

Per capita income in 2002, according to the Bureau of Economic Analysis, was \$22,496 in Marion County and \$28,145 in the labor market area, compared with \$27,611 for Tennessee, and \$30,906 for the nation. Hamilton County had the highest per capita income in the labor market area, \$30,572.

Manufacturing jobs accounted for 17.6 percent of employment in Marion County in 2002, compared with 13.4 percent for the labor market area and 12.7 percent for Tennessee (Bureau of Economic Analysis). Farm employment in Marion County was 3.9 percent, exceeding the labor market area and the state, at 1.7 percent and 3.1 percent, respectively. Retail employment of 15.4 percent in Marion County also exceeded the labor market area and state, which were 12.1 percent and 11.4 percent, respectively. Service sector employment for Marion County is unavailable because of confidentiality, but government employment in the county accounted for 12.9 percent of jobs; finance, real estate and insurance for 5.4 percent; and transportation and warehousing for 4.3 percent.

The 2000 U.S. Census revealed that 52 percent of Marion County's working residents commuted to other counties. Seventy percent of those commuted to Hamilton County. Of those who work in Marion County, 23 percent commuted in from elsewhere.

According to the Bureau of Labor Statistics, Marion County had a labor force of 12,806 in 2003, with an unemployment rate of 5.7 percent. Labor market area unemployment was 4.7 percent, with a labor force of 232,355. Unemployment rates ranged from 4.1 percent in Hamilton County to 8.1 percent in Jackson County, Alabama. Unemployment in Tennessee was 5.8 percent for 2003.

Under the development proposed, a conversion to commercial, residential, and recreational uses on Tract 3 would increase employment and income in the area during both

construction and operation. The levels of increase cannot be definitively quantified, but it is unlikely that many of the jobs created would be high paying. However, additional residential property tax revenue would accrue to local government, as well as sales tax revenue from local purchases made by new Marion County residents. Increased tax revenues would be accompanied by increased demands on public infrastructure such as roads, water, and sewer. There is already interstate highway access, a public water supply, and nearby sewer lines. Any improvements to water or sewer capacity would occur along existing road right-of-ways. Hence, a significant impact or demand on public infrastructure is unlikely. Demands on public services such as education and law enforcement are also anticipated. However, if the residential development includes high value homes, as does the Thunder Enterprises proposal, the property tax revenue generated by this would help offset the cost of any necessary additional infrastructure. Furthermore, existing county subdivision regulations would ensure that any residential development meets reasonable standards and would not place undo burden on the county.

The overall increase in population would be minimal, as would be the effects on existing labor market given the large existing labor force, which includes nearby Hamilton County.

Environmental justice concerns arise when adverse environmental impacts are borne disproportionately by minorities or those living in poverty. The population within the Census Block Group and Census Tract that encompass the land in question has a slightly greater percentage of minorities, 7.1 percent and 6.7 percent, compared to Marion County with 6 percent. However, compared to the labor market area with minority populations of 18.3 percent, or the state with 20.8 percent, the project area minority population is much lower. The 1999 poverty rate in the Block Group and Census Tract was 5.3 percent and 11.2 percent, respectively. These rates are below the county rate of 13.5 percent and the labor market area rate of 12.8 percent. Hence, demographics indicate that disproportionate impacts in the immediate area would be very minimal at most. Furthermore, adverse impacts on air quality and noise, which would be the primary impacts for the population in the immediate vicinity, would be minor, as suggested elsewhere in this document.

2.15 Air Quality and Noise

Air and Noise have previously been discussed in Section 4.15 of the 1996 EA.

Tennessee is subject to the National Ambient Air Quality Standards, which limit outside air concentrations of six pollutants: particulate matter, sulfur dioxide, carbon monoxide, ozone, nitrogen dioxide, and lead. For ozone, a nearby nonattainment area for the new 8-hour ozone standard includes Hamilton County and Meigs County in Tennessee and Catoosa County in Georgia. For the new fine particulates (PM-2.5) standard, nearby counties designated as nonattainment are Hamilton County in Tennessee, Walker County and Catoosa County in Georgia, and part of Jackson County in Alabama. For the other pollutants, no nearby nonattainment areas exist.

Prevention of Significant Deterioration (PSD) regulations are used to limit air pollutant emissions from new or expanding sources. Under these regulations, some national parks and wilderness areas are designated PSD Class I air quality areas and are specially protected. The closest PSD Class I area to the Little Cedar Mountain location is Cohutta National Wilderness Area, about 55 miles (about 90 kilometers) to the east and a little south at its closest boundary point in north-central Georgia near the state line and therefore no impact is anticipated.

2.16 Transportation

The proposed project site is located approximately 1.2 miles southwest of Interstate Highway 24 at Exit 158. Access Road provides a link between I-24 and the TVA Nickajack Dam. From I-24 to the proposed location of the new subdivision travel would be southwest on Access Road. The location is also accessible from Jasper via Shellmound Road south to Access Road. Access Road is a good quality two-lane rural highway with good lane width, well-maintained, grassed shoulders, 35 mph speed limits, and passing zones near the site. Shellmound Road is a two-lane facility with no shoulders and limited passing lanes near the site. Access Road is level and virtually straight with no residences or businesses from I-24 southwest to the proposed site. There are residences and various small businesses scattered along Shellmound Road. Shellmound Road also has curvy alignment and rolling terrain with a speed limit of 30 mph. Access road has four short connector drives with Shellmound Road. The latest available Annual Average Daily Traffic (AADT) counts from the Tennessee Department of Transportation (2004) shows approximately 920 vehicles per day (vpd) on Access Road just south of the intersection with I-24. There are approximately 2,320 vpd on Shellmound Road near where it goes under I-24.

If TVA chooses to dispose of the Tract 3 property at public auction, a successful bidder could put a range of development on the property. Residential development could vary greatly depending on a final construction plan and could include a density up to around 1000 homes. Because of a proposed subdivision is planned, additional traffic will be generated on the adjacent roadway network. Increased traffic would result from residents and visitors commuting to and from the home sites, as well as some truck traffic during construction. The methodology, as defined by *Trip Generation*, used to determine the additional trip generation estimates is based on an independent variable (dwellings) for each particular land use (housing) for a specified day or time (weekday). Based on several field studies of single-family housing, an estimate of the most dense type of development provides up to approximately 9,484 vehicles per day, or 1,020 vehicles during the peak hour, would be added to the existing traffic on the local roadways due to the subdivision.

The additional traffic due to the proposed subdivision is estimated to result in approximately an 822 percent increase in average annual daily traffic on Access Road and a 223 percent increase on Shellmound Road, assuming that 70 percent of the additional traffic exits on Access Road and 30 percent exits on Shellmound Road. This level of analysis provides a broad overview of the predicted impact. Peak hour traffic, on the other hand, would experience approximate increases of 877 and 232 percent respectively on Access Road and Shellmound Road, assuming current peak hour traffic is 10 percent of the AADT.

The *Highway Capacity Manual* provides a method of evaluating roadways and the level of service (LOS) on them based upon existing traffic and physical characteristics of the facilities. With the above assumption of a 70/30 traffic split with Access and Shellmound Roads, the LOS for these facilities is as follows. Access Road currently has an LOS of A and will change to an LOS of C upon completion of the development, while Shellmound Road will drop from LOS B to LOS C. Based on current conditions, the current Level of Service (LOS) provided by the roadways would be reduced at full build-out. However, the construction period is during a several-year period. Over a long period, there is a natural progression to improve the quality of the local roadway network by the appropriate highway departments. Therefore, as traffic increases, roadway networks will also improve. In addition, the increases in traffic will occur slowly over a long span of time, so that traffic conditions will not change suddenly and will not be perceived by the user as a significant

change. Direct access to the subdivision will be via Access Road. Design considerations should be taken for addressing turning movements, radii tolerances, sight distances, alignment, intersection design, etc.

There will be truck traffic during the construction phases. The truck traffic could include borrow or excess material transport and construction material deliveries to/from the site. The initial major construction of the development will occur prior to full residential development and the roadway network will be adequate to handle this traffic during operations. The residential construction will occur incrementally over a long period and should not be perceived as a significant change. It should be recognized, though, that a large amount of truck traffic contributes to an increase in the pavement maintenance required. In addition, trucks may not be loaded beyond legal load limits, must meet all safety standards, and hauling shall comply with all federal, state, and local ordinances.

Since there are no residences on this portion Access Road and very little existing traffic, the majority of people affected by this additional traffic are the residents of the proposed subdivision themselves. Some local businesses may benefit from the additional traffic. The residents along Shellmound Round will experience some effects of the proposed development, but the level of service on Shellmound Road will not drop significantly.

Possible mitigation efforts that could improve traffic flow are traffic control devices at intersections as well as physical road improvements to increase capacity. Potential capacity improvements could include roadway realignment and addition of passing zones, intersection realignment, roadway and/or shoulder widening, repaving, etc.

2.17 Cumulative Impacts

The discussion of cumulative impacts in Section 4.16 of the 1996 EA remains generally adequate, but as appropriate, the update of specific resource areas provides additional information about cumulative impacts to those areas.

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CHAPTER 3

3.0 COMMITMENTS

3.1 Development Commitments

The following development commitments will be required of the successful bidder for any development upon Tract 3 (XNJR-21). TVA evaluated the proposal to auction Tract 3 based on the premise that any potential developer would develop the property for mixed-use purposes, i.e. residential and recreation, as allocated in the Nickajack Land Plan.

1. The successful bidder shall develop Tract 3 for residential development, commercial recreation and public recreation purposes.
2. The successful bidder shall invest a minimum of \$4 million within five years from time of auction on a minimum of one of the following commercial recreation amenities to be built on Tract 3: marina, dry stack storage, golf course amenity, clubhouse/lodge/health club, rental cabins, tennis and swimming complex, equestrian stables and riding trails or other agreed upon commercial recreation amenities. The successful bidder will also be required to commit a minimum of 25 percent of the capacity of the amenities chosen to meet the minimum investment to members of the public other than residents of the development.
3. As part of the compensation for Tract 3, a successful bidder shall provide TVA with exchange properties deemed acceptable. General acceptability requirements for any exchange properties are identified in Appendix Table D-1. In addition, the successful bidder may have to undertake activities on the exchange properties to make them acceptable to TVA.

3.2 Environmental Commitments

The following environmental safeguards are proposed if Tract 3 is made available for purchase. These mitigation measures update and replace the mitigation measures found in the 1996 EA.

1. To ensure the successful bidder has incorporated the required mitigation commitments, TVA will require a final site development plan to be submitted to TVA for approval prior to any construction on Tract 3. TVA will evaluate the development plan to determine consistency with these mitigation measures.
2. Shoreline buffer zones will be maintained along the Nickajack Reservoir shoreline. The width of these zones may vary depending on slope and resource condition; however, in no instance will they be narrower than 50-feet as measured landward from the normal summer pool elevation (634 msl). Limited management of vegetation within this zone (e.g., removing nuisance species (poison ivy, etc.) and limited thinning of small trees (under three inches in diameter) may be allowed if it is consistent with a Vegetation Management Plan approved in advance by TVA.

3. As described in the 1996 EA, fringe and aquatic bed wetlands would be protected by requiring preparation and implementation of a detailed shoreline management plan for shoreline areas that would be disturbed by construction of a marina and associated facilities. This plan would identify strategies for avoiding or appropriately mitigating wetland impacts, if any. TVA would require a 100-foot vegetation management zone, temporarily marked with standard orange vinyl construction type fencing, be maintained surrounding the two sink hole jurisdictional wetlands located on Tract 3. No clearing or removal of vegetation would be permitted within the vegetation management zone.
4. A final site development plan will provide for vegetative screening to reduce the visual impacts to historic structures in the vicinity of the proposed development. These plans will be reviewed and approved by TVA in consultation with the State Historic Preservation Officer (SHPO).
5. The Shellmound Recreation Area facilities (Table 2-3) will be relocated to a site just downstream of its current location. Public amenities will be replaced as proposed by the applicant and listed in Table 2-4 of the Supplemental EA. The new recreation facilities will be developed prior to eliminating the current Shellmound Recreation Area.
6. Visual impacts from development of Tract 3 will be minimized by adhering to use of lighting equipped with full cut-off optics throughout the development.
7. Temporary orange construction fencing will be placed around archaeological site 40MI192 in order to protect the site from damage during construction phase of development. This fencing will incorporate both the site and a 100-foot buffer.
8. To avoid potential impacts to sensitive (natural, cultural, ecological) resources on Tract 5 from adjacent community development, an interpretive trail with signage will be used to direct recreation users away from sensitive resources. TVA will require the successful bidder of Tract 3 to fund the development of the following: a short access road from Shellmound road to a 16 space paved parking lot and trail head access point to be located on TVA property, an educational kiosk, interpretive trail (approximately 3.2 miles) with directional signs, gating one small pit cave, and an interpretive overlook sign. Interpretation and education about geology, scenic qualities, ecology, and regional Native American occupation will be offered to the general public through self-guided literature and signs. In addition, TVA will pay for a Phase I Archaeological Survey to be conducted along the trail corridor and any significant resource will be avoided and/or protected. This protection will be done in consultation with the SHPO and any other consulting parties.
9. Unless a golf course is identified for along the border between Tracts 3 and 5 that would provide an open space buffer, a 100-foot vegetated buffer zone shall be established along the length of the border between Tracts 3 and 5. This buffer would mitigate the impacts of visual aesthetics to the natural area and help prevent the introduction of invasive exotic plants onto Tract 5.

10. For protection of Little Cedar Mountain Cave on Tract 5, TVA will (1) place signs, as described in the Gray Bat Recovery Plan, in the entrance of the cave indicating the cave is closed to human entry between March 1 and November 1; (2) monitor bat usage at the cave annually for three years; and (3) monitor the temperature profile and levels of human disturbance at the cave for three years.
11. The applicant will comply with all provisions of the Memorandum of Agreement dated August 3, 2005.
12. Any golf course developed on Tract 3 will follow guidelines in the Tennessee Handbook for Golf Course Environmental Management.
13. Existing drainage stream channels will be stabilized by the successful bidder to carry the post-development discharge without significant erosion.
14. The developer will use public utility systems (wastewater and water supply) connected to treatment plants offsite. No septic tanks will be allowed on Tract 3.

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CHAPTER 4

4.0 LIST OF TVA PREPARERS

Staff Member	Position or Area of Involvement
Spencer Boardman	Resource Stewardship
Chellye Campbell	Land Use
Patricia Cox	Botany
V. James Dotson	Transportation
Harold M. Draper	NEPA Administration
Jerry Fouse	Recreation
Hill Henry	Terrestrial Threatened and Endangered Species
Charlie McEntyre	Environmental Engineer
Jim Hagerman	Water Quality
Roger Milstead	Floodplains
Jason Mitchell	Natural Areas
Norris Nielsen	Air Quality
Ken Parr	NEPA Document Preparation
Ralph Perhac	Socioeconomics
Kim Pilarski	Wetlands
Erin Pritchard	Cultural Resources
Jon Riley	Visual Resources

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CHAPTER 5

5.0 LIST OF AGENCIES AND PERSONS CONSULTED

This list includes individuals who contacted TVA during initial public involvement efforts, as well as those who commented on the Draft Supplemental EA. Commenters on the EA are noted with an asterisk.

Federal

*U.S. Fish and Wildlife Service, Dr. Lee A. Barclay, Cookeville, Tennessee

*U.S. Army Corps of Engineers, William L. James, Nashville, Tennessee

State

State Senator Ward Crutchfield, Chattanooga, Tennessee

Tennessee Department of Transportation, Douglas J. Delaney, Nashville, Tennessee

Tennessee Department of Agriculture, Terry Oliver, Nashville, Tennessee

Tennessee Department of Economic and Community Development, Wilton Burnette, Nashville, Tennessee

Tennessee Department of Environment and Conservation

*Tennessee Historical Commission, Herbert L. Harper, Nashville, Tennessee

*Division of Natural Heritage, Kirstin Condict, Nashville, Tennessee

*Division of Recreation Services, Mark Tummons, Nashville, Tennessee

Division of Water Pollution Control, Paul Davis, Nashville, Tennessee

Division of Air Pollution Control, Barry Stephens, Nashville, Tennessee

Tennessee Commission of Indian Affairs, Teri Ellenwood, Knoxville, Tennessee

*Tennessee Wildlife Resources Agency, Robert M. Todd, Nashville, Tennessee

City/County

*City of Chickamauga, Georgia, John Culpepper

*Marion County Mayor Howell Moss, Jasper, Tennessee

*Marion County Schools, Fred Taylor

*City of South Pittsburg, Tennessee, Mike Killian

Southeast Tennessee Development District, Hale Booth, Chattanooga, Tennessee

The Honorable Howell Moss, County Mayor, Marion County

*John Culpepper, City of Chickamauga, Georgia

American Indian Organizations

Alabama Quassarte Tribal Town, Augustine Asbury, Wetumka, Oklahoma

Alabama-Coushatta Tribe of Texas, Ronnie Thomas, Livingston, Texas

*Chattanooga InterTribal Association, Tom Kunesh, Chattanooga, Tennessee

Cherokee Nation, Dr. Richard Allen, Tahlequah, Oklahoma

*Chickamaka™ Tribe of the South, Tim Meeks and Kathy Cantu, Tracy City, Tennessee

Chickasaw Nation, Virginia Nell, Ada, Oklahoma

Eastern Band of Cherokee Indians, Russell Townsend, Cherokee, N. Carolina

Kialegee Tribal Town, Henry Harjo, Wetumka, Oklahoma

*Muscogee (Creek) Nation of Oklahoma, Joyce Bear and Vicky Karhu, Okmulgee, Oklahoma

Thlopthlocco Tribal Town, Charles Coleman, Weleetka, Oklahoma

United Keetoowah Band, Lisa Stopp, Tahlequah, Oklahoma

Organizations

Chattanooga Indigenous Resource Center and Library

Marion County Genealogical & Historical Group

*Sierra Club, Harvey Broome Group, David Reister, Knoxville, Tennessee

*Sons of Confederate Veterans, John Culpepper, Chickamauga, Tennessee

*Tennessee Citizens for Wilderness Planning, Sandra K. Goss, Knoxville, Tennessee

*Tennessee Ornithological Society, Danny Gaddy, Chattanooga, Tennessee

*Tennessee Wildlife Federation, Mike Butler, Nashville, Tennessee

*Trail of Tears Association, Tennessee Chapter, Floyd Ayers, Winchester, Tennessee

Individuals

Ables, R.

Ables, Garth

Aborn, David

Adams, Allen*

Adams, Shawn*

Adcock, Charles

Adcock, Tyna

Adock, Lynn

Adock, Russ C.

Alexan, Suzanna M.

Alexander, Lawrence

Allen, Corky*

Allison, Bedford

Altekruse, Joan

Ambrose, William S.*

Anderson, Carol J.*

Anderson, John*

Anderson, Melissa K.

Anderson, Phillip

Ashley, Donna

Atkins, Don E., Jr.*

Atterton, Thomas

Avendt, Colleen

Avendt, Michelle

Avendt, Sarah

Bailey, Kenneth*

Baker, Charles Carter*

Baker, Gayla

Baker, Linda R.*

Baker, Pam T.

Bank, Diana

Bank, Gregory

Barker, Joseph *

Barnett, Robert

Baroni, Del

Baroni, Vicki

Beason, William

Beatz, Ginger*

Becker, Susan*

Beevmass, Walt

Belcher, Harold

Bell, John

Bell, Terri

Bellamy, Rachel P.

Bilbery, Leia

Bilbrey, Elbert

Bille, Finn

Blackburn, Robert S.

Blackburn, Steve*

Blackburn, Vicki P.

Blankenship, Debbie*

Blankenship, Jackie D.*

Bledsoe, Harry

Blevins, Don

Blevins, Jay

Blevins, Joe*

Blossom, Carla*

Blossom, Gerald*

Bohon, Donna

Bohon, John

Bohon, John, & Donna

Boles, James

Borez, Joseph

Born, Brandon

Bowling, Charles

Bowman, Rebecca

Bowman, T.

Bowman, Walter T.

Boyd, Annie*

Boyd, Mary Grace*

Brabson, Ben D.*

Brackett, Larry J.

Braelton, Eddie

Brazeale, Sheila R.

Britt, Michele

Brock, Ray*

Brockt, Larry P.

Brooks, Steve*

Brown, George C.

Brown, James C.

Brown, Jere R.

Brown, Jerry*

Brown, Lonnie

Brown, Mary Jane*

Brown, William H.*

Bryan, William

Bumpus, Paul

Bunch, Van*

Burd, David

Burd, Mary Ellen

Burns, Robert C.

Burriss, Jacqueline

Butters, Bob

Buttram, Daniel	Crowe, Alva*	Fitzgerald, Doug
Callaway, Millie E.	Crowe, Nancy Harris*	Flatt, Bob
Cameron, Doug	Curd, Barbie*	Flatt, Leann
Cameron, Harvey J.*	Curd, Michael*	Flessner, Dave
Camerson, John	Curry, Donna M.	Fletcher, James D.*
Campbell, Ollie M.	Curry, John David	Flowers, James*
Campbell, Tony	Curtis, Don*	Ford, Marvin
Cannon, Harold	Curtis, Robert L.*	Ford, Tammy D.
Cantelou, Dexter	Daeson, Charles	Foster, Delia*
Cantu, Alexandra L.	Daeson, Charles	Foster, L. B., III*
Cantu, Jacquelyn N.	Daeson, Donald	Fox, Daniel
Capino, Debra	Daney, Danny	Fox, Janet*
Card, Earl	Daniels, Robert Allen	Fox, Jeff*
Carpenter, Doug	Danley, Walt*	Fox, Judy A.
Carroll, Andrew	Danley, Walter	Fraley, Berry
Carter, Bobby	Davis, Billy	Fraley, Hilda
Carter, Daniel	Davis, Cynthia	Fraley, Morgan H.
Carter, Thomas R.	Davis, Greg L.	Fuller, Ed
Carther Brad	Davis, Jerry	Furgerson, Richard*
Casavant, Phyllis	Dawson, Charles	Gabrych, Eugene
Case, Danny*	Dean, Doug*	Gaines, Layne B.
Case, Donny	Deaton, Roland E., Jr. *	Gaines, Thomas F.
Case, Larry	DeLozier, Kim*	Gales, Scott
Casteel, Jason	DeSelm, H. R.	Galloway, Mark P.
Cavin, D. J.	Dickinson, Melissa	Galloway, Timothy Paul
Chandler, Jerry M.	Dixon, Sue*	Garbrych, Eugene
Chandler, Pattie	Dobson, Joshua O.*	Gates, Scott
Chapin, James	Dobson, Sissy*	Gates, Scott
Chapin, Ralph	Dobson, Thomas A.*	Gauger, Jean*
Cheaves, Roy C.*	Dodson, Sarah*	Gault, Norma Carol
Childers, C.	Domingos, Kelly W.	Gee, Jim
Christensen, Brian	Dowbiggin, Kathy	Gentry, Jim
Clouse, Earnest G.	Downs, Carl	Gentry, Lisa Beckler*
Coault, Fred H., Jr.	Downum, Donald E.	Gentry, Wanda
Coffelt, Frank D.	Downun, Donald	Gerhardt, Erik
Coffelt, Terry P.	Drummand, John B.	Gerhardt, Erik
Cole, Lynn	Duke, Karen*	Giagnorio, Corinne*
Colvard, Janet	Dunn, Frances	Gilbert, Bill
Condra, Isabelle	Durham, Dallas*	Godsey, James R.
Condra, Myrtle	Dykes, Patricia*	Godwin, James T.
Conner, Harry	Eaton, Franklin H., Jr.	Godwin, Tim
Cook, Dick	Eaton, Franklin H., Sr.	Goins, Sandy*
Cooper, Joy E.	Edwards, Mark	Gonneville, Aaron*
Cooper, Kenneth M.	Elder, Tom*	Gonneville, Debra*
Cooper, Wendell J.	Epstein, Valerie W.	Gonzales, Michelle*
Copeland, Laura*	Evans, E. Raymond*	Good, Loren Charles*
Corbin, Barbara*	Evans, James S.	Gott, Paul
Corbin, William*	Evans, Kim A.	Gouber, William L., Jr.
Cordell, David A.*	Exum, Roy M.	Grafton, Gail
Cox, Brent	Faulkner, Eric*	Graham, Frances
Crowder, Ray*	Faulkner, Faye Bolton	Graham, Judy

Graham, Phillip	Horton, Bill	Kipikassa, Joseph H.
Grant, Greg	Houser, Jerry	Kirk, David
Grant, Harley	Howard, Clarence	Kirkendoll, Danny
Gregory, J. G.	Howard, Clay*	Kock, Wayne P.
Gregory, Rebecca D.	Howe, Max	Koger, Debbie
Grider, Sheila	Howell, Rebecca*	Koger, Ralph
Griffith, Connie B.	Howell, Ted A.*	Kurtz, Sandra L.
Grimes, Johnny Ray	Howerton, Jim	Lance, Richard*
Guest, Curtis E.	Hudson, Charles	Lawson, Ray*
Guest, Eddie	Hughes, Nancy*	Lawson, Sasa*
Guillion, Janet*	Hughes, Richard*	Layne, John
Gunther, Robert L.	Hurst, James L.	Leach, Lewis S.*
Hagan, Harry F.	Hutton, James C.	Leamon, Scott
Hagan, Mary A.	Jackson, George C.*	Lear, Paul*
Haggard, Donald R.	Jacobs, David	Lee, Judy D.*
Haggard, Sue	Jenkins, Charles G., Jr.*	Lester, David B.
Hale, Sam H.	Jenkins, Charles G., Sr.	Lewis, Larry
Hall, Ginger*	Jenkins, Tiffany D.	Liddle, Colenda T.
Hamilton, Chuck*	Johnson, Al*	Liddle, John A.
Hamilton, David*	Johnson, April	Lightfoot, Jack B.
Hancock, Thomas H.	Johnson, Babette	Lightfoot, Rachel H.
Hanley, Adele*	Johnson, Ben D.	Liz, Hasty
Hanley, Michael*	Johnson, Evelyn*	Lodge, Henry W.*
Harris, Daron*	Johnson, Kirk*	Loftin, Sean
Harris, Ernest	Johnson, Lester H.	Long, Jena M.
Harris, Mary Frances*	Johnson, Lori E.	Long, Tessa M.
Hatfield, Floyd	Johnson, Sissy	Long, Willis D.
Hedgecoth, John	Jones, Beth*	Looney, Steve
Hendershot, Mary	Jones, Karen*	Lowe, Charles Robert*
Kennedy	Jones, Randy F.*	Lowe, Justin C.
Henderson, Mary	Jones, Shirley	Lowery, Henry*
Kennedy	Jones, Virginia M.*	Lowery, Michael*
Henderson, Melissa	Jones-Nedring, Margaret*	Loyd, John
Henderson, Melissa	Jordan, Marlene*	Ludecke, Cheryl
Henderson, Richard*	Joyce, Bonnie*	Johnson
Heogly, Joe	Karhu, Vicky	Lyons, Janet*
Hewgley, Bill	Keahey, Ray	Mabe, Michele M.
Hewgley, John A.	Kear, Jerry*	Madaris, Dorayn*
Hewgley, Teena I.	Keith, Steve	Mahr, Aaron
Hicks, Dorothy	Kellerman, Bob*	Malone, Ross
Hicks, Fred A.*	Kelly, John	Manis, Christopher*
Hicks, Sarah	Kelly, Edwin Z., Jr.*	Marshall, Francis*
Hinton, Jo*	Kelly, Mark H.	Martin, Ronald
Hoback, Dora C.	Kelly, Zach	Masaitus, Crewy
Holbrook, Sandra*	Kempson, Robert B.	Masaitus, Nancy
Holifield, Deborah*	Kiessing, Margaret L.	Mason, Bettie M.*
Holland, Brenda	Kiessing, Paul A.	Matheny, Robert W.
Holland, Junior E.	Kilgore, Robert	Mays, Charles
Holtcamp, Jimmy	Killiam, Beck	McCalab, Joe W.*
Hood, Russ*	King, Billy	McCallie, Kenneth
Horn, Cheri A.*	Kinnie, John & Rozanne	McCarter, Jim*

McCay, Mary Helen	Norton, Chance*	Pumley, Brian*
McCombs, Sean	Nunley, Melodye	Raih, Leon A.
McCorrick, Harold	Oaks, Jill	Raih, Wanda
McCoy, Dwayne	Oaks, Jo Dell*	Rash, Leon A.
McCrary, Harriet	Ogle, Dudley	Reed, Able N.*
McDonald, Angie	Ogle, Rhonda	Reed, Melody*
McDonald, Taylor	Oswald, Bob*	Reeves, Robert
McElhaney, Leann*	Oswald, Elizabeth*	Reynolds, Virginia
McKin, Charles D.	Overholt, Bergein F.*	Richardson, Bobby E.
McKinley, Jim*	Owens, Dave	Richardson, C. N.*
McKinley, Kristie	Owens, Elise	Richardson, Connie E.*
McNabb, John	Parker, Deborah G.	Ridge, Monty
McQuain, Jim*	Parker, Jerry L.	Ringe, Azel C.*
Meeks, Catherine	Parks, Elizabeth*	Rixie, Wayne P.*
Meeks, James	Parris, Freddie C.	Roark, Charles H.
Meeks, Jeremy	Parris, Freddie C., Jr.	Roark, Charles H.
Merriman, Gregory E.	Parris, Regina	Roberts, Adams
Merritt, Helen Ann	Parson, Claude E.	Roberts, Peggy*
Merritt, Richard	Parsons, Fred	Robertson, Rebekah L.
Meyers, John W.	Parter, Mike	Robinson, Fred K.
Middlebrook, Jason B.*	Parter, Mike	Rodriguez, Eugene L.
Millard, Guy A.*	Partridge, Lamar	Rodriguez, Martha D.
Millard, Vicki V.	Pats, Michael	Rogers, Catherine
Miller, Hollis	Patton, Larry	Rogers, Christina
Miller, Judith	Payne, Deana*	Rogers, Hiram*
Miller, Keith	Payne, Faye T.	Rogers, Terry*
Miller, Kim	Payne, Ray*	Rooney, Tammy P.*
Miller, Penny	Payne, Wendall L.*	Rose, Elizabeth
Minser, Billy	Payton, Dr. Charles	Rose, Jack*
Mitchell, Dale*	Pellam, Gary	Rose, John W.
Montieth, Earl*	Penner, Dick*	Rose, Michele R.*
Morgan, Gwen	Perry, James	Ross, Gary
Morgan, Kevin S.	Petty, Betty	Ross, Karen
Morrison, D.	Phipps, Donald	Rowe, Holland*
Moss, Dennis	Pilgram, Albert*	Sanders, Patti W.*
Moss, Denny R.	Pittman, Darrell	Sanders, Shirley
Moss, Douglas B.	Pitts, Charles, Jr.*	Schacher, Wayne H.*
Moss, Jean	Plattenberg, Andrea	Schaerer, Charles
Myers, Mary	Plattenberg, Derrek	Schnakenberg, Donald*
Myzack, Leaf	Poe, Brenda	Scoggins, Leslie
Nabors, William Brian	Poe, David Lee	Scott, Daphne
Orbie *	Poovey, Bill	Scruggs, Mildred*
Neal, Doris V.*	Pope, Carolyn*	Seebacher, John A.
Neal, Roy B.	Pope, Shaune*	Seebacher, Mary A.
Neely, Christopher S.	Porras, Barbara*	Seymour, Monte*
Neely, Scott	Post, Geoff	Shiff, Gerald
Nelson, Evelyn*	Powers, Monroe	Shiff, Lola
Nelson, Harold*	Price, Leslie H.	Shiple, Richard*
Newcom, Cliff E.	Primus, Charles	Simms, Richard
Newcom, Deborah	Privett, Wayne	Simpson, Betty
Norris, Barbara D.*	Pruitt, Wayne	Simpson, Jane D.

Simpson, Billy J.*	Taylor, Roses	Wheeler, Larry D.*
Sims, James	Taylor, Stephanie	White, Gerald
Sizemore, Sara*	Teas, Tom	White, Marguerite R.*
Skelton, William H.*	Temple, Bob*	White, Mike*
Skyles, Bobby	Thomas, Ed*	White, R. B.
Sloan, Kim*	Thomas, John	White, Roger*
Smalley, Ronald*	Thomas, Robert K.*	Wilkey, Lonie*
Smith, Bill*	Thompson, Ben	Wilkey, Louise M.
Smith, Charles*	Thornton, Charles	Wilkey, Mary Anne*
Smith, Dave*	Thornton, Judy	Wilkey, Richard B.*
Smith, Donald	Thorton, Charles	Wilkey, William B.
Smith, Duane	Tipton, Eddie	Wilkman, Beatrice*
Smith, Dusty	Totten, Norman	Williams, Darren*
Smith, Joanne E.	Totten, Sheila	Williams, L.
Smith, Nancy	Townsend, Cleata	Williams, Lynn K.
Smith, Nancy	Townsend, Kenneth	Williams, Marilyn
Smith, Ralph, III	Treasure, Lisa*	Williams, Mel A.
Smith, Ralph L., II	Trevino, Doris Tate	Williams, Rebecca
Smith, Ralph Ty	Tuders, Sam	Wills, Betty R.
Smith, Robert	Tunnell, Winona	Wills, Raymond L.
Smith, Ronald	Valenzeula, Allen	Wills, Susie J.
Smith, Rusty	Valenzeula, Dawn	Wilson, Bob
Snyder, David*	Vannatta, Elizabeth*	Wilson, John
Snyder, Scott*	Vannatta, Troy*	Wilson, Paul W.
Snyder, Shannon*	Veal, Tommy	Wilson, Riley
Sosebee, Lyle E.*	Venable, Betty	Wilson, Stan
Spalding, Robert T.	Venable, Paul	Wolfe, Donna M.
Sparks, Johnny Ray*	Verner, Evelyn	Wolfe, Elaine*
Sparks, Karen*	Vest, Lee*	Wolfenbarger, Danny*
Sparks, Sheila*	Vincent, Jack	Woodall, Doug
Stanfield, Paul W., Jr.*	Vlasnik, James J.	Wooden, David
Stanfill, Tommy*	Vlasnik, Marcia E.	Woodfin, Joseph R.*
Starbuck, Lisa*	Wagner, Jack	Woodfin, Rob
Steele, Mark*	Walters, Jo*	Woodfin, Rob*
Steele, Robert*	Walton, Barbara A.*	Woodson, Sarah
Steisslinger, E. K.	Walton, Debra	Wooten, Gladys S.
Stone, Mike*	Watson, Sheila*	Wooter, Gladys
Stoner, Deborah*	Watts, Claude Wayne*	Worthington, Becki
Sutton, Leon*	Watts, Wade Wayne	Worthington, James
Swafford, Claude	Webb, Cheryl C.	Wright, G. Michael
Swafford, Graham	Webb, Donna	Wright, Harold*
Swafford, Howard	Webb, John, Jr.	Wright, Lee Ellen
Sweeton, Kay	Webb, Sandra	Wyatt, Kimberly G.
Talley, Daniel	Wesson, Chris	Wynne, William M.
Talley, Nancy	Wesson, Greg*	Yao, Emily H.
Talley, Pat	Wesson, Mark	Young, Charles*
Tate, Jim	Wesson, Sherry	Young, Frances*
Tate, M. J.	Whaley, Frank*	
Taylor, Ben	Whaley, Sandra*	
Taylor, Nancy	Wharton, Charles G.*	

CHAPTER 6

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CHAPTER 7

7.0 COMMENTS RECEIVED ON THE DRAFT SEA AND TVA RESPONSES

TVA received 332 comment letters, electronic mail, and oral statements during the comment period on the Supplemental EA in May and June 2005. Comments submitted during the comment period, and TVA responses, follow. Due to the volume of these comments and their frequent similarity, TVA has summarized all of them. In some cases, the SEA was changed because of the comments. TVA has identified, when possible, those individuals and organizations that made similar comments after each summarized response. Because the comments were summarized, the precise wording of the comments was not always used. Also, in some cases, the identified commenters did not individually raise every point or element within a summarized comment. However, TVA tried to retain all important differences among similar comments. Consequently, a number of summarized comments may appear repetitious. All original comments are available for review upon request from TVA.

For convenience, supportive comments are listed first. However, all comments have been reviewed and considered and this is not an indication of the weight or priority provided to a comment.

7.1 Supportive comments

1. The project will benefit Marion County as an anchor development, providing dollars for education, fire and police protection, tax revenues, jobs, housing, improved quality of life, and an increase in recreational opportunity. The proposed land trade is fair, and will be the best thing to happen to Marion County. (*Comments by: Don E. Atkins Jr., Charles Carter Baker, Walt Beevmas, Steve Blackburn, Don Blevins, Larry P. Brockt, Jerry and Mary Jane Brown, Harry Cameron, Danny Case, State Senator Ward Crutchfield, Don Curtis, Charles Daeson, Donald Dauener, Jerry Davis, Josh Dobson, Sissy Dobson, Dallas Durham, Thomas A. Dobson, , Patricia Dykes, Frank Eaton, Eric Faulkner, Faye Bolton Faulkner, Jeff and Janet Fox, Michelle Gonzales, Thomas H. Hancock, Michael and Adele Hanley, Duron Harris, Joe Heogly, Deborah Holifield, Russ Hood, Cheri Horn, George C. Jackson, Charles G. Jenkins, Jerry Kear, Bob Kellerman, Edwin Z. Kelly Jr., Mike Killian-City of South Pittsburg, Henry Lodge, Jena M. Long, Harold McCorrick, Jason B. Middlebrook, Guy Millard, Elizabeth Parks, Deana Payne, Wendell Payne, Albert Pilgrim, Charles Primus, Wayne Pruitt, Leon A. Raih, Wanda Raih, Terry Rogers, Billy Simpson, Charles Smith, Donald Smith, Nancy and Dusty Smith, Lyle Sosebee, Tommy Stanfill-Cumberland Realty, Robert Steele, Fred Taylor-Marion County Schools, Bob Temple, Robert R. Thomas, Troy and Elizabeth Vanatta, Sheila Watson, Claude Wayne Watts, Greg Wesson, Charles Wharton, Loniee Wilkey, Joseph Woodfin, Rob Woodfin, Charles W. Young, Francis L. Young, and Willis J. Young*)

TVA Response: These comments have been reviewed and noted.

2. One of TVA missions is economic development. Rural areas have not enjoyed the same economic vitality, diversification, or progress as our metropolitan brothers. (*Comments by: Joe Heogly, Charles Wharton, and Joseph Woodfin*)

TVA Response: As a part of TVA's broad regional resource development mission, TVA reservoir properties are managed to provide multiple public benefits, including recreation, natural resource conservation and protection, and economic development. In reservoir land management plans, TVA identifies specific parcels that have been determined to be suitable for economic and recreation development. TVA also reviews proposals to develop reservoir land to determine if the proposal would help further these objectives. TVA recognizes the importance of striking a balance among the competing demands placed on the land and water resources. That is why environmental evaluation and public involvement are key elements of the review process.

3. Currently, the property is underutilized. The region will benefit from having property that is income producing. (*Comments by: Harvey Cameron and Joseph Woodfin*)

TVA Response: TVA recognizes that reservoir property provides values other than for economic development. In 1997, the Board decided to expand the land use allocation for this tract to include commercial recreation and residential development. TVA recognizes for some Valley counties residential and recreation development may be the primary means of stimulating economic growth for the county.

4. It would be wrong not to allow Marion Co. the opportunity for economic development, and the development should be allowed to go forward. (*Comments by: Joseph V. Barker and Joseph Woodfin*)

TVA Response: These comments have been reviewed and noted.

5. Indian claims related to the town of Chief Dragging Canoe and the east bank of the river are unsupported. (*Comment by: Harry Cameron*)

TVA Response: Historic documentation does place Chief Dragging Canoe in the vicinity of the project area. Both Nickajack Town and Running Water Town were located adjacent to the Tennessee River in this area. These towns were flooded when TVA built Nickajack Dam in 1967. However, archaeological surveys failed to identify any evidence of this occupation on the development tract.

6. Almost double the land will be put in conservation as is being developed. It is truly a "win-win." Conservationists will have their needs met by acquiring Burns Island and Cedar Mountain and Indians will have precious archeological history preserved. (*Comments by: Mike Butler-Tennessee Wildlife Federation, Kim DeLozier, Beth Jones, and Axel C. Ringe*)

TVA Response: These comments have been reviewed and noted.

7. TVA acquisition of Burns Island and Boyd Farm will prevent the loss of archeological artifacts due to erosion and looting. (*Comment by: Thomas A. Dobson*)

TVA Response: This comment has been reviewed and noted.

8. The proposal offers tremendous gains for wildlife, historical recreational and any other desires of the people that you could imagine. (*Comment by: Howell Moss-Marion County*)

TVA response: This comment has been reviewed and noted.

9. I support the recreation facilities and trail system proposed. (*Comment by: Francis L. Young*)

TVA Response: This comment has been reviewed and noted.

10. The development will provide something that kids could do beside ride around and get drunk in the woods. There will be a lot less teen pregnancies. I am for anything that will help the kids. (*Comments by: Marlene Jordan and Catherine Rogers*)

TVA Response: This comment has been reviewed and noted.

11. TVA owns some of the best property in Marion Co for which it pays only minimal in lieu of taxes while other entities (such as Tennessee River Gorge Trust) pay property tax. (*Comment by: Edwin Z. Kelly Jr.*)

TVA Response: Pursuant to Section 13 of the TVA Act, TVA makes payment in lieu of taxes. The money is paid directly to state governments. However, all or part of the amount paid by TVA is redistributed to local governments according to formulas set by each state. Last year Marion County received \$748,296.

12. TVA should consider allowing the Tennessee Wildlife Resources Agency to manage Big Cedar Mountain, Burns Island, and Boyd Farm. (*Comment by: Kim DeLozier*)

TVA Response: This comment has been reviewed and noted.

13. The project should be supported with the caveat that the transferred lands be placed in permanent restrictive conservation easements. (*Comment by: Axel C. Ringe*)

TVA Response: As discussed in Appendix D of the EA, TVA has examined the resources and values associated with the lands proposed for exchange by Thunder Enterprises. Based on this examination, TVA expects to manage these properties for Sensitive Resource or Natural Resource Management until these lands are incorporated into the pertinent reservoir land management plans when those plans are updated, assuming the decision is made to transfer the requested property. Any other exchange properties identified by different bidders would be similarly examined and interim management uses identified for those properties. Because the purpose of requiring exchange properties is to maintain for the public the values associated with the requested property, TVA anticipates that the interim management uses identified for other exchange properties would be similar to those identified for the Thunder Enterprises' properties.

Allocating exchange properties for uses that protect and conserve natural resources in TVA's reservoir land management plans achieves a level of protection that is similar to that achieved by conservation easements. The primary difference is that TVA can and has revised land use allocations when this has been determined to be appropriate. When it does this, however, it weighs the merits of competing land use allocations and the value to the public in an environmental review process that involves public input.

7.2 Eminent Domain and Land Sale Issues

14. The original owners of this land (before eminent domain took their land), were never offered the opportunity to buy it back. They were forced to sell and move out. TVA should offer the land back to families that were forced to leave. The original owners should share in any profit from land sales. The developer should negotiate with the original owner. This land was taken from the local folks for a fraction of its worth today. TVA should not be able to sell land they have taken, and not at the price TVA paid. *(Comments by: Allen Adams, Shawn Adams, Kenneth Bailey, Diana Bank, Joe Blevins, Gerald and Carla Blossom, John and Donna Bohon, Ben D. Brabson, William H. Brown, D. J. Cavin, Roy C. Cheaves, Walter Danley, E. Raymond Evans, Richard Furgerson, Ginger Hall, Melissa Henderson, Richard Henderson, Sandra Holbrook, Jim Howerton, Arvil and Evelyn Johnson, Charles R. Lowe, Michael Lowery, Jan Lyons, Jim McCarter, Leann McElhaney, Jim McKinley, Jim McQuain, Billy Minser, Dr. and Mrs. Holland Rowe, Mildred Scruggs, Monte Seymour, Ronald Smalley, Tennessee River Queen, Lisa Treasure, Winona Tunnell, Paul Venable, John Webb Jr., Margueritte R. White, Roger White, and Danny Wolfenbarger)*

TVA Response: When TVA acquired land for Nickajack Reservoir, it did so for multiple purposes that supported creating that reservoir, the management of TVA's integrated reservoir system, and other responsibilities, including economic development. If and when TVA decides to make acquired property available for economic development, the enhanced value of the property is obtained through fair market appraisals. Respecting Tract 3, less than 50 percent was acquired through condemnation and if it is made available for development, TVA would obtain its fair market value.

Additionally, TVA does not have a ready legal means of selling/transferring property back to landowners from whom property was acquired. In general, the TVA Act provides TVA the authority to sell surplus land at public auction to the highest bidder. There is no authority for TVA, as some have suggested, to give preference to original landowners in our land disposal process.

15. TVA took more land than was needed. TVA has a history of taking more than needed for a pittance. *(Comments by: Ben D. Brabson, Melissa Henderson, Michael Lowery, and Winona Tunnell)*

TVA Response: See response to Comment 14.

16. I am opposed to TVA taking land by eminent domain from private landowners for the public good and then offering it to be developed by private developer, to be used by a chosen few. This is a violation of the public trust. *(Comments by: Carol J. Anderson, Gregory Bank, Annie Boyd, Mary Grace Boyd, Van Bunch, William and Barbara Corbin, Jean Gauger, Corinne Giagnorio, Sasa Lawson, C.R.L, Dudley and Rhonda Ogle, Ray Payne, Hiram Rodgers, Tammy P. Rooney, Lisa Starbuck, Richard Shipley, E. K. Steisslingor, Bruce Wilkey, Mary Anne Wilkey, and Richard B. Wilkey).*

TVA Response: See the response to Comments 14. As discussed in the EA and noted by a number of commenters, economic development of the kind proposed by Thunder Enterprises does benefit the public and is an appropriate part of TVA's mission to enhance the social and economic well being of the residents of the Tennessee Valley.

17. Lands should remain public to provide the greatest benefit to the greatest number of TVA's constituency. TVA's role is as a steward on the land. Waterfront property should be maintained for future generations to benefit wildlife, aesthetics, and public recreation. *(Comments by: Corky Allen, John Anderson, Lee A. Barclay-U.S. Fish and Wildlife Service, Debbie Blankenship, Jack D. Blankenship, John and Donna Bohon, Annie Boyd, Mary Grace Boyd, Steve Brooks, Van Bunch, William and Barbara Corbin, Jean Gauger, Corinne Giagnorio, Sasa Lawson, C.R.L, Dudley and Rhonda Ogle, Ray Payne, Hiram Rodgers, Tammy P. Rooney, Richard Shipley, Lisa Starbuck, E. K. Steisslingor, Bruce Wilkey, Mary Anne Wilkey, and Richard B. Wilkey).*

TVA Response: TVA manages its lands to provide multiple benefits, including conservation, recreation, and economic development. In the interest of balancing these benefits, TVA's considers a full range of uses when it plans lands around its reservoirs. With this particular proposal, TVA is requesting that bidders offer lands in exchange for Tract 3 to help offset the value of the tract to the public. Exchange properties must provide equal or greater resource value compared to Tract 3.

18. On 4/26/05, the Harvey Broome Group of the Sierra Club voted to oppose the sale of TVA lands for residential or commercial development. *(Comment by: David Reister-Sierra Club)*

TVA Response: This comment has been reviewed and noted. Tract 3 was allocated for these uses in 1997.

19. There is a limited amount of TVA lakefront land. Once gone, it is gone forever. *(Comments by: Carol J. Anderson, Jo Hinton, and Ben D. Johnson)*

TVA Response: In this instance in order to maintain the value of TVA reservoir lands to the public, TVA would require a successful bidder to provide equal or better exchange lands.

20. Land taken by TVA for public benefit belongs not to TVA but to the public. *(Comments by: Carol J. Anderson, Van Bunch, Roy C. Cheaves, Corinne Giagnorio, David Reister-Sierra Club, Bruce Wilkey, Richard B. Wilkey)*

TVA Response: See the response to Comments 14 and 16.

21. If TVA no longer needs the land, it should offer it to other agencies. *(Comment by: David Reister-Sierra Club)*

TVA Response: Of the lands originally acquired by TVA for its reservoir system, approximately 506,000 acres have been sold or transferred. Sixty-eight percent (68 percent) of those lands are used as state parks, public access areas, state wildlife management areas, group camps or commercial recreation areas. These transfers reflect TVA's commitment to ensuring a balanced range of uses on the lands acquired for its reservoirs. That balance includes lands deemed suitable for economic development such as Tract 3.

22. When TVA sells land to a developer, it is subsidizing the price of electricity. The users of electricity should pay the full cost of producing electricity. Money does talk especially when a government steward is in debt. *(Comments by: David Reister-Sierra Club, David Snyder)*

TVA Response: TVA considers projects such as Little Cedar Mountain not for revenue generation or debt reduction but in support of the agency's broad regional resource stewardship and development mission. The proposal is being considered to meet a recreational and economic development need of the region.

23. The land sale and trade is already a done deal. I observed several ladies from a real estate company moving through the crowd campaigning at the public meeting.
(*Comment by: David Snyder*)

TVA Response: Although TVA agreed to consider this request, a decision will not be made by the TVA Board until all appropriate environmental, legal, and programmatic reviews have been completed. If the request is approved by the TVA Board, the property can be sold at public auction.

24. Approval of the subject transfer should be dependent upon clear evidence of a net gain in resource and recreational values to the public. (*Comment by: Lee A. Barclay-U.S. Fish and Wildlife Service*)

TVA Response: TVA is requiring any potential bidder to bring suitable exchange property to TVA. This property must be of approximately the same acreage of the Little Cedar Mountain property to offset the potential loss of public lands under TVA's control. Features on proposed exchange property that TVA would look for must include resources that are similar to or better than those on the requested TVA property. The current applicant is offering approximately 1,100 acres of property in exchange for approximately 578 acres of TVA property. TVA has examined the natural resource attributes of the properties identified by Thunder Enterprises for exchange and plans to do this for the exchange lands of any different, successful bidder.

25. Due to a high rate of urban sprawl (Tennessee is losing 80,000 acres per year of private lands), there is a need to maintain public lands for wildlife habitat and recreation.
(*Comment by: David Reister-Sierra Club*)

TVA Response: TVA agrees. For this proposal, TVA is requiring exchange lands that are equal to or better than the land proposed for development as it relates to environmental resources.

26. There should be a moratorium on the sale of any properties taken which involve use of eminent domain for private development until Kelo vs. New London case is resolved by the Supreme Court. (*Comment by: Mary Anne Wilkey, and Richard B. Wilkey*)

TVA Response: The New London eminent domain case was decided on June 23, 2005. This case upheld a city's decision to condemn properties for economic development purposes.

7.3 Civil War Issues

27. The site has historic significance based on the events which occurred there in 1863 and not based on the archeological finds. It was an important crossing point in Chickamauga Campaign. (*Comments by: Linda R. Baker, Ginger Beatz, Debbie Blankenship, Jack D. Blankenship, Ray Brock, Janet Colvard, David A. Cordell, Ray Crowder, Alva Crowe, Nancy Harris Crowe, John Culpepper-City of Chickamauga and Private John Ingram Camp-Sons of Confederate Veterans, Barbie Curd, Michael Curd,*

Robert Allen Daniels, Doug Dean, Karen Duke, E. Raymond Evans, James D. Fletcher, James Flowers, L. B. Foster III, Aaron Gonneville, Debra Gonneville, Charles Loren Good, Janet Guillion, Chuck Hamilton, David Hamilton, Mary Francis Harris, Fred A. Hicks, Sara Hicks, Clay Howard, Rebecca Howell, Ted A. Howell, Karen Jones, Margaret E. Jones-Nedring, Bonnie Joyce, Lewis S. Leach, Judy D. Lee, D. B. Lester, Henry J. Lowery, Doralyn Madaris, Gwen Morgan, Doris V. Neal, Evelyn Nelson, Harold Nelson, Barbara Norris, Chance Norton, Freddie C. Parris, Regina Parris, Mitchel Pats, Charles Payton, Charles Pitts Jr., Carolyn Pope, Shawna Pope, Brian Pumley, DR, Able N. Reed, Melody Reed, C. N. Richardson, Charles H. Roark, Patti W. Saunders, Kim Sloan, Ralph Ty Smith II, J. R. Sparks, Karen Sparks, Sheila Sparks, Paul W. Stanfield, Jr., Mark Steele, E. K. Steisslingor, Mike Stone, Debra Stoner, Leon Sutton, Charles Thorton, Judy Thorton, Larry D. Wheeler, Mike White, Beatice Wickman, Bruce Wilkey, Elaine Wolfe, and Harold Wright)

TVA Response: The significant historic site, Love's Ferry, referred to as an "important crossing point," was inundated during the construction of the Nickajack Dam project. It was not Tract 3.

28. One potentially overlooked significant economic consideration is that there is great potential for ongoing Civil War tourism in both Georgia and Tennessee. (*Comments by: Linda R. Baker, Ginger Beatz, Jack D. Blankenship, Ray Brock, Janet Colvard, David A. Cordell, Ray Crowder, Alva Crowe, Nancy Harris Crowe, John Culpepper-City of Chickamauga and Private John Ingram Camp Sons of Confederate Veterans, Michael Curd, Robert Allen Daniels, Doug Dean, James Flowers, Aaron Gonneville, Charles Loren Good, Janet Guillion, Chuck Hamilton, David Hamilton, Fred A. Hicks, Sara Hicks, Clay Howard, Rebecca Howell, Ted A. Howell, Karen Jones, Bonnie Joyce, Lewis S. Leach, D. B. Lester, Henry J. Lowery, Doralyn Madaris, Doris V. Neal, Evelyn Nelson, Harold Nelson, Barbara Norris, Chance Norton, Freddie C. Parris, Regina Parris, Mitchel Pats, Charles Payton, Charles Pitts Jr., Carolyn Pope, Shawna Pope, Brian Pumley, DR, Able N. Reed, Melody Reed, Charles H. Roark, Patti W. Saunders, Kim Sloan, Ralph Ty Smith II, J. R. Sparks, Sheila Sparks, Paul W. Stanfield, Jr., Mike Stone, Debra Stoner, Leon Sutton, Judy Thorton, Larry D. Wheeler, Mike White, Bruce Wilkey, Richard B. Wilkey, Mary Ann Wilkey, and Harold Wright*)

TVA Response: TVA does not believe that the proposal would conflict with heritage tourism initiatives and may enhance such initiatives. Trail development on Little Cedar Mountain would include interpretive signage highlighting the Civil War and other significant events in local history which would encourage opportunities for heritage tourism.

29. There should be a complete EIS with discussion on regional historic tourism initiatives. (*Comments by: Mary Anne Wilkey and Richard B. Wilkey*)

TVA Response: See the response to Comment 28. Both in the original EA and this Supplemental EA, TVA has taken a hard look at potential environmental impacts and issues associated with selling the requested property. Based on TVA's analysis and after consideration of appropriate mitigation, TVA does not believe that the impacts of this project would be significant.

30. Civil War tourism interests hope to link the Chickamauga and Tullahoma Campaigns. Love's Ferry is significant part of this linkage. Groups interested in the Civil War have met to establish Chickamauga Driving Trail, which would include Love's Ferry site. (*Comments by: David A. Cordell, John Culpepper-City of Chickamauga and Private*

John Ingram Camp Sons of Confederate Veterans, Debra Gonneville, Charles Loren Good, Clay Howard, D. B. Lester, Mitchel Pats, Charles Payton, DR, Charles H. Roark, Ralph Ty Smith II, and Paul W. Stanfield, Jr.)

TVA Response: TVA does not believe that the proposal would adversely affect efforts to establish a Chickamauga Driving Trail. Trail development on Little Cedar Mountain would include signage interpreting the Civil War, as well as other events in local history, thus providing opportunities for heritage tourism. See the response to Comment 27.

31. Several commenters questioned the objectivity and qualifications of the archeological consultant utilized for this project. (*Comments by: Richard B. Wilkey, Bruce Wilkey, John Culpepper-City of Chickamauga, and Private John Ingram Camp Sons of Confederate Veterans*).

TVA Response: TVA prepared the scope of work (SOW) for the Phase I Cultural Resources survey for the development tract and selected a qualified consultant to complete the work. The resulting report was independently reviewed by TVA and the agency believes it to be both sound and adequate. Archaeological work conducted on Burns Island was also based on a SOW prepared by TVA. TVA reviewed this report, is satisfied with the historic overview, and agrees with the author regarding the significance of the archaeological resources on Burns Island. The author of this report has a good reputation and is well respected in the archaeological community.

32. If the choice is made to develop, require the developer to provide an easement to the Love's Ferry Site with proper signage comparable to that used in Tullahoma Campaign. (*Comments by: John Culpepper-City of Chickamauga and Private John Ingram Camp Sons of Confederate Veterans*)

TVA Response: The significant historic site, Love's Ferry, is now underwater and cannot be accessed through the development tract. TVA will retain an access for the public trail on Little Cedar Mountain if the decision is made to proceed with this proposal. TVA intends to include an interpretive element to this trail that will include information on Love's Ferry and its involvement in the Civil War. The conditions of the site and the level of interpretation are two factors that will be considered when determining the appropriate signage to be utilized.

33. The developer should leave public access to the one lone grave on the property. (*Comment by: Richard Henderson*)

TVA Response: The cemetery will continue to be accessible by walking along the shoreline.

7.4 Recreation Issues

34. I would like Shellmound Recreation Area left alone. Stop at the creek beside the day use area and leave all day use and campground properties unchanged. (*Comments by: Debbie Blankenship, Jack D. Blankenship, William and Barbara Corbin, Sue Dixson, Sarah Dodson, Melissa Henderson, Peggy Roberts, John W. Rose, Michelle Rose, Donald Schnakenberg*)

TVA Response: Comment reviewed and noted. Maintaining the public benefits associated with the Shellmound Recreation Area has been an important consideration in TVA's review of this proposal. In order to provide for feasible development of the site, TVA believes that it is necessary to re-orient recreation facilities as currently proposed. This proposal mitigates any loss of public recreation opportunities by requiring replacement of public recreation facilities, including day-use and campground facilities.

35. Development would forever mar the scenic landscape of Nickajack Reservoir with the added boats and traffic. (*Comments by: Van Bunch, Roland Deaton, Corinne Giagnorio*)

TVA Response: Increases in boat traffic were discussed in the 1996 EA. Current boating levels are considered to be moderate with the highest use occurring during weekends and holidays. While aesthetic impacts would potentially occur from the development of the property, the incremental increase in recreational lake traffic would not adversely affect the existing scenic landscapes. Access to area roads and highways and the reservoir are currently unrestricted. The potential increase in vehicle and boat traffic is considered insignificant. As a public reservoir, boaters currently have access to boating within the limits of regulations as adopted and applied by the Tennessee Boating Division of the Tennessee Wildlife Resources Agency.

36. Public recreational access should be an important consideration in the final acceptance of a proposal. The public should have access to the best location to maximize public usage. TVA currently manages for public use, camping, fall color cruise, hiking and swimming. Local residents use the property regularly. (*Comments by: E. Raymond Evans, Judy D. Lee, Gwen Morgan, Kevin S. Morgan, and John W. Rose*)

TVA Response: Public recreation is considered an important aspect of TVA's management of public lands. This proposal mitigates any loss of public recreation opportunities by requiring replacement of public recreation facilities, including those listed in this comment. See the response to Comments 34.

37. TVA should retain a buffer zone around the waterfront that allows public access for recreation. (*Comment by: David Reister-Sierra Club*)

TVA Response: The waterfront and a 50-foot buffer will remain in public ownership. Public recreation opportunities and public access are considerations in whether to accept the proposal.

38. The current location of Shellmound is the "best" location. I do not believe the applicant is interested in a successful RV park. The applicant's public recreation component has decreased as his proposal progressed. (*Comment by: John W. Rose*)

TVA Response: In order to provide for feasible development of the site, TVA believes that it is necessary to re-orient facilities on the site. This proposal mitigates any loss of public recreation by requiring replacement of public facilities, including the RV campsites.

39. The campground has been operated successfully, with 30 to 50 families per weekend; many times, it is at 100 percent capacity, such as on Memorial Day weekend. The operators have seen increased revenue every year. The boat ramp is continually used

year round. I do not feel that the RV park should be up-rooted. Lots of folks use it, and it is a place for fellow Marion County people to camp, picnic, boat, fish, and have reunions. I have enjoyed recreation at Shellmound for 25 years. (*Comments by: Roy C. Cheaves, Ray Lawson, Judy D. Lee, Mickey, and Michelle Rose*)

TVA Response: This proposal mitigates any loss of public recreation opportunities by requiring replacement of public recreation facilities including the land-based, water-based, day-use, and overnight facilities. There would continue to be opportunities for camping, picnicking, boating, fishing, and reunions.

40. The proposed replacement recreation area has no views of the river, and no shade trees. I do not believe the applicant could relocate and rebuild a successful recreation facility. The new location wouldn't be the same as today and would have greatly lessened appeal. (*Comment by: William and Barbara Corbin, Kevin S. Morgan, Peggy Roberts, John W. Rose, and Richard B. Wilkey*)

TVA Response: See the response to Comments 34. This proposal mitigates any loss of public recreation by requiring replacement of public recreation facilities. The current proposal relocates the public recreation facilities from a portion of the Shell Mound area toward the dam. Landscaping with additional trees will be considered as the new recreation area is developed.

41. There are not many places for non-wealthy seniors to go on the lake and camp. (*Comment by: William and Barbara Corbin*)

TVA Response: Comment reviewed and noted. See the response to Comments 34. There are four nearby campgrounds on Nickajack Reservoir, nine on Chickamauga Reservoir, one at Parksville Reservoir, and six on Watts Bar Reservoir as well as nearby state park campgrounds (2) and Cherokee National Forest campgrounds (3). The four campgrounds in the Nickajack area are Anchor Inn Bait and Tackle, Camp on the Lake, Marion County Park, and Nickajack Marina.

42. The stipulation that a developer create an interpretive trail on LCM proper cannot be used to compensate for loss of access to and use of Tract 3. (*Comment by: Richard B. Wilkey*)

TVA Response: The proposed interpretive trail is not being proposed as compensation for development, but it does help mitigate the potential effects of developing Tract 3. The trail is proposed as a means of protecting natural and cultural resources on tract 5 by limiting access to sensitive areas.

43. Having public lands for recreation is important to the tourism of the area. (*Comment by: Judy D. Lee*)

TVA Response: TVA agrees; however, the most successful models for outdoor recreation and ecotourism involve a balance of public and private facilities. This is necessary to provide the "critical mass" of attractions and accommodations for an area to gain "destination" status, resulting in overnight stays and increased economic benefits from tourism.

44. Sensitive plant species occur on LCM proper. The increased presence of people at the adjacent development will inevitably result in an increase in foot traffic and eventual extirpation of the sensitive species. (*Comment by: Richard B. Wilkey*)

TVA Response: See the response to Comment 42. Little Cedar Mountain already receives some recreational use. Installing the proposed trail would help to manage such use and any increase associated with development of Tract 3 and better protect the sensitive resources on Little Cedar Mountain.

45. TVA proposes to build an interpretive trail with the hopes that the trail will keep curiosity seekers and artifact hunters off the other more sensitive areas of Little Cedar Mountain and protect it. TVA must know that such a plan is laughable! There will be no way to prevent anyone, child or adult, from exploring the LCM to any extent desired and those explorations will only increase as those anticipated 615 home sites fill up and more and more people crowd onto the land. (*Comment by: Joe McCaleb*)

TVA Response: TVA disagrees. The trail would promote directed and interpretive public use of the natural area and thereby manage any increase in informal recreational resulting from the development of Tract 3. By managing public use and restricting use to a trail, resources would be better protected. This is commonly used by other land management agencies where sensitive resources are present. See the response to Comment 44.

46. The proposed trail system would facilitate access to the area and would increase the potential for adverse impacts to sensitive terrestrial resources. If approved, we agree that the trail system should be constructed and routed in a way that minimizes impacts to sensitive and unique floral and faunal resources. Interpretive signage should stress the importance of hikers remaining on the designated trail. The trail should be available to the general public, and its use should not hinder current recreational uses such as hunting. (*Comment by: Lee A. Barclay-U.S. Fish and Wildlife Service*)

TVA Response: TVA is aware of these concerns and will seek to achieve these goals in the trail routing and usage. Interpretive signs will be used to stress the importance of hikers remaining on the designated trail. The trail will be open to the general public. To protect public safety, TVA often restricts hunting on areas developed and promoted for public recreation opportunities such as hiking. See the response to Comment 44.

47. The gray bat is in close proximity. It should receive some protection from increased boat traffic/human activity in and around foraging and roosting areas. (*Comment by: Chris Manis-UTC Herpetology Lab*)

TVA Response: Little Cedar Mountain Cave has been examined for populations of gray bats during both winter and summer months by TVA biologists and a TWRA wildlife officer. These examinations conclude that the cave does not support a population of gray bats. As indicated in the EA, the cave may occasionally be used temporarily by small numbers of gray bats as they migrate to nearby Nickajack Cave. TVA has determined, with the concurrence of the U.S. Fish and Wildlife Service, that Little Cedar Mountain Cave did not warrant gating. In addition, a 50-foot-buffer strip will be retained along the shoreline and this will benefit the gray bat.

48. The developer should be required to maintain the new replacement recreational facilities with his own employees (at TVA Union rates) at TVA standards. (*Comment by: Bob and Elizabeth Oswald*)

TVA Response: This comment has been reviewed and noted.

49. It appears that existing public recreational facilities would be located in the corner area at the northern end of the earth fill portion of the dam. This is in the vicinity of the lock. We have reservations about increasing recreational boating near the approach to the lock. (*Comment by: William L. James-U.S. Army Corps of Engineers*)

TVA Response: Based upon further discussions with U. S. Army Corps of Engineers staff, it has been determined that the recreational facilities proposed upstream of the earth fill portion of the dam (fishing piers and swimming beach) would not create an undue hazard for navigation operations at Nickajack Lock.

50. Opportunities for viewing wildlife should be provided and rare and endangered species protected. (*Comment by: Danny Gaddy-Tennessee Ornithological Society*)

TVA Response: Wildlife viewing opportunities are an important part of the Little Cedar Mountain trail proposal. TVA's review of the proposal takes into account the protection of rare and endangered species.

51. Interpretation should be provided concerning the ecology and heritage of the affected areas. (*Comment by: Danny Gaddy-Tennessee Ornithological Society*)

TVA Response: Interpretation will be a part of the proposed trail development.

52. A first class Indian display coupled with the Civil War heritage of Love's Ferry would make Shellmound a must stop for many Midwest to Florida travelers. (*Comment by: Kirk Johnson*)

TVA Response: TVA will consider this suggestion in future plans for the Shellmound and dam recreation areas.

7.5 The Development Proposal

53. I wish to see a copy of the "Nickajack Shores" development plans. (*Comments by: Tom Kunesh, Mary Ann Wilkey, Richard B. Wilkey*)

TVA Response: The conceptual plans have been provided in the Supplemental EA.

54. We need a third party cost study of the projected infrastructure need of the "Nickajack Shores" development including roads, water, sewer, electricity, police ambulance. Currently, there is no sewer facility for such a dense development and the prohibitive cost for providing it raises the probability that government grants would be sought, adding additional public expense. (*Comments by: Mary Ann Wilkey and Richard B. Wilkey*)

TVA Response: Sewer and water are nearby. Sewer lines currently extend to the intersection of State Highway 28 and I-24. A potable water line exists along Shellmound Road. Marion County and local governments would determine how the expansions of such facilities would be financed.

55. I would like to know the appraisal value of TVA and exchange lands. An independent third party cost comparison of the actual and projected dollar value/acre of the proposed swap properties should be provided. (*Comments by: Tom Elder, Mary Ann Wilkey and Richard B. Wilkey*)

TVA Response: When TVA declares surplus and disposes of property, TVA receives full fair market value of the property at the time the land is conveyed. TVA uses certified general real property appraisers using standard appraisal methods to make value estimates of property. A minimum upset value will be set for the auction if the decision is made to proceed and this will be based on the appraised value and will be made available before the public auction.

56. Tract 3 is prime lakefront property whereas the offered property is much less desirable. Boyd Farm is half the size and less than 1/5th the shoreline. Cedar Mountain has no shoreline. The trade doesn't pass the smell test--two unsellable and unusable properties with no useful water frontage for prime property that is worth at least 1000 times what he owns. The swap lands have little if any value for development. Only Boyd Farm has any development potential. Burns Island is useless to the public because it is inaccessible. Big Cedar Mountain has no public amenities, no access, and no lake. (*Comments by: Ben D. Brabson, Al Johnson, Jack Rose, Telestar and Richard B. Wilkey*)

TVA Response: This comment misapprehends the objective of requiring exchange properties. It is not to secure properties that are equivalent in economic development potential, but rather are equivalent or better in natural resource and other values. Part of TVA's broad mission is balancing public benefit among conservation, recreation, and economic development uses. TVA recognizes that its reservoir property has multiple values. Some of these values or attributes, particularly natural resource values, are not readily captured in economic terms. The "value" of TVA reservoir property is certainly not limited to the economic development potential of the property. The properties being offered by the applicant do provide quality natural and cultural resource benefits which are recognized by some stakeholders as valuable assets. In addition, any successful bidder will be required to pay TVA the difference in value between the acceptable exchange lands and the value of Tract 3. TVA's examination of the properties offered in exchange by Thunder Enterprises reveals that they are rich in natural resource and other attributes.

57. The exchange properties are a rocky crag, a farm which frequently floods, and an island. These are much lesser properties than Shellmound. (*Comments by: Kirk Johnson and William H. Skelton*)

TVA Response: As indicated in the EA, these properties have exceptional natural and cultural resource values. See the response to Comment 56.

58. If the applicant's 1,100 acres is so good, why doesn't he develop it? Let the developer buy private lands at fair market value to do as he pleases. (*Comments by: Chris Manis-UTC Herpetology Lab, Barbara Porras, Connie Richardson, ripntear, Peggy Roberts, Bruce Wilkey, and Richard B. Wilkey*)

TVA Response: Comment reviewed and noted. TVA understands that the properties were acquired to provide natural and cultural resource values to offset those values that would be lost were the proposal accepted. See the response to Comment 56.

59. I do not believe the new residents would use schools in the area – they would use private schools. Only 33 percent of county residents own property. There would be an

increase in property tax because the increase in property values would be borne by only a few residents. (*Comment by: Melissa Henderson*)

TVA Response: It would be up to county authorities to determine property taxes. County officials who support the project believe that a development would generate additional property taxes which would offset the costs to the county of providing services to the development. Even if initial property taxes do not completely offset costs of county services, an increase in property taxes is not inevitable and would depend on how the county chooses to pay for services provided to the development. One alternative would be to charge impact fees to the developer instead of spreading those fees over the entire county property tax base. With regard to schools, if new residents use private schools, this could minimize or eliminate any need for increased property taxes to pay for public schools.

60. The developer should be required to pay a supplemental fair-market value payment, based on lot resale and development profits. (*Comment by: Danny Gaddy-Tennessee Ornithological Society*)

TVA Response: TVA would receive full fair market value of the property at the time the land is conveyed.

61. There should be no net loss of public land, access, wildlife habitat, conservation or recreation, and adequate vegetative buffers. (*Comment by: Danny Gaddy-Tennessee Ornithological Society*)

TVA Response: TVA believes the current applicant's proposal achieves these goals.

62. Jobs that will be created are not good jobs. The idea that adding more cooks, waiters, grounds and housekeepers will have a major impact on the local economy is ludicrous. Once communities bent on attracting out-of-state, well-to-do retirees gain enough voice, the tax base and school system, along with other public services in the area, will suffer. (*Comments by: Gregory Bank, Sandy Goins, and Barbara Porras*)

TVA Response: While service jobs are an important part of any recreational development, other professional jobs also would be associated with economic development of Tract 3. The proposed development may very well increase the possibility of future development that includes higher wage jobs.

63. A better avenue for protection of Burns Island and Cedar Mountain would be the Nature Conservancy or Audubon Society. (*Comment by: Jan Lyons*)

TVA Response: This comment has been reviewed and noted. See the response to Comment 13.

64. Let's not sell LCM. It is a bad idea, especially residential development. (*Comment by: Robert L. Curtis*)

TVA Response: The proposal does not involve the sell or transfer of Little Cedar Mountain.

65. The sale and development of public lands continues at an alarming rate and alters the ways in which the public is able to use those lands. TVA should retain possession of its public lands and maintain them in their natural state. (*Comment by: Lee Barclay-US Fish and Wildlife Service*)

TVA Response: See the responses to previous comments including Comments 17, 19, 21, and 24.

66. Not many current residents of the county need a golf course. Hundreds of empty homes are nearby. I question the need for a development. (*Comment by: Roland Deaton, Ripntear*)

TVA Response: County officials and many commenters have indicated strong support for a development project, whether or not it includes a golf course. They believe that the project will benefit Marion County and provide money for education, fire and police protection, and tax revenues, as well as provide jobs, housing, and an increase in recreational opportunity. The proposed development, and the recreational amenities it provides, would be expected to attract new residents or users from outside of the county, as well as being available to local residents.

67. The property is a great location for a state park. The trade lands do not have the needed characteristics for a state park. (*Comment by: Richard Lance*)

TVA Response: TVA in fact identified this as a possible location for a state park and offered this option to the state when lands around Nickajack were originally planned. However, the state determined that the lack of infrastructure to the site and overall cost considerations limited its ability to adequately develop the area as a state park. Since the state was not interested in the property, TVA has concluded that other alternative uses should be evaluated and after appropriate environmental review allocated Tract 3 for commercial and public recreation and residential uses.

68. It is not good practice to sell public land at auction and then limit the bidders in the way that TVA is going about it. (*Comment by: Randy Jones*)

TVA Response: TVA is requiring potential bidders to provide TVA with evidence that they currently own appropriate exchange lands deemed suitable to TVA. Such land would be used to offset the loss of public benefits associated with the land proposed for sale. TVA thinks this requirement is appropriate and important.

7.6 Land Policy Process and Procedures

69. TVA managers made statements in 1999 that the best use of public land was for public use and there should be a renewed commitment to preserve public lands. TVA pledged to keep Tract 3 for public use and preserve public land for public use. (*Comments by: William H. Brown, David A. Cordell, John Culpepper-City of Chickamauga and Private John Ingram Camp Sons of Confederate Veterans, Barbie Curd, Karen Duke, E. Raymond Evans, James D. Fletcher, L. B. Foster III, Debra Gonneville, Charles Loren Good, Mary Francis Harris, Clay Howard, D. B. Lester, Margaret E. Jones-Nedring, Mitchel Pats, Charles Payton, DR, Charles H. Roark, C. N. Richardson, Ralph Ty Smith II, Karen Sparks, Paul W. Stanfield, Jr., Mark Steele, Charles Thorton, Bruce Wilkey, Richard B. Wilkey, Beatice Wickman, and Elaine Wolfe*)

TVA Response: As discussed in the SEA (section 1.3), TVA stated that it would continue to evaluate requests for the use of TVA lands, but that proposals must be compatible with TVA's objective of managing public assets to benefit future generations and the environment.

70. TVA does not explain anywhere in the current SEA why the drastic change was made from "public recreation facilities" to "public/commercial recreation and residential," nor

why the change to the Land Management Plan was delayed until 2005 even though approved by the Board in 1997. Nor does TVA discuss the impact of private development on the “significant forestry investment” TVA has already made on public land with public funds, and proudly exclaimed in the original LMP (*Comment by: Joe McCaleb*)

TVA Response: In January 1997, TVA made a Finding of No Significant Impact (FONSI) for a proposal to change the land use allocation for Tract 3 (XNJR-3PT), making it available for commercial recreation, public recreation and residential development. The FONSI also included allocating Tract 4 (XNJR-4PT) for commercial recreation and Tract 1 (XNJR-1PT) for wildlife management. On January 29, 1997, the three tracts were reallocated by TVA. TVA chose not to pursue the specific development opportunities that were being considered at that time. The EA, as supplemented, examines the potential impact on terrestrial resources. Tract 3 contains three stands of timber. A 37-acre pine plantation established in 1984 had an investment of approximately \$81/acre, and has not been thinned. Its present net worth is estimated at \$800/acre and was originally established as erosion control, which was a success. A 20-acre stand of large pines were established during the construction of Nickajack Dam, and have periodically been thinned over the years. In the Southern Pine Beetle epidemic around year 2002, approximately half of this stand was salvaged due to heavy beetle infestation, and can be identified around the entrance to Shellmound campground. The remainder of these large pines is contributing more to the aesthetics of the area and is not being managed from a financial standpoint. Lastly, Tract 3 contains a pine hardwood stand of approximately 41-acres. This stand was established naturally and has no TVA investment. Many of the pines within this stand were impacted by beetles; however, there is still value in the remaining hardwoods. Impacts on the timber investment in Tract 3 are minor.

71. The proposal contradicts TVA’s Shoreline Management Policy, adopted in 1999, in the following ways:

- A. Currently, residential shoreline access rights do not exist on Tract 3 nor 5. The proposal would open up 4.4 miles of new shoreline to residential access.
- B. The shoreline frontage for Tract 3 is 4.4 miles. Of the 3 proposed tracts of land offered by Thunder Enterprises in a “swap” of private land for public land, the Boyd Farm and Burns Island are on the Guntersville Reservoir and Cedar Mountain, although on Nickajack Reservoir, has no shoreline frontage itself. This means that TVA will lose 4.4 miles of shoreline frontage for which there is no gain. Even if one includes the shoreline frontage of Burns Island (3.4 miles) and Boyds Farm (0.77 miles), TVA still loses 0.23 miles of shoreline overall. This is not no net loss of public shoreline.
- C. Losing 4.4 miles of shoreline is a significant loss (15 percent) of all shoreline on Nickajack.
- D. Even though TVA and Thunder Enterprises claim that TVA will see a net gain of 522 acres of potential public lands, that fact, if true, has no effect on the SMI policy adopted by TVA in 1999.

- E. TVA has reduced the buffer zone from 100 feet to 50 feet. While this is in compliance with the SMI buffer, opening up 4.4 miles of shoreline to residential access rights is not. (*Comments by: Joe McCaleb*)

TVA Response: This proposal does not include opening up the shoreline associated with Tract 3 to private water use facilities and is fully consistent with TVA's Shoreline Management Policy. Private water-use facilities will not be allowed unless an appropriate maintain and gain proposal is approved by TVA. Moreover, although that policy is limited to residential use of TVA shoreline and does not extend to commercial recreation uses, TVA is requiring prospective bidders to identify lands that would be exchanged for Tract 3 if TVA decides to sell the tract.

72. I wish to receive a copy of the actual proposed swap deal and the decision making process that approved it. TVA's promulgation of reservoir management plans calling for a private property development component has no foundation in law. Someone should appeal to the judiciary to make some definitive statements about what the TVA Act permits the agency to do with lands under TVA's care and management. Any such disposition of TVA's holdings is an affront to law and the interests of the public, which TVA was created to serve. (*Comments by: Annie Boyd, Delia Foster, Jan Lyons, Mary Ann Wilkey, Richard B. Wilkey, and Richard B. Wilkey*)

TVA Response: The comments have been reviewed and noted. A decision has not yet been reached by TVA regarding disposing of the property as proposed. TVA considers the potential environmental impacts of actions it proposes to take in accordance with the National Environmental Policy Act (NEPA) and implementing procedures and the current proposal is documented in the Supplemental EA. TVA manages reservoir lands for multiple benefits including conservation, recreation, and economic development. The TVA Act authorizes TVA to dispose of property for a number of purposes.

73. What authority granted by Congress in the TVA Act gives TVA the right or privilege to sale public lands for private residential development? There is no section in the Act which directly or indirectly gives TVA the authority to use, lease, or sale public land for private residential development. First, TVA does not own the land; the land is titled in the United States of America; second, "maximizing return yields for public lands" is not one of the mandates Congress gave TVA in 16 USC Section 831v, nor is "maximizing the availability of public recreation uses", nor "ensuring a high quality of multi-use development". Third, TVA lands, public lands, are held for the benefit of all people in the TVA region not just Marion County! The draft SEA omits any discussion whatsoever of how Congressional mandates to TVA allows TVA to sale or lease public land for private purposes and to private developers. (*Comments by: Joe McCaleb*)

TVA Response: TVA is evaluating the environmental impacts of disposing of this property at public auction pursuant to Section 31 of the TVA Act. Section 31 authorizes TVA to sell surplus land unrestricted, which, of course, means that the land could be used for residential purposes.

74. How can TVA declare land "surplus," auction it to the highest bidder, but accept in exchange for that surplus land (which it knows is not surplus), additional land which nets to the agency more land than it declared "surplus." Such interpretation turns the word "surplus" on its head. And, if Tract 3 is declared "surplus" and sold to the highest bidder, is that land no longer a part of the TVA Reservoir system and becomes a part of

the Marion County “Planned Growth Boundary”, subject to being annexed by a city or town in Marion County? If so, what effect does that have on the Nickajack Reservoir properties as a whole? (*Comments by: Joe McCaleb*)

TVA Response: TVA acquires and retains lands for a variety of purposes, including promoting economic development. When the purposes for which a certain tract is retained can be advanced by transferring it to another person or entity, declaring it surplus is appropriate and enables the tract to be transferred to accomplish TVA’s purposes. There is nothing inconsistent with deciding that retaining a tract is unnecessary for carrying out TVA’s plans provided that the tract is exchanged for other property with values that TVA wants to promote. Once property leaves federal ownership, it becomes subject to legal requirements, such as zoning, that may apply to other non-federal property in an area.

75. A moratorium is needed on any real estate sales or trade involving private development of public land until the full 9 member TVA board is in place. (*Comments by: Mary Ann Wilkey, and Richard B. Wilkey*)

TVA Response: This comment has been reviewed and noted. The amendment to the TVA Act that changes the 3-member Board to a 9-member Board has not yet gone into effect. Suspending activities and decisions until it becomes effective is neither feasible nor, necessarily, good policy.

76. This is the beginning of a precedent with all TVA waterfront lands. There will be a domino effect. This is the start of rampant development of shoreline and raping the land. What message are we sending? Rich folks can take what is being enjoyed by others. This is bad public policy. (*Comments by: William S. Ambrose, Jean Gauger, Mary Kennedy Hendershot, Paul Lear, Bergein F. Overholt, Peggy Roberts, Hiram Rodgers, Barbara A. Walton, and Frank and Sandra Whaley*)

TVA Response: TVA receives numerous land use requests and reasonable requests are considered on a case-by-case basis. TVA land use decisions are carefully made to ensure that they are in the best interest of the public. What TVA decides about any specific request, including the one addressed here, does not bind TVA with respect to other requests.

77. If traded, any land acquired should be put into a permanent land trust never to be developed. TVA has no provisions to protect lands it receives in a swap for the public. TVA makes up its management rules as it goes along. (*Comment by: Billy Minser*)

TVA Response: See the response to Comment 13. What is said in that response about conservation easements also applies to “permanent land trusts.”

78. I request information on how TVA makes new rules and the public input process for such. I request all new rules be reviewed and approved by Stewardship Council and Native American representation on Council. (*Comments by: Richard B. Wilkey, and Mary Anne Wilkey*)

TVA Response: TVA rules and regulations generally are codified in 18 CFR part 1300. Before promulgating new rules or regulations, it engages in a notice a comment rulemaking process, consistent with the federal Administrative Procedures Act. The public input process that TVA employs for its environmental reviews is set out in TVA’s procedures implementing the National Environmental Policy Act. Those procedures have not been codified, but did go through notice and comment

rulemaking. They can be found in the pertinent *Federal Register* or obtained from TVA.

79. When the land was acquired were there no stipulations about usage of the area? TVA needs to develop a permanent land policy. A 2:1 swap is a good model. The model should be stringent policy that decides what to do with land when it is not needed. (Comments by: Mike Butler-Tennessee Wildlife Federation, Delia Foster, Jim McKinley, Ripntear, Jack Rose, and Wayne H. Schacher)

TVA Response: This comment has been reviewed and noted. TVA can and has acquired lands for a variety of purposes in accordance with its authority under the TVA Act. While TVA typically requires lands for a specific purpose, it is not restricted to using acquired lands for those purposes.

80. The public does need to be informed of any proposal involving public land. The very short notice on the meeting seems suspicious and hurts folks who have the most to lose. Does TVA have rules on public notification? The public needs 90 days to review new documents and timely notice of meetings. Where is the proof that the public meeting notice was published in the Federal Register, in accordance with the timely notice requirement of the Administrative Procedures Act? (Comments by: Tom Kunesh, Joe McCaleb, Dale Michell, Shannon Snyder, Mitabuye Oyasin Wascicuns, Mary Ann Wilkey, and Richard B. Wilkey)

TVA Response: TVA's real property disposal actions are not subject to the Administrative Procedures Act. Considering the process employed with the original EA and the public scoping that occurred with this supplement, TVA has provided substantial opportunities for public input. The notice for the last public meeting was short, but TVA thought most people found convenient the location where the scoping public meeting was held, South Pittsburg High School, and wanted to use the same location. Unfortunately, that location was available only for a limited period of time, hence, the short notice. TVA did hold the record open after that meeting to provide the public a longer time in which to submit comments.

81. TVA should better focus on efficient management of power generation and stop poor stewardship in the Tennessee Valley. There is great bad taste about TVA and most of the people that work for TVA. It is not worth it to TVA's reputation as the steward of public lands. TVA should take more active role in preserving what resources remain. Public trust of TVA is eroded by these type of deals, resulting in loss of respect for TVA. (Comments by: Carol J. Anderson, John and Donna Bohon, Laura Copeland, Debbie Blankenship, Jan Lyons, Gwen Morgan, Bill Smith, Ed Thomas, and Bruce Wilkey)

TVA Response: TVA's policy is to manage reservoir lands for multiple benefits including conservation, recreation, and economic development. This policy provides TVA the flexibility to meet a range of regional and local needs and to improve the quality of life in the Valley. TVA's land policy continues to support the agency's broad regional resource stewardship and development mission by evaluating proposals for specific tracts based upon all the factors known to us including both conservation needs and the recreation and economic development needs of the local communities.

82. Has the Nickajack area been subject to the Land Management Planning Process? Is the proposed land swap consistent with it? (Comment by: Barbara A. Walton)

TVA Response: The proposal is consistent with the land management plan for Nickajack Reservoir, as amended in 1997.

83. TVA lands should not be transferred to private ownership under any circumstances. Only transfers to public entities should be considered. (*Comment by: Wayne H. Schacher*)

TVA Response: This comment has been reviewed and noted. See the response to Comment 21.

84. The Ecological Assessment level of investigation is inadequate to fully and fairly evaluate the resource categories involved. The document relies on the developers information which is not full fair and impartial. Only an EIS can produce a level of adequacy. (*Comment by: Wayne H. Schacher*)

TVA Response: TVA conducted an environmental assessment of the proposal to sell Tract 3 at public auction. TVA staff conducted a number of field visits and independently reviewed any information provided by the developer. The level of detail provided which is necessary to determine the environmental impacts of the project and constitutes a hard look at potential impacts and issues.

85. Natural resource values are shortchanged. A monetary value should be attached based on field survey data and fair quantification. Fair compensation at a market level 100 years into the future is needed. (*Comment by: Wayne H. Schacher*)

TVA Response: Any monetary quantification of natural resource values would be subject to judgment and debate among different persons and would not likely be definitive or helpful in comparing natural resource values. Doing this is usually unnecessary and in light of the requirement that equal or better exchange lands be provided, especially so in this case.

86. Burns Island and Boyds Farm are archaeologically significant. Due to these archaeological values, it would be difficult if not impossible to develop the site or to use it for wildlife management. We are concerned with potential future bank stabilization maintenance costs. (*Comment by: Robert M. Todd-Tennessee Wildlife Resources Agency*)

TVA Response: TVA thinks that Boyds Farm has excellent potential for wildlife management. Although archaeological concerns would limit ground-disturbing activity, a variety of techniques can be used to enhance wildlife habitat on the island. TVA agrees that bank stabilization is an ongoing concern with Burns Island. To protect archaeological resources, alternatives for funding and maintenance of bank stabilization would need to be investigated regardless of whether the island was managed for wildlife.

87. At Boyds Farm, public hunting for waterfowl may be inhibited by nearby residential areas. (*Comment by: Robert M. Todd-Tennessee Wildlife Resources Agency*)

TVA Response: Boyds Farm offers limited opportunities for waterfowl hunting. This property would be better suited for small and large game hunting opportunities.

88. If the proposed hiking trails are developed on Little Cedar Mountain, user conflicts with deer and turkey hunting will arise. We oppose development of these hiking trails due to

the high probability that hunting will be eliminated. (*Comment by: Robert M. Todd-Tennessee Wildlife Resources Agency*).

TVA Response: Comment reviewed and noted. In August 2000, TVA developed the Little Cedar Mountain TVA Natural Area Resource Stewardship Plan for the management of Tract 5, contemplating that a trail system would eventually be installed on the tract. Installing a trail system may require limiting hunting on some parts of the mountain. To protect public safety, TVA often restricts hunting on areas developed and promoted for public recreation opportunities such as hiking.

89. We support an interpretive trail system as long as rare species are avoided and it is carefully monitored. (*Comment by: Kirstin Condict-Tennessee Department of Environment and Conservation Division of Natural Heritage*)

TVA Response: One objective of the trail system is to protect rare species from inadvertent disturbance.

90. No state or federal grants have been awarded in the Nickajack Shores area for recreational development. (*Comment by: Mark Tummons-Tennessee Department of Environment and Conservation Recreational Educational Services Division*)

TVA Response: This comment has been reviewed and noted.

7.7 American Indian Issues

91. The site is very important to Indian people. Land is regarded as a sacred by all Indian nations. Would you want a golf course built where your church is standing? This land is sacred to my people. It is wrong to develop burial grounds. When you dig up white men, it is "desecration." When you dig up Indians, it is archaeology. Why is proposed development more important than our sacred land? Why don't you build a golf course on some Caucasian cemetery? (*Comment by: John Anderson, Debbie Blankenship, Kathy Cantu-Chickamauga, Roy C. Cheaves, Scott Gates, Sandy Goins, Richard and Nancy Hughes, Tom Kunesh, Ray Lawson, Sasa Lawson, Chris Manis-UTC Herpetology Lab, Gwen Morgan, Connie Richardson, Shannon Snyder, ripntear, and Lee Vest*)

TVA Response: TVA is sensitive to cultural concerns and issues and has a professional staff that is devoted to these issues. Here, TVA required the applicant to conduct a Phase I archaeological survey of the property utilizing a professional archeologist approved by TVA. TVA has independently reviewed the archaeological survey report and has determined that the survey was adequate. The survey did not identify any burial grounds on the property, confirming the conclusion that TVA reached in the original EA when these same kinds of assertions were made. In further consideration of these issues, TVA hosted a consultation meeting with representatives of the Muscogee (Creek) Nation, Chickasaw Nation, Cherokee Nation, and Seminole Nation of Oklahoma. On the basis of surveys completed in connection with this proposal, TVA has determined that selling this property for economic development purposes would have no effect on cultural resources. To help ensure this, TVA has entered into a Memorandum of Agreement with these tribes addressing the possibility of inadvertent discovery of human remains. The MOA sets out a process that must be adhered to if human remains are discovered during development activities on the property, but this is not expected to happen.

92. In both Nickajack Reservoir LMPs, the original and the addendum, TVA acknowledges that cultural resource considerations may affect development; however, in the draft SEA, TVA appears to forget its own early warnings and now claims that impacts to cultural and archaeological features on Tract 3 and adjacent Tract 5 will be insignificant. There is zero explanation for the differences in the Draft SEA, the 1990 LMP, and the 2005 Addendum to the LMP, relative to cultural and archaeological impacts. (*Comment by: Joe McCaleb*)

TVA Response: The TVA Land Management Plan's reference to cultural resource considerations refers to the possibility that additional archaeological survey may be needed prior to development. As required under Section 106 of the National Historic Preservation Act, TVA is required to make a "good-faith effort" to identify historic properties that may be affected by its undertakings. TVA required additional surveys be conducted as part of its review of the current proposal. The results of the Phase I archaeological survey indicated that two potentially significant sites were located in the area. These sites were removed from the proposed transfer tract and will be avoided by all development.

93. Even though TVA purports to set aside identified sensitive areas and archaeological sites, TVA ignores the fact that these entire tracts are sacred to Native American Indians and should not be sold for private residential development at all. (*Comment by: Joe McCaleb*)

TVA Response: TVA has consulted with federally recognized Indian tribes, and Tract 3 has not been designated as sacred. See the response to Comment 91.

94. TVA should conduct phase II investigations if it intends to go forward. TVA has a mandatory duty and responsibility to protect sensitive cultural resources on property owned by the United States and held in trust for the benefit of the American people (Public Trust Doctrine). (*Comment by: Joe McCaleb*)

TVA Response: Results of the Phase I archaeological survey identified two sites that were found to be potentially eligible for listing in the National Register of Historic Places (NRHP). These sites were removed from the proposed auction tracts. No resources within the auction area were identified as potentially eligible for the NRHP.

95. I am confident TVA will adhere to regulations regarding protection of Native American cultural sites. (*Comment by: John Anderson*)

TVA Response: Comment reviewed and noted.

96. The land contains documented and recorded Native American historic sites that were discovered during very preliminary pedestrian survey work. There may be numerous additional graves, sacred sites, and traditional cultural properties that are important to Native Americans who are indigenous to this region. (*Comments by: Vicky Karhu-Trade and Commerce Authority of Muscogee (Creek) Nation*)

TVA Response: See the response to Comment 91. TVA required that a Phase I archeological survey be conducted of the property. The archaeological sites documented in previous surveys were re-investigated by the consultant. Additional sites not previously recorded were also investigated in the 2005 survey. All but two of these sites failed to meet the criteria of eligibility for listing in the National Register of Historic Places and these two sites will not be part of the transfer.

97. I am concerned with the influx of residents and visitors to the Thunder development and the impacts it may have to historically and culturally rich Burns Island. Development will compromise the cultural significance and preservation of the island. (*Comment by: Roy C. Cheaves*)

TVA Response: Burns Island is located approximately 4 miles downstream from Nickajack Dam. The proposed development on Tract XNJR-3PT is not expected to have any impact on the archaeological sites on Burns Island. One benefit of approving the requested transfer to Thornton Enterprises is that Burns Island, with its significant cultural resources, would become better protected under public ownership.

98. Burns Island should be removed from the trade equation – it is so unique. For TVA to engage in some sort of “bartering” of nationally even globally significant historical and prehistoric heritage sites to appease the short-term desires of a profiteer, private developer is beyond the pale. Burns Island should be bought and donated to a tribal entity or some other land preservation organization and put under a conservation easement. (*Comments by: Tom Kunesh, Barbara Porras, and Richard B. Wilkey*)

TVA Response: This comment has been reviewed and noted. See the response to Comment 97.

99. When TVA closed Nickajack Dam, it inundated Running Water Town and Nickajack Cave – two of the most significant archeological sites in Eastern Tennessee. (*Comment by: Bruce Wilkey, and Richard B. Wilkey*)

TVA Response: TVA acknowledges that Native American sites were inundated as a result of the Nickajack Dam project. These inundated resources will not be affected by the proposed Nickajack Shores development.

100. The land is government-granted Indian land and it could never be sold. It is held in trust and bound to the heirs to pass to the descendents. The original deed is in an Indian language, but it appears to refer to land in the Nickajack area, probably Burns Island, a Chiaha town. (*Comment by: William Brian Orbie Nabors*)

TVA Response: TVA acquired this property as part of the Nickajack Dam project and it is currently held in fee by the United States. TVA has the authority to dispose of this property pursuant to the TVA Act.

101. There should be a moratorium on any significant Native American properties until the public gets to review and comment on an MOA between TVA and tribes as required by Section 106. (*Comments by: Mary Ann Wilkey, and Richard B. Wilkey*)

TVA Response: TVA has concluded that there are no eligible historic sites located on the proposed disposal tract. To accommodate concerns about a later inadvertent discovery on the property, TVA has prepared a Memorandum of Agreement with the State Historic Preservation Officer and the federally recognized tribes. A copy of the MOA is attached to the Final SEA.

102. Both land and water components of the Trail of Tears came through the area of the proposed development. Any Trail of Tears resources that might exist within the proposed project area should be inventoried and considered in the EA. The National

Park Service should be in the list of agencies consulted. (*Comment by: Floyd Ayers-Tennessee Chapter Trail of Tears Association*)

TVA Response: TVA's historic overview has considered Trail of Tears resources. The National Park Service official information regarding the Trail of Tears National Historic Trail shows the northern route of the Trail of Tears going through Jasper, Tennessee, to the north of the development tract. The water route does include the Tennessee River in the area of the Nickajack Shores development. The Trail of Tears Water Route can be included in the interpretive efforts and trail proposed for Little Cedar Mountain.

103. TVA should make connections with an appropriate Indian tribe. They will soon possess culturally affiliated artifacts currently in state and national repositories. (*Comment by: Kirk Johnson*)

TVA Response: TVA has consulted with federally recognized Indian tribes regarding this undertaking.

104. An unbiased archaeological team should perform an evaluation of the affected site. (*Comment by: Barbara Porras*)

TVA Response: See the response to Comment 31. TVA prepared the Scope of Work for the Phase I survey and selected the archaeological consultant to complete the work. This consultant is highly qualified and was not biased in his recommendations. TVA independently reviewed all reports and approved them.

105. The results of the June 10, 2005 meeting with tribal representatives should be made public, including any proposed agreements. (*Comment by: Tom Kunesh*)

TVA Response: Information regarding the Native American consultation meeting is included in the SEA. A copy of the Memorandum of Agreement is included in the Final SEA.

7.8 Water Quality Issues

106. Pesticides are going to run off into the river. Do you know what golf courses do? How will Thunder manage development without adding to the influx of insecticides, herbicides, and fertilizers? (*Comments by: Corky Allen, Chris Manis-UTC Herpetology Lab, and Richard B. Wilkey*)

TVA Response: Any golf course development would follow guidelines in the Tennessee Handbook for Golf Course Environmental Management. According to these guidelines, pesticides would be applied in a manner to reduce "loss or off-target transport" to the environment. Recommended Best Management Practices include careful selection of pesticides used, "reducing the frequency of pesticide application," selection of "less toxic, less mobile, and less persistent pesticides," control of the "timing and amount of pesticide applied" with restrictions of applications "prior to anticipated rainfall events," and proper application methods to avoid over-application and drift. If these BMPs are followed, effects of any pesticide runoff would be insignificant.

107. We disagree that a 50-foot buffer would provide the same protection as a 100-foot buffer. We recommend restoration of the 100-foot buffer to reduce sediment and filter pesticides and herbicides. (*Comments by: Kirstin Condict-Tennessee Department of*

Environment and Conservation Division of Natural Heritage, and Robert M. Todd-Tennessee Wildlife Resources Agency)

TVA Response: A 100-foot buffer would provide more protection than a 50-foot buffer, but a larger buffer would limit fuller utilization of the site and is unnecessary. TVA's experience is that a 50-foot buffer would meet water quality objectives, help control erosion, and provide aquatic habitat benefits. A 50-foot buffer is standard pursuant to TVA's shoreline management policy.

7.9 Other

108. In 1996, USFWS commented that a cave on Little Cedar Mountain was visited and occupied by an estimated 3500 gray bats annually and occasionally by the Indiana bat. Both bat species are listed as federally endangered. In the current Draft SEA, a conclusion is drawn that the cave is no longer used by the bats and does not warrant gating. No explanation is given for why endangered bats no longer use the cave and no protections are needed. The draft SEA presents an inadequate discussion of this issue. Furthermore, in a more recent comment, USFWS conditions no protection of the cave by insisting on a 100-foot buffer. If TVA is not going to apply the 100-foot buffer, then it should heed the comment by the USFWS that protection of the cave is needed. The recent FWS comment does not say that endangered bats no longer use the cave. *(Comment by: Joe McCaleb)*

TVA Response: Subsequent field investigations by TVA and TWRA revealed that Little Cedar Mountain Cave is used only on a transitional basis by a limited number of gray bats. The cave is not used by populations of gray or Indiana bats during winter and summer months. Therefore, TVA determined that Little Cedar Mountain Cave did not warrant gating. The vegetative buffer zone has little bearing on Little Cedar Mountain Cave. Gray bats from nearby Nickajack Cave forage over water adjacent to the proposed project. Considering the amount of vegetative shoreline in the vicinity of the project and the distances that gray bats travel to forage on a nightly basis (up to 32 km), reduction of the buffer zone would not result in impacts to gray bats in the vicinity.

109. An appropriately designed cave gate is recommended at the entrance of Little Cedar Mountain Cave. This cave is apparently used by endangered gray bats and other bat species. Construction of the proposed trail system could increase the potential for disturbance or destruction of sensitive cave resources in Little Cedar Mountain Cave. If the proposed trail system is approved, we recommend that a cave gate be constructed to protect those resources. *(Comment by: Lee A. Barclay-U.S. Fish and Wildlife Service)*

TVA Response: Due to results of recent multi-year visits to Little Cedar Mountain Cave, TVA determined that the cave did not warrant gating to protect bats. The trail system would be designed to route hikers away from Little Cedar Mountain Cave and nearby sensitive resources. Without the trail system, informal trails would be created by new homeowners, and would likely disregard sensitive resources.

110. The Draft SEA refers to "valuable wetlands" on the exchange properties which would offset the loss of two forested wetlands. The SEA however does not describe those "valuable wetlands" nor indicate why they are more valuable than 21.6 ac of forested wetland. *(Comment by: Joe McCaleb)*

TVA Response: A comparison of the acreage, types, and values of the wetlands on the exchange tracts is provided in Appendix D of the SEA. TVA would utilize these same criteria to evaluate any proposed exchange property submitted by a potential bidder.

111. The Draft SEA notes that in addition to known federally and state-listed plants within certain distances of Tract 5, there are two species “newly discovered to science” existing now on portions of Tract 5 and in the area where Tracts 3 and 5 meet. Furthermore, habitat for the federally listed Huntsville vasevine occur in both tracts. Consultation is required under the Endangered Species Act. Moreover, a portion of Tract 3 is planned by Thunder Enterprises as a golf course, necessarily subjecting all plants in that vicinity to herbicides. Spring herbicides on or near plants or the habitat of plants “newly discovered to science” is totally unacceptable. (*Comment by: Joe McCaleb*)

TVA Response: TVA has consulted with the U.S. Fish and Wildlife Service on the project. The habitat for Huntsville vasevine (a.k.a. Morefield’s leather flower) has been searched and the plant was not found. TVA conducted additional field surveys during the flowering season in May 2005. There is one new species, a member of the sunflower genus, *Helianthus*, that is known to occur in the Gray’s Bluff area of Tract 5, the tract that TVA is not proposing to sell. The SEA has been updated with this information. TVA will require that any golf course developed on Tract 3 follow guidelines in the Tennessee Handbook for Golf Course Environmental Management. See Comment #106.

APPENDIX A - POTENTIAL BIDDER QUALIFICATIONS

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Potential Bidder Qualifications

Based on TVA's current land management practices and the Final SEA, potential public auction bidders would qualify for the auction by meeting certain requirements. TVA may place additional business requirements in the public notice of public auction.

Potential Bidder Qualifications

All potential bidders would provide TVA with evidence, in a form and content acceptable to TVA, that they currently own appropriate exchange lands deemed suitable to TVA. At a minimum, this property should be approximately the same acreage as TVA Tract 3 property to offset the potential loss of public lands under TVA's control. Such land should be property on Nickajack Reservoir, or approximately 20 miles upstream or downstream of the project property, that is adjacent to either TVA reservoir property or the reservoir, and that is currently undeveloped and not in public ownership. TVA would review the proposed exchange lands to determine whether they have features that are similar to or better than those on the Little Cedar Mountain property. After review, TVA would determine, in its sole discretion whether the proposed exchange lands were suitable.

Potential bidders would be required to submit a general design plan to be approved by TVA in its sole discretion that provides for a mixed-use development of the property and meets all commitments established by TVA'S ENVIRONMENTAL reviews. These qualifications are subject to change based on the outcome of TVA's environmental and other reviews.

Potential bidders would be required to provide TVA with evidence, in a form and content acceptable to TVA, of sufficient funds to consummate the sale at closing.

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**APPENDIX B – LITTLE CEDAR MOUNTAIN (TRACT 5)
TRAIL DEVELOPMENT**

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Little Cedar Mountain (Tract 5) Trail Development

TVA manages the Little Cedar Mountain Natural Area as a Habitat Protection Area (HPA). HPAs are TVA designations that are established to protect populations of species that have been identified as threatened or endangered by the US Fish and Wildlife Service or that are rare to the State in which they occur. Unusual or exemplary biological communities or unique geological features also receive protection by being placed in this category.

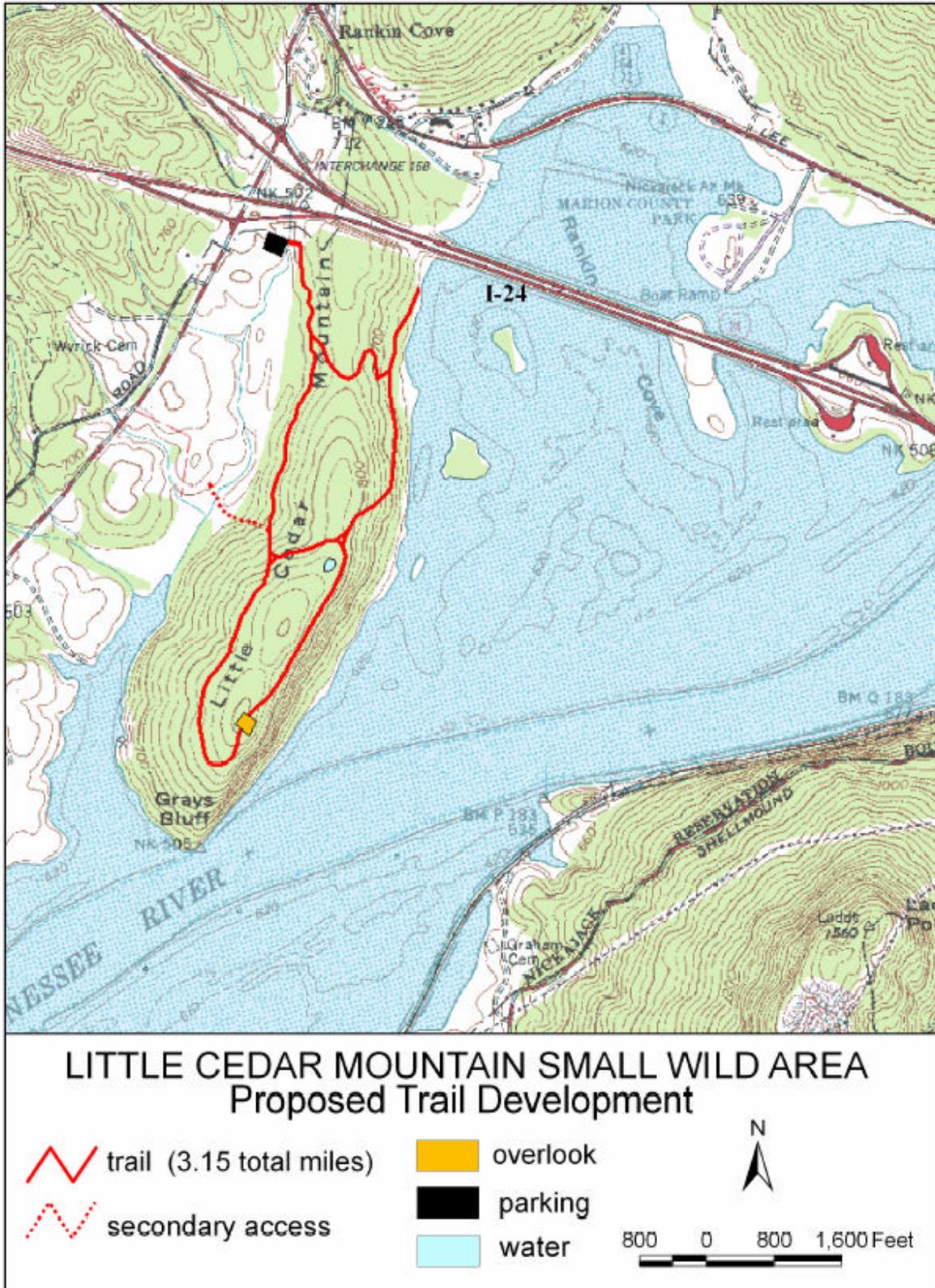
In 2000, TVA completed the *Little Cedar Mountain TVA Natural Area Resource Stewardship Plan*, and also designated the area a Small Wild Area (SWA). SWAs are sites with exceptional natural, scenic, or aesthetic qualities that are suitable for low-impact public use, where appropriate development is undertaken (e.g., foot trails, signs, and parking areas). Efforts are made to encourage public use and to interpret natural features of these areas for visitors.

Installing a system to serve the Little Cedar Mountain Natural Area would promote passive public recreation while protecting fragile parts of the mountain. The highest priority would be given to the protection of rare species and unusual features. One objective of the trail development is to provide directed use of the site in advance of a potential increased use of the natural area due to adjacent land use changes. It is expected that adjacent mixed-use development will result in an increase use of the site (see Section 2.11, Recreation). Development of a trail system would allow TVA to direct use away from sensitive resources, maintain the area for public use, and would develop a clear management strategy for future use of the area.

The proposed nature trail will take advantage of many opportunities offered by the area, including a forested setting with scenic views, interesting rock formations, a variety of shrubs, wildflowers, ferns, mosses and lichens, a woodland pond, and an early rural roadway with stone retaining walls and stone paving. The trail would be constructed from the public access parking area to a viewpoint near the highest point of Little Cedar Mountain (See Appendix B, Figure -1). Attractions along the trail would include rock formations and a diversity of plants and animals established on and between limestone outcrops. Public parking, with 16 spaces, would be available on the northwest end of the area, near the junction of Shellmound Road and I-24.

Interpretative Features

An educational kiosk would be erected at the trailhead. Interpretive signs, a map, and a brochure would describe the geology, flora and fauna, Native American history of the area, and history of Nickajack Reservoir, and would be made available at the public access area. TVA archeologists would design a sign for the view over Nickajack Reservoir with information about Native American sites that were once located below the reservoir. Directional signs would be installed at trail turns and intersections.



Appendix B, Figure 1. Little Cedar Mountain Proposed Trail Development

**APPENDIX C - THUNDER ENTERPRISES “NICKAJACK SHORES”
PROPOSAL TO DEVELOP TVA TRACT 3**

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NICKAJACK SHORES ESTATE DEVELOPMENT

Executive Summary

Thunder Enterprises, a Chattanooga, Tenn.-based real estate development company, is submitting a land use application plan for the development known as Nickajack Shores. Thunder Enterprises is confident that this plan meets the following objectives and criteria for the overall mission of TVA and the public at large. These include a development that is maximizing the return yields for land currently owned by TVA, maximizing the availability of public recreational uses, minimizing adverse environmental impacts, ensuring a high quality multi-use development and best serving the community and citizens of Marion County.

The Nickajack Shores plan proposes the public, recreational and residential development of approximately 578 acres that is in the River Gorge/Nickajack Dam area and located at the western base of what is known as Little Cedar Mountain. In exchange for this property, Nickajack Shores will transfer approximately 1,100 acres of privately held land known as Cedar Mountain, Burns Island and the Boyd Farm to TVA.

With a net gain of more than 500 acres for TVA, the historically and environmentally significant Cedar Mountain, the Boyd Farm and Burns Island will become the property of TVA and should be opened to increase public outdoor usage as they deem necessary. Burns Island itself contains at least 19 major prehistoric Native American archaeological sites — two of which already qualify to be included in the National Register of Historic Places. This archeological resource is of national significance, and comparable to Moccasin Bend National Park and Williams Island State Archeological Park in Chattanooga. In regards to Cedar Mountain, The Tennessee River Gorge Trust has identified this property as one of the last remaining privately owned, large properties in the watershed. Also heavily forested, this site is home to several species of wildlife and is ideal for public recreational opportunities such as hiking, mountain biking, camping and hunting. In addition, the Boyd Farm is recognized as a prime habitat for small game and waterfowl and has the potential for other recreational opportunities as well.

Maintaining the environmental and natural settings of the Tennessee River Gorge is paramount for the Nickajack Shores development. Strict guidelines and a design review process will be implemented to uphold the architectural integrity of all structures built on the property and ensure that their development will coincide with the surrounding landscape. The proposed development does not include any actual development on Little Cedar Mountain itself. However, Thunder Enterprises would welcome the opportunity to work with TVA or any other public entity to assist in making Little Cedar Mountain a more user-friendly area for the public.

The distinguished Nickajack Shores residential/public development plan includes a gated residential community consisting of approximately 615 home sites including a golf amenity, fitness and wellness center, a trophy bass lake, walking trails, swimming area, marina and clubhouse. The plan has also incorporated additional public recreation amenities including rental cabins, RV and other camping, a boat ramp that can accommodate three boats simultaneously, walking trails, park areas, and a 100-room hotel, complete with conference and business center, workout facility and swimming beach.

Civic and business leaders in Marion County support the proposal of this development and the economic advantages that will accompany it. Creating more than 150 jobs during the construction of the project, after completion, Nickajack Shores will sustain approximately

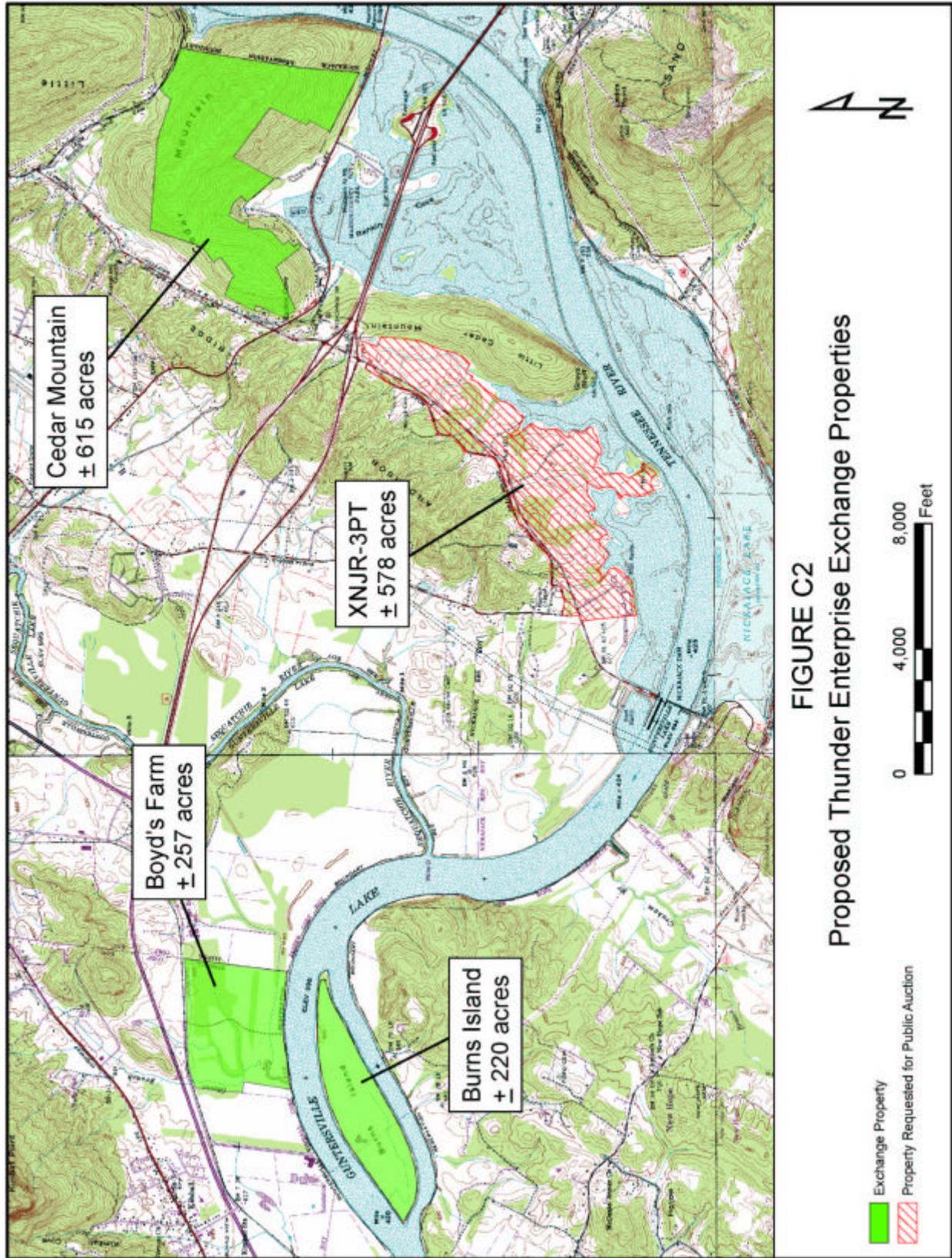
Proposed Development of Nickajack Reservoir Tract 3

135 new jobs in the areas of management, sales, outdoor recreation, hospitality and maintenance. In addition, this new development will generate millions of dollars of new revenue for Marion County, Tenn. each year.

Thunder Enterprises recognizes the commitments to the land, watershed and wildlife as outlined in the TVA Final Environmental Assessment (*See Appendix I online, Section 5.0 Commitments*). Nickajack Shores will adhere to these commitments and requirements throughout planning, construction and maintenance of the development.



Appendix C, Figure 1. Proposed “Nickajack Shores” Conceptual Development Plan



Appendix C, Figure 2. Proposed Thunder Enterprises Exchange Properties

**APPENDIX D - EVALUATION OF
PROPOSED EXCHANGE PROPERTY**

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APPENDIX D - EVALUATION OF PROPOSED EXCHANGE PROPERTY

TVA would require that any potential bidder for TVA Tract XNJR-3PT (Tract 3) be prepared to provide TVA exchange properties deemed suitable to TVA. The properties should be approximately the same acreage and value to offset the loss of lands available to the public. TVA would review the proposed exchange properties to determine whether they would be acceptable to TVA from programmatic, financial, land management and environmental standpoints. This appendix describes TVA's method of reviewing any proposed exchange properties from an environmental resource perspective.

TVA would evaluate the resource value in accordance with the following general acceptability criteria set forth in Appendix D, Table -1. If the proposed exchange properties meet these general criteria, TVA has determined that bringing the properties under federal protection would be beneficial to the environment.

Appendix D, Table 1. General Acceptability Criteria for Exchange Properties

<p>Acceptable exchange lands should provide resource benefits that have comparable value to those which currently exist on Tract 3. TVA has developed criteria for assessment of exchange lands. Criteria are based on ecological indicators that can be used to make a resource value determination. TVA staff will utilize as much available ecological indicator information as possible to evaluate any exchange property; however, available information may not be available for all ecological indicators. TVA would utilize information available through data searches, field investigation, aerial photos, and personal communications to make a best professional judgment as to the resource values of the exchange properties.</p>
<p>Resources areas that are of particular interest for which ecological indicators have been identified include wetlands, terrestrial ecology, recreation, visual resources, cultural resources and land use. TVA would also exchange lands based on the ease of access and shoreline condition and footage.</p>
<p>TVA would evaluate wetland resources based on a TVA Rapid Assessment Method, which TVA has developed and is based on the Ohio Rapid Assessment Method (ORAM v.5.0). The method is designed to distinguish between three categories of wetlands: limited, moderate, and high quality wetlands.</p>
<p>Terrestrial ecology will be reviewed for the presence of unique habitats, forest quality, understory diversity, presence of invasive species, suitable habitat for endangered species and tract accessibility.</p>
<p>Recreation resources would be evaluated based on recreation benefits (user-days) and demands along with administrative, operational and management and maintenance considerations.</p>
<p>Visual resources would be evaluated based on a standardized criteria including: vegetation cover, pattern and diversity, scenic importance and integrity, visibility, and frequency, duration and sensitivity of views.</p>
<p>Cultural resources evaluations would review potential/known archeological sites or historic sites, and potential/known structures or cultural properties.</p>
<p>Land use would be evaluated based on access, shoreline frontage and condition, acreage and location, topography, and land cover.</p>
<p>TVA would also review the exchange properties to identify any commitments or mitigation that would be necessary to make the property acceptable to TVA.</p>

Evaluation of Proposed Thunder Enterprises Exchange Properties

The following is an evaluation of the proposed exchange properties that have been offered by Thunder Enterprises. TVA has evaluated the exchange properties based on the General Acceptability Criteria for Exchange Properties – Appendix D, Table -1 by assessing vegetation and wildlife, wetlands, sensitive resources, visual resources, cultural resources, recreation and land use.

Vegetation

Three proposed land exchange tracts - Boyd Farm, Burns Island, and Cedar Mountain were surveyed for terrestrial plant communities.

Successional communities: The majority of these communities are represented by old fields and pastures. Boyd Farm (73 percent) and Burns Island (64 percent) have these types of communities. The agricultural fields found on the two areas were planted with soybeans and corn. The pasture on Boyd farm consisted mainly of tall fescue. The edges of the fields were occupied by several exotic invasive species such as Chinese privet, Japanese honeysuckle, and kudzu. In addition to the agricultural species present, many native and non-native weedy species were observed in the fallow fields during the field survey in early March.

Mixed Mesophytic communities: This is the main community type found on Cedar Mountain. This community type can be divided into several sub-communities such as North Slope-Mixed Mesophytic community and Oak-Pine sub-xeric community, which include the xeric calciphilic or glade community. The North Slope-Mixed mesophytic community is found on the north side of Cedar Mountain. It occupies approximately 46 percent of the area of this tract of land. This community is dominated by sugar maple, Northern red oak, white oak, shagbark hickory, bitternut hickory, white ash, and yellow poplar in the canopy. The subcanopy contains pawpaw, flowering dogwood, spicebush, and sweetshrub. The herb layer is composed of a wide variety of wildflowers such as blue phlox, bloodroot, mayapple, trillium species, and several different types of ferns.

The south side of Cedar Mountain is composed mainly of two types of xeric communities occupying approximately 54 percent of the total exchange lands. The first type is an Oak-Pine sub-xeric community mixed with Virginia Pine, Shortleaf Pine, Eastern Red Cedar, and several Oak species as the dominate vegetation types. The oaks are represented by black jack oak, post oak, black oak, Southern red oak, chinquapin oak, and Shumard's red oak. In addition, several hickory species also occur in this habitat. The subcanopy is dominated by redbud, hop-hornbeam, and various elm species. Other woody plants found here are Carolina buckthorn, blue ash, rusty blackhaw, and sugar maple. Herbaceous species that could occur are smooth leafcup, heart-leaved skullcap, Indian-pink, smooth rockcress, twin-leaf and four-leaved milkweed. Several fern species such as purple cliff-brake, spleenworts, and walking fern can be found on large limestone boulders. The other community is the xeric glade-like habitats where there is exposed limestone at the surface usually surrounded by a tall canopy of oaks. Characteristics herbaceous plants of these areas are false aloe, thimble-flower, woods sunflower, summer bluet, hoary pucoon, prairie coneflower, and Indian pink.

Palustrine Forest: Palustrine forest are wetlands comprised of woody vegetation that is six meters (20 ft) tall or taller. The most common forested wetlands found long Nickajack Reservoir are temporarily flooded riparian zones. These areas are dominated by red and

silver maple, slippery elm, boxelder, sycamore, and green ash. Sycamore, water, and white oak may also be members of these types of communities. Palustrine forest can be found on Burns Island (23 percent), and Boyd Farm (26 percent).

Wildlife

Burns Island

This 220-acre site contains a mixture of croplands, early successional and wetland habitats (See Appendix D, Table-2). Small stands of forested habitat also exist along the margins and along drainage corridors throughout the island. The wetland-dominated sites are used by a variety of waterfowl. Numbers of blue-winged teal, wood duck, mallard, and gadwall were noted during field investigations. Fallow croplands were used by white-tailed deer and numerous species of songbirds. Several colonies of great blue herons were observed on the island. An active osprey nest was also observed on the property during field investigations. Overall, the quality of the wildlife habitat is high. However, extensive erosion was noted along the margins of the island.

Boyd Farm

This 257 acre parcel has contains a mixture of croplands and wetland habitats dominated by deciduous forest. Several low-lying areas in fields collect rainfall and provide foraging areas for wintering shorebirds such as snipe, and also provide breeding areas for a variety of amphibians. Overall, the quality of the wildlife habitat is high. Although residual crops left on the property after harvest provide a source of food for wildlife, establishment of warm season grasses in the fields would greatly improve the quality of wildlife habitat on this property.

Cedar Mountain

Cedar Mountain contains approximately 615 acres of excellent wildlife habitat. The habitat is very similar to that observed on Tract 5. The parcel is largely dominated by upland deciduous hardwoods throughout with a mixture of red cedar and pine mostly on the western slope. This area is used by a variety of game and non-game species of wildlife. The contiguous forest is excellent habitat for migratory songbirds and is large enough to contain habitat for species favoring interior forest habitats. Overall, the quality of wildlife habitat is high and the incidence of invasive species of plants is low.

Appendix D, Table 2. Habitat Types and Acreages – Exchange Properties

Habitat Type*	Burns Island	Boyd Farm	Cedar Mountain
Early Successional	149	217	8
Forested	35	54	608
Wetlands	84	79	0
Other	0	2	1
Access	Limited	Good	Good
Wildlife Value	Excellent	Good	Excellent
Presence of Invasive Plants	Moderate	Moderate	Low

* Early successional habitat estimates includes non-forested wetlands. Forested habitat estimates include forested wetlands. Other includes residential, commercial, transportation, and other modified habitats.

Several comments relevant to wildlife were received from the public during the public review process. Most concerns focused on the apparent loss of publicly accessible wildlife habitat, especially early successional habitats. Under the Thunder Enterprises proposal,

the Burns Island and Boyd Farm properties land exchange would result in a net increase in wildlife habitat (see Appendix D, Table -3).

Appendix D, Table 3. Net Change in Acreage of Habitats in Exchange

Habitat Type	Tract 3	Exchange Properties	Net
Early Successional	285	374	+89
Forested	365	697	+332
Wetlands	23	163	+140
Other	39	3	-36

Wetland Resources

Wetland resources on the exchange properties (Burns Island, Boyd Farm, and Cedar Mountain) were identified primarily by photo interpretation of digital orthophotos taken March 10, 2003 at a scale of 1:24,000 using color infrared photography; a target-mapping unit of 0.25 acre was used to develop a land use/land cover dataset. In addition, National Land Cover Data (NLCD), (<http://www.mrlc.gov/index.asp>), a land cover dataset derived from early 1990s Landsat TM data at 30m resolution was used to estimate the extent of wetlands in the larger project area (Marion County).

National Wetland Inventory (NWI) maps, the USDA Soil Survey for Marion County (Elder 1958) and limited field surveys were also used to determine the location of potential wetlands. TVARAM was also used on selected wetlands on the exchange properties to evaluate their ecological condition.

The presence of hydric soils as identified in soil surveys indicates potential wetland areas. On portions of the exchange properties, it appears that some of the hydric soil areas may have formerly supported wetlands but have been converted to upland through drainage, clearing, and conversion to other land uses. In some areas, both drainage and clearing occurred to allow for agricultural development. These prior converted wetland areas could have high potential for restoration and/or recovery.

Acreage figures were determined using photo interpretation of 2003 aerial photography. Appendix D, Table-4 and Table -5 summarize the comparison of wetlands resources and types of wetland resources on the three parcels proposed for exchange, as well as Tract 3. Due to the steep topography, there are no wetlands present on the Cedar Mountain tract.

Burns Island

The Marion County soil survey indicates there are approximately 84 acres of hydric soil present on the island. Land use/land cover analysis of aerial photography identified 21.6 acres of forested wetlands, 27.1 acres of forested/scrub shrub wetlands, 19.4 acres of emergent wetlands, and 29.8 acres of open water. In recent years, a small dam has been constructed across an unnamed stream on the island, resulting in the development of a large pond and associated wetland. This wetland is a mix of emergent and forested habitat; common species present include red maple (*Acer rubrum*), sycamore (*Platanus occidentalis*), green ash (*Fraxinus pennsylvanica*), cattail (*Typha latifolia*), soft rush (*Juncus effusus*), and smartweed (*Polygonum spp.*). This wetland provides habitat for a variety of wetland-dependent wildlife. There is a heron rookery built in the forested area of the

wetland, and a variety of waterfowl was observed. Beaver are active in this wetland as well. TVARAM scored this wetland as a Category 3 (high quality) wetland. Photo interpretation indicates that up to 35 percent (83.8 acres) of the total land area of Burns Island is wetland.

Boyd Farm

The Marion County soil survey maps approximately 129.93 acres of hydric soil on the Boyd Farm property. Land use/land cover analysis of aerial photography indicates there are 52.1 acres of forested wetlands present on this parcel, 22.6 acres of emergent wetlands, 1.9 acres of forested/scrub-shrub wetlands, 1.5 acres of scrub-shrub/emergent wetlands and 0.9 acres of ponds/open water. Large areas of this tract are cropland with a high potential for wetland restoration.

Species present in forested wetlands on this site include water oak (*Quercus nigra*), willow oak (*Q. phellos*), sycamore (*Platanus occidentalis*), sweet gum (*Liquidambar styraciflua*), red maple (*Acer rubrum*), black willow (*Salix nigra*), slippery elm (*Ulmus rubra*), and green ash (*Fraxinus pennsylvanica*). There are also smaller areas of emergent/scrub-shrub wetlands at the north end of the parcel; species associated with these areas include cattail (*Typha latifolia*), soft rush (*Juncus effusus*), wool grass (*Scirpus cyperinus*), bulrush (*Scirpus spp.*), and black willow. The initial field survey indicates most of the forested wetlands are saturated to the degree that invasive species are not as prevalent as occur on Tract 3. TVARAM was not conducted on this site. Photo interpretation indicates that up to 27 percent (79 acres) of the total land area of the Boyd Farm tract is wetland.

Appendix D, Table-4 includes a comparison of wetland resources between Tract 3 and the three exchange tracts. Both the Burns Island and the Boyd Farm tracts contain relatively significant wetland resources, as compared to Tract 3. Acquisition of the Burns Island and Boyd property would result in approximately an additional 139 acres of high quality wetlands being added to the public land base. Coming under TVA jurisdiction, these wetlands would be further protected in perpetuity to meet federal wetland protection requirements; under private ownership, these areas would not be afforded the same level of long-term protection.

Appendix D, Table 4. Comparison of Wetland Resources (Acres)

	Acres of Hydric Soil	Acres of Wetlands Identified by Photo Interpretation
Tract 3	46	21
Burns Island	84	76
Boyd Farm	129	79
Cedar Mountain	0	0

Appendix D, Table 5. Acres of Wetland Types by Tract

	Forested	Scrub-shrub	Emergent	Forested/ scrub-shrub	Scrub- shrub/ emergent	Ponds/ open water	Total wetland acreage	Percent of land that is wetland
Tract 3	21.6	0.1		0.3		1.2	23.2	3
Burns Island	7.5		19.4	27.1		29.8	83.8	35
Boyd Farm	52.1		22.6	1.9	1.5	0.9	79.0	27
Cedar Mountain							0	0

Sensitive Resources**Burns Island/Boyd Farm**

Review of the TVA Natural Heritage database indicates that several state- and federal-listed aquatic animals are present in the main stem Tennessee River (Nickajack Dam tailwaters downstream to Guntersville Reservoir), and in the Sequatchie River (Appendix D, Table -6). All of these species are likely to be present in the main stem of the Tennessee River in the vicinity of the Boyd Farm property and Burns Island. Two additional federal-listed aquatic species: Owen Spring limnephilid caddisfly (*Glyphopsyche sequatchie*) and the royal marstonia snail (*Pyrgulopsis ogmoraphe*) are known only from Owen Spring in the Sequatchie River system. These two species are restricted to the spring run habitat in Owen Spring and do not occur in the main stem Tennessee River.

The area around Boyd Farm in the main stem Tennessee River is the location of one of the best remaining populations of the federal-listed Anthony's riversnail (*Athearnia anthonyi*). This population extends into the Sequatchie River, and represents one of only two known populations of this species. The other population is found in Limestone Creek, Limestone County, Alabama. There is a well-established population of snail darters in the lower Sequatchie River, and this species is also likely to occupy the main stem Tennessee River in the vicinity of Boyd Farm, at least during certain times of the year.

An additional 15 protected aquatic animal species are historically reported from the Tennessee River downstream of Nickajack Dam, its tributaries, or in cave systems near the river (Appendix D, Table-7). However, none of these species have been collected recently, and none are likely to be present in the vicinity of Boyd Farm or Burns Island.

Appendix D, Table 6. Protected Aquatic Species Known to be Present in the Tennessee River (Nickajack Dam tailwater) and its Tributaries (including the Sequatchie River), Marion County, Tennessee, and Jackson County, Alabama

Scientific Name	Common Name	Federal Status	State Status
Fish			
<i>Carpiodes velifer</i>	Highfin carpsucker	-	NMGT
<i>Etheostoma denoncourti</i>	Golden darter	-	NMGT
<i>Percina tanasi</i>	Snail darter	Threatened	Threatened
Snails			
<i>Athearnia anthonyi</i>	Anthony's river snail	Endangered	Endangered - TN Protected - AL
<i>Lithasia verrucosa</i>	Varicose rocksnail	-	Threatened - TN
<i>Pleurocera corpulenta</i>	Corpulent hornsnail	-	Protected - AL
Mussels			
<i>Lampsilis abrupta</i>	Pink mucket	Endangered	Endangered - TN Protected - AL

NMGT - Deemed In Need of Management by the Tennessee Wildlife Resources Agency

Protected - AL - species designated for protection by the State of Alabama

NOST - considered sensitive by the State of Alabama, but with no formal protection status

Appendix D, Table 7. Protected Aquatic Species Historically Reported, but no Longer Believed to be Present, in the Tennessee River (Nickajack Dam Tailwater) and its Tributaries (including the Sequatchie River), Marion County, Tennessee, and Jackson County, Alabama

Scientific Name	Common Name	Federal Status	State Status
Fish			
<i>Hemitremia flammea</i>	Flame chub	-	NMGT - TN
<i>Typhlichthys subterraneus</i>	Southern cavefish	-	NMGT - TN
Snails			
<i>Io fluvialis</i>	Spiny riversnail	-	Endangered - TN
Mussels			
<i>Cumberlandia monodonta</i>	Spectaclecase	Candidate	NOST
<i>Dromus dromas</i>	Dromedary pearlymussel	Endangered	Protected - AL
<i>Epioblasma triquetra</i>	Snuffbox	-	NOST
<i>Lasmigona holstonia</i>	Tennessee heelsplitter	-	NOST
<i>Lexingtonia dolabelloides</i>	Slabside pearlymussel	Candidate	Protected - AL
<i>Obovaria olivaria</i>	Hickorynut	-	NOST
<i>Obovaria retusa</i>	Ring pink	Endangered	Protected - AL
<i>Plethobasus cooperianus</i>	Orange-foot pimpleback	Endangered	Protected - AL
<i>Pleurobema plenum</i>	Rough pigtoe	Endangered	Protected - AL
<i>Ptychobranthus fasciolaris</i>	Kidneyshell	-	NOST
<i>Quadrula cylindrica cylindrica</i>	Rabbitsfoot	-	Protected - AL
<i>Quadrula intermedia</i>	Cumberland monkeyface	Endangered	Protected - AL

NMGT - Deemed In Need of Management by the Tennessee Wildlife Resources Agency

Protected - AL - species designated for protection by the State of Alabama

NOST - considered sensitive by the State of Alabama or State of Tennessee, but with no formal protection status

This population of Anthony's riversnail is likely the best and most stable of the two known populations of this species. If TVA decides to auction the requested property and Thunder Enterprises is the successful bidder, TVA would require it to stabilize portions of the "Burns Island" and "Boyd Farm" because of shoreline erosion problems. If TVA acquires these properties, and subsequently desires to do bank stabilization work, all work would need to be reviewed for potential impacts to Anthony's riversnail, pink mucket, and snail darter in this area.

Cultural Resources

Cedar Mountain

Cedar Mountain consists of 615 acres of steep, wooded uplands. The geological terrain of this tract is such that there are likely to be many caves and rock shelters present. These geological formations served as natural shelter areas and were extensively occupied throughout prehistory. In addition to shelter, caves were often used as mortuary sites by prehistoric peoples.

Other types of archaeological sites include open-air prehistoric habitation sites, such as camp and village sites, quarry sites, and other occupational sites that are located in an open-air setting such as an upland field or valley. Open habitation sites on Cedar Mountain would likely be temporary campsites as this type of terrain would have been less conducive for long-term habitation and more suitable for hunting, spiritual, or other traditional activity.

In addition to prehistoric occupation sites, the possibility exists for the presence of historic occupational sites associated with the early settlers in this region. This would include any post European contact sites where settlers constructed homes and associated outbuildings. These sites typically date to the late 19th and early 20th century when population growth occurred in this region

TVA conducted a limited reconnaissance survey to sample the types of historic and archaeological resources that might be present (Angst 2005). Results of this survey identified several potentially significant archaeological resources. These resources date to both prehistoric and historic occupation of the region. Additional survey would be required to determine the significance of the resources identified on the Cedar Mountain tract.

Boyd Farm

Boyd Farm consists of 257 acres of alluvial terraces along the Tennessee River (RM 420.9 to 421.8R) on the Gunter'sville Reservoir. This tract has a high potential for significant archaeological resources given its favorable location to the river and gentle topography. The type of archaeological sites that might be found on this tract would include both prehistoric and historic occupational sites. The location along the Tennessee River makes this tract highly conducive for long-term habitation sites.

A limited archaeological survey was conducted on the Boyd Farm tract when a gas pipeline was installed on the property in 1999. This survey identified ten archaeological sites on or adjacent to the tract. Occupation of these sites spans from the late Paleo-Indian Period (10,600 – 9,200 B.C.) through the Mississippian Period (A.D. 1000 – 1700). Based on the information gathered from the survey, these sites are considered potentially eligible for listing in the National Register. The archaeological significance of this tract appears to be very high.

Burns Island

Burns Island consists of approximately 220 acres along the Tennessee River (RM 420 to 421.8L) within the Gunter's Reservoir. The original archaeological recording of Burns Island designated it in its entirety as one archaeological site named 40MI1. Subsequent archaeological review designated 19 separate archaeological sites during the 1970s and 80s. An intensive Phase I Archaeological survey (Alexander 2005) was conducted on the island to identify the extent of significant archaeological deposits present.

Results of the survey indicate that archaeological deposits on the island are a great deal more extensive than originally recorded. The 19 originally recorded archaeological sites have been combined; along with newly identified archaeological deposits, to reinstate the previously unified site 40MI1. Archaeological concentrations within the island have been divided into ten loci each representing relatively dense concentrations of occupation. Prehistoric occupation of the Island extends from the Late Archaic Period (3700 – 1600 B.C.) through the Mississippian Period (AD 1000 – 1700). In addition, archaeological and historic evidence indicates that the island was occupied historically from the 17th century through the mid 20th century. Given the depth of archaeological deposits on the island and the limitations of the Phase I survey, it is not possible to rule out occupations prior to 3700 B.C. Additional archaeological investigations would need to be conducted to determine the true extent of archaeological deposits on the island.

The archaeological significance of Burns Island is very high. Archaeological evidence indicates that the island was intensively occupied for over 3000 years. While the archaeological deposits have been threatened by erosion and looting through the years, a substantial amount of archaeology is still present throughout the island.

Should TVA obtain the three previously mentioned tracts, archaeological resources and other historic sites will be protected under all Federal laws relating to historic properties. These laws include the National Historic Preservation Act (NHPA), the Native American Graves Protection and Repatriation Act (NAGPRA), and the Archaeological Resources Protection Act (ARPA).

Visual Resources

Visual resources are evaluated based on existing landscape character, distances of available views, sensitivity of viewing points, human perceptions of landscape beauty/sense of place (scenic attractiveness), and the degree of visual unity and wholeness of the natural landscape through the course of human alteration (scenic integrity).

Data used in preparation of the existing environment section of this review was collected through site inventory and analysis using digital orthophotos, USGS quad maps, proprietary TVA GIS data, and field reviews conducted at each of the properties.

The evaluation properties are located in a fold of the lower Sequatchie Valley at the lower western margins of Walden Ridge. Positioned at the lower portion of the Cumberland Escarpment, the physiography and landscape character vary within the area from rocky slopes, which rise precipitously from the reservoir into well-forested foothills, to gently rolling pastoral lands where agriculture, farming, and commercial and residential development define views. The varying landforms, vegetative patterns and colors, cultural enclaves, and the reservoir water body itself help to define the landscape character and combined, result in a harmony and diversity that is generally pleasing.

Cedar Mountain

Cedar Mountain is located to the northeast of Little Cedar Mountain, near mile 430 of the Tennessee River and immediately across reservoir from the Hale's Bar Marina. From the western shoreline of the reservoir, Cedar Mountain rises over six-hundred feet to its peak, which is prominently visible from the foreground (0' to 1/2 mile from the observer) and middleground (1/2 mile to 4 miles from the observer) viewing distances. From viewing positions to the east, the landform is seen across the breadth of the reservoir, accentuating the steeply sloping bluffs and crags, which are exposed by the sparsely scattered cedars that cling to the rocky walls. Views available from these positions vary in context from those available both upstream and down. At the southwestern point of the land mass where the reservoir rounds into Rankin Cove, a causeway and steel bridge are visible as they pass within the immediate foreground (0' to 300' from the observer) viewing distance, where the degree of discernable detail is very high and observers may distinguish individual leaf patterns, bark texture, and movement in the landscape. Farther into the cove, views transition into those of more rurally developed areas as the causeway winds to the shoreline and through the hills beyond view. Several residences are scattered about the lower elevations at the base of Cedar Mountain. The sparse development begins slightly to the west of the Marion County Park islet and becomes denser as it reaches a shallow vale where Cedar Mountain and Little Cedar Mountain meet. Following the base of the mountain as it winds to the north, motorists traveling TN 27 have similar views from the foreground of Cedar Mountain as it rises from behind the residences that line the roadway. These views gradually change as motorists near the intersection of Hale's Bar Dam road, which leads motorists around the northern portion of Cedar Mountain and again within view of the reservoir.

Views available from these and other similar foreground positions accentuate landscape elements and their individual form, line, texture, and color. There are, additionally, positions surrounding the property from which deeper middleground views are available. At the upper elevations of Morgan Point, Ladds Point, Burnett Point, portions of Hogjaw Ridge and Anderson Ridge, Cedar Mountain is seen in a much broader context and as a landscape element giving scale and sequence when viewed against similar landforms that form the foothills of the Appalachian Mountains. The scenic attractiveness is common, with areas exhibiting distinctive scenic attractiveness and the scenic integrity is moderate.

Burns Island

Burns Island lies downstream and through the Nickajack Dam from the properties previously described, near TRM 421. It is positioned between the small town of Kimball, Tennessee, to the north, and the small rural settlement of New Hope, Tennessee, to the south. The landforms within this section of the reservoir have moderated and are more gently sloping. Mature vegetative patterns in this area have yielded from dense and mature wooded hillsides to flat and rolling pastoral fields. The large island appears as a segment of the larger far shore land mass from the opposing shoreline due to its length in relation to the viewing position and distance. Shoreline and reservoir viewers have foreground views of agricultural operations to the interior of the island, which are partially screened by a tenuous banding of hardwood vegetation at the island's perimeter. The scenic attractiveness is common and the scenic integrity is moderate.

Boyd Farm

Boyd Farm is located immediately across the reservoir from the eastern portion of Burns Island. Similar in vegetative cover and topography to Burns Island, Boyd Farm is visible along the right bank of the reservoir, where a thin banding of shoreline vegetation sits atop a low scarp. The bank elevation, in combination with the scrubby shoreline vegetation,

prevents most views into the back-lying property, which would otherwise be available to recreational reservoir users. Away from the shoreline, and to the interior of the property, the existing landscape character is predominated by agricultural operations and pastoral fields interspersed among winding creeks and ephemeral streams; their banks lined by thick vegetation, left standing where agricultural operations have not been suitable. Views within the property are confined, primarily, to the foreground viewing distance. More definitive views of the property are available from adjacent lands and roadways, including a residential development to the west, and Switch Road/US 24 to the north. From the Riversedge neighborhood, the property is visible intermittently through mature vegetation, which skirts the property boundary. Views from these positions within the foreground are similar to those available to the interior of the property. From the two roadways which parallel the northern boundary of the property, views are available from a slightly elevated position, where motorists additionally have broad views of a farmstead and its outbuildings which contribute to the existing landscape character and sense of place. These two roadways pass the entire length of the northern boundary of the property, and are also in immediate foreground view of a small rural business and industrial complex, as well as three to four private residences. The scenic attractiveness ranges from minimal to common and the scenic integrity is low.

Recreation

Under the current proposal, three properties were offered for exchange – Burns Island, Boyd Farm and Cedar Mountain. These properties were compared with Tract 3 based on the following criteria and the informal recreation opportunities they would provide.

Recreation resources have been evaluated based on recreation benefits and demands analysis along with administrative, operational and management and maintenance considerations.

A recreation demand analysis has determined current and projected demand for recreation opportunities. Demand for land-based and water-based recreation experiences, opportunities, services and facilities of various types to meet current and future recreation needs have been evaluated for the geographic and demographic area and region.

Impacts to recreation visitor units “recreation user-days” have been provided through supportive administration, operation, management and maintenance will be reviewed. The base metric will be in recreation visitor units or recreation user-days with a focus on no net loss of acres/facilities allocated to recreation. A review of Section 2.11 revealed no net loss of recreation facilities and user-days if Tract 3 were sold and the exchange properties accepted, as proposed. The loss of 578 acres of Tract 3 for informal recreation including hunting, hiking, wildlife viewing, bank fishing etc., would be more than offset by the net addition of over 500 acres to public land for comparable uses that would be maintained and managed under TVA protection.

Boyd Farm

Boyd Farm is easily accessible to the public. This gently sloping property is made up of agricultural croplands, wetlands and forested habitat which would support additional “recreation user-days” for informal recreation activities including hiking, small game hunting, bank fishing, wildlife viewing and primitive camping.

Burns Island

This island is only accessible by boat and consists mostly of croplands and wetlands with forested habitat along the margins. Burns Island would support additional “recreation user-

days' for informal recreation activities including hiking, hunting, bank fishing and wildlife viewing.

Cedar Mountain

This exchange property does not have shoreline associated with it, but is contiguous with TVA reservoir shoreline property. The tract is steep and forested with high quality wildlife habitat. It has unpaved roads throughout the property. This property would support additional "recreational user-days" for informal recreation activities including hiking, hunting, wildlife viewing and primitive camping.

Land Use

Under the current proposal, three properties were offered for exchange, Burns Island, Boyd Farm, and Cedar Mountain. If TVA accepts the Thunder Enterprises proposal, then TVA intends to manage the exchange tracts for following use allocations until such a time as additional land planning is undertaken for Nickajack and/or Guntersville Reservoirs: Burns Island property for Sensitive Resource Management and the Cedar Mountain and Boyd Farm properties for Natural Resource Management. These properties were compared with Tract 3 based on the following criteria:

- Accessibility of the exchange property to the general public.
- Comparison of the exchange properties and Tract 3 and shoreline condition (erosion).
- Acreage comparison of the exchange property to Tract 3; location of the properties in relation to Tract 3
- General topography of the exchange property

Boyd Farm

Boyd Farm is approximately 257 acres and is located approximately 5 miles downstream of Tract 3 on Guntersville Reservoir. Boyd Farm is easily accessible to the public located on Industrial Boulevard, just off Interstate 24, in Marion County, Tennessee. This gently sloping tract is made up of agricultural croplands, wetlands and forested habitat which would support small game for hunters. The shoreline fronting this tract is approximately 0.77 miles long and is severely eroded in places.

Burns Island

Burns Island is approximately 220 acres and is located approximately 5 miles downstream of Tract 3 on Guntersville Reservoir. This relatively flat island is only accessible by boat and consists mostly of croplands and wetlands with forested habitat along the margins. Burns Island has approximately 4.4 miles of shoreline that is severely eroded.

Cedar Mountain

Cedar Mountain is approximately 615 acres and is located on Nickajack Reservoir approximately 2 miles upstream of Tract 3. This exchange property does not have shoreline associated with it, but is contiguous with TVA Nickajack Reservoir property. Cedar Mountain is a steep forested tract with high quality wildlife habitat. Cedar Mountain is easily accessible from TN 27, but has unpaved roads throughout the property.

Appendix D, Table 8. Land Use Comparison

	Tract 3	Boyd Farm	Burns Island	Cedar Mountain
Ease of Accessibility	easily accessible from I-24 off of Shellmound Road	easily accessible from I-24 off of Industrial Blvd	accessible by boat only	easily accessible from I-24 off of TN 27 - unpaved roads on property
Shoreline Frontage	4.4 miles	0.77 miles	3.4 miles	*
Condition of Shoreline	moderate erosion in certain areas	severely eroded in places	severely eroded	*
Acres	578	257	220	615
Location of Property	Nickajack Reservoir	Guntersville Reservoir – 2.7 miles from Tract 3	Guntersville Reservoir – 2.7 miles from Tract 3	Nickajack Reservoir – 0.5 mile from Tract 3
Topography				

*This property is contiguous with TVA Nickajack Reservoir waterfront property.

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APPENDIX E – AGENCY CORRESPONDENCE

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DEPARTMENT OF THE ARMY
NASHVILLE DISTRICT, CORPS OF ENGINEERS
3701 Bell Road
NASHVILLE, TENNESSEE 37214-2860

June 20, 2005

REPLY TO
ATTENTION OF:

Regulatory Branch

SUBJECT: Comments on the Draft Supplemental Environmental Assessment (DSEA) for the Proposed Nickajack Shores Development

Mr. Kenneth P. Parr
Tennessee Valley Authority
1101 Market Street, MR 2T-C
Chattanooga, Tennessee 37402-2801

Dear Mr. Parr:

This letter is in response to your request for comments on the subject proposal.

We have completed our review of the DSEA and offer the following comments:

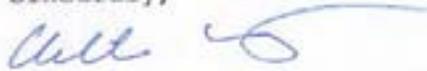
- After reviewing previous conceptual master plans for the development, we had expressed concerns about the potential for development of commercial marina/dry boat storage facilities in the "corner" at the northern end of the earth fill portion of Nickajack Dam. Appendix C, Figure 1 indicates that the commercial facilities in the "corner" have been eliminated from consideration in the current Nickajack Shores conceptual plan.
- Under the current conceptual proposal, it appears that existing public recreational facilities located at the existing Shellmound Recreation Area would be relocated to the corner area (Appendix C, Figure 1 and Table 2-4). Siting of public recreational facilities in this area would generate recreational boating traffic in the vicinity of the upper lock approach. As previously discussed, we have reservations about any proposal which may increase recreational boating traffic near the upper approach. We also believe extensive dredging would be likely be required through the shallow areas to provide a safe channel from the proposed boat ramp to deeper water. Based on these concerns, we request that TVA evaluate alternatives to siting of public water use facilities at this location.

Thank you for the opportunity to comment on this DSEA. If you have any questions regarding these comments, please

-2-

contact me at the above address, telephone (615) 369-7508, or
e-mail at william.l.james@lrm02.usace.army.mil.

Sincerely,

A handwritten signature in blue ink, appearing to read "Will L. James", with a long horizontal flourish extending to the right.

William L. James
Chief, Eastern Regulatory Section
Operations Division



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION

321

June 17, 2005

Mr. Jon M. Loney, Manager
NEPA Administration
Environmental Policy and Planning
Tennessee Valley Authority
400 West Summit Hill Drive
Knoxville, Tennessee 37902-1409

RE: Supplemental Environmental Assessment (SEA) - Proposed Tract XNJR-3PT Development (Nickajack Shores), Nickajack Reservoir, Marion County, Tennessee

Dear Mr. Loney:

Thank you for the opportunity to comment on the above referenced document.

After a research of our office's files, we can locate no occasion where a grant administrated by this division has been awarded to the Nickajack Shores area in Marion County. Therefore, we have no involvement in the Nickajack Shores Area from a state or federal level.

Thank you for including this office during the review period.

Sincerely,

Mark Tummons, CPRP
Director

MT/lh

Copy: Jim Hammontree, Middle TN PARTAS Consultant

Restoration Educational Services Division 10th Floor, L&C Tower 101 Church Street Nashville, TN 37243
Phone (615) 532-0748
Fax (615) 532-8778



US 052013170
ID# 052013170
United States Department of the Interior

FISH AND WILDLIFE SERVICE
446 Neal Street
Cookeville, TN 38501

June 15, 2005

RECEIVED
Environmental Policy and Planning

JUN 22 2005

Mr. Jon M. Loney
Manager, NEPA Administration
Tennessee Valley Authority
400 West Summit Hill Drive
Knoxville, Tennessee 37902-1499

Doc. Type: EA-Administrative Record
Index Field: Agency Comment
Project Name: Little Cedar Mountain
Project No.: 2005-65

Re: FWS #05-1215

Dear Mr. Loney:

Thank you for your letter and enclosure of May 19, 2005, transmitting a supplemental environmental assessment for the proposed Tract XNJR-3PT development on Nickajack Reservoir in Marion County, Tennessee. Fish and Wildlife Service biologists have reviewed the document and we offer the following comments.

A draft environmental assessment for a generally similar action was prepared by the Tennessee Valley Authority on June 26, 1996. Our response, dated August 26, 1996, provided our comments and recommendations. In our response, we generally opposed the transfer due to the loss of public trust resources and associated recreational opportunities. However, we concurred that development of the tract would not affect the following federally listed species:

- Large-flowered skullcap – *Scutellaria montana* (E)
- Price's potato bean – *Apios priceana* (T)
- American hart's tongue fern – *Asplenium scolopendrium* var. *americana* (T)
- Eggert's sunflower – *Helianthus eggertii* (T)
- Bald eagle – *Haliaeetus leucocephalus* (T)

We also concurred that development of the tract would not be likely to adversely affect the endangered gray bat (*Myotis grisescens*) or Indiana bat (*Myotis sodalis*), provided that the recommendations contained in our letter for 100-foot (minimum) vegetated buffer zones along all shoreline areas, stream channels, and drainages on the tract—and for seasonal restrictions on tree cutting—were implemented.

The supplemental environmental assessment contains a revised proposal by a potential bidder for Tract XNJR-3PT to exchange approximately 1,000 acres for a smaller 538-acre Little Cedar Mountain tract, and a proposal to develop a trail system on Little Cedar Mountain. In addition, a request was made by the potential bidder to reduce the standard buffer zones from 100 feet to 50 feet.

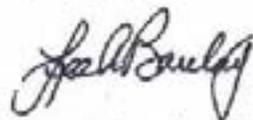
As stated in our August 26, 1996, letter, we routinely discourage development of public lands. The sale and development of public lands continues at an alarming rate and alters the ways in which the public is able to utilize those lands. The Tennessee Valley Authority should retain possession of its public lands and maintain them in their natural state to benefit fish and wildlife resources, aesthetics, and public recreation. We recommend that, prior to proceeding with the proposed action, a thorough evaluation be conducted of the tracts that would be acquired through the exchange to determine their current and potential future value for wildlife habitat and recreational use. Approval of the subject transfer should be dependent upon clear evidence of a net gain in resource and recreational values to the public.

The proposed trail system on Little Cedar Mountain would facilitate access to the area and would increase the potential for adverse impacts to sensitive terrestrial resources. If approved, we agree that the trail system should be constructed and routed in a way that minimizes impacts to sensitive and unique floral and faunal resources. Interpretive signage should stress the importance of hikers remaining on the designated trail. The trail should be available to the general public, and its use should not hinder current recreational uses such as hunting.

In our original response, we also recommended that an appropriately designed cave gate be constructed at the entrance to Little Cedar Mountain Cave. This cave is apparently used by endangered gray bats and other bat species. Construction of the proposed trail system could increase the potential for disturbance or destruction of sensitive cave resources in Little Cedar Mountain Cave. If the proposed trail system is approved, we recommend that a cave gate be constructed to protect those resources.

Thank you for the opportunity to comment. If you have any questions, please contact Jim Widlak of my staff at 931/528-6481, ext. 202.

Sincerely,



Lee A. Barclay, Ph.D.
Field Supervisor

xc: Director, TWRA, Nashville, TN (Attention: Rob Todd)



320

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION

Division of Natural Heritage
14th Floor L&C Tower
401 Church Street
Nashville, Tennessee 37243-0447
Phone 615/532-0431 Fax 615/532-0231

June 14, 2005

Jon M. Loney, Manager, NEPA Administration
Environmental Policy and Planning
Tennessee Valley Authority
400 West Summit Hill Drive
Knoxville, TN 37902-1499

Subject: Supplemental Environmental Assessment – Proposed Tract XNJR-3PT Development
(Nickajack Shores), Nickajack Reservoir, Marion County, Tennessee

Dear Mr. Loney:

Thank you for your letter and enclosures regarding the above mentioned Supplemental Environmental Assessment (SEA). It is the understanding of the Division of Natural Heritage (DNH) that the Tennessee Valley Authority (TVA) has received a proposal from Thunder Enterprises to acquire and develop approximately 578-acres currently held by TVA on Nickajack Reservoir. In exchange for this property, Thunder Enterprises would transfer approximately 1,100 acres of privately held land known as Cedar Mountain, Burns Island, and Boyd Farm to TVA. We have reviewed the information submitted and offer the following comments for consideration.

The DNH supports a land exchange process that would result in a net gain of more than 500 acres for TVA, provided that any such exchange be thoroughly evaluated. This is consistent with our position that the sale of public lands be done only when there is no-net-loss of public land; and that any offer to buy public land from TVA be in conjunction with a land exchange of equal or greater acreage and of equal or greater natural and cultural resource value.

Regarding Section 2.4 Wetlands, Thunder Enterprises development proposal includes a reduction in the shoreline buffer zone from 100-feet to 50-feet. The DNH is concerned that runoff from the proposed golf course and from fertilized lawns could adversely impact aquatic life if the buffer zone is reduced. The original buffer zone of 100-feet would help prevent excessive nutrients and sediment from entering the reservoir and would also maintain travel corridors for bats and other wildlife foraging throughout these areas.

Section 2.6 addresses potential impacts to Little Cedar Mountain TVA HPA/SWA. The DNH supports development of an interpretive trail system on Tract 5 so long as it is routed in such a way that avoids rare species populations and other sensitive resources. Careful monitoring of the HPA/SWA by TVA will be necessary to ensure that increased use of the area does not adversely impact the area.

We thank you for considering Tennessee's rare species throughout the planning and implementation of this project. Should you have any questions, please do not hesitate to contact me at (615)532-0440.

Sincerely,

Kirstin Condict
Data Manager

051890154
ID# 051892172



TENNESSEE HISTORICAL COMMISSION
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
2941 LEBANON ROAD
NASHVILLE, TN 37243-0442
(615) 532-1550

RECEIVED

Environmental Policy and Planning

June 13, 2005

JUN 23 2005

Mr. Jon Loney
Tennessee Valley Authority
400 West Summit Hill Drive
Knoxville, Tennessee 37902-1499

Doc. Type: EA-Administrative Record
Index Field: Agency Comment
Project Name: ~~North Fork of the Tennessee~~
Project No.: 2005-65

Nickajack Tract 3
Development

RE: TVA, NICKAJACK RES. LAND SALE/TRANSFER, UNINCORPORATED,
MARION COUNTY

Dear Mr. Loney:

The above-referenced Supplemental Environmental Assessment has been reviewed with regard to National Historic Preservation Act compliance by the participating federal agency or its designated representative. Procedures for implementing Section 106 of the Act are codified at 36 CFR 800 (Federal Register, December 12, 2000, 77698-77739).

In order to complete our review of this undertaking, this office will need to receive from you a detailed archaeological survey report on the area of potential effect for all portions of the proposed land sale and development. It is this office's understanding that such surveys are already being initiated through the Tennessee Valley Authority's Cultural Resources office.

Upon receipt of the survey reports and consultation documentation, we will complete our review of this undertaking as expeditiously as possible. Until such time as this office has rendered a final comment on this project, your Section 106 obligation under federal law has not been met. Please inform this office if this project is canceled or not funded by the federal agency. Questions and comments may be directed to Jennifer M. Barnett (615) 741-1588, ext. 17.

Your cooperation is appreciated.

Sincerely,

Herbert L. Harper
Executive Director and
Deputy State Historic
Preservation Officer

HLH/jmb



TENNESSEE WILDLIFE RESOURCES AGENCY

ELLINGTON AGRICULTURAL CENTER
P. O. BOX 40747
NASHVILLE, TENNESSEE 37204

316

RECEIVED

Environmental Policy and Planning

June 13, 2005

Tennessee Valley Authority
Attention: Jon M. Loney, Manager
NEPA Administration
Environmental Policy and Planning
400 West Summit Hill Drive
Knoxville, TN 37902-1499

JUN 16 2005

Doc. Type: EA-Admin Record
Index Field: Public Comment
Project Name: Little Cedar Mtn
Project No.: 2005-65

Re: Comments Regarding the Supplemental Environmental Assessment - Proposed Tract XNJR-3PT Development (Nickajack Shores), Nickajack Reservoir, Marion County, Tennessee

Dear Mr. Loney:

The Tennessee Wildlife Resource Agency provides the following comments regarding the Supplemental Environmental Assessment - Proposed Tract XNJR-3PT Development (Nickajack Shores), Nickajack Reservoir in Marion County, Tennessee. On January 20, 2005 the Tennessee Wildlife Resources Commission unanimously passed a resolution stating that "TVA public lands provide significant natural resource benefits to Tennessee's fish and wildlife and the citizens of our state and nation who enjoy and value these resources; and whereas, moving forward without adequate consideration of impacts of disposal of these properties can result in permanent damage to our wildlife resources;" they strongly object "to the proposed transfer/sale of TVA public lands, pending a thorough review and consideration of the comprehensive impact of such transfer/sale to wildlife resources." The Tennessee Wildlife Resource Agency supports the position of the Tennessee Wildlife Resources Commission on this issue.

We have reviewed the Supplemental Environmental Assessment, object to the sale of the above mentioned tract (Tract 3), "Nickajack Shores" (578 acres) and offer the following comments. Thunder Enterprises proposes to offset the natural resource value loss to the public that would occur if this sale is approved by TVA by exchanging this tract for three other tracts; 1) "Burns Island" (220 acres), 2) "Cedar Mountain" (615 acres), and "the Boyd Farm" (257 acres). Thunder Enterprises also proposes to fund the construction of an interpretive trail on "Little Cedar Mountain".

The property proposed for sale (Tract 3, "Nickajack Shores" is quality small game habitat and is the most utilized area in Marion County for small game hunting. The heavily forested "Cedar Mountain" tract offers little or no small game habitat and therefore little small game hunting opportunities. The "Cedar Mountain" tract is very steep and does not include any wetlands according to the information provided in the Supplemental Environmental Assessment, so if development occurred on this currently owned private tract, wetland impacts due to development would be negligible.

The State of Tennessee

AN EQUAL OPPORTUNITY EMPLOYER

"Burns Island" offers some small game and waterfowl habitat but is only accessible by boat, limiting public hunting participation. According to Appendix D, "Burns Island" is a site of very high archeological significance. Due to the archaeological significance, it would be difficult if not impossible to develop the site for most commercial purposes and intensive wildlife management may be hindered. "Burns Island" according to Appendix D indicates that up to 35 percent of the total land area is wetland. Although it would increase the protection level for these wetlands if it were transferred to TVA control, under state and federal law any impacts to wetlands require mitigation for the impacts, so wetland loss due to this property remaining in private control is not an issue. We are also concerned with the potential future bank stabilization maintenance cost associated with 4.4 or 3.4 miles (depending on whether the figure in the narrative or the figure in the table as stated on page D-13 is correct) of severely eroding banks that is occurring at this site due to uncertain future funding by TVA for maintenance, even though it is stated in the document that the applicant is to pay for the stabilization prior to TVA acquisition.

The "Boyd Farm" would provide some small game hunting and waterfowl hunting opportunities if it were to become public property; but once again due to the archaeological significance, it would be difficult if not impossible to develop the site for most commercial purposes and intensive wildlife management may be hindered. As with "Burns Island", the "Boyd Farm" has significant wetland resources but any potential impacts to these resources by development would require mitigation and the cost of this mitigation may prohibit future development of this tract. It is unclear at this time whether public hunting for waterfowl at the "Boyd Farm" tract would be acceptable to the public due its close proximity to residential areas, especially in the future as residential areas expand. The "Boyd Farm" also has a severe bank erosion problem that will require stabilization and the associated future cost of maintenance of stabilization.

Currently "Little Cedar Mountain" provides deer and turkey hunting opportunities. If the proposed hiking trails on "Little Cedar Mountain", which will be in close proximity to the proposed development, it is highly likely that user conflicts will arise and hunting will be prohibited. We oppose the development of the proposed hiking trails on "Little Cedar Mountain" due to the high probability that hunting opportunities will be eliminated at this site.

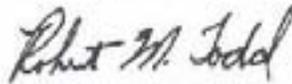
The Tennessee Wildlife Resources Agency is also concerned about the potential wetland impacts on the proposed development site. Two high quality depression wetlands are located on the proposed "Nickajack Shores" tract. These wetlands are to be retained by TVA with a buffer area. The information in the Supplemental Environmental Assessment was insufficient to determine if the proposed protection of these high quality wetlands would assure that the hydrology to these wetlands would not be impacted due to the proposed development with the described buffer.

We also disagree with the assumption that a 50-foot vegetative buffer would provide the same level of protection for these wetlands as would a 100-foot buffer in an area with a high level of land clearing as would occur with the proposed development and alluded to in the statement on page 11 of the document that states: "Maintaining an undisturbed 50-foot vegetative buffer along the shoreline except where public or community water use facilities are proposed would protect other areas of aquatic bed wetlands." We think that the current 100-foot buffer provides better protection than does the proposed 50-foot buffer for water quality issues such as potential increase in sediment during development and potential increase pesticide and herbicide use by home owners and the golf course; especially at a site that was described in the document on page D-13 as one with a moderate erosion rate even though it is currently under TVA control. We recommend that the 100-foot buffer condition remain as stated in the 1996 Environmental Assessment.

Although the public would gain approximately 514 acres of land due to the exchange as proposed by Thunder Enterprises; it is the opinion of the Tennessee Wildlife Resources Agency that the lands offered for exchange, do not provide the same level of public hunting opportunities that the land proposed to be sold provides. Again, we oppose the exchange of public land for the development of "Nickajack Shores" for private lands offered by Thunder Enterprises as stated in the Supplemental Environmental Assessment.

Thank you for the opportunity to comment.

Sincerely,



Robert M. Todd
Fish and Wildlife Environmentalist

cc: Bobby Brown
John Mayer
USFWS, EPA

MEMORANDUM OF AGREEMENT

Among

TENNESSEE VALLEY AUTHORITY (TVA)
AND THE TENNESSEE STATE HISTORIC PRESERVATION OFFICE (SHPO),

and

Federally Recognized Indian Tribes

MUSCOGEE (CREEK) NATION OF OKLAHOMA, THE CHICKASAW NATION,
THE SEMINOLE NATION OF OKLAHOMA, THE CHEROKEE NATION, THE
THLOPHLOCCO TRIBAL TOWN, THE KIALEGEE TRIBAL TOWN, THE
ALABAMA-QUASSARTE TRIBAL TOWN AND THE UNITED KEETOOWAH
BAND

WHEREAS, the Tennessee Valley Authority (TVA) proposes to auction 578 acres of TVA fee-owned land (Property) on Nickajack Reservoir adjacent to Tennessee River Miles 425-429R, and acquire approximately equal acreage of land within a 20 mile radius in exchange for said Property, and place a hiking trail on Little Cedar Mountain (TVA Tract XNJR-5PT); and

WHEREAS, TVA has consulted with the Tennessee State Historic Preservation Officer (SHPO) and federally recognized Indian tribes, pursuant to 36 CFR Part 800 (the "Regulations"), the regulations of the Advisory Council on Historic Preservation (Council) implementing Section 106 of the National Historic Preservation Act (NHPA) (16 U.S.C. 470f); and

WHEREAS, TVA has overseen an intensive historic properties survey of the Property to be transferred out of TVA ownership and pursuant to 36 CFR Part 800.4(b), no historic properties were identified; and,

WHEREAS, the Muscogee (Creek) Nation of Oklahoma, Chickasaw Nation, Seminole Nation of Oklahoma, United Keetoowah Band, Kialegee Tribal Town, the Thlophlocco Tribal Town, the Alabama-Quassarte Tribal Town, and the Cherokee Nation (the "Indian Tribes") have participated in the consultation and have requested measures to address the possible discovery of historic properties (as defined in 36 CFR Part 800.16(l)(1)) on the Property following its sale to a private owner; and

WHEREAS, the possibility exists for the inadvertent discovery of significant archaeological resources including human remains and associated funerary objects; and

WHEREAS, TVA proposes to conduct phased compliance for the identification, evaluation, and treatment of historic properties that could be affected by the proposed hiking trail; and

WHEREAS, documentation of the area of potential effects (APE) for the proposed land auction and hiking trail, clearly delineated, is made a part of this Agreement by reference as Appendix A.

NOW THEREFORE, TVA, the Tennessee SHPO, and the participating federally recognized Indian Tribes agree to the following stipulations to resolve issues raised during consultation by placing certain obligations on TVA, SHPO, the Indian Tribes and the successful bidder (Purchaser) at the proposed auction of the Property to address post auction discoveries of historic properties. The TVA Federal Preservation Officer, or the designee thereof, shall act for TVA in all matters concerning the administration of this Agreement.

Stipulations

TVA, in consultation with the SHPO, the Muscogee (Creek) Nation of Oklahoma, the Chickasaw Nation, the Seminole Nation of Oklahoma, the Cherokee Nation, the Thlophlocco Tribal Town, the United Keetoowah Band, the Kialegee Tribal Town, the Alabama-Quassarte Tribal Town, and the Purchaser will ensure that the stipulations of this agreement are carried out relative to all development within the above-referenced APE.

I. POST AUCTION DISCOVERY

TVA agrees that Purchaser will be required to recognize and comply with this Agreement in the form of Exhibit A attached hereto. TVA and Purchaser will execute a contract at closing which will contain the following real covenant:

In order to implement and ensure compliance with a Memorandum of Agreement (MOA) regarding cultural resources which is being executed by Purchaser simultaneously herewith; Purchaser shall not sell, assign, or otherwise alienate to a third party undeveloped and non-platted Property or any interest therein, in whole or in part, without requiring any subsequent purchaser, and assignees, of undeveloped and non-platted properties to execute a consent to be bound by the MOA in the form of Exhibit A; provided however, such consent shall not be required if such sale, assignment, or other alienation is for platted properties or lots. Purchaser will provide TVA with satisfactory evidence that any such sale, assignment or other alienation (except as to platted properties or lots) contains terms binding such third party to the MOA prior to such sale, assignment, or other alienation. Any sale, assignment or other alienation of subject Property without compliance with this covenant shall be void and of no effect and TVA or the Indian Tribes may file an action contesting the conveyance or require the subsequent purchaser of undeveloped and non-platted properties to execute a consent to avoid a contest of the conveyance. This consent shall not extend beyond the Construction Period. If there is any transfer of undeveloped, non-platted property, the transferee shall assume full

Proposed Development Nickajack Reservoir Tract 3

responsibility for compliance with the MOA as to such property and the Purchaser will be released from any further responsibility under the MOA as to the transferred property

In the event that archaeological deposits or human internments or “cultural items,” as this latter term is defined under the Native American Graves Protection and Repatriation Act (NAGPRA) are discovered anytime during the Construction Period, (as defined herein) the activity must immediately stop within one hundred (100) feet of the discovery and TVA Cultural Resources must be immediately notified (865-632-2453) or via email (culturalresources@tva.gov). Mailing address: WT 11D, 400 West Summit Hill Drive, Knoxville, TN, 37902. For the purposes of this agreement, “archaeological deposits” means: significant intact archaeological features indicating prehistoric human activity or human burials as referenced in Stipulation II. TVA will agree to furnish construction resource material and presentations to Purchaser and its contractors to assist in the identification of archaeological deposits.

TVA agrees that when notified pursuant to above, a TVA Cultural Resources staff archaeologist and/or a consultant, approved by TVA, will visit the discovery site within one working day of notification to examine the suspect material. Based on the findings made during the onsite assessment, monitoring of excavation activities in the vicinity of this discovery may be necessary to ensure that National Register of Historic Places (National Register) eligible deposits are protected.

If, upon examination, the discovered material is determined by TVA to be noncultural or natural in origin, the TVA representative will advise the project manager to proceed with project activities.

If, upon examination, the discovered material is considered by TVA as ineligible for listing in the National Register, TVA will inform the SHPO and concurring parties of these findings. TVA may then advise the project manager to proceed with project activities.

If it is determined by TVA that the recovered archaeological data/materials are insufficient to make a valid assessment of significance, an emergency testing plan will be developed in consultation with the SHPO.

If, upon examination, TVA and the SHPO agree that the archaeological resource is eligible for the National Register, TVA will recommend relocation of the activity to avoid the archaeological resources. If avoidance is not possible, TVA will consult with the SHPO and concurring parties to determine further action.

If, upon examination, TVA determines that the site contains human remains or cultural items, TVA will immediately contact those federally recognized Indian Tribes participating in this consultation. TVA will recommend *in situ* preservation of these resources. If avoidance is not possible, TVA will go forward with the procedures outlined in Stipulation II.

TVA shall give notice to Purchaser of findings and recommendations regarding the discovered material within forty-five (45) days of receipt of notice of the discovery. If notice is not given to Purchaser within such time, the finding will be considered to be ineligible for listing in the National Register and the project manager will be able to proceed with the project.

For purposes of this Agreement, the Construction Period will be the period during which the Purchaser will construct infrastructures, such as roads and utilities for a preliminary plat of any portion of the Property and will continue until all phased properties to be platted are completed. The requirements of Purchaser under this Agreement shall not apply to any subsequent purchaser of a platted lot. With respect to those portions of the Property that are developed for other than platted residential lots, the Construction Period will be the period required to construct planned common amenities that require excavation.

II. INADVERTENT DISCOVERY OF HUMAN REMAINS

To ensure the respectful treatment of human remains in the event of a discovery of identifiable human skeletal remains or other gravesite identifier, TVA will require the Purchaser to follow the steps listed below:

- 1) Immediately stop work within a 100 ft. area surrounding the location of human remains (the "Discovery Boundary"). This will include removing all equipment from the Discovery Boundary. Depending on the extent of the discovery and the topography of the site, TVA may determine that the Discovery Boundary should be adjusted;
- 2) Pursuant to Tennessee Code §11- 6-107, the Purchaser will notify the Marion County Sheriff and the coroner or medical examiner. The Purchaser shall also contact TVA Cultural Resources within 24 hours. No media will be contacted concerning the discovery. The Purchaser will arrange for a qualified specialist approved by TVA to conduct an onsite investigation of the remains and determine whether the burial(s) is Native American;
- 3) If the burial is Native American, TVA will establish a meeting that includes Indian Tribes participating in the consultation for this MOA, TVA Cultural Resources staff, the SHPO, the Purchaser, and the specialist, if one is involved. To ensure both that the inadvertently discovered remains receive the maximum protection and that costly delays are avoided, this meeting will be conducted, within 15 days of the determination that the burial is Native American; and
- 4) TVA, in consultation with the Indian Tribes, will determine and implement the appropriate treatment and disposition of the human remains and associated

cultural items within forty-five (45) days after determination that the burial is Native American. Until treatment and disposition are determined and implemented, the remains will be protected from further disturbance.

In situ preservation of the remains will be the preferred alternative. If avoidance is not possible and the human remains must be relocated, the Purchaser will pay all exhumation and re-interment costs. No scientific study will be conducted on human remains or funerary objects that is disrespectful of their spiritual and sacred nature. Grave remains will not be removed to local, state or federal agencies, universities, or research institutions for scientific study, but will be relocated and reburied. In the event that the human remains and associated cultural items are determined to be culturally affiliated with a specific tribe, TVA will further ensure that the treatment of these remains and cultural items is conducted in accordance with that tribe's preferred treatment plan, including the use of photography. The Purchaser will arrange for and pay the reasonable costs for one representative of the culturally affiliated Indian tribe to be present for the re-interment ceremony. TVA will designate a location for re-interment on TVA fee-owned lands. This location will be determined in consultation with the consulting Indian Tribes for this MOA.

III. REPORTS:

TVA, in consultation with the SHPO, and concurring Indian Tribes shall ensure that all historical and archaeological investigations undertaken for compliance with this agreement are recorded in formal written reports that meet the Secretary of the Interior's Standards and Guidelines for Identification (48 FR 44720-23) and the Tennessee SHPO Standards and Guidelines for Archaeological Resource Management Studies. All signatories and concurring parties shall be afforded thirty (30) days to review and comment on any archaeological reports submitted in compliance with this agreement.

IV. TVA ACQUIRED PROPERTIES:

TVA will manage lands transferred into TVA ownership consistent with its responsibilities under Section 106 and Section 110 of the National Historic Preservation Act. Such management will include identification and evaluation of historic properties.

V. PROPOSED HIKING TRAIL:

When final plans for the proposed hiking trail have been determined by TVA, a Phase I archaeological survey will be conducted of the entire trail system. All resources identified as part of this survey will be avoided and/or protected. The avoidance and protection strategy will be determined in consultation with the SHPO and concurring parties.

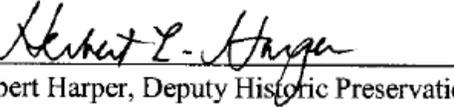
Execution of this Memorandum of Agreement by TVA and the SHPO and implementation of its terms, evidence that TVA has taken into account the effects of the undertaking on historic properties, and TVA has complied with its obligations under Section 106 of NHPA.

SIGNATORIES:

TENNESSEE VALLEY AUTHORITY

By:  Date: 8.1.05
[Kathryn J. Jackson, Executive Vice President, RSO&E]

THE TENNESSEE STATE HISTORIC PRESERVATION OFFICER

By:  Date: 8/4/05
[Herbert Harper, Deputy Historic Preservation Officer]

CONCURRING FEDERALLY RECOGNIZED INDIAN TRIBES

MUSCOGEE (CREEK) NATION OF OKLAHOMA

By: _____ Date: _____

CONCURRING FEDERALLY RECOGNIZED INDIAN TRIBES

CHEROKEE NATION

By: _____ Date: _____

CONCURRING FEDERALLY RECOGNIZED INDIAN TRIBES

THLOPHLOCCO TRIBAL TOWN

By: _____ Date: _____

CONCURRING FEDERALLY RECOGNIZED INDIAN TRIBES

CHICKASAW NATION

By: _____ Date: _____

CONCURRING FEDERALLY RECOGNIZED INDIAN TRIBES

SEMINOLE NATION OF OKLAHOMA

By: _____ Date: _____

CONCURRING FEDERALLY RECOGNIZED INDIAN TRIBES

UNITED KEETOOWAH BAND

By: _____ Date: _____

CONCURRING FEDERALLY RECOGNIZED INDIAN TRIBES

KIALEGEE TRIBAL TOWN

By: _____ Date: _____

CONCURRING FEDERALLY RECOGNIZED INDIAN TRIBES

ALABAMA-QUASSARTE TRIBAL TOWN

By: _____

Date: _____

Exhibit A

PURCHASER OF PROPERTY:

I, _____, as purchaser of the above described Property hereby agree to the obligations and stipulations in the attached Memorandum of Agreement and will require any contract transferring development rights or transferring any unplatted property to a third party for development, to honor and comply with this Agreement.

By: _____

Date: _____

Appendix A

Documentation of the Area of Potential Effect

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