

2.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION

TVA is considering three alternatives for managing the TVA public land around Pickwick Reservoir. Under the No Action Alternative (Alternative A), TVA would continue to use the existing 1981 Plan previously prepared by TVA staff, along with minor updates to reflect allocation changes approved by the TVA Board of Directors over the past 20 years. Under the action alternatives (Alternatives B and C), TVA would update the plan to guide future land use decisions. Alternatives B and C would call for substantial changes to the 1981 parcel allocations to address the needs and expectations of stakeholders. The changes proposed under Alternatives B and C would be based on evaluations, reservoir data collected, and TVA technical staff and public input. These alternatives seek to integrate land and water resources protection needs and balance competing, and sometimes conflicting, resource uses, while providing for the optimum public benefit from use of the land. The TVA Board of Directors' selected alternative would guide TVA resource management and property administration decisions on the TVA public land surrounding Pickwick Reservoir for the next ten years or until the Plan is revised.

2.1 No Action Alternative - Alternative A

Under the No Action Alternative, TVA would continue to use the 1981 Plan which currently guides land use decisions on TVA public land surrounding Pickwick Reservoir. The 1981 Plan documents actual and prospective uses indicated for the public land. Currently, proposed land use requests received from external applicants or internal TVA organizations are evaluated for consistency with the 1981 Plan. Requested land uses that are consistent with the 1981 Plan can either be approved or denied based on a review of potential environmental impacts and other administrative considerations. If the request is not consistent with the designated land use, then formal TVA Board of Directors' approval, following necessary review, would be required to change the designated allocation.

The 1981 Plan used 10 allocation categories, defined in Table 2-1. Under Alternative A, the land uses designated in the 1981 Plan would continue to be used by TVA to make land use decisions. The 1981 Plan included approximately 21,100 acres. This included approximately 1,200 acres of land transferred to other agencies under easement or other agreements. TVA still owns title to the land in fee. It also included approximately 2,000 acres that are under water. The 1981 Plan did not allocate approximately 1,330 acres of residential shoreline or other marginal shoreline strips along the reservoir.

Table 2-1. Allocation Category Definitions (1981)	
Allocation	Description
Wildlife Management	<i>Parcels allocated for wildlife management are managed to protect and enhance wildlife habitats, restore depleted or regionally rare populations of certain species, and improve public access and use opportunities where appropriate. Specific types of management included: Upland Wildlife Management, Wetland Wildlife Management, and Water Fowl Management.</i>
Forest Management	<i>Parcels are managed to improve the forest resources. On parcels allocated for Forest Management Demonstrations/Research, TVA demonstrates to private nonindustrial forest landowners that harvesting and other silvicultural activities can be conducted for economic benefits which result in more productive and attractive forest stands. General Forest Management tracts are managed for the multiple-use benefits of timber, wildlife, recreation, and watershed protection.</i>
Recreation	<i>On certain parcels allocated for public recreation, TVA will develop recreation facilities or encourage and provide technical assistance for recreation development by other public agencies (i.e., federal, state, county, or local government agencies). On other parcels allocated for public recreation, TVA will continue to promote informal recreation use with little or no physical development of the site.</i> <i>Types of development that can occur on this land: Campgrounds and Boat Ramps.</i>
Cultural Resources Management	<i>Parcels allocated to Cultural Resources Management contain historic and/or archaeological sites. Historic sites include buildings, sites, objects, structures, and districts. Archaeological sites contain physical remains from the prehistoric and/or historic periods. Parcels allocated to specific land uses with the presence of such sites noted as a possible constraint to the management or development of that parcel.</i>
Agriculture	<i>Parcels allocated for general agriculture are managed to protect their potential for agricultural use, promote increased agricultural productivity, and demonstrate multiple-use developments that preserve agricultural land. The need for TVA land in agricultural research was identified by TVA's Office of Agriculture and Chemical Development. This land is chosen after considering such factors as location, soil conditions, and economics.</i>
Navigation	Safety Harbor or Landing - Safety harbors or landings are designated shoreline areas where commercial tows and recreational boats can be tied up during adverse weather conditions or equipment malfunctions. Minor Commercial Barge Landing - Parcels allocated for minor commercial landings are relatively unprepared sites that can be used for the transfer of pulpwood, sand, gravel, and other natural resources between barges and trucks. Barge Fleeting Areas - Fleeting areas are designated places where barges are switched between tows and/or barge terminals. The Tennessee-Tombigbee Letter Permit - Area located on Yellow Creek, committed for the purpose of constructing the Tenn-Tom Waterway.

Table 2-1 (cont.). Allocation Category Definitions (1981)	
Allocation	Description
Visual Protection	<i>Parcels are allocated to Visual Protection with the intent to maximize actions that result in either no change or a positive change to the visual environment.</i>
Open Space	<i>Parcels allocated for open space are not intensively managed but are available for continued informal public use. These parcels are generally unsuitable for development or intensive management because of size, topography, or location.</i>
Special Management Areas	<p>Habitat Protection Areas - <i>Parcels allocated as Habitat Protection Areas are closed to any activities which might harm or damage significant natural elements. These areas are established to protect species which have been identified by the U.S. Fish and Wildlife Service (USFWS) as threatened or endangered or which are rare to the region. Unusual or exemplary biological communities or unique geologic features also receive protection.</i></p> <p>Mussel Sanctuary - <i>The area from Wilson Dam downstream to the head of Seven Mile Island contains endangered species and commercial quantities of freshwater mussels. The sanctuary is maintained by the state of Alabama.</i></p>
Industrial Sites	<p><i>Parcels allocated for industrial sites can be made available to industrial developers on adjacent back-lying properties if the developers require additional land or access to the inland waterway system.</i></p> <p>Barge Terminals Sites - <i>Public or private facilities used for the transfer, loading, and unloading of commodities between barges and trucks, trains, storage areas, or industrial plants.</i></p> <p>Access for Development - <i>Developers on these sites can be permitted access for water intake, wastewater discharge and commodity pipelines.</i></p>

2.2 Action Alternatives

2.2.1 The Plan Revision Process

Information on public concerns was obtained from the public meetings and scoping meetings with stakeholders, community leaders, and peer groups as described in Section 1.4 and Appendix A. In addition, TVA reviewed existing and newly collected field data both on land conditions and resources. Each parcel of land was reviewed to determine its physical capability for supporting certain uses, other potential suitable uses of such land, and the needs of the public expressed during the scoping process. Based on this information, the planning team allocated land parcels to one of seven allocation zones described in Table 2-2.

Committed Land

The following assumptions were made in updating the 1981 Plan. Land currently committed to a specific use would be allocated to a zone designated for that use unless there is a need to make a change. Commitments include leases, licenses, easements, outstanding land rights, or existing designated natural areas. Possible reasons to change allocations would be ongoing adverse impacts or a request by the license or easement holder. No committed lands are proposed for change in the Pickwick Area. Projects such as the TVA dam reservation and public works projects are also committed land and are allocated to Zone 2, Project Operations. Approximately 2,861 acres (14.9 percent) of the TVA public land surrounding Pickwick Reservoir are committed due to existing TVA projects. Agricultural licenses are not considered to be committed uses because they are an interim use of TVA public land. Approximately 9,987.92 acres (52.1 percent) of the TVA public land surrounding Pickwick Reservoir are committed due to existing land use agreements. In the list of parcels presented in Appendix B, the parcels where these agreements are located are shaded in gray.

If sensitive resources were identified on a parcel with an existing land use agreement (leases, licenses, etc.), that parcel would remain zoned for the committed use, unless an ongoing adverse impact is found. However, TVA review would be needed prior to future activities that could impact the identified sensitive resources on that parcel to ensure the proposed activity would not significantly impact the identified sensitive resource(s).

Over the years, TVA sold surplus land on Pickwick Reservoir, but retained a strip of land lying between the 423-foot contour and the water's edge (in some exceptions, the 418-foot contour was used). The majority of these sales occurred in the mid- to late 1950s. The bulk of this public land which TVA retained below the 423-foot contour has water access rights. Based on the Shoreline Management decision of 1999, these back-lying property owners with access rights may apply for private water use facilities.

Uncommitted Land

The balance of public land on Pickwick Reservoir (6,304.02 acres) were not committed to a specific use. Field data were collected on many uncommitted parcels by technical specialists to identify areas containing sensitive resources. Representatives from different TVA organizations including power generation, navigation, resource stewardship, recreation and economic development (the planning team) met to allocate the parcels of TVA public land into the seven planning zones. There is a small amount of land in Sheffield, Alabama that has been allocated to Zone 1, Non-TVA Shoreland. TVA has retained the right to flood this privately owned land up to elevation 418 msl. Using maps that identified the location of sensitive resources (cultural, wetlands, threatened and endangered species, and visual) and the data collected during the scoping process, the capability and suitability for potential uses of each parcel were discussed. The proposed allocations were made by consensus of the planning team members.

Table 2-2. Land Use Zone Definitions	
Zone	Definition
1	<p>Non-TVA Shoreland</p> <p>Shoreland located above summer pool elevation that TVA does not own in fee or land never purchased by TVA. TVA is not allocating private or other non-TVA land. This category is provided to assist in comprehensive evaluation of potential environmental impacts of TVA's allocation decision. Non-TVA shoreline includes:</p> <ul style="list-style-type: none"> • Flowage easement land—Privately or publicly owned land where TVA has purchased the right to flood and/or limit structures. Flowage easement rights are generally purchased to a contour elevation. Since construction on flowage easement land is subject to TVA's 26a permitting requirements, the SMP guidelines discussed in the definition of Zone 7 would apply to the construction of residential water use facilities fronting flowage easement land. SMP guidelines addressing land-based structures and vegetation management do not apply. • Privately owned reservoir land—This was land never purchased by TVA and may include, but is not limited to, residential, industrial, commercial, or agricultural land. This land, lying below the 500-year flood elevation, is subject to TVA's 26a approvals for structures.
2	<p>Project Operations</p> <p>All TVA reservoir land currently used for TVA operations and public works projects includes:</p> <ul style="list-style-type: none"> • 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. • Navigation dayboards 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.

Table 2-2 (cont.). Land Use Zone Definitions	
Zone	Definition
3 Sensitive Resource Management	<p>Land managed for protection and enhancement of sensitive resources. Sensitive resources, as defined by TVA, include resources protected by state or federal law or executive order and other land features/natural resources TVA considers important to the area viewscape or natural environment.</p> <p>Recreational natural resource 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:</p> <ul style="list-style-type: none"> • TVA-designated sites with potentially significant archeological 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 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 managed by TVA or in cooperation with other public agencies or private conservation organizations to protect exceptional natural, scenic, or aesthetic qualities that can also support dispersed, low-impact types of outdoor recreation. • River corridor with sensitive resources—A river corridor is a linear green space along both stream banks of selected tributaries entering a reservoir managed for light boat access at specific sites, riverside trails, and interpretive activities. These areas will be included in Zone 3 when identified sensitive resources are present. • Significant scenic areas—These are areas designated for visual protection because of their unique vistas or particularly scenic qualities.

Table 2-2 (cont.).		Land Use Zone Definitions
Zone	Definition	
		<ul style="list-style-type: none"> • Champion tree site— Areas designated by TVA as sites that contain the largest known individual tree of its species in that state. The state forestry agency “Champion Tree Program” designates the tree, while TVA designates the area of the sites for those located on TVA public land. • Other sensitive ecological areas—Examples of these areas include heron rookeries, uncommon plant and animal communities, and unique cave or karst formations. • Land planned for any of the above uses in the future.
4	Natural Resource Conservation	<p>Land managed for the enhancement of natural resources for human use and appreciation. Management of resources is the primary focus of this zone. Appropriate activities in this zone include hunting, timber management to promote forest health, wildlife observation, and camping on undeveloped sites. Areas included are:</p> <ul style="list-style-type: none"> • TVA public land under easement, lease, or license to other agencies for wildlife or forest management purposes. • TVA public land fronting land owned by other agencies for wildlife or forest management purposes. • TVA public land managed for wildlife or forest management projects. • Informal recreation areas maintained for passive, dispersed recreation activities, such as hunting, hiking, 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 back-lying property that are managed for wildlife, water quality, or visual qualities. • Wildlife Observation Areas—TVA Natural Areas with unique concentrations of easily observed wildlife that are managed as public wildlife observation areas. • River corridor without sensitive resources present—A river corridor is a linear green space along both stream banks of selected tributaries entering a reservoir managed for light boat access at specific sites, riverside trails, and interpretive activities. River corridors will be included in Zone 4 unless sensitive resources are present (see Zone 3). • Islands of 10 acres or less. • Land planned for any of the above uses in the future.

Table 2-2 (cont.).		Land Use Zone Definitions
Zone		Definition
5	Industrial/ Commercial Development	<p>Land managed for economic development including business, commercial, light manufacturing, and general industrial uses.</p> <p>Areas included are:</p> <ul style="list-style-type: none"> • TVA public land under easement, lease, or license to other agencies/individuals. • TVA public land fronting land owned by other agencies/individuals. • Sites planned for future use supporting sustainable development. <p>Types of development that can occur on this land are:</p> <ul style="list-style-type: none"> • Business parks—TVA waterfront land which would support business and light manufacturing activities. • Industrial access—Access to the waterfront by back-lying 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. <p><i>(Commercial recreation uses, such as marinas and campgrounds, are included in Zone 6.)</i></p>
6	Developed Recreation	<p>All reservoir land managed for concentrated, active recreational activities that require capital improvement and maintenance, including:</p> <ul style="list-style-type: none"> • 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, day use areas, etc. • Land planned for any of the above uses in the future.

Table 2-2 (cont.). Land Use Zone Definitions	
Zone	Definition
	<p>Types of development that can occur on this land are:</p> <ul style="list-style-type: none"> • Commercial recreation, e.g., marinas, boat docks, 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	<p>Residential Access</p> <p>TVA-owned land where Section 26a applications and other land use approvals for residential shoreline alterations are considered. Requests for residential shoreline alterations are considered on parcels identified in this zone where such use was previously considered and where the proposed use would not conflict with the interests of the general public. As provided for in the SMP, residential access would be divided into three categories based on the presence of sensitive ecological resources and navigation restrictions. The categories are: (1) Shoreline Protection where no residential alterations would be permitted; (2) Residential Mitigation where special analysis would be needed; and (3) Managed Residential, where no known sensitive resources exist. Types of development/management that can occur on this land are:</p> <ul style="list-style-type: none"> • Residential water use facilities, e.g., docks, piers, launching ramps/driveways, marine railways, boathouses, enclosed storage space, and 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, etc.

Property Administration

The reservoir land plan takes into consideration TVA policy, guidelines, and environmental laws and regulations developing a strategy to manage resources by identifying suitable uses for each tract of land. As administrators of TVA public land, the watershed team uses the plan along with TVA policies and guidelines to manage resources and to respond to requests for the use of TVA public land. All inquiries about, or request for the use of TVA public land on Pickwick Reservoir should be made to TVA's Pickwick Watershed Team, P.O. 1010, Muscle Shoals, Alabama, 256-386-2228.

Requests generally fall into one of four categories:

1. A proposed land use that is consistent with the allocation in the plan.
2. A proposed land use that is not consistent with the plan allocation but is not otherwise inconsistent with TVA policy or legal authority.
3. Public service uses not specifically considered during the development of the plan.
4. A proposed land use that is not consistent with the plan allocation and is also precluded by TVA policy or legal authority.

Proposals that fall into the fourth category of request would normally be denied at the Watershed Team level. For each of the other three categories of requests, the applicant would be required to demonstrate the public benefits of the request, the need for TVA public land, and the capability of the tract to support the requested use. The applicant must also provide information about the proposed investment schedule, capital improvements, and other information typically required of any applicant for the use of TVA public land.

When a proposal is consistent with the allocated use (category 1), the request would be reviewed in accordance with NEPA and other legal authorities. If a proposed land use is consistent with TVA policies but is not congruent with the allocated uses for a parcel (category 2), the applicant would be asked to consider other tracts allocated for the proposed use. If an applicant finds none of the alternative to be satisfactory, they would be asked to provide justification that a modification to the plan is warranted and in the best public interest. If justifications are provided that are satisfactory to TVA, the agency would consider changing the allocation to accommodate the proposed need.

For requests falling within categories 2 and 3, TVA staff would use resource information and information provided by the applicant to determine if the requested site is physically capable of supporting the proposed use. If the capability evaluation reveals that the tract does not have the physical characteristics necessary to support the proposed use, the request will be denied. If the tract is found to be capable of supporting the proposed use, an interdisciplinary TVA team would conduct a suitability review that would include, in addition to public input, an assessment of the impacts on the environment, adjacent land uses, surrounding allocations, land management goals, reservoir plan objectives, and socioeconomic conditions. Public input would be a key component of this suitability analysis. If the request is found to be suitable, it would be coordinated within TVA, following established land use review processes. Access corridors for public works/utility projects proposed on any TVA public land that do not affect the zoned land use or sensitive resources would not require an allocation change so long as such uses would not be inconsistent with the use of the allocated zone. (An

access corridor is a linear pathway extending between TVA and the adjacent landowner to the water. It is located in a way that minimizes removal of trees or other vegetation and potential for erosion. The corridor should be stabilized and revegetated with native species.) Any other requests involving a departure from the planned uses would require the approval of the TVA Board of Directors.

2.2.2 Action Alternatives B and C

Under the action alternatives, TVA would update the 1981 Plan using resource data, computer analyses, stakeholder input, and TVA staff input. Alternatives B and C include 1,330.12 acres not planned in 1981. This previously unplanned land includes strips of retained land fronting tracts sold by TVA. Approximately, 1,064 acres of these retained strips of TVA public land have water access rights. These have been allocated to Zone 7, Residential Access, based on access rights as documented in the SMI and to Zone 5, Industrial/Commercial Development, based on existing land use. The remainder of the unplanned land is allocated to Zone 4, Natural Resource Conservation.

Comments received during the scoping period by public input requested that Parcel 16 be allocated to Zone 3, Sensitive Resource Management, instead of Zone 4, Natural Resource Conservation. This 154.66-acre parcel is located at the back of the Second Creek embayment near Waterloo, Alabama. Under both action alternatives, TVA is proposing to retain Parcel 16 in Zone 4, Natural Resource Conservation, since sensitive resources (fringe wetlands and bald eagle habitat) potentially present on this tract could still be managed effectively under this allocation. TVA staff would conduct additional surveys around this parcel during the winter for the presence of a bald eagle nest.

Public scoping comments also included a request for allocating Parcel 26 to Zone 3, Sensitive Resource Management, instead of Zone 6, Developed Recreation, because of the sensitive resources on this parcel. This 150.65-acre parcel fronts land transferred to the U.S. Department of Interior, National Park Service (NPS), to be managed as part of a national historic park (the Natchez Trace Parkway). This parcel is under permanent easement to the NPS to be managed as part of the Natchez Trace Parkway and other recreational uses. Under the action alternatives, Parcel 26 would be allocated to Zone 6, Developed Recreation, because of this existing agreement with the NPS. As stated in the previous section, if sensitive resources were identified on a parcel with an existing land use agreement (leases, licenses, etc.), that parcel would remain zoned for the committed use. However, TVA approval would be needed prior to undertaking activities on the parcel to ensure that the proposed activities would not adversely impact the identified sensitive resource(s).

The state of Mississippi inquired about changing the allocation of Parcel 130 from Natural Resource Conservation to commercial recreation. At this time, the state does not have enough information to proceed with a proposal and, therefore, it was not considered in this EIS.

Alabama Department of Conservation and Natural Resources (ADCNR) has requested Parcels 9, 30, and 32 be incorporated into a consolidated 30-year term easement involving 24,534 acres of TVA fee-owned land in North Alabama (includes property on Wheeler and Guntersville Reservoirs also). Parcels 9, 30, and 32 are currently under a 15-year term easement to ADCNR for natural resources management and public recreation (Seven Mile Island and Lauderdale Wildlife Management Areas). Under the

existing and proposed easements the land use and activities would remain the same; therefore these parcels would be allocated to Zone 4, Natural Resources Conservation under Alternatives B and C. Additionally, the U.S. Fish and Wildlife Service has requested that Parcel 31 (0.8 acre) be considered for transfer as part of the Key Cave National Wildlife Refuge.

Proposals for the use of three parcels (Parcels 37, 53, and 156) of TVA public land have been received. Under Alternative B, a balanced alternative which provides for conservation of natural resources and allows for limited Developed Recreation and Industrial/Commercial Development, these parcels would be allocated to zones that are compatible with the requests. Under Alternative C, a conservation alternative, TVA would not consider these requests and would allocate these parcels to Zone 4 (Natural Resource Conservation). These three parcels are described below.

Parcel 37

This 35.97-acre parcel was previously allocated in the 1981 Plan for industrial development. This parcel has been requested by the city of Florence for public recreation facilities including trails and overlooks.

Parcel 53

This 88.59-acre parcel was previously allocated for Upland Wildlife and General Forest Management. This parcel fronts the Barton industrial site (previously known as the Gilbert farm site). Also, Tennessee River Interstate Gas Company has an existing pipeline easement across this parcel. Southeast Tissue has requested access across this parcel for an industrial discharge for their proposed tissue plant to be located in Barton Riverfront Industrial Park.

Parcel 156

This 21-acre parcel is located on the left bank of lower Pickwick Reservoir (TRM 209.5), just upstream of Pickwick Landing State Park. This parcel consists of the nine White Sulphur Springs cabin sites, which are intermingled along the shoreline of Parcel 155. The lessees of these cabin sites have requested to purchase their individual lots. The White Sulphur Springs cabin site area was one of TVA's early ventures in cabin site development. The site was established in 1940 as a leased cabin site area containing 23 lots including one out-lot. Later, one lot was eliminated to accommodate a safety harbor for a total of 21 subdivision lots. During the 1940s, 11 lots were leased to individuals, and summer cabins were constructed on nine of the 11 lots by the lessees. These nine lots ranged from 1.5 acres to 5.5 acres in size for a total of 21 acres under lease. The nine lots that are leased are not grouped together in one location. The lots that are under lease are: 3, 4, 5, 8, 9, 11, 12, 13, and 19.

Alternative B, Balanced Conservation with Limited Developed Recreation and Industrial/Commercial Development

TVA would allocate these parcels of TVA public land to Zones 5, 6, and 7 (see Table 2-3). This alternative best accommodates existing back-lying uses and requests, with minimal to no impacts to the environment, and in some cases provides beneficial impacts. Parcel 37 would be allocated to Zone 6, Developed Recreation, to accommodate the city of Florence's request for public recreation facilities including trails and overlooks. Parcel 53 would be allocated to Zone 5, Industrial/Commercial

Development, to be compatible with the back-lying land use of the Barton industrial site. Parcel 156 would be allocated to Zone 7, Residential Access, because of the existing land use and developments. With this allocation, TVA would have the option to continue the leases, cancel the leases, or sell the lots (3, 4, 5, 8, 9, 11, 12, 13, and 19). TVA currently is considering all three options and how best to manage this property in future years.

Table 2-3. Allocations of Parcels Under Alternative B			
Parcel	Acres	Location	Alternative B
37	35.97	Florence River Heritage Trails Request	Zone 6
53	88.59	Barton Industrial Site (Old Gilbert Farm Site)	Zone 5
156	21.00	White Sulphur Springs Cabin Sites	Zone 7

Alternative C, Conservation

Under this conservation-oriented alternative, TVA would allocate Parcels 37 and 53 to Zone 4, Natural Resource Conservation (see Table 2-4). Parcel 156 would be allocated to Zone 4, Natural Resource Conservation, making its use compatible with the use of the backlying Pickwick Landing State Park.

Table 2-4. Allocations of Parcels Under Alternative C			
Parcel	Acres	Location	Alternative C
37	35.97	Florence River Heritage Trails Request	Zone 4
53	88.59	Barton Industrial Site (Old Gilbert Farm Site)	Zone 4
156	21.00	White Sulphur Springs Cabin Sites	Zone 4

2.3 Comparison of Alternatives

This section compares the environmental impacts of the three alternatives based on the information and analyses provided in Chapters 3, the Affected Environment, and 4, Environmental Consequences.

Section 101 of the NEPA declares that it is the policy of the Federal government to use all practicable means and measures, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations. TVA believes that all alternatives would be consistent with this policy, and TVA has interpreted the regulations and laws governing it to be consistent with this policy, as required by Section 102(1). Because of the environmental safeguards in each alternative, a wide range of beneficial uses of the environment could be obtained without degradation or unintended consequences under each alternative.

Direct comparison of parcel land uses between Alternatives A, B, and C is difficult because the 1981 Plan land allocation definitions and the proposed Alternatives B and C plan definitions are not the same. In the 1981 Plan, many of the parcels were designated for multiple uses. The existing 1981 Plan allocated approximately 21,100 acres which included approximately 1,200 acres that were transferred to other agencies. It also included approximately 2,000 acres that are submerged. The 1981 Plan did not allocate 1,330.12 acres of residential shoreline or other marginal shoreline strips along the reservoir. The proposed alternatives allocate all marginal shoreline strips with existing residential access rights to Zone 7, Residential Access. Despite these differences, the allocated land uses in the 1981 Plan (Alternative A) and the proposed Plan (Alternatives B and C) for each TVA parcel are identified and compared in Appendix B. For comparison purposes, an approximate relationship between the 1981 allocation categories and the current planning zones is shown in Table 2-5.

In implementing Alternative A, actual use for land with multiple tags would be decided on a case-by-case basis, making the assessment of impacts speculative. Therefore, for comparison purposes, a range of acreages for each possible land use category has been given. Under Alternative A, 1,220.42 up to 1,335.03 acres of land could be allocated to sensitive resource management-type uses, 4,840.34 up to 9,249.96 acres could be allocated to natural resource conservation-type uses, 434.18 up to 2,499.63 acres could be allocated to industrial and/or commercial development uses, and 372.79 up to 2,457.91 acres could be allocated to recreational uses. The actual allocation would be determined on a case-by-case basis as requests are received.

Under Alternatives B and C, more acreage is allocated for sensitive and natural resource uses than is designated than under Alternative A (see Table 2-6). Under Alternative B, approximately 2,845 to 7,369 acres of land would be allocated to more protective uses (Zones 3 and 4) than under Alternative A. Under Alternative C, approximately 2,992 to 7,516 acres of land would be allocated to more protective uses (Zones 3 and 4) than under Alternative A. Under Alternative C, approximately 145 acres would be allocated to more protective uses (Zone 4) than under Alternative B. Approximately 89 acres of Natural Resource Conservation are proposed to be allocated to Industrial/Commercial Development. A large number of sites previously allocated for access for future industrial development would be allocated to more protective categories. In addition, approximately 1,070.99 acres of marginal shoreline strip, not included in the 1981 Plan, would be allocated for Residential Access due to existing deeded rights for water access. Under Alternatives B and C, approximately 36 acres that were previously allocated to Industrial/Commercial Development are considered for allocation to Recreation Development or Natural Resource Conservation. Approximately 21 acres of land with existing privately-owned residential cabins and associated water use facilities are considered for allocation to either Natural Resource Conservation or Residential Access.

Table 2-5. Comparison of Land Uses Under Alternatives A, B, and C							
Existing (1981) Allocation Categories	Current Land Use Zones	Alternative A		Alternative B		Alternative C	
		Acres	%	Acres	%	Acres	%
Retained Developed Safety Harbors	Zone 2 - Project Operations	2,718.93	14.1	2,860.89	14.9	2,860.89	14.9
Cultural Resources Management Special Management Areas Visual Protection	Zone 3 - Sensitive Resource Management	1,220.42 up to 1335.03	6.3 up to 6.9	1,351.78	7.0	1,351.78	7.0
Wildlife Management Forest Management Agriculture Open Space	Zone 4 - Natural Resource Conservation	4,840.34 up to 9,249.96	25.2 up to 48.1	12,078.52	62.8	12,219.60	63.5
Industrial Sites Navigation	Zone 5 - Industrial/ Commercial Development	434.18 up to 2,499.63	2.3 up to 13.0	534.45	2.8	450.34	2.4
Recreation	Zone 6 - Developed Recreation	372.79 up to 2,457.91	1.9 up to 12.8	1,327.33	6.9	1,291.36	6.7
Previously Unplanned	Zone 7 - Residential Access	1,070.99 ^a	5.5	1,085.43	5.6	1,064.43 ^a	5.5
Previously Unplanned		259.13 ^b	1.3				
Previously Planned, but not included in proposed updated plan.	Transferred land Land under water.	(1,200) (2,000)					
	Total	~21,100 ^c		19,238.40		19,238.40	

^a The 1,070.99 acres of Zone 7 land allocated under Alternative A was reduced by 6.56 acres. This marginal strip with water access rights has been developed as Mill Creek Boat Dock, a commercial marina since the 1981 Plan. Under Alternatives B and C, this land is allocated to Zone 6, Developed Recreation.

^b This previously unplanned land does not have water access rights and under Alternatives B and C, has been allocated to Zone 4, Natural Resource Conservation.

^c The original 1981 Plan included approximately 21,100 acres. Additional acreage in the original 1981 Plan included approximately 1,200 acres of land that have been transferred to other agencies and approximately 2,000 acres that are under water. Also, the 1981 Plan did not include approximately 1,064 acres of residential access shoreline and 259 acres of shoreline that does not have residential access rights (see footnote b).

Table 2-6. Comparison of Acres Allocated to Sensitive and Natural Resource Uses		
Alternative	Allocation	Acres
Alternative A	Cultural Resources Management Special Management Areas, Visual Protection, Wildlife Management, Forest Management, Agriculture , Open Space	6,061 to 9,250
Alternative B	Zone 3 - Sensitive Resource Management Zone 4 – Natural Resource Conservation	13, 430
Alternative C	Zone 3 - Sensitive Resource Management Zone 4 – Natural Resource Conservation	13, 577

2.4 Impacts Summary

The range of impacts that could result from implementation of the alternatives is bracketed by the impacts of Alternatives A and C. Alternative A has greater acreages of land allocated to developed uses, including Industrial/Commercial Development, Access for Future Development, and Developed Recreation, than the other alternatives. Adoption of Alternative B would allow additional but limited recreational and industrial access and, therefore, would have greater natural resource potential impacts than Alternative C. Implementation of Alternative C would result in the largest amount of acres allocated to Zone 4, Natural Resource Conservation. A qualitative rating of the potential impacts of the alternatives with respect to different potentially affected resources is provided in Table 2-7. Mitigation measures to further reduce impacts are included in Section 4.21.

Table 2-7. Impacts Summary				
Resource	Potential Impacts	Alternative A	Alternative B	Alternative C
Terrestrial Ecology	Clearing and alteration of vegetation could impact the composition and abundance of species.	Forest areas generally remain forested. Potential for up to 2,500 acres for Industrial/Commercial Development. Some potential for fragmentation to the resource.	Some forest and wildlife management to maintain and enhance the resource. Less potential for fragmentation as 69.8% of acreage is allocated to Zones 3 and 4.	Some forest and wildlife management to maintain and enhance the resource. Less potential for fragmentation as 70.5% of acreage is allocated to Zones 3 and 4.

Table 2-7 (cont.). Impacts Summary				
Resource	Potential Impacts	Alternative A	Alternative B	Alternative C
Threatened and Endangered Plants and Animals	Clearing and alteration of vegetation could impact the composition and abundance of species.	Generally protected; some potential for fragmentation to the resource. Potential impact for state-listed species on Parcel 128.	Suitable habitats are placed in appropriate management zones.	
Threatened and Endangered Aquatic Animals	Potential impacts to sensitive species in Key Cave.	Allocation of Parcel 32 allows general forest research and agriculture activities.	Provides protection by allocating Parcel 32 to Zone 4 and Parcel 31 (Key Cave) to Zone 3.	
Managed Areas and Sensitive Ecological Sites	Incompatible land use on adjacent areas. Impacts on sensitive resources.	Potential impact to state-listed species on Parcel 128.	Suitable habitats are placed in appropriate management zones.	
Water Quality	Toxic substances, erosion, and nutrient loading.	More overall development of residential, industrial, and recreational developments on either TVA or private property could increase pollutant release.	More acreage allocated to conservation uses which would protect water quality; however, some potential for impacts due to commercial, industrial, and recreational development.	
Aquatic Ecology	Alteration of aquatic habitat.	Generally no change from existing conditions; some accelerated shoreline erosion due to clearing of riparian vegetation.	Increases in woody shoreline vegetation over time would be beneficial.	
Wetlands	Adverse effects to or destruction of wetlands.	Generally protected under Section 404 and EO 11990; indirect impacts to functions and values through adjacent incompatible land uses.	Protected; cumulatively beneficial effects through Zone 3 designation for significant wetlands. Some indirect impacts to functions and values through adjacent incompatible land uses.	
Floodplains	No impacts to the 100-year floodplain.	Any future facilities or equipment subject to flood damage shall be located above the TVA FRP elevation of 419.1-feet msl. All future development shall be consistent with the requirements of TVA's Flood Control Storage Loss Guideline (TVA, 1999b).		

Table 2-7 (cont.). Impacts Summary				
Resource	Potential Impacts	Alternative A	Alternative B	Alternative C
Prime Farmland	Conversion of prime farmland.	Resources protected; however, zoning did not consider the potential for impacts. These would be addressed in site-specific reviews.	Insignificant.	Insignificant.
Cultural Resources	Potential for activities to affect historic properties.	Resources managed; however, zoning did not consider the potential for impacts. These would be addressed in site-specific reviews.	Resources protected through phased identification and evaluation procedure; zoning considered the potential for impacts.	
Air Quality	Emissions from construction and development activities.	Greatest potential for air emissions due to most industrial development land	Generally insignificant impacts depending on the industries recruited.	
Navigation	Interference with commercial navigation.	No change from existing conditions.	Insignificant.	Insignificant.
Recreation	Availability of recreational opportunities.	Does not consider recent stakeholder input to limit development.	Informal use of 13,430 acres of Zones 3 and 4 land; 1,327 acres allocated to Developed Recreation; meets needs of city of Florence's request for walking trail.	Informal use of 13,571 acres of Zones 3 and 4 land; 1,291 acres allocated to Developed Recreation; does not allocate land to accommodate land use requests.
Visual Resources	Effects on Scenic Quality.	No change in present conditions.	Protection of scenic resources and maintenance of scenic integrity and attractiveness at a moderate to high level.	
Socioeconomic Impacts and Environmental Justice	Local economy and human communities.	Most acreage allocated to industrial/commercial development. Would have more positive impact on local economy. No environmental justice impacts.	Lesser opportunities for access for future development. Public input was to limit future development. Possible development sites include Barton industrial site, Yellow Creek site, and Parcel 53. No environmental justice impacts.	Lesser opportunities for access for future development. Public input was to limit future development. Possible development sites include Barton industrial site and Yellow Creek site. No environmental justice impacts.

2.5 The Preferred Alternative

TVA prefers Alternative B over the No Action Alternative and Alternative C. Alternative B would allocate a substantial amount of acreage to Natural Resource Management and Sensitive Resource Management, while also providing industrial/commercial and recreational development opportunities. Under Alternative B, the allocation of Parcel 37 to Developed Recreation would be compatible with the City of Florence's request for the River Heritage trail project. The allocation of Parcel 53 to Industrial/Commercial Development would be compatible with any industrial projects on the Barton Industrial Site. The allocation of Parcel 156 to Residential Access would be compatible with the existing use of summer cabins, commonly known as the White Sulphur Springs Cabin sites. As indicated in this analysis, the potential environmental impacts of these developments would be insignificant. TVA would designate the entrance to Key Cave (Parcel 31) for addition to the Key Cave National Wildlife Refuge and Parcel 128 would be designated as a TVA Natural Area.