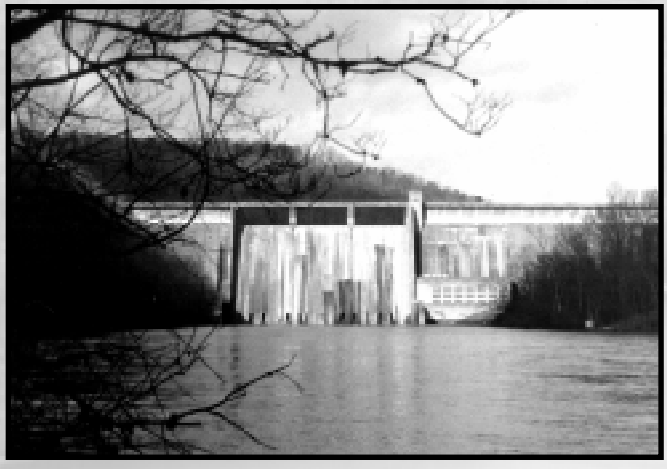
Draft Environmental Assessment

NORRIS RESERVOIR LAND MANAGEMENT PLAN



Public Summary

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TVA

NORRIS RESERVOIR LAND MANAGEMENT PLAN

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

Responsible Federal Agency: Tennessee Valley Authority (TVA)

Abstract: TVA has prepared a Draft Environmental Assessment (EA) and a TVA comprehensive Land Management Plan (Plan) for the 27,859 acres (809.2 shoreline miles) of TVA land above the summer operating range (1020-foot elevation) on Norris Reservoir. The EA documents the analysis of alternative uses of the TVA land and their influence on the surrounding environment. The Plan provides a clear statement of how TVA would manage its land in the future, based on scientific, cultural, and economic principles. This Plan takes into account the comments received from the general public. The Plan prepared for Norris Reservoir is intended to guide TVA resource and property management decisions for the next 10 years. It identifies the most suitable range of uses for 315 parcels of TVA public land. TVA considered two alternatives for making land use decisions for the TVA land around Norris Reservoir. Under the No Action Alternative (Alternative A) TVA would continue to use the existing land use plan to manage TVA land on Norris Reservoir. Under the Allocation Alternative (Alternative B), an updated and revised Norris Reservoir Land Management Plan is proposed.

The full Environmental Assessment and Norris Reservoir Land Management Plan can be viewed at http://www.tva.gov/environment/reports/norris on the Internet.

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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 lands along Norris Reservoir. The EA and this summary describe the alternatives and their effects on key resources. This document summaries:

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

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APPENDIX

TABLES

Acronyms and Abbreviations

APE	Area of Potential Effect
ARPA	Archaeological Resources Protection Act
Board	Tennessee Valley Authority Board of Directors
cfs	cubic feet per second
CPWT	Clinch-Powell Watershed Team
CRM	Clinch River mile
EA	Environmental Assessment
EPA	U.S. Environmental Protection Agency
Forecast	Forecast System
HUCs	hydrologic units codes
Loyston	Loyston Point Recreation Area
msc	maximum sea level
msc	maximum shoreline contour
NHPA	National Historic Preservation Act
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. 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 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.

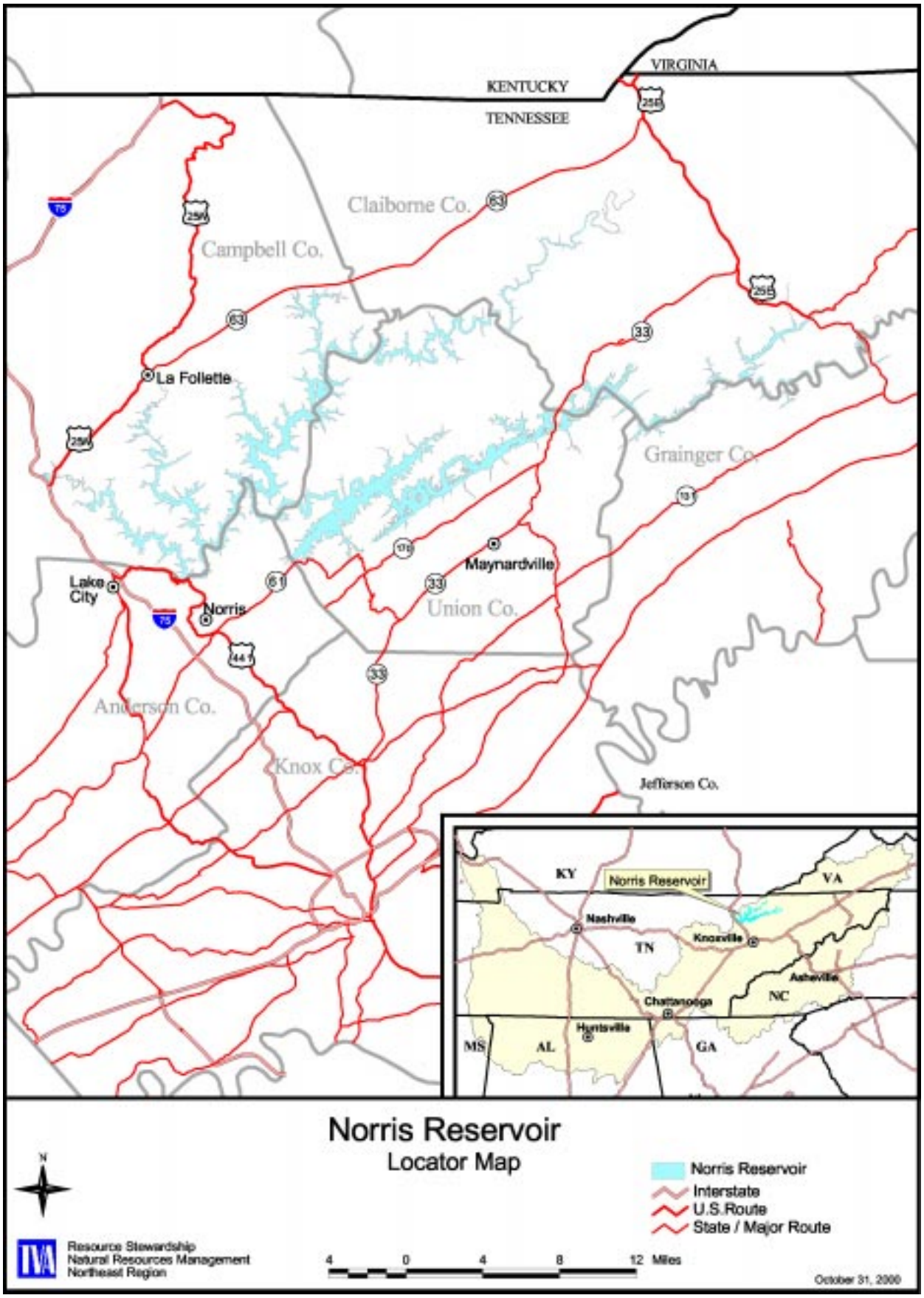
Reservoir land management plans have been completed and implemented for seven mainstream and three tributary reservoirs. The purpose of this Environmental Assessment (EA) is to examine the impacts of possible alternative uses of TVA's land on Norris Reservoir.

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 1,860-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.

Figure 1-1 Vicinity Map of Norris Reservoir



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 2,912-square-mile watershed from portions of east Tennessee and southwest Virginia. This watershed accounts for roughly 7 percent on the entire Tennessee River drainage basin.

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 (TVA, 1940).

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 developments (including Norris Dam, Cove Lake, and Big Ridge State Parks). TVA also acquired the right to flood (flowage easement rights) over 4,000 acres of privately-held land to allow flexibility of reservoir operations. The agency retained landrights below the 1044-foot elevation (and in some cases below the 1052-foot elevation). Subsequent transfers of land for economic, industrial, residential, or public recreation development have resulted in a current net balance of 27,927 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 a new 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 1-800 number is still available for anyone to call and request to be added to the mailing list. Mailings were also sent to approximately 3,000 citizens catalogued on an existing list

based upon permits issued and stakeholder contacts notifying them of the planning process and how to become 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 and told about the Norris Plan, how to become involved, and 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 know 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 comments about their valued and preferred uses of TVA public land. They were also asked about the watershed surrounding the 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 (58 percent) used Norris Reservoir and surrounding TVA 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 providing 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 clean-up 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 Reservoir Watershed by stabilizing streambanks, working with farmers to minimize agricultural impacts, clean up litter and dump sites, provide educational opportunities, etc.

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, 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
- Historic Resources
- 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

Following public comment on the DEIS and agency response to those comments, a Final Environmental Impact Statement and Record of Decision will be issued by TVA. The Plan

will be presented to the TVA Board of Directors for approval. If approved, the Plan will be adopted as the agency's policy to provide for long-term stewardship and accomplishment of TVA responsibilities under the 1933 TVA Act.

1.4. Necessary Federal Permits or Licenses

No federal permits are required to develop a reservoir land management plan. To the extent possible, site-specific information on reservoir resources has been characterized in the EA and potential impacts on these resources were considered in making land use allocations. 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 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 reservoir land Forecast System to manage public land. Under the Norris Plan 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 federally-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 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 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 the 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 with the adoption of Shoreline Management Policy (see Section 1.2), 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	*Land managed to protect the integrity of the dam and associated switchyards and power lines* – 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.
Public Recreation	*Land set aside for use by the general public for recreational activities* – 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.
Reservoir Operations (*Islands)*	*Islands in the mainstream or tributaries used for informal, dispersed recreation and natural resource management projects.*
Reservoir Operations (*Mainland)*	*Generally, narrow bands of shoreland retained by TVA for flood control and other reservoir operations purposes* – 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.
Power Transmission and Power Needs	*Land reserved for future power development or to maintain the integrity of existing power lines* – Interim wildlife enhancement projects are often implemented on the land.
Commercial Recreation	*Land that TVA has reserved primarily for commercial use* – This use includes, but is not limited to, marinas and campgrounds. Informal, dispersed recreational activities often occur on this land as an interim use.

TABLE 2-1 FORECAST SYSTEM DESIGNATION DEFINITIONS	
Forecast System Designation	**Definition**
Minor Commercial Landings	*Tracts allocated for minor commercial landings available for public or private development of small-scale barge facilities* – 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 will generally be no significant impact on adjacent land uses.
Forestry Research	*Tracts used as on-going sites for monitoring tree growth and stress.* Also, trees are used in these areas to produce reliable seed sources.
Steam Plant Study	*Tracts set aside to potentially serve as a future steam plant location.* The actual construction of a steam plant will depend on energy demands and cost-benefit considerations.
TVA Hydraulic and Silt Laboratories	*Tracts designated to study the effectiveness of silt retention devices and monitor silt accumulation within a reservoir system.*
TVA Small Wild Area	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.
Wildlife Management	Land managed for the enhancement of natural resources for human use and appreciation. Management of resources is the primary focus of this designation. Management strategies includes 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.

Acreage for each Forecast System designation is summarized in Table 2-2

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	584.34
Public Recreation	18,049.59
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	3634.51
TOTAL	**27,926.76**

2.2.2. Alternative B – Allocation Alternative

Alternative B, the proposed Norris Plan, was developed using information obtained from the public, existing and newly collected field data both on land conditions and resources, and technical knowledge from TVA staff. In determining proposed allocations for 315 parcels of 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 Zone 1 (Non-TVA public land), Zone 2 (Project Operations), or Zone 7 (Residential Access). Also, there was no land allocated to Zone 5 (Industrial/ Commercial Development). The planned land use zones are described in Table 2-3 below.

TABLE 2-3 PLANNED LAND USE ZONE DEFINITIONS

Zone		Definition
1	**Non-TVA Shoreland**	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 shoreline includes: • *Flowage easement land*—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 26a permitting requirements, the SMP guidelines discussed in the definition of 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. • *Privately-owned reservoir land*—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 26a approvals for sturctures.
2	**Project Operations**	All TVA public land currently used for TVA operations and public works projects includes: • ***Land adjacent to established navigation operations***—Locks, lock operations and maintenance facilities, and the navigation work boat dock and bases. • ***Land used for TVA power projects operations***—Generation facilities, switchyards, and transmission facilities and rights-of-way. • ***Dam reservation land—***Areas used for developed and dispersed recreation, maintenance facilities, Watershed Team offices, research areas, and visitor centers. • ***Navigation safety harbors/landings—***Areas used for tying off commercial barge tows and recreational boats during adverse weather conditions or equipment malfunctions.

TABLE 2-3 PLANNED LAND USE ZONE DEFINITIONS		
Zone		**Definition**
		• ***Navigation day-boards and beacons—***Areas with structures placed on the shoreline to facilitate navigation. • ***Public works projects***—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.) • ***Land planned for any of the above uses in the future.***
3	**Sensitive Resource Management**	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 focus is protecting and enhancing the sensitive resource the site supports. Areas included are: • TVA-designated sites with potentially ***significant archaeological resources***. • TVA public land with ***sites/***structures ***listed on or eligible for listing on the National Register of Historic Places***. • ***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 streambanks 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 Zone 3 when identified sensitive resources are present.

TABLE 2-3 PLANNED LAND USE ZONE DEFINITIONS		
Zone		**Definition**
		• ***Significant scenic areas***—These are areas designated for visual protection because of their unique vistas or particularly scenic qualities. • ***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	**Natural Resource Conservation**	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, wildlife observation, and camping on undeveloped sites. Areas included are: • ***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, bird watching, 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 streambanks 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 Zone 4 unless sensitive resources are present (see Zone 3).
5	**Industrial/ Commercial* Development**	Land managed for economic development purposes. Areas included are: • ***TVA public land under easement, lease, or license to other agencies/individuals*** for industrial or commercial purposes. • ***TVA public land fronting land owned by other agencies/individuals*** for industrial or commercial purposes. • ***Sites planned for future industrial use.*** Types of development that can occur on this land are: • ***Business parks***—TVA waterfront land which supports industrial or commercial development.

TABLE 2-3 PLANNED LAND USE ZONE DEFINITIONS		
Zone		**Definition**
		• ***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	**Recreation**	All reservoir land managed for concentrated, active recreation activities that require capital improvement and maintenance, including: • ***TVA public land under easement, lease, or license to other agencies/individuals*** for recreational purposes. • ***TVA public land fronting land owned by other agencies/individuals*** for recreational purposes. • ***TVA public land developed for recreational purposes,*** such as campgrounds and day use areas. • ***Land planned for any of the above uses in the future.*** Types of development that can occur on this land are: • ***Commercial recreation***, e.g., commercial marinas, resorts, campgrounds, and golf courses. • ***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	**Residential Access**	TVA-owned land where 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 Plan, residential access would be divided into three categories based on the presence and potential impacts to sensitive ecological resources such as endangered or threatened species, wetlands, and archaeological and historic sites. The categories are(1) Shoreline Protection where no residential alternations would be permitted; (2) Residential Shoreline Mitigation, where special analysis

TABLE 2-3 PLANNED LAND USE ZONE DEFINITIONS		
Zone		**Definition**
		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: • ***Residential water use facilities***, e.g., docks, piers, launching ramps/driveways, marine railways, boathouses, enclosed storage space, and 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 6,696.70 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 - 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 proposed allocations were used to prepare the draft Norris Plan. The draft Norris Plan contains an explanation of the planning process, an overview of the reservoir's history and development. The acreage totals for each of the six zones is summarized in Table 2-5.

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 - Recreation	1,743.90
7 - Residential Access	1,472.55
Total	**27,926.76**

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

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 pastureland, and shoreline development. There are no actual towns or industrial facilities visible from the 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. The 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 have 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 setting 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 publicland 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, and cemeteries and Norris Dam), on or adjacent to TVA parcels are classified as historic by definition under NRHP criteria. All site 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. An is. Many of the historic sites are along the access roadways leading to TVA public land.

3.3. Threatened and Endangered Species

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 federally-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 3,214 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 federally-listed plant species were found. Twelve Tennessee state-listed plant species (39 occurrences) were found during this survey.

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 forest, upland and riparian hardwood forest, wetland, 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-two sensitive terrestrial animal species were identified from the database. Four of these terrestrial animals are federally protected under the ESA and the remaining 18 are protected by the state of Tennessee. Protected terrestrial animals and sensitive ecological areas which were observed during the 1999 parcel surveys. Four 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 102 terrestrial animal species were observed or detected during field activities on surveyed parcels. Also, 82 caves and 4 heron colonies were noted from existing records.

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 indicates that most of these species are unlikely to occur in the types of habitats present in the reservoir pool. Some state- and federal-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

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 land is within the oak-hickory forestland resource region, as described by the U.S. Forest Service (USDA Forest Service, 1969). 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 wetland/riparian areas. Approximately 22,262 acres has 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.

Significant Natural Areas

There are eight significant ecological sites or managed areas on Norris Reservoir. Five of these areas (Beech Island, Comby Ridge, Hemlock Bluff, Monks Corner, and River Bluff) are TVA Small Wild Areas and are managed for low impact public use, such as hiking. Two areas (Norris Dam Cave and Stiners Woods) are TVA Habitat Protection Areas and are 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 in size, 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 (Amundsen, 1994).

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 their overall importance. 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 three state parks, two county parks, twelve paved public ramps, and TVA's Loyston Point Recreation Area 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 two commercial campgrounds.

Informal and dispersed recreation activities, such as primitive camping, bank fishing, hunting, and wildlife observation, occur on the 23,694.9 allocated to Sensitive Resource Management and Natural Resource Conservation. Most of these acres are accessed by dirt and gravel roads; however, approximately 1,000 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 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 (DO) 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 cfs) are provided in the Clinch River below Norris Dam by a reregulating weir constructed in 1984 (TVA, 1996).

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 HUCs 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 Index of Biotic Integrity (IBI) 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 (TDEC, 1998).

3.8. Aquatic Ecology

Aquatic habitat in the littoral (near shore) zone is greatly influenced by underwater topography and backlying 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 the 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 (Hickman, 1999). 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 1999 population of the five counties in the Norris Reservoir area is estimated by the U.S. Bureau of the Census to be 176,020, a 9.8 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.

Labor Force and Unemployment - In 1999 the civilian labor force of the area was 84,590. Of these, 3,890 were unemployed, for an unemployment rate of 4.6 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 1997 the Norris Reservoir area had over 86,000.0 jobs, an increase of almost 18 percent over the level in 1989. This represents a faster rate of growth than in the Nation, but a slightly 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 39.8 percent from 1989 to 1997. This was slightly faster than the national growth rate of 39.3 percent, but below the state rate of 47.0 percent.

Environmental Justice - Minority population in the Norris Reservoir area was 3.9 percent of the total population in 1998. This well below the state average of 18.7 percent and the national average of 27.7 percent. None of the five counties has a minority population share close to the state and national averages, with Anderson the highest at 7.1 percent. Overall, the poverty level in the area, at 18.0 percent, is higher than the state, at 14.7 percent, and the Nation at 13.8 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 the 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. Prime farmland, as defined by U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops. The conversion of farmland and prime farmland soils to industrial and other nonagricultural uses essentially precludes farming the land in the foreseeable future.

3.12. Other Issues

3.12.1. Floodplains

The 100-year floodplain on Norris Reservoir is the area inundated by the 100-year flood. 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-foot 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-foot msl and the 500-year flood elevation is

subject to the requirements of the TVA Flood Control Storage Loss Guideline (TVA, 1999c). 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 public lands and would protect current resource functions and values. Impacts of either alternative (summarized in Table 3-2) 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
Reservation 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	18,049.59
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				584.34
No Forecast	0.80	53.52	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	**27,926.76**

→*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 as 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 considerable 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 (Appendix A-1). 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 (BMP) 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 (TVA, 1994). Timber harvests will be less than 20 acres in size. Visual and water quality enhancement buffers, between 50-feet and 100-feet wide, will be provided to screen timber harvest areas from public thoroughfares and shorelines and to minimize the potential for sediments or other nonpoint source pollutants to enter Norris Reservoir.

2. TVA will comply with its implementation procedures of any action would potentially affect wetlands or floodplains in accordance with Executive Order No. 11990 (Protection of Wetlands) to minimize adverse effects on wetlands and protect their natural and beneficial values.

3. Any development proposed in the 100-year floodplain will be subject to prior review and approval by TVA and the requirements of Executive Order No. 11988 (Floodplain Management) to ensure effects on floodplain values are minimized. Any facilities or structures subject to flood damage will be flood-proofed or located above the 500-year flood elevation.

4. TVA will take necessary steps to ensure compliance with regulatory requirements of the NHPA and ARPA. Through consultation with the State Historic Preservation Officer (SHPO), it was determined that 60 sites were potentially eligible for inclusion on the NRHP. In addition, one archaeological site will be further investigated to determine eligibility status

   Historic resources surveys will be conducted prior to initiation of any soil-disturbing activity, including installation of additional wildlife openings, timber harvest, road construction, and parking areas. Consistent with a TVA/Tennessee SHPO Programmatic Agreement, a report on the survey findings will be submitted to the SHPO for review and comment.

5. Similar to the Davis Creek and Fullerton Bend Plans, TVA will prepare additional natural resource management unit plans and environmental assessments for some of its land allocated to Zones 3 and 4. With stakeholder inputs, these plans will enable TVA to determine the appropriate level of resource management and outline a schedule of activities, as well as assess the effects of these activities no this land. Work on these areas will be implemented consistent with provisions of the Presidential Executive Orders 13112 (Invasive Species) and 13186 (Migratory Birds).

6. Beech Island, Comby Ridge, Hemlock Bluff, Monks Corner, River Bluff, Norris Dam Cave, Stiners Woods, and Norris Song Bird Trail will all keep their designations as TVA Natural Areas for the life for this Plan. TVA will expand Monks Corner Small Wild Area by 25 acres. Nine new Habitat Protection Areas will be designated because of the presence of rare species or other sensitive resources.

7. Parcels allocated to Zone 7 will be managed in accordance with TVA's SMP in regard to vegetation management plans, shoreline buffers, access corridors, and other applicable provisions.

8. Controlled burns will be conducted in accordance with Tennessee open burning regulations.

9. BMP's for agriculture, including maintenance of vegetative buffers, will be included in agricultural licenses.

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. The TVA technical review process concluded the Norris Dam Reservation Tactical Plan will have an insignificant impact on visual resources. This alternative would have beneficial impacts to the aesthetic resources of Norris Reservoir.
3.2 Cultural Resources			
3.2.1	Archeological 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 proposed in the future would be approved, mitigated, or denied according to the significance of the resource. If mitigation is required, an appropriate archaeological investigation will be necessary, and potentially impacted resources will be properly recorded and removed. The Norris Plan 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 zoning 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, which contain historic properties, 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 is a commitment to management of archaeological resources within Zones 3 and 4 and effectively preserve resources within the other planned parcels. The TVA technical review process concluded the Norris Dam Reservation Tactical Plan will have an insignificant impact on cultural resources.

Table 3-2 COMPARISON OF POTENTIAL ENVIRONMENTAL EFFECTS BY ALTERNATIVE			
Section of EA	**Resource Area**	**Alternative A**	**Alternative B**
3.2.2	Historic Structures	Under this alternative all proposals for changes to any TVA parcel will require review to clear any adverse 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. If adverse, the proposed use will be modified or denied to protect the resource as required under Section 106 review of the NHPA. The TVA technical review process concluded the Norris Dam Reservation Tactical Plan will have an insignificant impact on historic structures.
3.3 Threatened and Endangered Species			
3.3 - 1	Plants	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. 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.	This alternative would provide protective status for 14 parcels containing 39 state-listed plant occurrences. Twelve of these parcels are in Zone 3 under the Norris Plan, and the remaining two parcels are in Zone 4. In Zone 3, the overriding focus is protecting and enhancing the sensitive resources the site supports (see Section 2.2.2). Parcels in 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). The TVA technical review process concluded the Norris Dam Reservation Tactical Plan will have an insignificant impact on threatened and endangered plants.

Table 3-2 COMPARISON OF POTENTIAL ENVIRONMENTAL EFFECTS BY ALTERNATIVE

Section of EA	Resource Area	Alternative A	Alternative B
3.3 - 2	Terrestrial animals	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 the reservoir, TVA's ability to address cumulative impacts to these resources would be limited.	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 Resources Management (Zone 3) or Natural Resources 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. 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 the reservoir. For these stated reasons, this alternative is preferred over Alternative A. The TVA technical review process concluded the Norris Dam Reservation Tactical Plan will have an insignificant impact on threatened and endangered terrestrial animals.

Table 3-2 COMPARISON OF POTENTIAL ENVIRONMENTAL EFFECTS BY ALTERNATIVE			
Section of EA	**Resource Area**	**Alternative A**	**Alternative B**
3.3 - 3	Aquatic Animals	Under this alternative TVA actions would be unlikely to adversely affect the habitat of protected aquatic species. While four state- and/or federal-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.	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. The TVA technical review process concluded the Norris Dam Reservation Tactical Plan will have an insignificant impact on threatened and endangered aquatic animals.

Table 3-2 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	Terrestrial Ecology	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 designation 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 sub-regional basis. Overall the cumulative impacts to terrestrial ecology under this alternative would be insignificant on TVA's forestland, open land, and riparian areas.	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 is 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 1,500 to 4,000 acres. The TVA technical review process concluded the Norris Dam Reservation Tactical Plan will have an insignificant impact on terrestrial ecology. Selection of Alternative A 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.
3.4 - 2	Significant Natural Areas	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.	Because this alternative has a specific zone for sensitive resource management, and allows for establishing a new TVA Natural Areas and expansion of an existing small wild area, this is the preferred alternative. Nine parcels meet the criteria for designation as new TVA Natural Areas. All nine of these areas are suitable for designation as TVA Habitat Protection Areas because of the presence of plant species with Tennessee state status. This alternative would have no significant impacts on TVA's Natural Areas land. The TVA technical review process concluded the Norris Dam Reservation Tactical Plan will have an insignificant impact on significant natural features.

Table 3-2 COMPARISON OF POTENTIAL ENVIRONMENTAL EFFECTS BY ALTERNATIVE			
Section of EA	**Resource Area**	**Alternative A**	**Alternative B**
3.5	Wetlands/Riparian Ecology	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.	Under this alternative significant wetland areas (excluding Zone 7, Residential Access areas) would be allocated to Sensitive Resource Management (Zone 3) or Natural Resource Conservation (Zone 4). Zones 3 and 4 areas will be part of TVA's unit planning process as described in Section 4.4.2. The TVA technical review process concluded the Norris Dam Reservation Tactical Plan will have an insignificant impact on wetlands and riparian ecology. 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 Zone 7 wetlands and riparian areas would be insignificant.
3.6	Recreation	A large portion of TVA's retained land is forecast for public and commercial recreation, 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. Although any 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, TVA could not deny the request on principle.	Under this alternative 1,744 acres are proposed for Zone 6 Recreation. The TVA technical review process concluded the Norris Dam Reservation Tactical Plan will have an insignificant impact on recreation. Under this alternative 16,403 fewer acres are subject to developed recreation proposals than there were under Alternative A. This means TVA will be considering developed recreation opportunities on significantly fewer acres than it could under Alternative A. This decrease is, however, in alignment with public desires expressed during Scoping.

Table 3-2 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 acreage's of TVA property are designated specifically for protection of sensitive resources, and the extent of protection of natural resources in other designations (such as public recreation or reservoir operations) is vague. 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 or Natural Resource Conservation (Zones 3 and 4, respectively) as the designated use on some parcels now having more general designations. Any of the proposed uses of Zone 3 or 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. The TVA technical review process concluded the Norris Dam Reservation Tactical Plan will have an insignificant impact on water quality.
3.8	Aquatic Ecology	Under this alternative, few parcels of TVA public land are designated specifically for protection of sensitive resources, and the extent of protection of natural resources in other designations (such as public recreation and reservoir operations) is vague. 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 "fair" 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. The TVA technical review process concluded the Norris Dam Reservation Tactical Plan will have an insignificant impact on aquatic ecology.

Table 3-2 COMPARISON OF POTENTIAL ENVIRONMENTAL EFFECTS BY ALTERNATIVE			
Section of EA	**Resource Area**	**Alternative A**	**Alternative B**
3.9	Socioeconomic	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.	Under this alternative no land would be classified for industrial/commercial use. Over 1,700 acres would be zoned for Recreation. 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. The TVA technical review process concluded the Norris Dam Reservation Tactical Plan will have an insignificant impact on socioeconomics.
3.10	Navigation	There would be no significant impact on navigation aids used by recreational boaters.	There would be no significant impact on navigation aids used by recreational boaters. The TVA technical review process concluded the Norris Dam Reservation Tactical Plan will have an insignificant impact on Navigation.
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 and Natural Resource Conservation (Zone 3 and 4, respectively). 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 Zone 6 or 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. The TVA technical review process concluded the Norris Dam Reservation Tactical Plan will have an insignificant impact on prime farmland.

Table 3-2 COMPARISON OF POTENTIAL ENVIRONMENTAL EFFECTS BY ALTERNATIVE			
Section of EA	**Resource Area**	**Alternative A**	**Alternative B**
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 these Zones 3 and 4 land. Under either alternative, impacts to floodplain values would be insignificant. The TVA technical review process concluded the Norris Dam Reservation Tactical Plan will have an insignificant impact on floodplains.
3.12.2	Noise	The Forecast System land designations within which development of specific, new noise sources might occur are the reservoir operations - mainland (approximately 1,327 acres), commercial recreation (approximately 97 acres), and industrial and minor commercial landings (approximately 24 acres). Reservoir operations land includes residential development; commercial recreation covers marinas; and industrial and commercial landings comprise a range of potential manufacturing and processing operations, as well as barge loading and servicing facilities. Noise from single-family residences usually comes from recreational (boating and personal watercraft), landscaping, and transportation sources. These are common noises currently found around the reservoir. The level of these noises depends on the density of residences in an area. Multi-family residences, such as condominiums would generate the same type of noises but at higher levels in the local area. Large developments of single- or multi-family housing would have the second level of community noise evaluation.	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 1,744 acres) will not vary between the two alternatives. The TVA technical review process concluded the Norris Dam Reservation Tactical Plan will have an insignificant impact on noise. There is no land allocated to the Industrial Zone in this alternative

Table 3-2 COMPARISON OF POTENTIAL ENVIRONMENTAL EFFECTS BY ALTERNATIVE			
Section of EA	**Resource Area**	**Alternative A**	**Alternative B**
3.12.3	Air Quality	Insignificant effects on Air Quality.	Insignificant effects on Air Quality. The TVA technical review process concluded the Norris Dam Reservation Tactical Plan will have an insignificant impact on air quality.

Appendix A - 1 Parcel Information Matrix				
Parcel No.	**Zone Allocation**	**# Acres**	**Reason of Allocation**	**Prior Forecast Designation**
1	2	6.29	Existing TVA operations.	Forestry Research
2	3	10.54	Sensitive plant and animal resources were found on this parcel.	Forestry Research
3	4	246.05	Capable and suitable for sustaining natural resource based activities.	Forestry Research
4	6	13.24	This is the location of the Miller Island boat launching ramp and parking area.	Forestry Research
5	3	60.04	Sensitive plant and animal resources were found on this parcel.	Forestry Research
6	2	903.74	Existing TVA operations - Norris Dam Reservation.	Norris Dam Reservation
7	4	456.49	Capable and suitable for sustaining natural resource based activities.	Public Recreation
8	6	83.46	This parcel fronts Norris Dam State Park.	No Prior Forecast
9	3	5.65	Sensitive cultural resources were found on this parcel.	Reservoir Operations - Islands
10	3	73.81	Sensitive cultural and plant resources were found on this parcel.	Public Recreation
11	6	2.19	This site is a TVA developed boat launching ramp and parking area.	Public Recreation
12	4	99.71	Capable and suitable for sustaining natural resource based activities.	Public Recreation, Reservoir Operations
13	3	120.39	Sensitive visual, cultural, and plant resources were found on this parcel.	Public Recreation
14	7	2.70	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
15	4	97.90	Capable and suitable for sustaining natural resource based activities.	Public Recreation
16	7	33.54	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
17	3	14.22	Sensitive visual, aquatic, and wetland resources were found on this parcel.	Reservoir Operations - Islands
18	6	6.02	This an undeveloped TWRA access site.	Public Recreation
19	4	160.81	Capable and suitable for sustaining natural resource	Public Recreation, Reservoir

Appendix A - 1 Parcel Information Matrix				
Parcel No.	**Zone Allocation**	**# Acres**	**Reason of Allocation**	**Prior Forecast Designation**
			based activities.	Operations
20	7	16.25	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
21	6	3.11	This is the site of Twin Cove Marina.	No Prior Forecast
22	4	2.15	Capable and suitable for sustaining natural resource based activities.	No Prior Forecast
23	7	1.26	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
24	4	51.76	Capable and suitable for sustaining natural resource based activities.	Public Recreation
25	6	149.62	This parcel fronts Cove Lake State Park.	Public Recreation
26	6	4.51	This parcel has constructed ballfields and Caryville community buildings.	Reservoir Operations
27	4	17.25	Capable and suitable for sustaining natural resource based activities.	Reservoir Operations
28	2	3.83	Existing TVA operations.	Reservoir Operations
29	7	9.75	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
30	7	4.81	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
31	6	5.29	This parcel fronts a TWRA access site.	No Prior Forecast
32	7	3.51	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
33	3	167.38	Sensitive plant resources were found on this parcel.	Public Recreation
34	4	385.46	Capable and suitable for sustaining natural resource based activities.	Public Recreation
35	6	3.69	This parcel fronts a TWRA access site.	No Prior Forecast
36	3	18.96	Sensitive plant resources were found on this parcel.	Public Recreation
37	6	5.22	This parcel fronts a TWRA access site.	Public Recreation
38	7	23.42	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
39	6	1.92	This parcel fronts a TWRA access site.	No Prior Forecast

Appendix A - 1 Parcel Information Matrix				
Parcel No.	**Zone Allocation**	**# Acres**	**Reason of Allocation**	**Prior Forecast Designation**
40	4	119.87	Capable and suitable for sustaining natural resource based activities.	Reservoir Operations
41	3	97.90	Sensitive visual resources were found on this parcel.	Public Recreation
42	7	21.09	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
43	6	2.88	This parcel fronts a TWRA access site.	No Prior Forecast
44	4	3.25	Capable and suitable for sustaining natural resource based activities.	Reservoir Operations
45	7	15.15	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
46	4	114.52	Capable and suitable for sustaining natural resource based activities.	Public Recreation
47	6	1.82	This parcel fronts a TWRA access site.	Public Recreation
48	7	30.34	Private water-use facilities and other residential shoreline alteration requests are considered.	Public Recreation
49	6	1.46	This parcel fronts a TWRA access site.	Public Recreation
50	6	5.66	This parcel fronts a TWRA access site.	Public Recreation
51	4	660.63	Capable and suitable for sustaining natural resource based activities.	Public Recreation, Reservoir Operations - Islands
52	3	89.87	Sensitive plant resources were found on this parcel.	Public Recreation,
53	6	70.11	This parcel is currently being operated as Campbell County Park.	Public Recreation
54	7	0.76	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
55	4	12.84	Capable and suitable for sustaining natural resource based activities.	Reservoir Operations
56	6	1.01	This parcel fronts a TWRA access site.	No Prior Forecast
57	4	6.36	Capable and suitable for sustaining natural resource based activities.	Reservoir Operations
58	6	22.18	This parcel has a30-year easement for ballfield construction by the City of LaFollette.	Public Recreation
59	4	8.42	Capable and suitable for sustaining natural resource based activities.	Reservoir Operations

Appendix A - 1 Parcel Information Matrix				
Parcel No.	**Zone Allocation**	**# Acres**	**Reason of Allocation**	**Prior Forecast Designation**
60	4	45.13	Capable and suitable for sustaining natural resource based activities.	reservoir Operations
61	3	0.95	Sensitive wetland resources were found on this parcel.	Public Recreation
62	3	9.07	Sensitive visual, cultural, and plant resources were found on this parcel.	Public Recreation
63	4	62.06	Capable and suitable for sustaining natural resource based activities.	Public Recreation
64	3	1.96	Sensitive visual resources were found on this parcel.	Reservoir Operations - Islands
65	4	531.52	Capable and suitable for sustaining natural resource based activities.	Public Recreation
66	6	6.97	Whitman Hollow Boat Dock is located at this site.	Public Recreation
67	4	177.22	Capable and suitable for sustaining natural resource based activities.	Public Recreation
68	3	150.57	Sensitive visual resources were found on this parcel.	No Prior Forecast
69	7	65.50	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
70	7	36.96	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
71	4	11.24	Capable and suitable for sustaining natural resource based activities.	No Prior Forecast
72	4	588.39	Natural Resource Conservation	Public Recreation
73	3	27.48	Sensitive cultural, plant, and animal resources were found on this parcel.	Public Recreation
74	3	83.68	Sensitive cultural and plant resources were found on this parcel.	Public Recreation
75	4	55.40	Natural Resource Conservation	Public Recreation
76	4	3.60	Natural Resource Conservation	Public Recreation
77	6	14.69	This property fronts land owned by the Blue Ridge Council of the Boy Scouts of America.	No Prior Forecast
78	3	154.20	Sensitive visual resources were found on this parcel.	Public Recreation
79	7	29.11	Private water-use facilities and other residential shoreline alteration requests are considered.	Reservoir Operations

Appendix A - 1 Parcel Information Matrix				
Parcel No.	**Zone Allocation**	**# Acres**	**Reason of Allocation**	**Prior Forecast Designation**
80	6	8.23	Rainbow Marina is located on this parcel.	Reservoir Operations
81	3	1.50	Sensitive visual and cultural resources were found on this parcel.	Reservoir Operations - Islands
82	3	107.58	Sensitive plant and wetland resources were found on this parcel.	Public Recreation
83	4	516.08	Natural Resource Conservation	Public Recreation
84	6	5.79	This parcel fronts land sold to the Minister's and Orphans Camp for recreation purposes.	No Prior Forecast
85	7	1.16	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
86	7	31.42	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
87	6	6.88	This parcel fronts Shanghai Marina.	No Prior Forecast
88	7	55.21	Private water-use facilities and other residential shoreline alteration requests are considered.	Commercial Recreation
89	4	97.33	Natural Resource Conservation	No Prior Forecast
90	4	1.23	Natural Resource Conservation	Reservoir Operations
91	6	6.85	This parcel fronts a TWRA access site.	No Prior Forecast
92	7	2.82	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
93	4	42.78	Natural Resource Conservation	Public Recreation
94	6	14.22	This parcel fronts a TWRA access site.	No Prior Forecast
95	4	16.77	Natural Resource Conservation	Reservoir Operations
96	4	13.57	Natural Resource Conservation	No Prior Forecast
97	6	0.64	This parcel fronts a TWRA access site.	No Prior Forecast
98	7	19.47	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
99	6	6.38	This parcel fronts a TWRA access site.	No Prior Forecast
100	6	5.89	This parcel fronts a TWRA access site.	No Prior Forecast
101	4	1.17	Natural Resource Conservation	Reservoir Operations
102	4	4.93	Natural Resource Conservation	No Forecast

Appendix A - 1 Parcel Information Matrix				
Parcel No.	**Zone Allocation**	**# Acres**	**Reason of Allocation**	**Prior Forecast Designation**
103	4	1542.86	Natural Resource Conservation	Public Recreation, Reservoir Operations, Reservoir Operations - Islands, Wildlife Management
104	4	6.53	Natural Resource Conservation	No Prior Forecast
105	7	72.45	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
106	4	0.59	Natural Resource Conservation	Reservoir Operations
107	6	3.04	This parcel fronts a TWRA access site.	Reservoir Operations
108	7	8.75	Private water-use facilities and other residential shoreline alteration requests are considered.	Reservoir Operations
109	6	19.22	Powell Valley Marina is located at this site.	Reservoir Operations
110	4	57.28	Natural Resource Conservation	Wildlife Management
111	4	0.18	Natural Resource Conservation	No Prior Forecast
112	6	5.68	This parcel fronts a TWRA access site.	Public Recreation
113	4	3.07	Natural Resource Conservation	Reservoir Operations - Islands
114	4	8.69	Natural Resource Conservation	Reservoir Operations
115	6	2.49	This parcel fronts a TWRA access site.	Public Recreation
116	4	5.15	Natural Resource Conservation	Public Recreation
117	7	9.71	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
118	6	6.59	Flat Hollow Marina is located at this site.	No Prior Forecast
119	7	7.50	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
120	4	15.76	Natural Resource Conservation	No Prior Forecast
121	4	2147.02	Natural Resource Conservation	Public Recreation
122	3	57.37	A TVA Small Wild Area exists on this parcel.	TVA Small Wild Area
123	3	145.11	A TVA Small Wild Area exists on this parcel.	Public Recreation, TVA Small Wild Area
124	6	7.40	Blue Springs Boat Dock is located at this site.	No Prior Forecast

Appendix A - 1 Parcel Information Matrix				
Parcel No.	**Zone Allocation**	**# Acres**	**Reason of Allocation**	**Prior Forecast Designation**
125	7	8.84	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
126	7	4.34	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
127	6	9.43	Union County Boat Dock is located on and has mooring rights along this parcel.	No Prior Forecast
128	3	2.41	Sensitive wetland resources were found on this parcel.	No Prior Forecast
129	7	12.59	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
130	4	6.65	Natural Resource Conservation	No Prior Forecast
131	4	491.13	Natural Resource Conservation	Public Recreation
132	3	167.95	Sensitive visual resources were found on this parcel.	Public Recreation
133	4	11.08	Natural Resource Conservation	No Prior Forecast
134	4	8.54	Natural Resource Conservation	Reservoir Operations
135	4	8.19	Natural Resource Conservation	No Prior Forecast
136	4	6.25	Natural Resource Conservation	Reservoir Operations
137	3	62.46	Sensitive visual resources were found on this parcel.	Power Transmission System
138	4	1.09	Natural Resource Conservation	Reservoir Operations
139	7	14.30	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
140	6	0.52	Greasy Hollow Marina is located at this site.	No Prior Forecast
141	4	109.32	Natural Resource Conservation	Reservoir Operations
142	4	6.29	Natural Resource Conservation	No Prior Forecast
143	4	145.19	Natural Resource Conservation	Power Transmission System
144	6	4.10	This parcel fronts a TWRA access site.	Reservoir Operations
145	3	67.71	Sensitive visual, plant, and animal resources were found on this parcel.	Public Recreation, Reservoir Operations
146	3	216.10	Sensitive visual and plant resources were found on this parcel.	Public Recreation
147	4	60.70	Natural Resource Conservation	Public Recreation

Appendix A - 1 Parcel Information Matrix				
Parcel No.	**Zone Allocation**	**# Acres**	**Reason of Allocation**	**Prior Forecast Designation**
148	4	220.43	Natural Resource Conservation	Power Transmission System
149	6	19.99	This parcel fronts a TWRA access site.	No Prior Forecast
150	4	716.31	Natural Resource Conservation	Public Recreation
151	3	104.56	Sensitive visual resources were found on this parcel.	Power Transmission System
152	6	7.45	This parcel fronts a TWRA access site.	No Prior Forecast
153	4	265.57	Natural Resource Conservation	Public Recreation
154	3	16.36	Sensitive plant resources were found on this parcel.	No Prior Forecast
155	4	8.73	Natural Resource Conservation	Reservoir Operations
156	4	53.45	Natural Resource Conservation	Reservoir Operations
157	3	455.74	Sensitive visual resources were found on this parcel.	Public Recreation
158	7	23.30	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
159	6	25.39	This parcel will be licensed to TWRA for boat launching ramp and parking lot.	Reservoir Operations
160	4	5.64	Natural Resource Conservation	No Prior Forecast
161	7	30.99	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
162	4	662.29	Natural Resource Conservation	No Prior Forecast
163	4	97.32	Natural Resource Conservation	Reservoir Operations - Islands
164	4	2.70	Natural Resource Conservation	Reservoir Operations - Islands
165	4	22.81	Natural Resource Conservation	Reservoir Operations
166	3	12.77	Sensitive wetland resources were found on this parcel.	Public Recreation
167	4	25.82	Natural Resource Conservation	Public Recreation
168	4	43.23	Natural Resource Conservation	Reservoir Operations - Islands
169	4	0.83	Natural Resource Conservation	Reservoir Operations - Islands
170	4	43.82	Natural Resource Conservation	Reservoir Operations - Islands

Appendix A - 1 Parcel Information Matrix				
Parcel No.	**Zone Allocation**	**# Acres**	**Reason of Allocation**	**Prior Forecast Designation**
171	7	243.46	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
172	4	328.50	Natural Resource Conservation	Public Recreation, Reservoir Operations
173	3	16.73	Sensitive cultural resources were found on this parcel.	Reservoir Operations
174	4	120.74	Natural Resource Conservation	Public Recreation, Reservoir Operations
175	2	4.02	Existing TVA operations.	Public Recreation
176	6	56.27	Union County, Tennessee has a 30-year recreation easement for on this parcel.	Forestry Research, Public Recreation, Reservoir Operations
177	6	11.90	Lakeview Marina is located at this site.	Reservoir Operations
178	6	17.45	This parcel fronts a TWRA access site.	No Prior Forecast
179	7	3.45	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
180	3	9.80	Sensitive cultural resources were found on this parcel.	Public Recreation
181	3	187.13	Sensitive visual, cultural, and plant resources were found on this parcel.	Public Recreation, Reservoir Operations - Islands
182	3	161.87	Sensitive cultural and plant resources were found on this parcel.	Reservoir Operations - Islands
183	6	16.92	This parcel fronts a TWRA access site.	No Prior Forecast
184	7	2.10	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
185	4	351.12	Natural Resource Conservation	Public Recreation
186	6	8.38	This parcel fronts a TWRA access site.	Public Recreation
187	3	13.74	Sensitive cultural, plant, and wetland resources were found on this parcel.	Public Recreation
188	6	81.59	This parcel has been identified as a new public recreation area.	Public Recreation
189	4	218.65	Natural Resource Conservation	Public Recreation
190	6	58.56	Cedar Grove Marina is located on this parcel.	Public Recreation, Reservoir Operations
191	4	0.77	Natural Resource Conservation	Reservoir Operations

Appendix A - 1 Parcel Information Matrix				
Parcel No.	**Zone Allocation**	**# Acres**	**Reason of Allocation**	**Prior Forecast Designation**
192	2	0.80	Existing TVA operations.	No Prior Forecast
193	7	39.38	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
194	4	282.84	Natural Resource Conservation	Public Recreation, Reservoir Operations - Islands
195	6	10.20	Straight Creek Marina has a license agreement for mooring rights along this parcel.	Public Recreation
196	6	10.39	This parcel fronts a TWRA access site.	No Prior Forecast
197	4	15.31	Natural Resource Conservation	Reservoir Operations
198	4	5.38	Natural Resource Conservation	Public Recreation
199	3	59.45	Sensitive cultural and visual resources were found on this parcel.	Public Recreation
200	4	18.12	Natural Resource Conservation	Public Recreation
201	6	6.57	This parcel fronts a TWRA access site.	No Prior Forecast
202	4	406.69	Natural Resource Conservation	Public Recreation, Reservoir Operations
203	3	121.97	Sensitive visual resources were found on this parcel.	Public Recreation
204	7	183.72	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
205	4	176.49	Natural Resource Conservation	Public Recreation, Reservoir Operations
206	6	3.99	This parcel fronts a TWRA access site.	No Prior Forecast
207	3	13.12	Sensitive visual resources were found on this parcel.	Reservoir Operations - Islands
208	4	59.41	Natural Resource Conservation	Public Recreation, Steam Plant Study
209	6	65.38	Claiborne County has a 30-year easement on this parcel for recreation.	Reservoir Operations
210	4	1.01	Natural Resource Conservation	Reservoir Operations
211	4	40.26	Natural Resource Conservation	Steam Plant Study
212	3	345.62	Sensitive plant resources were found on this parcel.	Steam Plant Study
213	4	140.01	Natural Resource Conservation	Public Recreation

Appendix A - 1 Parcel Information Matrix				
Parcel No.	**Zone Allocation**	**# Acres**	**Reason of Allocation**	**Prior Forecast Designation**
214	3	8.82	Sensitive cultural resources were found on this parcel.	Public Recreation
215	4	14.21	Natural Resource Conservation	Reservoir Operations
216	3	194.87	Sensitive cultural, animal, and wetland resources were found on this parcel.	Public Recreation
217	6	11.65	This parcel fronts a TWRA access site.	Public Recreation
218	4	33.92	Natural Resource Conservation	Public Recreation, Reservoir Operations
219	3	20.87	Sensitive cultural and wetland resources were found on this parcel.	Public Recreation
220	6	0.75	This parcel fronts a TWRA access site.	No Prior Forecast
221	4	0.71	Natural Resource Conservation	No Prior Forecast
222	4	22.59	Natural Resource Conservation	No Prior Forecast
223	3	83.85	Sensitive wetland resources were found on this parcel.	Reservoir Operations
224	4	6.79	Natural Resource Conservation	Reservoir Operations
225	3	75.34	A TVA Small Wild Area exists on this parcel.	Reservoir Operations, TVA Small Wild Area
226	4	735.45	Natural Resource Conservation	Forestry Research, Public Recreation, Reservoir Operations, Steam Plant Study
227	3	18.34	Sensitive visual resources were found on this parcel.	Steam Plant Study
228	4	83.95	Natural Resource Conservation	Commercial Landing, Steam Plant Study
229	3	45.53	Sensitive visual resources were found on this parcel.	Commercial Landing, Public Recreation, Steam Plant Study
230	3	85.34	Sensitive visual and animal resources were found on this parcel.	Public Recreation, Reservoir Operations
231	3	63.97	Sensitive visual resources were found on this parcel.	Public Recreation
232	4	119.44	Natural Resource Conservation	Public Recreation
233	4	15.81	Natural Resource Conservation	Public Recreation
234	6	8.94	This parcel fronts a TWRA access site.	Public Recreation, Reservoir Operations

Appendix A - 1 Parcel Information Matrix				
Parcel No.	**Zone Allocation**	**# Acres**	**Reason of Allocation**	**Prior Forecast Designation**
235	3	0.88	Sensitive aquatic animal resources were found on the parcel.	No Prior Forecast
236	7	5.39	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
237	4	161.60	Natural Resource Conservation	Public Recreation
238	4	0.48	Natural Resource Conservation	Reservoir Operations
239	3	45.66	Sensitive wetland resources were found on this parcel.	Reservoir Operations
240	7	1.36	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
241	6	7.04	This parcel fronts a TWRA access site.	No Prior Forecast
242	4	1.05	Natural Resource Conservation	Reservoir Operations
243	4	38.27	Natural Resource Conservation	Public Recreation
244	4	9.84	Natural Resource Conservation	No Prior Forecast
245	3	49.57	Sensitive visual resources were found on this parcel.	Public Recreation
246	7	25.68	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
247	4	19.10	Natural Resource Conservation	No Prior Forecast
248	7	38.27	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
249	4	4.51	Natural Resource Conservation	Reservoir Operations
250	4	344.26	Natural Resource Conservation	Public Recreation
251	3	91.34	Sensitive visual resources were found on this parcel.	Public Recreation
252	7	5.52	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
253	4	264.16	Natural Resource Conservation	Public Recreation
254	3	156.30	Sensitive visual, cultural, plant, and wetland resources were found on this parcel.	Public Recreation
255	6	1.75	Grainger County, Tennessee has a license agreement on this parcel for recreation.	Public Recreation
256	6	2.70	This parcel fronts a TWRA access site.	Public Recreation
257	4	355.98	Natural Resource Conservation	Public Recreation

Appendix A - 1 Parcel Information Matrix				
Parcel No.	**Zone Allocation**	**# Acres**	**Reason of Allocation**	**Prior Forecast Designation**
258	3	57.74	Sensitive visual resources were found on this parcel.	Public Recreation, Reservoir Operations - Islands
259	6	5.84	This parcel fronts a TWRA access site.	No Prior Forecast
260	7	26.48	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
261	6	11.94	This parcel fronts a TWRA access site.	No Prior Forecast
262	7	72.36	Private water-use facilities and other residential shoreline alteration requests are considered.	Reservoir Operations
263	4	4.54	Natural Resource Conservation	No Prior Forecast
264	3	51.70	Sensitive visual resources were found on this parcel.	Power Transmission System
265	4	24.06	Natural Resource Conservation	Public Recreation
266	3	37.91	Sensitive visual resources were found on this parcel.	Public Recreation
267	4	264.89	Natural Resource Conservation	Public Recreation, Reservoir Operations - Islands
268	7	22.65	Private water-use facilities and other residential shoreline alteration requests are considered.	Reservoir Operations
269	4	49.27	Natural Resource Conservation	Reservoir Operations - Islands
270	6	20.55	This parcel fronts a TWRA access site.	No Prior Forecast
271	4	0.53	Natural Resource Conservation	No Prior Forecast
272	4	13.47	Natural Resource Conservation	Reservoir Operations
273	7	7.61	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
274	4	125.67	Natural Resource Conservation	Public Recreation
275	6	45.62	Pennington's 33 Bridge Marina is located on this parcel.	Public Recreation, Reservoir Operations - Islands
276	3	12.57	A TVA Natural Area exists on this parcel.	TVA Small Wild Area
277	4	224.22	Natural Resource Conservation	Forestry Research, Public Recreation, Reservoir Operations - Islands
278	7	27.68	Private water-use facilities and other residential shoreline alteration requests are considered.	Reservoir Operations

Appendix A - 1 Parcel Information Matrix				
Parcel No.	**Zone Allocation**	**# Acres**	**Reason of Allocation**	**Prior Forecast Designation**
279	3	8.48	Sensitive visual resources were found on this parcel.	Reservoir Operations - Islands
280	4	14.34	Natural Resource Conservation	Public Recreation
281	7	10.87	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
282	4	1.10	Natural Resource Conservation	Reservoir Operations - Islands
283	6	6.79	This parcel fronts a TWRA access site.	No Prior Forecast
284	7	0.44	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
285	4	191.01	Natural Resource Conservation	Public Recreation
286	4	61.46	Natural Resource Conservation	Public Recreation, Reservoir Operations
287	4	518.38	Natural Resource Conservation	Reservoir Operations - Islands
288	7	23.57	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
289	4	75.83	Natural Resource Conservation	Reservoir Operations - Islands
290	4	1.43	Natural Resource Conservation	No Prior Forecast
291	7	8.42	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
292	3	119.68	Sensitive visual resources were found on this parcel.	Reservoir Operations - Islands
293	6	10.50	This parcel is the site of Hickory Star Marina.	Reservoir Operations
294	6	283.09	This Parcel fronts Big Ridge State Park.	No Prior Forecast
295	4	5.50	Natural Resource Conservation	Reservoir Operations - Islands
296	4	56.89	Natural Resource Conservation	Reservoir Operations - Islands
297	6	132.62	This parcel fronts Tanasi Council Girl Scout Camp.	No Prior Forecast
298	7	6.76	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast

Appendix A - 1 Parcel Information Matrix				
Parcel No.	**Zone Allocation**	**# Acres**	**Reason of Allocation**	**Prior Forecast Designation**
299	4	9.02	Natural Resource Conservation	No Prior Forecast
300	7	26.48	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
301	6	8.73	Andersonville Boat Dock fronts this parcel.	No Prior Forecast
302	2	15.82	Existing TVA operations.	Reservoir Operations
303	4	186.50	Natural Resource Conservation	Public Recreation
304	7	19.65	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
305	6	7.03		No Prior Forecast
306	4	1280.78	Natural Resource Conservation	Public Recreation
307	6	204.59	This parcel is currently operated as TVA Loyston Point Public Use Area.	Public Recreation
308	3	176.73	A TVA Natural Area exists on this parcel.	Public Recreation, TVA Small Wild Area
309	4	8.07	Natural Resource Conservation	Reservoir Operations - Islands
310	6	24.15	Star Dust Marina has a license agreement for mooring rights fronting this parcel.	No Prior Forecast
311	6	38.13	This parcel is currently operated as Anderson County Park.	No Prior Forecast
312	7	6.25	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
313	7	68.01	Private water-use facilities and other residential shoreline alteration requests are considered.	No Prior Forecast
314	6	0.59	This parcel fronts a TWRA access site.	No Prior Forecast
315	6	5.29	Sequoyah Marina is located on this parcel.	No Prior Forecast

Metric Conversion

U.S. Unit	Metric Equivalent
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