

Environmental Assessment

Norris Reservoir Land Management Plan



Public Summary

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NORRIS RESERVOIR LAND MANAGEMENT PLAN

Anderson, Campbell, Claiborne, Grainger, and Union Counties, Tennessee

Responsible Federal Agency: Tennessee Valley Authority (TVA)

Abstract: TVA has prepared an Environmental Assessment (EA) and a comprehensive land management plan for 27,927 acres and 809 shoreline miles of TVA public land above the summer pool levels on Norris Reservoir. The EA documents the analysis of alternative uses of TVA public land and their effects on the surrounding environment. TVA considered two alternatives for making land use decisions for TVA public land around Norris Reservoir. Under the No Action Alternative (Alternative A), TVA would continue to use the existing 1968 Forecast System to manage TVA public land on Norris Reservoir. The Forecast System emphasizes recreation and power plant development. Under the Allocation Alternative (Alternative B), TVA would use the Norris Reservoir Land Management Plan (Norris Plan) to manage TVA public land based on scientific, cultural, and economic principles. The Norris Plan emphasizes resource management and sensitive resource protection. The Norris Plan takes into account the comments received from the general public and various state and federal agencies, elected officials, resource conservation groups, and other interested groups. The Norris Plan is intended to guide TVA resource and property management decisions for the foreseeable future. It identifies the most suitable range of uses for 315 parcels of TVA public land. Regardless of the alternative adopted by TVA, either planning strategy would be implemented consistent with the current TVA Shoreline Management Policy.

The draft EA was distributed in June 2001. TVA received forty-four sets of comments on the draft. The EA includes responses to these comments. The full EA and Norris Plan can be viewed on the Internet at <http://www.tva.gov/environment/reports/norris>.

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SUMMARY DOCUMENT PREVIEW

This document is a summary of the Environmental Assessment (EA) on the alternatives for use of TVA retained land along Norris Reservoir. The EA and this summary describe the alternatives and their effects on key resources. This document summarizes:

- Background and Purpose
- The Decision
- Public Involvement and Scoping
- Necessary Federal Permits or Licenses
- Alternatives, Including the Proposed Action
- Affected Environment
- Comparison of Alternatives
- The Preferred Alternative
- Commitments

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Acronyms and Abbreviations

APE	Area of Potential Effect
ARPA	Archaeological Resources Protection Act
BMPs	Best Management Practices
Board	Tennessee Valley Authority Board of Directors
CRM	Clinch River Mile
EA	Environmental Assessment
Loyston	Loyston Point Recreation Area
msc	maximum shoreline contour
msl	mean sea level
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
Norris Plan	Norris Reservoir Land Management Plan
PSD	Prevention of Significant Deterioration
SFI	Sport Fishing Index
SMP	Shoreline Management Policy
TDEC	Tennessee Department of Environment and Conservation
TMDL	Total Maximum Daily Load
TVA	Tennessee Valley Authority
USFWS	U.S. Fish and Wildlife Service

1. INTRODUCTION

In order to systematically manage its land, the Tennessee Valley Authority (TVA) develops reservoir land management plans (Plans). These Plans seek to integrate land and water resources, provide for the optimum public benefit, and balance competing and sometimes, conflicting resource uses. By providing a clear statement of how TVA hopes to manage land and by identifying each parcel for specific purposes, TVA intends to balance conflicting land uses and facilitate decision-making for use of its TVA public land. Plans are approved by the TVA Board of Directors (Board) and adopted as agency policy to provide for long-term land stewardship and accomplishment of TVA responsibilities under the TVA Act of 1933.

Plans have been completed and implemented for seven mainstream and five tributary reservoirs. The purpose of this Environmental Assessment (EA) is to examine the impacts of a proposed Plan for alternative uses of TVA's public land on Norris Reservoir.

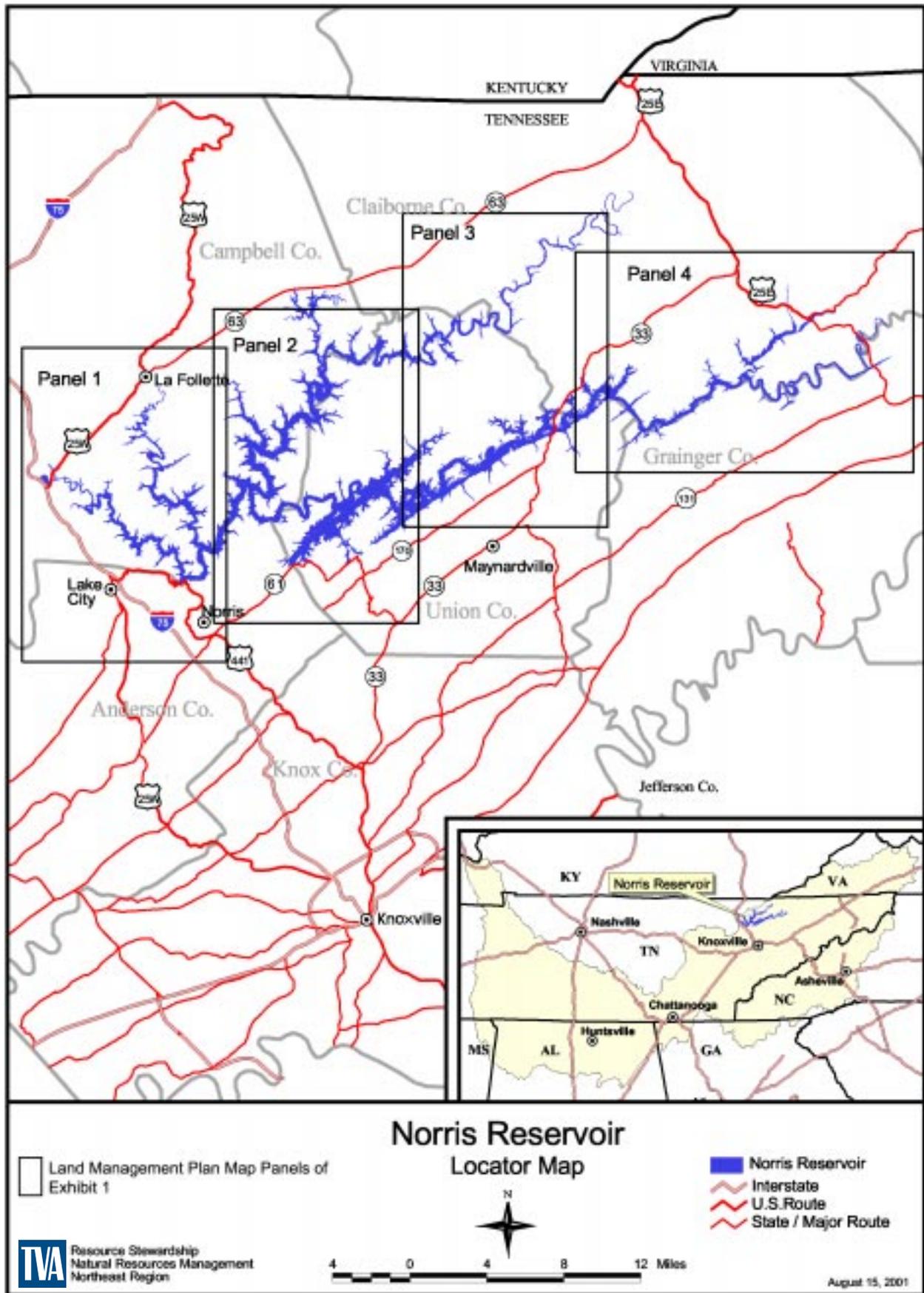
1.1. Background and Purpose

The Clinch River basin offered excellent opportunities for construction of a large storage project, and as early as 1911 the present site for Norris Dam was investigated by power company interests. These studies recommended a number of dam sites, among them one on the Clinch River at approximately the present location of Norris Dam, then known as the Cove Creek site. As early as 1922 the outstanding importance of the Cove Creek Dam as a flood-control measure was emphasized, particularly by Nebraska Senator George Norris. Senator Norris also recognized the importance of such projects in hydroelectric generation and navigation development.

TVA created its first dam, the 1860-foot-long, 265-foot-high Norris Dam at Clinch River mile (CRM) 79.8. Named for Senator Norris, construction of Norris Dam and Reservoir began in 1933 and was completed in 1936. Located in the Tennessee counties of Anderson, Campbell, Union, Claiborne, and Grainger (see Figure 1-1), Norris Reservoir has the largest flood control storage capacity of any reservoir on a tributary of the Tennessee River. Nearby towns and communities include Clinton, Norris, Andersonville, Caryville, Jacksboro, LaFollette, Lake City, Harrogate, and Tazewell.

Norris Reservoir extends 129 miles upstream from the dam site (73 miles up the Clinch River and 56 miles up the Powell River) and covers 34,200 surface acres at normal maximum (summer) pool elevation of 1020-foot mean sea level (msl). The top of the gates, maximum shoreline contour (msc), is 1034-foot msl, while the normal minimum pool (winter) elevation is 960-foot msl. On Norris Reservoir, typical annual water level fluctuation is 42 feet and ranges from elevation 978- to 1020-foot msl. It has 809.2 miles of mainland and island shoreline and collects rainfall runoff from a 3850-square-mile watershed from portions of east Tennessee and southwest Virginia. This watershed accounts for roughly 7 percent of the entire Tennessee River drainage basin.

Figure 1 Vicinity Map of Norris Reservoir



Norris Dam and Reservoir form an integral unit in the overall system of water control projects in the Tennessee Valley that aids in reducing main river flood stages and in stabilizing low water flows. As a multipurpose project it also provides power production, navigation, recreation opportunities, and residential as well as regional economic development. As an example of its navigation benefit, immediately after its completion, substantial releases from Norris Reservoir during periods of low water on the lower river added 2 feet to the controlled depth of the 250-mile reach of the river between Wilson Dam and the mouth of the Tennessee River.

Originally, TVA acquired 122,000 acres of land around Norris Reservoir. TVA later sold 56,700 acres and transferred or leased an additional 35,000 acres to the state of Tennessee and various counties for recreation development (including Norris Dam, Cove Lake, and Big Ridge State Parks). TVA also acquired the right to flood (flowage easement rights) over 4000 acres of privately held land to allow flexibility of reservoir operations. The agency retained landrights below the 1044-foot contour elevation (and in some cases below the 1052-foot contour elevation). Subsequent transfers of land for economic, industrial, residential, or public recreation development have resulted in a current net balance of 27,926.8 acres (in fee-simple ownership) of public land on Norris Reservoir. Forests occupy the majority of the land, and some 85 percent of the TVA-managed shoreline remains undeveloped.

1.2. The Decision

The Board will decide whether to adopt the Norris Reservoir Land Management Plan (Norris Plan) to guide implementation of future policy or to continue the use of the existing Forecast System for land use.

1.3. Public Involvement and Issue Identification

In April 1999 an article was published in *TVA River Neighbors* announcing that land use planning was underway on Norris Reservoir. This publication was sent to over 20,000 people inside and outside the Tennessee Valley. Fifteen people responded by calling 1-800-TVA-LAND and asked to be placed on the Norris Reservoir land planning mailing list. This toll free telephone number is still available for anyone to call and request to be added to the mailing list. Mailings were also sent to approximately 3000 citizens notifying them of the planning process and how to get involved.

From October through November 1999 TVA sought comments from elected officials, county chamber of commerce members, public agency representatives, citizens, recreational users, and other stakeholders of Norris Reservoir. Local officials were personally visited, told about the Norris Plan and how to become involved, and were asked to help notify the public about the process. Information packets were also left for the officials to distribute. A series of meetings were held between TVA and other public agencies who have responsibility within the Norris Reservoir watershed. Agency representatives were asked to identify issues that should be addressed in the Norris Plan and to share what information they knew about

the condition of the watershed. Agencies were also asked to provide information concerning proposed or ongoing activities affecting Norris Reservoir. Input from stakeholders and the general public was sought through news releases to local newspapers announcing public participation opportunities. Individuals were also invited to submit comments by electronic mail.

Citizens were invited to attend two public meetings. The first meeting was held at Anderson County High School on October 28, 1999, and the second was held at Lincoln Memorial University on November 2, 1999. These two meetings had a total of 104 participants who were asked to respond to questions to help define issues associated with Norris Reservoir and the watershed area. The meetings were cosponsored by TVA and the Tennessee Department of Environment and Conservation (TDEC).

Additionally, individuals were invited to complete a questionnaire indicating their preferences and opinions regarding Norris Reservoir and submit comments about their valued and preferred uses of TVA public land. They were also asked about the watershed surrounding Norris Reservoir and to identify important issues that need to be addressed over the life of the Norris Plan. Questionnaires were mailed to individuals whose names were compiled from TVA mailing lists and were also distributed during public meetings. A total of 322 questionnaires were returned. The vast majority of respondents (77 percent) indicated a preference for water-related activities and more than half (59 percent) used Norris Reservoir and surrounding TVA public land for wildlife observation. Respondents (72 percent) suggested that the number (or amount) of marinas on Norris Reservoir were about right, while almost half (46 percent) indicated a need for more opportunities for wildlife observation. Seventy-five percent suggested a preference for fewer jet skiers on Norris Reservoir. Over 50 percent felt that more land was needed for sensitive resources, wildlife management, and other natural resource management areas. Over 50 percent thought that about the right amount of land was already allocated for state park and commercial recreation areas.

Survey respondents also felt that boat waste, trash and litter cleanup, water quality monitoring, and improved recreational access and facilities should be high priority issues, while industrial/economic development opportunities should be low. Those surveyed also expressed a relatively strong willingness to get involved and help with such projects as litter cleanup and wildlife food plantings. A slightly less strong willingness was expressed regarding participation in watershed coalitions, erosion control/prevention, or committing to proper disposal of boat waste. About 9 percent indicated an interest in starting a watershed coalition. As a result, two watershed coalitions—Friends of Norris Lake, Anderson County and Campbell County Chapters, were formed. These coalitions are working to improve water quality throughout the Norris watershed by stabilizing stream banks, working with farmers to minimize agricultural impacts, cleaning up litter and dump sites, and providing educational opportunities.

TVA staff also solicited input from representatives of a cross section of groups who used or were concerned with the natural resource conservation issues on Norris Reservoir. Information packets were sent to county chamber of commerce offices with an offer to visit

the office as a follow-up. Interested state and federal agencies and resource conservation groups, such as the U.S. Fish and Wildlife Service (USFWS), U.S. Army Corps of Engineers, Tennessee Wildlife Resources Agency (TWRA), Tennessee Division of Forestry, Tennessee Conservation League, Quail Unlimited, National Wild Turkey Federation, and others were asked to participate in the planning process by providing information and input, including concerns about proposed or ongoing activities and land use issues around Norris Reservoir.

Issue Identification – Internal scoping and general public, public officials, stakeholders, peer agencies, and focus groups were used to identify the following resources/issues that are considered in the EA:

- Aesthetics and Visual Resources
- Cultural Resources (Archaeological and Historical)
- Threatened and Endangered Species
- Terrestrial Ecology
- Wetlands and Riparian Areas
- Recreation
- Water Quality
- Aquatic Ecology
- Socioeconomics

The following issues, also identified in scoping, are not likely to be affected by the proposed alternatives:

- Navigation
- Prime Farmland
- Air Quality
- Noise
- Floodplains

Participation continued in 2001 during the comment period for the draft EA by attending: June 19, Friends of Norris Lake, Anderson County Chapter meeting in Norris, Tennessee; June 26, Friends of Norris Lake, Campbell County Chapter meeting in LaFollette, Tennessee; July 3, Campbell Outdoor Recreation Association, meeting in LaFollette, Tennessee; July 9 Clinch-Powell Watershed Team (CPWT) Open House in Norris, Tennessee; and July 13 Campbell County Leadership Forum held on Norris Reservoir. Comments were also received through emails, the Norris Plan website, 1-800 TVA LAND, and the U.S. mail. The majority of the comments were in support of Alternative B. The comments and TVA responses are provided in Appendix A-4.

1.4. Necessary Federal Permits or Licenses

No federal permits are required to develop a Plan. Site-specific information on Norris Reservoir resources has been characterized in this EA, and potential impacts on these resources were considered in making land use allocation recommendations. Appropriate agencies administering laws and other environmental regulations associated with the development of wetlands, taking of endangered species, and effects on historic resources have been consulted during this planning process. When specific actions, such as construction of water use facilities, buildings, roads, or walking trails, are proposed that could affect sensitive resources, additional review and appropriate permits or consultations may be required in order to gain approval for the action.

2. ALTERNATIVES, INCLUDING THE PROPOSED ACTION

2.1. The Proposed Action

The proposed action is to formulate a comprehensive plan for managing TVA public land on Norris Reservoir. The proposed Norris Plan is intended to provide a clear statement of how TVA would manage its public land in the future, based on scientific, natural, and cultural resource management and economic principles. It addresses sensitive resources and other important issues and concerns raised by citizens and other stakeholders. The Norris Plan is intended to guide TVA resource management and property administration decisions for the next 10 years. It identifies the proposed range of uses for 315 parcels of TVA public land.

2.2. Alternatives

TVA is considering two alternatives for making land use decisions for the TVA public land around Norris Reservoir. Under the No Action Alternative (Alternative A), TVA would continue to use the existing Norris Reservoir Land Forecast System to manage TVA public land. Under the Allocation Alternative (Alternative B), TVA would use the proposed Norris Plan to guide future land use decisions.

A common feature of both alternatives is categorization of the residential and flowage easement shoreline. In accordance with the TVA Shoreline Management Policy (SMP), TVA categorized the residential shoreline of Norris Reservoir based on resource data collected from field surveys of sensitive species and their potential habitats, archaeological resources, and wetlands along the residential shoreline of Norris Reservoir. The shoreline categorization is composed of three categories:

- **Shoreline Protection** is designed for shoreline segments that support sensitive ecological resources, such as federal-listed threatened or endangered species, high priority state-listed species, wetlands with high function and value, archaeological and/or historical sites of national significance, and certain navigation restriction zones. Within this category all significant resources would be protected.
- **Residential Mitigation** is intended for shoreline segments where resource conditions or certain navigation restrictions would require special analysis of individual development proposals, additional data, or specific mitigation measures.
- **Managed Residential** is depicted along shoreline segments where no sensitive resources are known to exist. An environmental review would be completed for any proposed action.

2.2.1. Alternative A—No Action Alternative

Under this alternative, TVA would continue to use the Forecast System to manage TVA public land on Norris Reservoir. The Forecast System for Norris Reservoir was developed by TVA staff in August 1968, without the particular consideration for sensitive resource

protection and public input provided by the National Environmental Policy Act (NEPA) decision-making process. It serves as a general guide for land use and/or development, and documents actual and prospective uses indicated for most of the TVA public land surrounding Norris Reservoir. When a proposal is received from an external applicant or an internal TVA organization, the proposed land use is evaluated for consistency with the Forecast System. The request is then either approved or denied, based on a review of potential environmental effects and other considerations.

Under Alternative A, the land which TVA has retained in fee ownership below the 1020-foot msc, not specifically considered in the Forecast System designations, would be managed consistent with outstanding landrights. The Forecast System does not identify where residential access could be permitted. However, the adoption of the SMP has put in place a consistent approach to TVA permitting decisions about residential shoreline alterations. As such, the TVA public land acreage available for residential access is the same for both Alternative A and B. The Forecast System designation categories are defined in Table 2-1.

TABLE 2-1 FORECAST SYSTEM DESIGNATION DEFINITIONS	
Forecast System Designation	Definition
Dam Reservation	<p><i>Land managed to protect the integrity of the dam and associated switchyards and power line.</i></p> <p>Most TVA dam reservations provide a visitor reception building that overlooks the facilities. Day use recreational activities, such as picnicking, fishing, hiking, and birdwatching, are encouraged. Campgrounds and boat launching facilities are often available. Hunting and unregulated camping are generally prohibited on the reservation.</p>
Public Recreation	<p><i>Land set aside for use by the general public for recreational activities</i></p> <p>This includes informal, dispersed activities, such as hunting, hiking, fishing, and primitive camping, as well as more formal activities in developed areas, such as parks, boat launching areas, and campgrounds.</p>
Reservoir Operations (Islands)	<p><i>Islands in the mainstream or tributaries used for informal, dispersed recreation and natural resource management projects.</i></p>
Reservoir Operations (Mainland)	<p><i>Generally, narrow bands of shoreland retained by TVA for flood control and other reservoir operations purposes</i></p> <p>Although there are no outstanding rights to construct water use facilities, TVA allowed backlying residential property owners to construct facilities on the land until 1992. Since 1992 facilities have only been allowed on reservoir operations land in those areas where existing facilities have been permitted.</p>

TABLE 2-1 FORECAST SYSTEM DESIGNATION DEFINITIONS	
Forecast System Designation	Definition
Power Transmission and Power Needs	<p><i>Land reserved for future power development or to maintain the integrity of existing power lines.</i></p> <p>Interim wildlife enhancement projects are often implemented on the land.</p>
Commercial Recreation	<p><i>Land that TVA has reserved primarily for commercial use.</i></p> <p>This use includes, but is not limited to, marinas and campgrounds. Informal, dispersed recreational activities often occur on this land as an interim use.</p>
Minor Commercial Landings	<p><i>Tracts allocated for minor commercial landings available for public or private development of small-scale barge facilities.</i></p> <p>These are sites that can be used for transferring pulpwood, sand, gravel, and other natural resource commodities between barges and trucks. Since this use is intermittent and usually not a major activity, there would generally be no significant impact on adjacent land uses.</p>
Forestry Research	<p><i>Tracts used as ongoing sites for monitoring tree growth and stress.</i></p> <p>Also, trees are used in these areas to produce reliable seed sources.</p>
Steam Plant Study	<p><i>Tracts set aside to potentially serve as a future steam plant location.</i></p> <p>The actual construction of a steam plant would depend on energy demands and cost-benefit considerations.</p>
TVA Small Wild Area	<p><i>These TVA natural areas are areas managed by TVA or in cooperation with other public agencies or private conservation organizations to protect exceptional natural or aesthetic qualities that can also support dispersed, low-impact types of outdoor recreation.</i></p>
Wildlife Management	<p><i>Land managed for the enhancement of natural resources for human use and appreciation. Management of resources is the primary focus of this designation.</i></p> <p>Management strategies include planting food plots, selective timber harvesting, and other forms of manipulating habitat to attract certain wildlife species. Appropriate activities in this zone include hunting, wildlife observation, and camping on undeveloped sites.</p>

TABLE 2-2 SUMMARY OF FORECAST SYSTEM DESIGNATIONS FOR NORRIS RESERVOIR	
Forecast System Name	Acres
Minor Commercial Landing	23.85
Commercial Recreation	97.32
Dam Reservation	903.74
Forestry Research	726.23
Power Transmission System	584.37
Public Recreation	18,029.59
Reservoir Operations - Island	1,221.58
Reservoir Operations - Mainland	1,346.09
Steam Plant Study	820.99
TVA Small Wild Area	363.31
Wildlife Management	175.19
No Forecast	3,634.51
TOTAL	27,926.77

2.2.2. Alternative B—Allocation Alternative

Alternative B, the Allocation Alternative, was developed using information obtained from the public, other agencies, organizations, existing and newly collected field data on land conditions and resources, and technical knowledge of TVA staff. In determining proposed allocations for 315 parcels of TVA public land, TVA considered a wide range of possible land uses. Each parcel of land was reviewed to determine its physical capability and suitability for supporting possible uses as well as expressed public needs. Based on this information, the Norris Reservoir Planning Team allocated parcels to four of the seven planning zones. No additional land was allocated to Non-TVA Shoreland (Zone 1), Project Operations (Zone 2), or Residential Access (Zone 7). Should changing conditions warrant, TVA will consider future zone allocation changes for TVA public land with the appropriate level of environmental review, public involvement, and approval from the Board. Compatible public works/utilities projects proposed in any zone will not require an allocation change.

No proposals were made during the planning process to allocate TVA public land to Industrial/Commercial Development (Zone 5). In the past, TVA has accommodated requests for commercial or industrial uses on Norris Reservoir or projects to accommodate water access, water supply, or water treatment needs. In addition, TVA supports local communities in their efforts to improve the overall economic situations. If it is determined that TVA public land on Norris Reservoir could enhance an overall community development concept which includes commercial use, TVA would consider requests for utility corridor easements

or allocation changes to support the proposal. The standardized planned land use zones are described in Table 2-4 on the following page. These definitions would apply to Norris Reservoir as appropriate.

TABLE 2-3 PLANNED LAND USE ZONE DEFINITIONS	
Zone	Definition
1 Non-TVA Shoreland (<i>Flowage/ Retained Rights</i>)	<p>Shoreland located above summer pool elevation that TVA does not own in fee or land never purchased by TVA. TVA is not allocating private or other non-TVA public land. This category is provided to assist in comprehensive evaluation of potential environmental impacts of TVA’s allocation decision. Non-TVA shoreland includes:</p> <ul style="list-style-type: none"> • <i>Flowage easement land</i>—Privately or publicly owned land where TVA has purchased the right to flood and/or limit structures. Flowage easement land is generally purchased to a contour elevation. Since this land is subject to TVA’s Section 26a permitting requirements, the SMP guidelines discussed in the definition of Residential Access (Zone 7) apply to the construction of water use facilities fronting flowage easement residential development. SMP guidelines addressing land based structures and vegetation management do not apply. • <i>Privately owned reservoir land</i>—This is land never purchased by TVA and may include, but is not limited to, residential, industrial, commercial, or agricultural land. This land is subject to TVA’s Section 26a approvals for structures.
2 Project Operations	<p>All TVA public land currently used for TVA operations and public works projects includes:</p> <ul style="list-style-type: none"> • <i>Land adjacent to established navigation operations</i>—Locks, lock operations and maintenance facilities, and the navigation work boat dock and bases. • <i>Land used for TVA power projects operations</i>—Generation facilities, switchyards, and transmission facilities and rights-of-way. • <i>Dam reservation land</i>—Areas used for developed and dispersed recreation, maintenance facilities, watershed team offices, research areas, and visitor centers. • <i>Navigation safety harbors/landings</i>—Areas used for tying off commercial barge tows and recreational boats during adverse weather conditions or equipment malfunctions. • <i>Navigation day-boards and beacons</i>—Areas with structures placed on the shoreline to facilitate navigation. • <i>Public works projects</i>—Includes fire halls, public water intakes, public treatment plants, etc. (These projects are placed in this category as a matter of convenience and may not relate specifically to TVA projects.) • <i>Land planned for any of the above uses in the future.</i>

TABLE 2-3 PLANNED LAND USE ZONE DEFINITIONS	
Zone	Definition
3 Sensitive Resource Management	<p>Land managed for protection and enhancement of sensitive resources. Sensitive resources, as defined by TVA, include resources protected by state or federal laws or executive orders and other land features/natural resources TVA considers important to the area viewscape or natural environment. Recreational activities, such as hunting, wildlife observation, and camping on undeveloped sites, may occur in this zone, but the overriding focuses are protecting and enhancing the sensitive resource the site supports. Areas included are:</p> <ul style="list-style-type: none"> • TVA-designated sites with potentially <i>significant archaeological resources</i>. • TVA public land with <i>sites/structures listed on or eligible for listing on the National Register of Historic Places</i>. • Wetlands—Aquatic bed, emergent, forested, and scrub-shrub wetlands as defined by TVA. • TVA public land under easement, lease, or license to other agencies/individuals for resource protection purposes. • TVA public land fronting land owned by other agencies/individuals for resource protection purposes. • Habitat protection areas—These TVA natural areas are areas managed to protect populations of species identified as threatened or endangered by the USFWS, state-listed species, and any unusual or exemplary biological communities/geological features. • Ecological study areas—These TVA natural areas are designated as suitable for ecological research and environmental education by a recognized authority or agency. They typically contain plant or animal populations of scientific interest or are of interest to an educational institution that would utilize the area. • Small wild areas—These TVA natural areas are areas managed by TVA or in cooperation with other public agencies or private conservation organizations to protect exceptional natural, scenic, or aesthetic qualities that can also support dispersed, low-impact types of outdoor recreation. • River corridor with sensitive resources—A river corridor is a linear green space along both stream banks of selected tributaries entering a reservoir managed for light boat access at specific sites, riverside trails, and interpretive activities. These areas will be included in Sensitive Resource Management (Zone 3) when identified sensitive resources are present. • Significant scenic areas—These are areas designated for visual protection because of their unique vistas or particularly scenic qualities.

TABLE 2-3 PLANNED LAND USE ZONE DEFINITIONS	
Zone	Definition
	<ul style="list-style-type: none"> • Champion tree site— Areas designated by TVA as sites that contain the largest known individual tree of its species in that state. The state forestry agency “Champion Tree Program” designates the tree, while TVA designates the area of the sites for those located on TVA public land. • Other sensitive ecological areas—Examples of these areas include heron rookeries, uncommon plant and animal communities, and unique cave or karst formations. • Land planned for any of the above uses in the future.
4	<p>Natural Resource Conservation</p> <p>Land managed for the enhancement of natural resources for human use and appreciation. Management of resources is the primary focus of this zone. Appropriate activities in this zone include hunting, timber management to promote forest health, wildlife observation, and camping on undeveloped sites. Areas included are:</p> <ul style="list-style-type: none"> • TVA public land under easement, lease, or license to other agencies for wildlife or forest management purposes. • TVA public land fronting land owned by other agencies for wildlife or forest management purposes. • TVA public land managed for wildlife or forest management projects. • Informal recreation areas maintained for passive, dispersed recreation activities, such as hunting, hiking, birdwatching, photography, primitive camping, bank fishing, and picnicking. • Shoreline Conservation Areas—Narrow riparian strips of vegetation between the water’s edge and TVA’s backlying property that are managed for wildlife, water quality, or visual qualities. • Wildlife Observation Areas—Areas with unique concentrations of easily observable wildlife that are managed as designated public wildlife observation areas. • River corridor without sensitive resources present—A river corridor is a linear green space along both stream banks of selected tributaries entering a reservoir managed for light boat access at specific sites, riverside trails, and interpretive activities. River corridors will be included in Natural Resource Conservation (Zone 4) unless sensitive resources are present (see Sensitive Resource Management, Zone 3).

TABLE 2-3 PLANNED LAND USE ZONE DEFINITIONS		
Zone	Definition	
5	Industrial/ Commercial* Development	<p>Land managed for economic development including business, commercial, light manufacturing, and general industrial uses. Areas included are:</p> <ul style="list-style-type: none"> • <i>TVA public land under easement, lease, or license to other agencies/individuals.</i> • <i>TVA public land fronting land owned by other agencies/individuals.</i> • <i>Sites planned for future use supporting sustainable development.</i> <p>Types of development that can occur on this land are:</p> <ul style="list-style-type: none"> • Business parks—TVA waterfront land which would support business and light manufacturing activities. • Industrial access—Access to the waterfront by backlying property owners across TVA property for water intakes, wastewater discharge, or conveyance of commodities (i.e., pipelines, rail, or road). Barge terminals are associated with industrial access corridors. • Barge terminal sites—Public or private facilities used for the transfer, loading, and unloading of commodities between barges and trucks, trains, storage areas, or industrial plants. • Fleeting areas—Sites used by the towing industry to switch barges between tows or barge terminals which have both offshore and onshore facilities. • Minor commercial landing—A temporary or intermittent activity that takes place without permanent improvements to the property. These sites can be used for transferring pulpwood, sand, gravel, and other natural resource commodities between barges and trucks.
6	Developed Recreation	<p>All reservoir land managed for concentrated, active recreation activities that require capital improvement and maintenance, including:</p> <ul style="list-style-type: none"> • <i>TVA public land under easement, lease, or license to other agencies/individuals</i> for recreational purposes. • <i>TVA public land fronting land owned by other agencies/individuals</i> for recreational purposes. • <i>TVA public land developed for recreational purposes</i>, such as campgrounds and day use areas. • <i>Land planned for any of the above uses in the future.</i> <p>Types of development that can occur on this land are:</p> <ul style="list-style-type: none"> • <i>Commercial recreation</i>, e.g., commercial marinas, resorts, campgrounds, and golf courses.

TABLE 2-3 PLANNED LAND USE ZONE DEFINITIONS	
Zone	Definition
	<ul style="list-style-type: none"> • Public recreation, e.g., local, state, and federal parks and recreation areas. • Greenways, e.g., linear parks located along natural features, such as lakes or ridges or along man-made features, including abandoned railways or utility rights-of-way which link people and resources together. • Water access sites, e.g., boat ramps, courtesy piers, canoe access, fishing piers, vehicle parking areas, picnic areas, trails, toilet facilities, and information kiosks.
7	<p>Residential Access</p> <p>TVA-owned public land where Section 26a applications and other land use approvals for residential shoreline alterations are considered. Requests for residential shoreline alterations are considered on parcels identified in this zone where such use was previously considered and where the proposed use would not conflict with the interests of the general public. Under the Norris Plan, residential access would be divided into three categories based on the presence and potential impacts to sensitive ecological resources, such as threatened or endangered species, wetlands, and archaeological and historic sites. The categories are (1) Shoreline Protection where no residential alterations would be permitted; (2) Residential Shoreline Mitigation, where special analysis would be needed; and (3) Managed Residential Shoreline, where no known sensitive resources exist. Types of development/management that can be considered on this land are:</p> <ul style="list-style-type: none"> • Residential water use facilities, e.g., docks, piers, launching ramps/driveways, marine railways, boathouses, enclosed storage space, and potable/nonpotable water intakes. • Residential access corridors, e.g., pathways, wooden steps, walkways, or mulched paths which can include portable picnic tables and utility lines. • Shoreline stabilization, e.g., bioengineering, riprap and gabions, and retaining walls. • Shoreline vegetation management on TVA-owned residential access shoreland. • Conservation easements for protection of the shoreline. • Other activities, e.g., fill, excavation, grading.

*Commercial recreation uses, such as marinas and campgrounds, are included in Zone 6.

A basic premise of reservoir land planning is that land currently committed to a specific use will be allocated to that current use unless there is an overriding need to change the use. Committed land includes transfers, leases, licenses, contracts, outstanding landrights, small wild areas and areas with identified sensitive resources, TVA project land, such as the dam reservation or power lines, and TVA-developed recreation areas. Agricultural licenses would be excluded because they are considered to be an interim use of TVA public land. For planning purposes, a total of 6696.70 acres of Norris Reservoir is considered committed. Table 2-4 summarizes the allocation of committed land on Norris Reservoir.

TABLE 2-4 SUMMARY OF ALLOCATION OF COMMITTED LAND ON NORRIS RESERVOIR	
Land Use Zones	Acres
Zone 2 - Project Operations	934.50
Zone 3 - Sensitive Resource Management	467.19
Zone 4 - Natural Resource Conservation	2,147.02
Zone 6 - Developed Recreation	1,675.44
Zone 7 - Residential Access	1,472.55
Total	6,696.70

The balance of Norris Reservoir (21,230.1 acres) was considered “plannable land,” that is, land that was not previously committed to a use. Field data and/or existing information were collected on all plannable land by technical specialists, such as archaeologists, historic architects, wetland specialists, visual specialists, and biologists to identify areas containing sensitive resources and recommend a future best use.

Technical specialists were asked to rate each parcel high, medium, or low by a given set of criteria and to rank the parcels high, medium, or low depending on customer needs. Customer needs were identified during the scoping process to help determine the most suitable use for the land. After the ranking exercise, the planning team and technical specialists met to allocate the plannable parcels to the seven planning zones. Using resource maps and all of the information collected during the planning process, including public input, the capability and suitability of each parcel were discussed. Allocation decisions were made by consensus.

The allocations were used to prepare the proposed Norris Plan. The proposed Norris Plan contains an explanation of the planning process and an overview of the history and development of Norris Reservoir. The acreage totals for each of the six zones are summarized in Table 2-5 on the next page.

Appendix A-1 is the Parcel Information Matrix which identifies each parcel number, the proposed allocation zone, number of acres, reason for allocation, prior forecast designation, and map panel locator. The location of each parcel is shown on the Norris Plan map for Alternative B (located in map pocket as Exhibit 1).

TABLE 2-5 SUMMARY OF PROPOSED LAND USE ALLOCATIONS FOR ALTERNATIVE B	
Proposed Land Allocations	Acres
2 - Project Operations	934.50
3 - Sensitive Resource Management	4,839.18
4 - Natural Resource Conservation	18,936.64
5 - Industrial/Commercial Development	0.00
6 - Developed Recreation	1,743.90
7 - Residential Access	1,472.55
Total	27,926.76

3. AFFECTED ENVIRONMENT AND POTENTIAL EFFECTS

3.1. Visual Resources

The visual landscape surrounding Norris Reservoir has a predominantly natural, undisturbed appearance. Extensive tree-covered ridges frame the occasional fields, rolling pasture land, and shoreline development. There are no actual towns or industrial facilities visible from Norris Reservoir. The attractive natural features, together with the residential areas and other cultural development, provide a scenic, relatively harmonious rural countryside.

Among the scenic resources of Norris Reservoir, the water body itself is the most distinct and outstanding aesthetic feature. The horizontal surface provides visual balance and contrast to the islands, bluffs, and wooded hillsides. Norris Reservoir provides harmony and creates mystery as it weaves around the ridges and bends, constantly changing views seen from the water. It also provides unity, serving as a visual ribbon that links the other landscape features together. Middle ground views across the water provide a tranquil sense of place that is satisfying and peaceful to most observers.

3.2. Cultural Resources

3.2.1. Archeological Resources

For at least 12,000 years, the land along the Clinch and Powell Rivers has been an area for human occupation which became more intense through succeeding cultural periods. In the upper east Tennessee area, archaeological investigations have demonstrated that Tennessee and the Eastern Ridge and Valley regions were the settings for each one of these cultural/temporal traditions. Areas such as this typically are characterized rich in archaeological resources and historic properties.

TVA is mandated under the National Historic Preservation Act (NHPA) of 1966 and the Archaeological Resources Protection Act (ARPA) of 1979 to protect significant archaeological resources and historic properties located on TVA public land or affected by TVA undertakings. A historic property is defined, under 36 C.F.R. § 800.16 (l), as “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places (NRHP).” In response to this federal legislation, TVA conducts inventories of its land to identify historic properties.

3.2.2. Historic Structures

Structures and man-made features which are over 50 years old (including farmhouses, churches, cemeteries, and Norris Dam), on or adjacent to TVA parcels, are classified as historic by definition under NRHP criteria. All sites considered potentially eligible or eligible for listing on the NRHP have been identified and mapped. Most of these features—

with the exception of Norris Dam—are not on TVA parcels, but are adjacent to or near TVA parcels. Many of the historic sites are along the access roadways leading to TVA public land.

3.3. Threatened and Endangered Species

3.3.1. Plant Species

Prior to the 1999 field surveys for the Norris Plan, a search of the TVA Natural Heritage Project database was conducted to identify protected plant species known from the six Tennessee counties (Anderson, Campbell, Claiborne, Grainger, Hancock, and Union) containing portions of Norris Reservoir. It should be noted that while there is no TVA public land in Hancock County, the county is in the Norris watershed and species occurring in that county could also be present on land considered as part of either alternative.

The results of the search indicated that no federal-listed and 29 Tennessee state-listed plant species (97 occurrences) were known from these counties. This list, combined with regional information on additional species likely to occur on Norris Reservoir land, provided a focus for the field surveys. During the 1999 field inventories of 3214 acres, areas which appeared to be suitable habitat for listed plants were intensively surveyed. Surveys continued until the botanist determined that additional searches for rare plants would be unproductive. Several parcels contained more than one listed plant species. No federal-listed plant species were found. Twelve Tennessee state-listed plant species (39 occurrences) were found during this survey.

3.3.2. Terrestrial Animals and Sensitive Ecological Areas

The various plant communities on Norris Reservoir provide suitable habitat for a variety of federal- and state-listed terrestrial animals. These diverse communities include pine forests, upland and riparian hardwood forests, wetlands, and open-field habitats. In addition to distinctive vegetated communities, many features, such as streams, caves, rock communities, and sinkholes on reservoir parcels, provide unique habitats for rare species of wildlife.

Prior to initiating field surveys on reservoir parcels, the TVA Regional Natural Heritage Project database was queried to identify federal- and state-protected terrestrial animals, as well as sensitive ecological areas (e.g., caves and heron colonies) from counties adjacent to Norris Reservoir. Twenty-four sensitive terrestrial animal species were identified from the database. Four of these terrestrial animals are federal-protected under the Endangered Species Act and the remaining 20 are protected by the state of Tennessee. Five terrestrial animals were found during parcel surveys. Two of those animals were previously not known to be present in the Norris Reservoir vicinity. A total of 96 terrestrial animal species were observed or detected during field activities on surveyed parcels. Also, 82 caves and four heron colonies were noted from existing records.

3.3.3. Aquatic Animals

Several aquatic species now protected as either federal- or state-listed endangered or threatened species existed in the reservoir area prior to impoundment. Those species include several freshwater mussels (such as the dromedary, green blossom and shiny pigtoe, fine-rayed pigtoe, and birdwing pearlymussel) and a few fishes (such as the palezone shiner and spotfin chub). Information available in the TVA Regional Natural Heritage Project database and other sources indicated that most of these species are unlikely to occur in the types of habitats present in the reservoir pool. Some federal- and state-protected aquatic species are either known to occur or might still persist in parts of the Clinch and Powell Rivers adjacent to some upstream parcels of land considered in the Norris Plan.

3.4. Terrestrial Ecology and Significant Natural Areas

3.4.1. Terrestrial Ecology

Norris Reservoir is located within the Great Valley of east Tennessee, or geographically what is described as the Appalachian Ridge and Valley Physiographic Province of east Tennessee. This physiographic province is characterized by long ridges and intervening valleys that generally run in a southwestern-to-northeastern direction. Norris Reservoir is within the oak-hickory forestland resource region, as described by the U.S. Forest Service. The 27,926.8 acres of TVA public land surrounding Norris Reservoir can be divided into three broad community types: (1) forestland; (2) open land; and (3) wetland/riparian areas. Approximately 22,262 acres have been inventoried as part of the TVA forest prescription process.

Past land use has played a major role in creating the present mosaic of forest conditions. At the time of TVA purchase, TVA public land on Norris Reservoir was typical of other land in the Tennessee Valley—primarily small subsistence farming on marginal land with pastures and row crop areas interspersed with woodlands. Pasture and row crops made up a majority of the landscape, while most woodland areas were grazed and often burned to promote the growth of annuals and other forage plants. Woodlots were also selectively harvested periodically to provide construction lumber, firewood, and other wood products. After purchase, open land was either planted to shortleaf pine by TVA or reverted naturally to Virginia pine, red cedar, hickory, and other hardwoods.

3.4.2. Significant Natural Areas

There are eight significant ecological sites or managed areas on Norris Reservoir. Six of these areas (Beech Island, Comby Ridge, Hemlock Bluff, Monks Corner, Stiners Woods, and River Bluff) are TVA small wild areas and are managed for low impact public use, such as hiking. One area (Norris Dam Cave) is a TVA habitat protection area and is managed for the protection of federal- and/or state-protected species. One area, (the Norris Song Bird Trail) is a state wildlife observation area and is managed for various types of viewable wildlife.

3.5. Wetlands/Riparian Ecology

Wetlands along TVA's reservoirs tend to be diverse and highly productive components of the overall reservoir ecosystem. They provide habitat for many wildlife species, serve as shoreline stabilization zones, aid in flood control, and contribute to improved water quality. Most wetlands on Norris Reservoir are found in shallow coves or embayments. They generally are in linear strips, ranging in size from one-tenth of an acre to 60 acres, following the shape of the shoreline and below the 1020-foot contour elevation (normal summer pool).

Along reservoir shorelines, wetlands and riparian areas are transitional ecosystems between terrestrial and aquatic communities. Historically, there were no lakes in the upper Tennessee River basin. TVA's impoundments inundated the previous riverine and upslope habitats creating new wetland areas and many miles of terrestrial shoreline riparian habitat, which consist of summer shoreline riparian zones and winter drawdown mud flats.

The wetlands of Norris Reservoir primarily lie along approximately 133.5 miles of shoreline. These fringe and reservoir wetlands influence 16.5 percent of Norris Reservoir's 809.2 miles of shoreline and embody a variety of wetland habitat types, including aquatic beds, emergent, scrub-shrub, and forested wetlands, all of which can be found as isolated or mixed units. The small percentage of wetland acreage, when compared to all TVA public land on Norris Reservoir, does not diminish overall importance of the wetlands. In fact, it serves to increase and focus their importance within the system, as it tends to concentrate the wildlife species utilizing these habitat types.

3.6. Recreation

Norris Reservoir is bordered by Anderson, Campbell, Claiborne, Union, and Grainger Counties. Many people living in these counties find Norris Reservoir an attractive day trip and weekend destination. Norris Reservoir has also recently been discovered by out-of-state residents, especially travelers along the north and south I-75 corridor. Increases in new housing construction and requests to expand marina facilities are the result of this new population of Norris Reservoir users as well as the growing population of native county residents. Only 2 percent (17 miles) of the shoreline was developed for recreation as of 1994. This development included marinas, public parks, and public boat ramps. There are 3 state parks, 2 county parks, 12 paved public boat ramps, and TVA's Loyston Point Recreation Area (Loyston) providing public access and facilities. Developed campsites are available at two state parks, one county park, and Loyston. Developed campsites are available at 14 of the 23 developed marinas, and there are 2 commercial campgrounds.

Informal and dispersed recreation activities, such as primitive camping, bank fishing, hunting, and wildlife observation, occur on the 23,775.8 acres allocated to Sensitive Resource Management (Zone 3) and Natural Resource Conservation (Zone 4). Most of these acres are accessed by dirt and gravel roads; however, approximately 1000 acres of islands are accessible only by boat. Many of the islands are treasured camping spots during the summer months.

There are four ski slalom courses on Norris Reservoir, as well as several large parcels allocated for group camps, including boy scouts and girl scouts. In addition to the reservoir recreation activities, Norris Dam Reservation has many paved parking lots, picnic tables, river access points, and trails. Literally, tens of thousands of people use these facilities each year to gain access to the Clinch River tailwater, which is one of only six TVA tailwaters stocked with trout in the state of Tennessee.

3.7. Water Quality

General Water Quality Characteristics - Like other deep storage impoundments with long retention times, Norris Reservoir exhibits strong vertical density/temperature stratification during summer months. As a consequence, oxygen in the cold, bottom layer is gradually depleted by natural decomposition processes. To remedy this dissolved oxygen problem in the tailwater (the water in the Clinch River below the dam), Norris was the first dam to benefit from the TVA Reservoir Releases Improvement Program. Routine, seasonal use of hub baffles and turbine venting was employed from 1983 to 1995. In September 1995 a newly designed autoventing turbine runner, which more efficiently aerates discharge water, replaced one of the two original turbine runners. Minimum flows (200 cubic feet per second) are provided in the Clinch River below Norris Dam by a reregulating weir constructed in 1984.

Hydrologic Units - The Norris Reservoir watershed is divided into two cataloging units that denote the Clinch and Powell Rivers. TVA manages watershed initiatives that are based on conditions of watersheds using input from stakeholders, coalitions, local governments, and state and federal agencies. The 11 Hydrologic Unit Codes or watersheds that drain into Norris Reservoir have been rated as being in good, fair, or poor ecological condition. Ratings are based on the professional judgment of TVA public land and water resource specialists after consideration of the Index of Biotic Integrity sampling results, condition of aquatic habitats in the watersheds, and land uses.

Recent Evaluations by the State of Tennessee - The 1998 TDEC water quality assessment report, known as the 305(b) Report, listed Norris Reservoir as fully supporting designated stream use classifications. Section 303 of the federal Clean Water Act directs all states to compile a list of the streams and lakes requiring additional pollution controls in order to meet water quality standards. The state 303(d) list was established as part of the Total Maximum Daily Load (TMDL) Program, a state program seeking to restore pollution-impacted waters to a condition that meets criteria for the designated uses of the water body. TDEC's priority TMDL streams are Davis Creek, Big Creek and Russell Creek. Davis Creek is impaired by pathogens, nutrients, and siltation. The major source is from a confined animal feeding operation. Big Creek is impaired by pathogens and nutrients stemming from sewer overflows. Russell Creek is impaired by nutrients and siltation from urban runoff and storm sewers.

3.8. Aquatic Ecology

Aquatic habitat in the littoral (near shore) zone is greatly influenced by underwater topography and back-lying land use. Underwater topography at Norris Reservoir varies from moderately steep, with extensive areas of exposed bedrock near the river channel, to typically shallower in embayments, coves, and areas further from the river channel and tributary stream channels, particularly in upper reservoir reaches. The overall average Shoreline Aquatic Habitat Index score at Norris Reservoir was 13.3 (of a possible 20), which indicates generally “fair” shoreline aquatic habitat within Norris Reservoir. Of the shoreline distance surveyed, 21 percent rated “good,” 74 percent rated “fair,” and 5 percent rated “poor.”

Benthic Community - Benthic macroinvertebrate (e.g., lake bottom dwelling, readily visible aquatic worms, snails, crayfish, and mussels) samples were taken in three areas of Norris Reservoir in 1994, 1995, 1997, and 1999 as part of TVA’s Reservoir Vital Signs Monitoring Program. The benthic community in the three areas of Norris Reservoir rated from poor to excellent at various times in comparison to other Ridge and Valley ecoregion reservoirs.

Fish Community - The Reservoir Vital Signs Monitoring Program included annual fish sampling at Norris Reservoir from 1990 through 1995, 1997, and 1999 (no samples were taken in 1996 or 1998). Fish are included in aquatic monitoring programs because they are important to the aquatic food chain and because they have a long life cycle which allows them to reflect conditions over time. Fish are also important to the public for aesthetic, recreational, and commercial reasons.

A Sport Fishing Index (SFI) has been developed to measure sport fishing quality for various species in Tennessee and Cumberland Valley reservoirs. In 1998, Norris Reservoir rated better than average for smallmouth, spotted, and striped bass. The SFI rating was below average for black bass species as a group, largemouth bass, crappie, walleye/sauger, and channel catfish.

There are no fish consumption advisories in effect for Norris Reservoir. TVA last collected channel catfish and largemouth bass for tissue analysis in the autumn of 1997. All contaminant levels were either below detection levels or below the levels used by the state to issue fish consumption advisories.

3.9. Socioeconomic

Population - The population of the five counties in the Norris Reservoir area, according to the 2000 Census of Population, is 179,513, which is a 12 percent increase over the 1990 population of 160,255. Projections suggest that the area is likely to grow more slowly than the state and the nation over the next 20 years, although Union County is expected to continue to grow faster.

Labor Force and Unemployment - In 2000, the civilian labor force of the area was 83,240, as shown in Table 3-13. Of these, 3,710 were unemployed, for an unemployment rate of 4.5

percent. The overall rate was somewhat higher than the state and national rates, with three of the five counties higher than both the state and the nation.

Jobs - In 1999, the Norris Reservoir area had almost 89,000 jobs, an increase of almost 22 percent over the level in 1989. This represents a faster rate of growth than in the nation, but a slower rate than the state.

Occupation - The Norris Reservoir area has a smaller proportion of its workers in managerial and professional jobs than the state and national averages. The area also has a smaller proportion of its workers in technical, sales, and administrative support positions. Conversely, it has a higher share of its workers in blue-collar jobs, including the higher paid skill levels.

Income - Per capita personal income in the Norris Reservoir area increased by 53.8 percent from 1989 to 1999. This was the same as the national growth rate, but below the state rate of 60.9 percent.

Environmental Justice - The minority population in the area at 4.3 percent of the total in 2000. This is well below the state average of 20.8 percent and the national average of 30.9 percent. Minority population is defined as nonwhite persons and white Hispanics (nonwhite Hispanics are already included in the nonwhite estimate and are not counted again as Hispanic). None of the five counties has a minority population share close to the state and national averages, with Anderson the highest at 7.3 percent.

3.10. Navigation

There is no commercial navigation on Norris Reservoir; however, the TVA Navigation Program assists in the installation and maintenance of navigation aids on land surrounding Norris Reservoir to assist recreational boaters. TVA also assists in marking hazardous boating areas with boat hazard buoys on Norris Reservoir.

3.11. Prime Farmland

Prime farmland may currently be in use as cropland, pastureland, range land, forestland, or other uses, but cannot be urban or built-up land. There are 433 acres of prime farmland on TVA public land on Norris Reservoir

3.12. Other Issues

3.12.1. Floodplain

The 100-year flood for the Clinch River varies from elevation 1032 feet above msl at Norris Dam (CRM 79.8) to elevation 1055-feet msl at approximately the upper end of Norris Reservoir (CRM 155.14). For the Powell River, the 100-year flood varies from elevation

1032-feet msl at the mouth to elevation 1068-feet msl at approximately the upper end of Norris Reservoir (Powell River mile 63.28).

Any fill material placed between elevations 930 and 1020 feet msl is subject to a charge for lost power storage. Generally, the quantity of fill required for residential projects, such as shoreline stabilization and boat ramps, would not result in a charge for lost power storage. Any material placed between elevations 985 feet msl and the 500 year flood elevation is subject to the requirements of the *TVA Flood Control Storage Loss Guideline*. All development subject to flood damage must be located above the 500-year flood elevation.

3.12.2. Noise

Potential community noise effects will be evaluated for this EA on two levels. The first level will be a comparison of the likely effects based on the change in land allocations from Alternative A to B. In general, the amount of land allocated to each zone or land use designations would be a measure of the potential noise effects from the land uses. The second level is a review conducted in the future to evaluate each land use request to determine its potential for causing community noise effects.

3.12.3. Air Quality

National Ambient Air Quality Standards establish safe concentration limits in the outside air for six pollutants: particulate matter, sulfur dioxide, carbon monoxide, ozone, nitrogen dioxide, and lead. These standards are designed to protect public health and welfare. Prevention of Significant Deterioration (PSD) regulations protect national parks and wilderness areas that are designated PSD Class I air quality areas. Of the two PSD Class I areas within 62 miles of Norris Reservoir, the closest is the Great Smoky Mountains National Park, approximately 38 miles to the southeast at the nearest point. The other, in North Carolina, is Joyce Kilmer/Slickrock National Wilderness Area, approximately 53 miles to the south at the nearest point.

3.13. Comparison of Alternatives

Table 3-1 shows the comparison of acres of the forecast designations and proposed zones. Alternative A would continue the use of the existing Forecast System. Selection of this alternative could result in some reduction in potential long-term benefits on Norris Reservoir. Alternative B would allocate land into categories that emphasize sensitive resource management and natural resource conservation. Selection of this alternative would be beneficial to TVA public land and would protect current resource functions and values. Impacts of either alternative would be insignificant.

TABLE 3-1 COMPARISON OF ALLOCATIONS FOR ALTERNATIVES A AND B							
Alternative A Forecast Designations	Alternative B Proposed Zones						Alt. A TOTAL ACRES
	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	
Dam Reservation	903.74						903.74
Reservoir Operations	19.65	379.60	1,977.16		145.93	45.33	2,567.67
Public Recreation	4.02	3,355.31	14,186.17		483.66	0.43	18,029.59
Commercial Recreation			97.32				97.32
TVA Small Wildlife Area		363.31					363.31
Minor Commercial Landing		1.74	22.11				23.85
Forestry Research	6.29	70.58	608.61		40.75		726.23
Steam Plant Study		396.20	424.79				820.99
Wildlife Management			175.19				175.19
Power Transmission		218.72	365.65				584.37
No Forecast	0.80	53.72	1,079.64		1,073.56	1,426.79	3,634.51
Alt B TOTAL ACRES	934.50	4,839.18	18,936.64	0	1,743.90	1,472.55	27,926.77

Alternative A acres are added horizontally with the total acres in the right-hand column.

Alternative B acres are added vertically with the total acres along the bottom row.

Alternative B allocates 68.5 percent less acreage to TVA Project Operations (Zone 2) than does Alternative A. This means that more land will be available in Alternative B for undeveloped public use, as compared to Alternative A. Natural and sensitive resource management receives considerably more emphasis under Alternative B. Conversely, Developed Recreation is allotted considerably more acreage under Alternative A.

3.14. The Preferred Alternative

The Preferred Alternative is Alternative B. The proposed Norris Plan honors previous land use commitments and allocates uncommitted TVA public land into zones that allow for a balance of development and conservation. It addresses the stewardship of sensitive resources and other important issues and concerns raised by citizens and other stakeholders. Shoreland habitat is incorporated into planning decisions. Land allocation decisions also consider critical knowledge of watershed conditions and their potential effects on reservoir resources.

3.15. Commitments

1. All land-disturbing activities shall be conducted in accordance with Best Management Practices (BMPs) as defined by Section 208 of the Clean Water Act and implementing regulations to control erosion and sedimentation. Forest management activities will be conducted in accordance with practices prescribed for forestry in *Best Management Practices for Silvicultural Activities on TVA Land*.
2. Visual and water quality enhancement buffers, between 50 and 100 feet Wide, will be provided to screen wildlife habitat enhancement areas from public thoroughfares and shorelines and to minimize the potential for sediments or other nonpoint source pollutants to enter Norris Reservoir.
3. Any facilities or structures subject to flood damage will be floodproofed or located above the 500-year flood elevation.
4. TVA will utilize a phased identification and evaluation approach to identify cultural resources.
5. Controlled burns will be conducted in accordance with Tennessee open burning regulations.
6. BMPs for agriculture, including maintenance of vegetative buffers, will be included in agricultural licenses as described in *Agricultural Land Licensing for 1999-2003 Crop Years - Northeast Region, Land Management, TVA, 1999*.

TABLE 3-2 COMPARISON OF POTENTIAL ENVIRONMENTAL EFFECTS BY ALTERNATIVE			
Section of EA	Resource Area	Alternative A	Alternative B
3.1	Visual Resources	Due to land subject to potential development, the cumulative effects could substantially reduce the scenic attractiveness of Norris Reservoir land over time, resulting in an adverse impact on the visual landscape character and aesthetic sense of place.	With implementation of this alternative, substantial preservation of the scenic qualities, aesthetic sense of place, and attractive visual character of Norris Reservoir could be expected. This alternative would have beneficial impacts to the aesthetic resources of Norris Reservoir.
3.2 Cultural Resources			
3.2.1	Archaeological Resources	There are a number of archaeological resources that are considered potentially eligible for listing in the NRHP. Approximately 73 percent of the recorded archaeological resources are located on land proposed for public recreation. The remaining 27 percent are located on the Norris Dam Reservation, reservoir operations, and steam plant study areas. Under this alternative, site-specific activities are reviewed for impact to archaeological resources. If archaeological investigations demonstrate the need for mitigation, an appropriate archaeological investigation will be necessary, and potentially impacted resources will be properly recorded and removed. The Forecast System does not provide for specific preservation of archaeological resources. However, TVA will comply with regulatory requirements of the NHPA and ARPA.	This alternative would incorporate the phased identification and evaluation procedure to effectively preserve historic properties. Early identification of the presence of cultural resources through allocating land into the zones avoids the likelihood of soil-disturbing activities in areas known to contain historic properties. This would, in turn, save time, reduce costs, and ensure more efficient compliance of Section 106 of the NHPA than under Alternative A. All soil-disturbing activities that occur on TVA parcels would be reviewed by a TVA archaeologist. TVA will take necessary steps to ensure compliance with regulatory requirements of the NHPA and the ARPA. Within this alternative, there are commitments to the management of archaeological resources within Sensitive Resource Management (Zone 3) and Natural Resource Conservation (Zone 4) and to effectively preserve resources within the other planned parcels.

Table 2-8 COMPARISON OF POTENTIAL ENVIRONMENTAL EFFECTS BY ALTERNATIVE			
Section of EA	Resource Area	Alternative A	Alternative B
3.2.2	Historic Structures	Under this alternative, proposals for changes to any TVA parcel will be reviewed on a case-by-case basis to assess impacts to historic structures potentially eligible or eligible for listing on the NRHP within the Area of Potential Effect (APE). This will include structures both on or adjacent to all TVA parcels.	Under this alternative, specific TVA parcels are identified as potentially subject to development. Historic structures were identified in the APE of these specific parcels and marked on the maps. The proposed use for a TVA parcel will determine the impact on the historic structure. Impacts of the proposed use will be assessed as required under Section 106 review of the NHPA.
3.3 Threatened and Endangered Species			
3.3.1 - 1	Plants	<p>Under this alternative, use of TVA public land on Norris Reservoir would continue to be based on the Forecast System. The Forecast System does not currently include any areas, other than TVA small wild areas, reserved primarily for protection of natural resources. There are 39 reported occurrences of state-listed plant species on the subject parcels. Under the Forecast System 35 of these occurrences are on land designated for public recreation, 3 are on a parcel designated for steam plant study, and 1 is on land designated for forestry research.</p> <p>If the Forecast System continues to be used, potential impacts to state-listed threatened and endangered plants would be assessed during site-specific reviews. Each proposed land use would be reviewed, and its anticipated impacts to existing vegetation, including rare plants, would be evaluated. Some Forecast System uses would likely be modified, based on the environmental review process. However, the review process would ensure that impacts to state-listed plants would be negligible. Under the Forecast System, no land is managed specifically for the protection and enhancement of the rare plant populations present.</p>	<p>This alternative would provide protective status for 16 parcels containing 39 state-listed plant occurrences. Under the Norris Plan 12 (75 percent) of these parcels are in Sensitive Resource Management (Zone 3), 3 parcels (20 percent) are in Natural Resource Conservation (Zone 4); and 1 parcel (5 percent) is in Developed Recreation (Zone 6). In Sensitive Resource Management (Zone 3) the overriding focuses are protecting and enhancing the sensitive resources the site supports (see Section 2.2.2). Parcels in Natural Resource Conservation (Zone 4) are managed for the enhancement of natural resources for human use and appreciation. If this alternative is implemented with the Norris Plan, 86 percent of the parcels containing listed plants would be allocated to Sensitive Resource Management (Zone 3) and 14 percent would be allocated to Natural Resource Conservation (Zone 4).</p>

Table 2-8 COMPARISON OF POTENTIAL ENVIRONMENTAL EFFECTS BY ALTERNATIVE			
Section of EA	Resource Area	Alternative A	Alternative B
3.3.1 - 2	Terrestrial Animals	<p>Currently, decisions regarding the use of TVA public land surrounding Norris Reservoir are based upon the Forecast System. Effects to populations of rare terrestrial animals and sensitive ecological areas (caves and heron colonies) would be considered during TVA environmental reviews associated with specific projects; therefore, no significant impacts to threatened or endangered terrestrial animals are expected. Although this process would protect most populations of rare terrestrial animals and sensitive ecological areas along Norris Reservoir, TVA's ability to address cumulative impacts to these resources would be limited.</p>	<p>Using the land planning allocation process, land planning parcels that harbor populations of rare terrestrial animals or sensitive ecological areas would be designated for Sensitive Resource Management (Zone 3) or Natural Resource Conservation (Zone 4). This process would protect populations of federal- and state-listed species, significant rare species habitat, and sensitive ecological areas. In parcels designated for Natural Resource Conservation, habitat manipulation would be allowed to improve this habitat for wildlife.</p> <p>This alternative would benefit rare terrestrial animals, their habitat, and sensitive ecological areas by applying appropriate protective buffers around them. Ultimately, unit plans would be developed for TVA public land surrounding Norris Reservoir. These plans would specifically designate protective zones for populations of rare terrestrial animals, their habitat, and sensitive ecological areas, and specify wildlife management requirements and limitations for Norris Reservoir. For these stated reasons, this alternative is preferred over Alternative A.</p>

Table 2-8 COMPARISON OF POTENTIAL ENVIRONMENTAL EFFECTS BY ALTERNATIVE			
Section of EA	Resource Area	Alternative A	Alternative B
3.3.1 - 3	Aquatic Animals	<p>Under this alternative, TVA actions would be unlikely to adversely affect the habitat of protected aquatic species. While four federal- and/or state-listed fishes could occur in portions of the Clinch and Powell Rivers upstream from the land included in the Forecast System, current environmental review practices would likely avoid or minimize any adverse impacts to these species.</p>	<p>Under this alternative, no parcels were identified specifically to protect habitats necessary for sensitive aquatic species. However, adoption of this alternative would lead to the protection of several large areas containing wetlands and sensitive terrestrial habitats. Many of these areas would act as riparian buffer zones and could have indirect but positive effects on aquatic habitat quality. The cumulative effects of these actions may help improve water quality and aquatic habitats downstream from these parcels, including areas where sensitive aquatic species may occur. Therefore, this alternative could afford these species and/or habitats greater protection than the current Forecast System.</p>

Table 2-8 COMPARISON OF POTENTIAL ENVIRONMENTAL EFFECTS BY ALTERNATIVE			
Section of EA	Resource Area	Alternative A	Alternative B
3.4 Terrestrial Ecology and Significant Natural Areas			
3.4.1 - 1	Terrestrial Ecology	<p>Approximately 69 percent of TVA public land on Norris Reservoir is under either the public recreation, small wild area, forest research, or wildlife management designations. Approximately 65 percent of this land is under the public recreation designation. This Forecast System design allows a wide variety of potential uses and management options ranging from undeveloped to developed recreation. Changes in use patterns under the public recreation designation could create a corresponding change in vegetation and terrestrial ecology of the affected parcels. However, these types of impacts would be localized and insignificant on a regional or subregional basis. Overall, the cumulative impacts to terrestrial ecology under this alternative would be insignificant on TVA's forestland, open land, and riparian areas.</p>	<p>This alternative allocates 23,775.8 acres within the categories of Sensitive Resource Management (Zone 3) and Natural Resource Conservation (Zone 4). These two categories comprise approximately 85 percent of TVA public land on Norris Reservoir. The management of these parcels under this alternative would be guided by written unit management plans. These plans describe the type and intensity of wildlife and public use management that are anticipated over the long-term. These plans would be developed and reviewed with public input. There would be approximately seven such units ranging in size from 1500 to 4000 acres.</p> <p>Selection of Alternative B would have a beneficial effect on the terrestrial ecology on TVA public land because 85 percent of public land has been allocated to Sensitive Resource Management (Zone 3) and Natural Resource Conservation (Zone 4). These areas would be managed to enhance and protect natural resources.</p>
3.4.1 - 2	Significant Natural Areas	<p>All existing natural areas will continue to be managed in a manner consistent with no significant impacts. However, under the Forecast System there are no new areas identified as natural area candidates.</p>	<p>Because this alternative has a specific zone for Sensitive Resource Management (Zone 3) and allows for establishing new TVA natural areas and expansion of an existing small wild area, this is the preferred alternative. Eleven parcels meet the criteria for designation as new TVA habitat protection areas because of the presence of plant species with Tennessee state status. This alternative would have no significant impacts on TVA natural areas land.</p>

Table 2-8 COMPARISON OF POTENTIAL ENVIRONMENTAL EFFECTS BY ALTERNATIVE			
Section of EA	Resource Area	Alternative A	Alternative B
3.5	Wetlands/Riparian Ecology	<p>Wetland areas located on TVA public land surrounding Norris Reservoir are found in most of the Forecast System categories. Under this alternative, these areas would most likely remain unchanged, although some emergent wetlands may gradually mature to scrub-shrub wetlands, and aquatic beds will vary in size depending on yearly reservoir water levels. Even though the Forecast System may change on these areas, it would be subject to TVA NEPA review, and any action would be subject to Executive Order No. 11990 (Protection of Wetlands). Because of TVA's review process, selection of this alternative would have insignificant or no impacts on either of these resources.</p>	<p>Under this alternative, significant wetland areas (excluding Residential Access [Zone 7] areas) would be allocated to Sensitive Resource Management (Zone 3) or Natural Resource Conservation (Zone 4). Sensitive Resource Management (Zone 3) and Natural Resource Conservation (Zone 4) areas will be part of TVA's unit planning process.</p> <p>Selection of this alternative would provide a beneficial effect to wetland and riparian resources on TVA public land, and future permit reviews would ensure that any impacts to Residential Access (Zone 7) wetlands and riparian areas would be insignificant.</p>

Table 2-8 COMPARISON OF POTENTIAL ENVIRONMENTAL EFFECTS BY ALTERNATIVE			
Section of EA	Resource Area	Alternative A	Alternative B
3.6	Recreation	<p>A large portion of TVA's retained land is forecast for public and commercial recreation of 18,147 acres and 65 acres, respectively. Under the Forecast System this land could be used indefinitely for informal recreation activities, such as primitive camping, bank fishing, and hunting. However, this same land is subject to requests for developed recreation activities by other public agencies and private individuals as they might interpret the recreation and tourism demand. Requests for recreation development would be subject to environmental review and avoidance and/or mitigation of wetlands, threatened and endangered species, cultural resources, floodplains, and other elements of concern.</p>	<p>Under this alternative, 1744 acres are proposed for Developed Recreation (Zone 6). No additional land is allocated in Developed Recreation (Zone 6) for new commercial recreation development, but some land was allocated for expansion of mooring rights at existing marinas, where the appropriate rights exist. This allocation would give certain marinas the ability to request additional harbor area. The effects of expanded boat mooring capacity at existing areas would be expected to be minor and regionally insignificant.</p> <p>No additional land is allocated in Zone 6 for new commercial recreation development, but some land was allocated for expansion of mooring rights at existing marinas, where the appropriate rights exist. This allocation would give certain marinas the ability to request additional harbor area. The effects of expanded boat mooring capacity at existing areas would be expected to be minor and regionally insignificant.</p> <p>Under this alternative, 16,403 fewer acres would be subject to developed recreation proposals than there were under Alternative A. This means TVA would be considering developed recreation opportunities on significantly fewer acres than it would under Alternative A. This decrease is, however, in alignment with public desires expressed during scoping.</p>

Table 2-8 COMPARISON OF POTENTIAL ENVIRONMENTAL EFFECTS BY ALTERNATIVE			
Section of EA	Resource Area	Alternative A	Alternative B
3.7	Water Quality	Under this alternative, few parcels comprising small acreages of TVA property are designated specifically for protection of sensitive resources. Although protection of the natural reservoir shoreline may be undertaken as a secondary consideration on parcels designated for various uses, natural resource protection or conservation and the resulting impacts on reservoir water quality may not be a primary consideration when land use decisions are made.	This alternative would provide a better opportunity to protect water quality by identifying Sensitive Resource Management (Zone 3) or Natural Resource Conservation (Zone 4) as the designated use on some parcels now having more general designations. Any of the proposed uses of Sensitive Resource Management (Zone 3) or Natural Resource Conservation (Zone 4) land would allow for protection of water quality either due to less development or ensured use of management practices to minimize negative impacts. Allocation of other parcels for future developed recreation activities or other public access/use areas would allow TVA control over development to minimize adverse impacts.
3.8	Aquatic Ecology	Under this alternative, few parcels of TVA public land are designated specifically for protection of sensitive resources. Although protection of the natural reservoir shoreline may be undertaken as a secondary consideration on parcels of TVA public land designated for various uses, natural resource protection or conservation, and consequently, impacts to aquatic communities, may not be a primary consideration when land use decisions are made affecting those parcels. There could be more recreational and TVA operations development under this alternative. Consequently, more direct and indirect disturbance of aquatic habitat could occur. There could also be greater potential for sedimentation and nutrient runoff.	Adoption of this alternative would provide a better opportunity to protect or enhance aquatic habitats by identifying sensitive resource management or conservation as the designated use on some parcels now having general designations for other uses. Because aquatic habitat on Norris Reservoir can be considered only ifair overall, impacts to aquatic habitats would be a major consideration in future decisions affecting TVA public land under either alternative. However, this alternative better defines suitable activities for each parcel of TVA public land, and would likely result in fewer impacts.

Table 2-8 COMPARISON OF POTENTIAL ENVIRONMENTAL EFFECTS BY ALTERNATIVE			
Section of EA	Resource Area	Alternative A	Alternative B
3.9	Socioeconomic	<p>The Forecast System would continue to be used. This system currently classifies no land for industrial use, except for some small tracts used for commercial landing purposes. Any proposals for industrial use of these properties would receive appropriate environmental review when specific proposals are presented for TVA approval.</p>	<p>Under this alternative, no land would be classified for industrial/commercial use. However, as with similar municipal requests, TVA would consider requests for the use of suitable land in Project Operations (Zone 2), Natural Resource Conservation (Zone 4), and Developed Recreation (Zone 6) to provide minimum width corridors for reservoir access for the purpose of siting water intakes or other utility support to industry on backlying private land. The compatibility of the request with approved land use allocation (e.g., zone) would be considered, and each proposal would be subjected to the appropriate level of environmental review. Over 1700 acres would be zoned for Developed Recreation (Zone 6). All of this could be available for development requiring capital expenditures and maintenance. Construction of facilities and use of the property for such purposes would have some positive impact on income and employment in the area. Much of the use, however, depending on the type of development, is likely to be by residents of the local area or adjoining counties, limiting the impact.</p>
3.10	Navigation	<p>There would be no significant impact on navigation aids used by recreational boaters.</p>	<p>There would be no significant impact on navigation aids used by recreational boaters.</p>

Table 2-8 COMPARISON OF POTENTIAL ENVIRONMENTAL EFFECTS BY ALTERNATIVE			
Section of EA	Resource Area	Alternative A	Alternative B
3.11	Prime Farmland	With the exception of the parcels which are less than 10 acres, completion of Form AD 1006 would assist in evaluating the impacts of farmland conversion for all the remaining parcels. Because of the small amount of prime farmland in the project area, any of these developments would probably result in an impact rating score below 160 which requires that protection of farmland be considered.	Most of the land in the project area that is used for agriculture has been allocated for Sensitive Resource Management (Zone 3) and Natural Resource Conservation (Zone 4). There are only five parcels which are larger than 10 acres and have a significant percentage of the acreage in agriculture that are allocated for Developed Recreation (Zone 6) or Residential Access (Zone 7). The total agriculture land use in all these parcels is approximately 90 acres, and none contain prime farmland soils. The development of these parcels would have an insignificant impact on farmland.
3.12 Other Issues			
3.12.1	Floodplain	Under this alternative, the allocation, development, and/or management of properties would be made on a case-by-case basis, and evaluations would be done individually to ensure compliance with Executive Order No. 11988. Potential development would generally consist of water use facilities and other repetitive actions in the floodplain that could result in minor floodplain impacts.	Under this alternative, the potential adverse impacts to natural and beneficial floodplain values would be less than those under Alternative A, because a substantial portion of the available land would be allocated for resource management and conservation activities. Little development which could affect floodplain values would occur on Sensitive Resource Management (Zone 3) and Natural Resource Conservation (Zone 4) land. Under either alternative, impacts to floodplain values would be insignificant.

Table 2-8 COMPARISON OF POTENTIAL ENVIRONMENTAL EFFECTS BY ALTERNATIVE			
Section of EA	Resource Area	Alternative A	Alternative B
3.12.2	Noise	<p>The Forecast System land designations within which development of specific, new noise sources might occur are the reservoir operations - mainland (approximately 1347 acres), commercial recreation (approximately 97 acres), and industrial and minor commercial landings (approximately 24 acres). Reservoir Operations land includes residential development; commercial recreation (e.g., marinas); and industrial and commercial landings. Industrial and commercial landings comprise a range of potential manufacturing and processing operations as well as barge-loading and servicing facilities.</p> <p>Noise from single-family residences usually comes from recreational activities (boating and personal watercraft), landscaping, and transportation sources. These are common noises currently found around Norris reservoir. The level of these noises depends on the density of residences in an area. Multifamily residences, such as condominiums would generate the same type of noises but at higher levels in the local area. Large developments of single or multifamily housing would have the second level of community noise evaluation.</p>	<p>The allocations of committed land in this alternative are not exactly similar to those described in Alternative A. However, the amount of residential development (approximately 1744 acres) will not vary between the two alternatives. There is no land allocated to the Industrial/Commercial Development (Zone 5) in this alternative.</p>
3.12.3	Air Quality	<p>Insignificant effects on air quality.</p>	<p>Insignificant effects on air quality.</p>

APPENDIX A-1 PARCEL INFORMATION MATRIX

Appendix A-1 Parcel Information Matrix					
Parcel No.	Zone Allocation	# Acres	Reason for Allocation	Prior Forecast Designation	Map Panel
1	2	6.29	Existing TVA operations.	Forestry Research	1
2	3	10.54	Sensitive plant resources were found on this parcel.	Forestry Research	1
3	4	246.05	Capable and suitable for sustaining natural resource-based activities.	Forestry Research	1
4	6	13.24	This is the location of the Miller Island boat launching ramp and parking area.	Forestry Research	1
5	3	60.04	Capable and suitable for sustaining natural resource-based activities. A TVA Natural Area exists on this parcel to protect a vigorous population of Kentucky rosin-weed. TVA will work with the City of Norris to ensure the protection of this population.	Forestry Research	1
6	2	903.74	Existing TVA operations - Norris Dam Reservation. Three Natural Areas exists on this parcel.	Norris Dam Reservation	1
7	4	456.49	Capable and suitable for sustaining natural resource-based activities. A TVA Natural Area exists on this parcel.	Public Recreation	1
8	6	83.46	This parcel fronts Norris Dam State Park.	No Prior Forecast	1
9	3	5.65	Sensitive cultural, wetlands, and visual resources were found on this parcel.	Reservoir Operations - Islands	1
10	3	73.81	Sensitive cultural and plant resources were found. A TVA Natural Area exists on this parcel. on this parcel.	Public Recreation	1
11	6	2.19	This site is a TVA developed boat launching ramp and parking area.	Public Recreation	1
12	4	99.71	Capable and suitable for sustaining natural resource-based activities.	Public Recreation, Reservoir Operations	1
13	3	120.39	Sensitive visual, cultural, and plant resources were found on this parcel. A TVA Natural Area exists on this parcel.	Public Recreation	1

Appendix A-1 Parcel Information Matrix					
Parcel No.	Zone Allocation	# Acres	Reason for Allocation	Prior Forecast Designation	Map Panel
14	7	2.70	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	1
15	4	97.90	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	1
16	7	33.54	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	1
17	3	14.22	Sensitive visual, aquatic, and wetland resources were found on this parcel.	Reservoir Operations - Islands	1
18	6	6.02	This is an undeveloped TWRA access site.	Public Recreation	1
19	4	160.81	Capable and suitable for sustaining natural resource-based activities.	Public Recreation, Reservoir Operations	1
20	7	16.25	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	1
21	6	3.11	This is the site of Twin Cove Marina.	No Prior Forecast	1
22	4	2.15	Capable and suitable for sustaining natural resource-based activities.	No Prior Forecast	1
23	7	1.26	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	1
24	4	51.76	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	1
25	6	136.48	This parcel fronts Cove Lake State Park.	Public Recreation	1
26	6	4.51	This parcel has constructed ball fields and Caryville community buildings.	Reservoir Operations	1
27	4	17.25	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations	1
28	2	3.83	Existing TVA operations.	Reservoir Operations	1
29	7	9.75	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	1

Appendix A-1 Parcel Information Matrix					
Parcel No.	Zone Allocation	# Acres	Reason for Allocation	Prior Forecast Designation	Map Panel
30	7	4.81	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	1
31	6	5.29	This is an undeveloped TWRA access site.	No Prior Forecast	1
32	7	3.51	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	1
33	3	167.38	Sensitive plant resources were found on this parcel.	Public Recreation	1
34	4	385.46	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	1
35	6	3.69	This parcel fronts a TWRA access site. A TVA Natural Area exists on this parcel for the protection of population of Kentucky Rosin-weed occurring within an existing TWRA easement. TVA will work with the TDEC and TWRA to ensure protection of this population.	No Prior Forecast	1
36	3	18.96	Sensitive plant resources were found on this parcel. A TVA Natural Area exists on this parcel.	Public Recreation	1
37	6	5.22	This parcel fronts a TWRA access site.	Public Recreation	1
38	7	23.42	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	1
39	6	1.92	This parcel fronts a TWRA access site.	No Prior Forecast	1
40	4	119.87	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations	1
41	3	97.90	Sensitive visual resources were found on this parcel.	Public Recreation	1
42	7	21.09	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	1
43	6	2.88	This is an undeveloped TWRA access site.	No Prior Forecast	1

Appendix A-1 Parcel Information Matrix					
Parcel No.	Zone Allocation	# Acres	Reason for Allocation	Prior Forecast Designation	Map Panel
44	4	3.25	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations	1
45	7	15.15	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	1
46	4	114.52	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	1
47	6	1.82	This is an undeveloped TWRA access site.	Public Recreation	1
48	7	30.34	Private water use facilities and other residential shoreline alteration requests are considered.	Public Recreation	1
49	6	1.46	This is an undeveloped TWRA access site.	Public Recreation	1
50	6	5.66	Indian River Marina is located on this parcel.	Public Recreation	1
51	4	660.63	Capable and suitable for sustaining natural resource-based activities.	Public Recreation, Reservoir Operations - Islands	1
52	3	89.87	Sensitive plant resources were found on this parcel. A TVA Natural Area exists on this parcel.	Public Recreation	1
53	6	70.11	This parcel is currently being operated as Campbell County Park.	Public Recreation	1
54	7	0.76	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	1
55	4	12.84	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations	1
56	6	1.01	This parcel fronts a TWRA access site.	No Prior Forecast	1
57	4	6.36	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations	1
58	6	22.18	This parcel has a 30-year easement for ball field construction by the city of LaFollette.	Public Recreation	1

Appendix A-1 Parcel Information Matrix					
Parcel No.	Zone Allocation	# Acres	Reason for Allocation	Prior Forecast Designation	Map Panel
59	4	8.42	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations	1
60	4	45.13	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations	1
61	3	0.95	Sensitive wetland resources were found on this parcel.	Public Recreation	1
62	3	9.07	Sensitive visual, cultural, and plant resources were found on this parcel.	Public Recreation	1
63	4	62.06	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	1
64	3	1.96	Sensitive visual resources were found on this parcel.	Reservoir Operations - Islands	1
65	4	531.52	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	1
66	6	6.97	Whitman Hollow Dock is located on this parcel.	Public Recreation	1
67	4	177.22	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	1
68	3	150.57	Sensitive visual resources were found on this parcel.	No Prior Forecast	1
69	7	65.50	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	1
70	7	36.96	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	1
71	4	11.24	Capable and suitable for sustaining natural resource-based activities.	No Prior Forecast	1
72	4	588.39	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	1
73	3	27.48	Sensitive cultural, plant, and animal resources were found on this parcel.	Public Recreation	1
74	3	83.68	Sensitive cultural and plant resources were found on this parcel. A TVA Natural Area exists on this parcel.	Public Recreation	2

Appendix A-1 Parcel Information Matrix					
Parcel No.	Zone Allocation	# Acres	Reason for Allocation	Prior Forecast Designation	Map Panel
75	4	55.40	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	2
76	4	3.60	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	2
77	6	14.69	This property fronts land owned by the Blue Ridge Council of the Boy Scouts of America.	No Prior Forecast	2
78	3	154.20	Sensitive visual resources were found on this parcel.	Public Recreation	2
79	7	29.11	Private water use facilities and other residential shoreline alteration requests are considered.	Reservoir Operations	2
80	6	8.23	Rainbow Marina and Resort is located on this parcel.	Reservoir Operations	2
81	3	1.50	Sensitive visual and cultural resources were found on this parcel.	Reservoir Operations - Islands	2
82	3	107.58	Sensitive plant and wetland resources were found on this parcel.	Public Recreation	2
83	4	516.08	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	2
84	6	5.79	This parcel fronts land sold to the Ministers and Orphanage Camp for recreation purposes.	No Prior Forecast	2
85	7	1.16	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	2
86	7	31.42	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	2
87	6	6.88	ShanghaiResort is located on this parcel..	No Prior Forecast	2
88	7	55.21	Private water use facilities and other residential shoreline alteration requests are considered.	Commercial Recreation	2
89	4	97.33	Capable and suitable for sustaining natural resource-based activities.	No Prior Forecast	2

Appendix A-1 Parcel Information Matrix					
Parcel No.	Zone Allocation	# Acres	Reason for Allocation	Prior Forecast Designation	Map Panel
90	4	1.23	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations	2
91	6	6.85	This parcel fronts a TWRA access site.	No Prior Forecast	2
92	7	2.82	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	2
93	4	42.78	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	2
94	6	14.22	This is an undeveloped TWRA access site.	No Prior Forecast	2
95	4	16.77	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations	2
96	4	13.57	Capable and suitable for sustaining natural resource-based activities.	No Prior Forecast	2
97	6	0.64	This parcel fronts a TWRA access site.	No Prior Forecast	2
98	7	19.47	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	2
99	6	6.38	This is an undeveloped TWRA access site.	No Prior Forecast	2
100	6	5.89	This parcel fronts a TWRA access site.	No Prior Forecast	2
101	4	1.17	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations	2
102	4	4.93	Capable and suitable for sustaining natural resource-based activities.	No Forecast	2
103	4	1551.68	Capable and suitable for sustaining natural resource-based activities.	Public Recreation, Reservoir Operations, Reservoir Operations - Islands, Wildlife Management	1
104	4	6.53	Capable and suitable for sustaining natural resource-based activities.	No Prior Forecast	2

Appendix A-1 Parcel Information Matrix					
Parcel No.	Zone Allocation	# Acres	Reason for Allocation	Prior Forecast Designation	Map Panel
105	7	72.45	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	2
106	4	0.59	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations	1
107	6	3.04	This parcel fronts a TWRA access site.	Reservoir Operations	1
108	7	8.75	Private water use facilities and other residential shoreline alteration requests are considered.	Reservoir Operations	1
109	6	19.22	Powell Valley Resort is located at this site.	Reservoir Operations	1
110	4	48.46	Capable and suitable for sustaining natural resource-based activities.	Wildlife Management	1
111	4	0.18	Capable and suitable for sustaining natural resource-based activities.	No Prior Forecast	1
112	6	5.68	This parcel fronts a TWRA access site.	Public Recreation	1
113	4	3.07	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations - Islands	1
114	4	8.69	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations	1
115	6	2.49	This is an undeveloped TWRA access site.	Public Recreation	1
116	4	5.15	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	1
117	7	9.71	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	1
118	6	6.59	Flat Hollow Marina is located at this site.	No Prior Forecast	1
119	7	7.50	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	1
120	4	15.76	Capable and suitable for sustaining natural resource-based activities.	No Prior Forecast	1

Appendix A-1 Parcel Information Matrix					
Parcel No.	Zone Allocation	# Acres	Reason for Allocation	Prior Forecast Designation	Map Panel
121	4	2147.02	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	2
122	3	57.37	A TVA Small Wild Area exists on this parcel.	TVA Small Wild Area	3
123	3	145.11	A TVA Small Wild Area exists on this parcel.	Public Recreation, TVA Small Wild Area	3
124	6	7.40	Blue Springs Boat Dock is located on this parcel.	No Prior Forecast	2
125	7	8.84	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	2
126	7	4.34	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	3
127	6	9.43	Union County Boat Dock is located on this parcel.	No Prior Forecast	3
128	3	2.41	Sensitive wetland resources were found on this parcel.	No Prior Forecast	3
129	7	12.59	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	3
130	4	6.65	Capable and suitable for sustaining natural resource-based activities.	No Prior Forecast	3
131	4	491.13	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	3
132	3	167.95	Sensitive visual resources were found on this parcel.	Public Recreation	3
133	4	11.08	Capable and suitable for sustaining natural resource-based activities.	No Prior Forecast	3
134	4	8.54	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations	3
135	4	8.19	Capable and suitable for sustaining natural resource-based activities.	No Prior Forecast	3
136	4	6.25	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations	3

Appendix A-1 Parcel Information Matrix					
Parcel No.	Zone Allocation	# Acres	Reason for Allocation	Prior Forecast Designation	Map Panel
137	3	62.46	Sensitive visual resources were found on this parcel.	Power Transmission System	3
138	4	1.09	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations	3
139	7	14.30	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	3
140	6	0.52	Greasy Hollow Boat Dock is located on this parcel.	No Prior Forecast	3
141	4	109.32	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations	3
142	4	6.29	Capable and suitable for sustaining natural resource-based activities.	No Prior Forecast	3
143	4	145.19	Capable and suitable for sustaining natural resource-based activities.	Power Transmission System	3
144	6	4.10	This parcel fronts a developed TWRA access site.	Reservoir Operations	3
145	3	67.71	Sensitive visual, plant, and animal resources were found on this parcel. A TVA Natural Area exists on this parcel.	Public Recreation, Reservoir Operations	3
146	3	216.10	Sensitive visual and plant resources were found on this parcel.	Public Recreation	3
147	4	60.70	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	3
148	4	220.43	Capable and suitable for sustaining natural resource-based activities.	Power Transmission System	3
149	6	19.99	This parcel fronts a TWRA access site.	No Prior Forecast	3
150	4	716.31	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	3
151	3	104.56	Sensitive visual resources were found on this parcel.	Power Transmission System	3
152	6	7.45	This is an undeveloped TWRA access site.	No Prior Forecast	3

Appendix A-1 Parcel Information Matrix					
Parcel No.	Zone Allocation	# Acres	Reason for Allocation	Prior Forecast Designation	Map Panel
153	4	265.57	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	3
154	3	16.36	Sensitive plant resources were found on this parcel.	No Prior Forecast	3
155	4	8.73	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations	3
156	4	53.45	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations	3
157	3	455.74	Sensitive visual resources were found on this parcel.	Public Recreation	3
158	7	23.30	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	3
159	6	25.39	A portion of this parcel will be licensed to TWRA for boat launching ramp and parking lot.	Reservoir Operations	3
160	4	5.64	Capable and suitable for sustaining natural resource-based activities.	No Prior Forecast	3
161	7	30.99	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	3
162	4	662.29	Capable and suitable for sustaining natural resource-based activities.	No Prior Forecast	2
163	4	97.32	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations - Islands	2
164	4	2.70	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations - Islands	2
165	4	22.81	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations	3
166	3	12.77	Sensitive wetland resources were found on this parcel.	Public Recreation	3
167	4	25.82	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	3
168	4	43.23	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations - Islands	3

Appendix A-1 Parcel Information Matrix					
Parcel No.	Zone Allocation	# Acres	Reason for Allocation	Prior Forecast Designation	Map Panel
169	4	0.83	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations - Islands	2
170	4	43.82	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations - Islands	2
171	7	243.46	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	3
172	4	328.49	Capable and suitable for sustaining natural resource-based activities.	Public Recreation, Reservoir Operations	3
173	3	16.73	Sensitive cultural resources were found on this parcel.	Reservoir Operations	3
174	4	120.74	Capable and suitable for sustaining natural resource-based activities.	Public Recreation, Reservoir Operations	3
175	2	4.02	Existing TVA operations.	Public Recreation	3
176	6	56.27	Union County, Tennessee, has a 30-year recreation easement on this parcel.	Forestry Research, Public Recreation, Reservoir Operations	3
177	6	11.90	Lakeview Boat Dock is located on this parcel.	Reservoir Operations	3
178	6	17.45	This is an undeveloped TWRA access site.	No Prior Forecast	3
179	7	3.45	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	3
180	3	9.80	Sensitive cultural resources were found on this parcel.	Public Recreation	3
181	3	187.13	Sensitive visual, cultural, and plant resources were found on this parcel. A TVA Natural Area exists on this parcel.	Public Recreation, Reservoir Operations - Islands	3
182	3	161.87	Sensitive cultural and plant resources were found on this parcel. A TVA Natural Area exists on this parcel.	Reservoir Operations - Islands	3
183	6	16.92	This parcel fronts a TWRA access site.	No Prior Forecast	3

Appendix A-1 Parcel Information Matrix					
Parcel No.	Zone Allocation	# Acres	Reason for Allocation	Prior Forecast Designation	Map Panel
184	7	2.10	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	3
185	4	351.12	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	3
186	6	8.38	This parcel fronts a TWRA access site.	Public Recreation	3
187	3	13.74	Sensitive cultural, plant, and wetland resources were found on this parcel.	Public Recreation	3
188	6	81.59	This parcel has been identified as a new developed recreation area.	Public Recreation	3
189	4	218.65	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	3
190	6	58.56	Cedar Grove Marina and campground is located on this parcel.	Public Recreation, Reservoir Operations	3
191	4	0.77	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations	3
192	2	0.80	Existing TVA operations.	No Prior Forecast	3
193	7	39.38	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	3
194	4	282.84	Capable and suitable for sustaining natural resource-based activities.	Public Recreation, Reservoir Operations - Islands	3
195	6	10.20	Straight Creek Boat Dock is located on this parcel.	Public Recreation	4
196	6	10.39	This parcel fronts a TWRA access site.	No Prior Forecast	4
197	4	15.31	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations	4
198	4	5.38	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	4
199	3	59.45	Sensitive cultural and visual resources were found on this parcel.	Public Recreation	4
200	4	18.12	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	4

Appendix A-1 Parcel Information Matrix					
Parcel No.	Zone Allocation	# Acres	Reason for Allocation	Prior Forecast Designation	Map Panel
201	6	6.57	This parcel fronts a TWRA access site.	No Prior Forecast	4
202	4	406.69	Capable and suitable for sustaining natural resource-based activities.	Public Recreation, Reservoir Operations	4
203	3	121.97	Sensitive visual resources were found on this parcel.	Public Recreation	4
204	7	183.72	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	4
205	4	176.49	Capable and suitable for sustaining natural resource-based activities.	Public Recreation, Reservoir Operations	4
206	6	3.99	This parcel fronts a TWRA access site.	No Prior Forecast	4
207	3	13.12	Sensitive visual resources were found on this parcel.	Reservoir Operations - Islands	4
208	4	59.41	Capable and suitable for sustaining natural resource-based activities.	Public Recreation, Steam Plant Study	4
209	6	65.38	Claiborne County has a 30-year easement on this parcel for recreation. Part of this parcel is also transferred to TWRA and Lone Mountain Boat Dock is located on this parcel.	Reservoir Operations	4
210	4	1.01	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations	4
211	4	40.26	Capable and suitable for sustaining natural resource-based activities.	Steam Plant Study	4
212	3	345.62	Sensitive plant resources were found on this parcel.	Steam Plant Study	4
213	4	140.01	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	4
214	3	8.82	Sensitive cultural resources were found on this parcel.	Public Recreation	4
215	4	14.21	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations	4
216	3	194.87	Sensitive cultural, animal, and wetland resources were found on this parcel.	Public Recreation	4

Appendix A-1 Parcel Information Matrix					
Parcel No.	Zone Allocation	# Acres	Reason for Allocation	Prior Forecast Designation	Map Panel
217	6	11.65	This parcel fronts a TWRA access site.	Public Recreation	4
218	4	33.92	Capable and suitable for sustaining natural resource-based activities.	Public Recreation, Reservoir Operations	4
219	3	20.87	Sensitive cultural and wetland resources were found on this parcel.	Public Recreation	4
220	6	0.75	This parcel fronts a TWRA access site.	No Prior Forecast	4
221	4	0.71	Capable and suitable for sustaining natural resource-based activities.	No Prior Forecast	4
222	4	22.59	Capable and suitable for sustaining natural resource-based activities.	No Prior Forecast	4
223	3	83.85	Sensitive wetland resources were found on this parcel.	Reservoir Operations	4
224	4	6.79	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations	4
225	3	75.34	A TVA Small Wild Area exists on this parcel.	Reservoir Operations, TVA Small Wild Area	4
226	4	735.45	Capable and suitable for sustaining natural resource-based activities.	Forestry Research, Public Recreation, Reservoir Operations, Steam Plant Study	4
227	3	18.34	Sensitive visual resources were found on this parcel.	Steam Plant Study	4
228	4	83.95	Capable and suitable for sustaining natural resource-based activities.	Commercial Landing, Steam Plant Study	4
229	3	45.53	Sensitive visual resources were found on this parcel.	Commercial Landing, Public Recreation, Steam Plant Study	4
230	3	85.34	Sensitive visual and animal resources were found on this parcel.	Public Recreation, Reservoir Operations	4
231	3	63.97	Sensitive visual resources were found on this parcel.	Public Recreation	4
232	4	119.44	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	4
233	4	15.81	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	4

Appendix A-1 Parcel Information Matrix					
Parcel No.	Zone Allocation	# Acres	Reason for Allocation	Prior Forecast Designation	Map Panel
234	6	8.94	This parcel fronts a TWRA access site.	Public Recreation, Reservoir Operations	4
235	3	0.88	Sensitive aquatic animal resources were found on the parcel.	No Prior Forecast	4
236	7	5.39	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	4
237	4	161.60	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	4
238	4	0.48	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations	4
239	3	45.66	Sensitive wetland resources were found on this parcel.	Reservoir Operations	4
240	7	1.36	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	4
241	6	7.04	This parcel fronts a TWRA access site.	No Prior Forecast	4
242	4	1.05	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations	4
243	4	38.27	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	4
244	4	9.84	Capable and suitable for sustaining natural resource-based activities.	No Prior Forecast	4
245	3	49.57	Sensitive visual resources were found on this parcel.	Public Recreation	4
246	7	25.68	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	4
247	4	19.10	Capable and suitable for sustaining natural resource-based activities.	No Prior Forecast	4
248	7	38.27	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	4
249	4	4.51	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations	4

Appendix A-1 Parcel Information Matrix					
Parcel No.	Zone Allocation	# Acres	Reason for Allocation	Prior Forecast Designation	Map Panel
250	4	344.26	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	4
251	3	91.34	Sensitive visual resources were found on this parcel.	Public Recreation	4
252	7	5.52	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	4
253	4	264.16	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	4
254	3	156.30	Sensitive visual, cultural, plant, and wetland resources were found on this parcel.	Public Recreation	4
255	6	1.75	Grainger County, Tennessee, has a license agreement on this parcel for recreation.	Public Recreation	4
256	6	2.70	This parcel fronts a TWRA access site.	Public Recreation	4
257	4	355.98	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	4
258	3	57.74	Sensitive visual resources were found on this parcel.	Public Recreation, Reservoir Operations - Islands	4
259	6	5.84	This parcel fronts a TWRA access site.	No Prior Forecast	4
260	7	26.48	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	4
261	6	11.94	This parcel fronts a TWRA access site.	No Prior Forecast	4
262	7	72.36	Private water use facilities and other residential shoreline alteration requests are considered.	Reservoir Operations	4
263	4	4.54	Capable and suitable for sustaining natural resource-based activities.	No Prior Forecast	4
264	3	51.70	Sensitive visual resources were found on this parcel.	Power Transmission System	4

Appendix A-1 Parcel Information Matrix					
Parcel No.	Zone Allocation	# Acres	Reason for Allocation	Prior Forecast Designation	Map Panel
265	4	24.06	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	4
266	3	37.91	Sensitive visual resources were found on this parcel.	Public Recreation	4
267	4	264.89	Capable and suitable for sustaining natural resource-based activities.	Public Recreation, Reservoir Operations - Islands	3
268	7	22.65	Private water use facilities and other residential shoreline alteration requests are considered.	Reservoir Operations	3
269	4	49.27	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations - Islands	3
270	6	20.55	This parcel fronts a TWRA access site.	No Prior Forecast	3
271	4	0.53	Capable and suitable for sustaining natural resource-based activities.	No Prior Forecast	3
272	4	13.47	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations	3
273	7	7.61	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	3
274	4	125.67	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	3
275	6	45.62	Pennington's 33 Bridge Marina is located on this parcel.	Public Recreation, Reservoir Operations - Islands	3
276	3	12.57	A TVA Natural Area exists on this parcel.	TVA Small Wild Area	3
277	4	224.22	Capable and suitable for sustaining natural resource-based activities.	Forestry Research, Public Recreation, Reservoir Operations - Islands	3
278	7	27.68	Private water use facilities and other residential shoreline alteration requests are considered.	Reservoir Operations	3
279	3	8.48	Sensitive visual resources were found on this parcel.	Reservoir Operations - Islands	3
280	4	14.34	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	3

Appendix A-1 Parcel Information Matrix					
Parcel No.	Zone Allocation	# Acres	Reason for Allocation	Prior Forecast Designation	Map Panel
281	7	10.87	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	3
282	4	1.10	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations - Islands	3
283	6	6.79	This parcel fronts a TWRA access site.	No Prior Forecast	3
284	7	0.44	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	3
285	4	191.01	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	3
286	4	61.46	Capable and suitable for sustaining natural resource-based activities.	Public Recreation, Reservoir Operations	3
287	4	518.38	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations - Islands	3
288	7	23.57	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	3
289	4	75.83	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations - Islands	3
290	4	1.43	Capable and suitable for sustaining natural resource-based activities.	No Prior Forecast	3
291	7	8.42	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	2
292	3	119.68	Sensitive visual resources were found on this parcel.	Reservoir Operations - Islands	2
293	6	10.50	This parcel is the site of Hickory Star Marina.	Reservoir Operations	2
294	6	283.09	This parcel fronts Big Ridge State Park. There is also a TWRA access site located on this parcel.	No Prior Forecast	2
295	4	5.50	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations - Islands	2

Appendix A-1 Parcel Information Matrix					
Parcel No.	Zone Allocation	# Acres	Reason for Allocation	Prior Forecast Designation	Map Panel
296	4	56.89	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations - Islands	2
297	6	132.62	This parcel fronts Tanasi Council Girl Scout Camp.	No Prior Forecast	2
298	7	6.76	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	2
299	4	9.02	Capable and suitable for sustaining natural resource-based activities.	No Prior Forecast	2
300	7	26.48	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	2
301	6	8.73	Andersonville Boat Dock is located on this parcel..	No Prior Forecast	2
302	2	15.82	Existing TVA operations.	Reservoir Operations	2
303	4	186.50	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	2
304	7	19.65	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	2
305	6	7.03	This is an undeveloped TWRA access site.	No Prior Forecast	2
306	4	1280.78	Capable and suitable for sustaining natural resource-based activities.	Public Recreation	2
307	6	204.59	This parcel is currently operated as TVA Loyston Point Public Use Area.	Public Recreation	2
308	3	176.73	A TVA Natural Area exists on this parcel.	Public Recreation, TVA Small Wild Area	2
309	4	8.07	Capable and suitable for sustaining natural resource-based activities.	Reservoir Operations - Islands	2
310	6	24.15	Stardust Resort and Marina is located on this parcel.	No Prior Forecast	2
311	6	38.13	Anderson County Park is located on this parcel.	No Prior Forecast	2

Appendix A-1 Parcel Information Matrix					
Parcel No.	Zone Allocation	# Acres	Reason for Allocation	Prior Forecast Designation	Map Panel
312	7	6.25	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	2
313	7	68.01	Private water use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast	2
314	6	0.59	This parcel fronts a TWRA access site.	No Prior Forecast	2
315	6	5.29	Sequoyah Lodge and Marina, Inc. is located on this parcel.	No Prior Forecast	2

Metric Conversion

<u>U.S. Unit</u>	<u>Metric Equivalent</u>
1 acre	0.405 hectares, 4,047 sq. meters
1 foot	30.48 centimeters
1 inch	2.54 centimeters
1 mile	1.609 kilometers
1 ton	0.907 metric tons
1 yard	0.9144 meters
1 square yard	0.093 square meters
1 cubic yard	0.765
0.39 inches	1 centimeter
2.47 acres	1 hectare
0.62 miles	1 kilometer
39.37 inches	1 meter
1.102 tons	1 metric ton
1.196 square yards	1 square meter
1.30 cubic yards	1 cubic meter

