CHAPTER 1

1.0 PURPOSE OF AND NEED FOR ACTION

1.1 Background

Tennessee Valley Authority (TVA) has been charged by Congress with improving navigation, controlling floods, providing for the proper use of marginal lands, providing for industrial development, and providing power at rates as low as is feasible, all for the general purpose of fostering the physical, economic, and social development of the Tennessee Valley region. The lands that TVA holds as steward in the name of the United States are some of the most important resources of the region. They have provided the foundation for the great dams and reservoirs that protect the region from flooding and secure for its residents the benefits of a navigable waterway and low-cost hydroelectricity. TVA's lands are the sites for its power generating system and arteries for delivering power to those that need it. Many of the region's parks, recreation areas, and wildlife refuges that are so important for the region's quality of life are on lands TVA made available. TVA lands often have been the catalyst for public and private economic development that supports all of these activities.

The United States of America (USA), through TVA, originally acquired approximately 1.3 million acres of land in the Tennessee River Valley. The construction and operation of the reservoir system inundated approximately 470,000 acres with water. USA/TVA has already transferred to other federal and state agencies for public uses or sold for residential development approximately 508,000 acres. The USA owns approximately 293,000 acres that TVA manages pursuant to the TVA Act.

As stewards of this important resource, TVA's policy is to manage its lands to protect the integrated operation of the TVA reservoir and power systems, to provide for appropriate public use and enjoyment of the reservoir system, and to provide for continuing economic growth in the Tennessee Valley region. TVA recognizes that historical land transfers have contributed substantially to meeting these multipurpose objectives, and it is TVA's policy to preserve reservoir lands remaining in public ownership under its control except in those rare instances when the benefits to the public will be so significant that transferring the land is justified.

1.2 Purpose and Need

TVA develops reservoir land management plans (RLMPs) to facilitate the management of reservoir lands in its custody. In general, TVA manages public land to protect and enhance natural resources, generate prosperity, and improve the quality of life in the Tennessee Valley region (see Appendix A, TVA Land Policy). RLMPs are submitted to the TVA Board of Directors for approval and provide a plan for long-term land stewardship and accomplishment of TVA's responsibilities under the TVA Act.

TVA proposes to develop a Mountain Reservoirs Land Management Plan (MRLMP) to guide land use approvals, private water use facility permitting, and resource management decisions for the next 10-year period for the nine mountain-region reservoirs illustrated in Figure 1-1 and listed in Table 1-1. All lands under TVA ownership on these nine reservoirs, a total of approximately 6,222 acres are under consideration in this planning process.

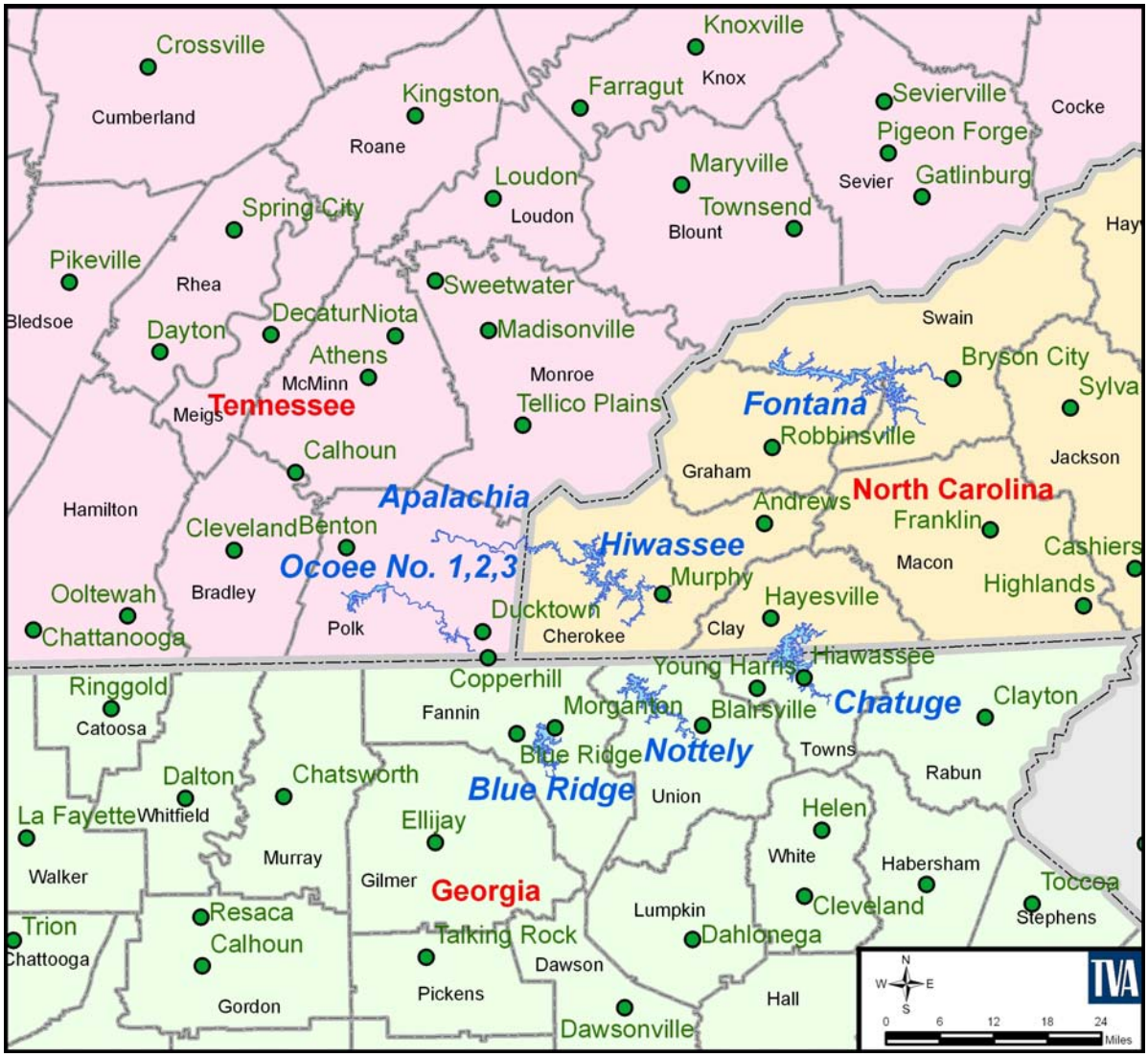

Figure 1-1. Mountain Reservoirs (Chatuge, Hiwassee, Blue Ridge, Nottely, the Ocoees, Apalachia, and Fontana) Locater Map

Land acquisition and disposal information for the nine tributary mountain reservoirs is shown in Table 1-1. Some lands (approximately 20 acres) were acquired for power assets (substations, etc.) subsequent to original project land acquisition and are not included in the acquisition total. The acreages listed in the table were calculated from georeferenced mapping data and aerial photography of the reservoir land parcels and do not completely align with acreage totals in recorded deeds. The acreages also do not account for land acquired and retained that are below the full summer pool elevations of the the reservoirs.

Table 1-1. Mountain Reservoirs Land Acquisition and Disposal Data

Reservoir	Location (County, State)	Total Land Originally Acquired * (Acres)	Transferred Lands* (Acres)	Sold Lands* (Acres)	Total Lands Disposed* (Acres)	Percent of Original Acquisition Sold or Transferred	TVA-Retained Land* (Acres)
Chatuge	Clay County, N.C. Towns County, Ga.	3,557	1,161	629	1,790	50	1,767
Hiwassee	Cherokee County, N.C.	19,046	17,280	759	18,039	95	1,007**
Blue Ridge	Fannin County, Ga.	6,495	5,919	106	6,025	93	470**
Nottely	Union County, Ga.	3,136	2,031	276	2,307	74	829
Ocoee 1	Polk County, Tenn.	4,135	3,925	133	4,058	98	77**
Ocoee 2	Polk County, Tenn.	389	309	0	309	79	80**
Ocoee 3	Polk County, Tenn.	3,261	3,043	0	3,043	93	218**
Apalachia	Cherokee County, N.C. Polk County, Tenn.	7,506	6,661	2	6,663	89	843**
Fontana	Graham County, N.C. Swain County, N.C.	57,312	55,153	1,228	56,381	98	931**
TOTAL		**104,837**	**95,482**	**3,133**	**98,615**	**93**	**6,222**

* Does not include land inundated by the reservoirs

** Includes narrow strip of TVA-retained land along shoreline; acreage not calculated

The goals of the MRLMP include the following:

Goal 1: Apply a systematic method of evaluating and identifying the most suitable uses of TVA public lands using resource data, stakeholder input, suitability and capability analyses, and TVA staff input.

Goal 2: Identify land use zone allocations to optimize public benefit and balance competing demands for the use of public lands.

Goal 3: Identify land use zone allocations to support TVA's broad regional resource development mission. TVA reservoir lands are managed to provide multiple public benefits including recreation, conservation, and economic development.

Goal 4: Provide a clear process, consistent with TVA's Land Policy, by which TVA will respond to requests for use of TVA public land.

Goal 5: Comply with federal regulations and executive orders (EOs).

Goal 6: Ensure the protection of significant resources, including threatened and endangered species, cultural resources, wetlands, unique habitats, natural areas, water quality, and the visual character of each reservoir.

Goal 7: Provide a mechanism that allows for local, state, and federal infrastructure projects when the use is compatible with the zone allocation and TVA's Land Policy.

TVA has prepared this environmental impact statement (EIS) to assess the impacts of a RLMP on the nine mountain reservoirs. Alternative approaches to allocating the TVA managed lands are analyzed in this EIS. Throughout the planning process, TVA has also sought to address issues and concerns raised by the public regarding management of the

TVA parcels. These issues are addressed in the environmental analyses of the various alternatives and include concerns such as protection of sensitive resources, natural resource conservation, and recreation.

1.3 The Decision

The TVA Board of Directors will decide which of the MRLMP alternatives to adopt.

1.4 Other Pertinent Environmental Reviews and Documentation

***Reservoir Operations Study Final Programmatic Environmental Impact Statement* (TVA 2005a)**

This study evaluated alternative ways to operate the TVA reservoir system to produce greater overall public value. Specific changes in the operation of the reservoirs included in the MRLMP were implemented in 2004 as a result of this study, including:

- Limiting the reservoir drawdowns from June 1 to Labor Day on Blue Ridge, Chatuge, Fontana, and Hiwassee reservoirs. The January 1 Flood Guide elevations of these reservoirs were increased. Tailwater releases at Apalachia and Ocoee 1 were modified to improve tailwater recreational opportunities.

- Implementation of continuous flows in the tailwater between Apalachia Dam and the downstream powerhouse from June 1 to November 1 to support aquatic life.

***Shoreline Management Initiative (SMI): An Assessment of Residential Shoreline Development Impacts in the Tennessee Valley Final Environmental Impact Statement* (SMI EIS) (TVA 1998)**

In 1998, TVA completed an EIS analyzing possible alternatives for managing residential shoreline development throughout the Tennessee River Valley. The alternative selected determined TVA's current Shoreline Management Policy (SMP), which incorporates a strategy of maintaining and gaining public shoreline through an integrated approach that conserves, protects, and enhances shoreline resources and public use opportunities while providing for reasonable and compatible use of the shoreline by adjacent residents. The SMP defines the standards for vegetation management, docks, shoreline stabilization, and other residential shoreline alterations. The SMI EIS is available on TVA's Web site at http://www.tva.gov/river/landandshore/landuse_shore.htm. More information on TVA's SMP may found on TVA's Web site at: http://www.tva.gov/river/landandshore/pdfs/shorelnk.pdf. The MRLMP EIS tiers from the final SMI EIS.

The analysis of shoreline data compiled for the SMI EIS determined that about 38 percent of the shoreline along TVA reservoirs was available for residential use and that about 13 percent was developed at that time. The SMI EIS shoreline ownership data for the nine mountain reservoirs is presented in Table 1-2. Residential shoreline on Chatuge Reservoir comprised 15 percent of the total (18.8 miles); Hiwassee Reservoir, 12 percent (20.3 miles); Blue Ridge Reservoir, 17 percent (11.4 miles); and Nottely Reservoir, 5 percent (5 miles). There is no residential shoreline on Ocoee 1, 2, or 3 (collectively referred to as the Ocoees), Apalachia, or Fontana reservoirs.

Table 1-2. Mountain Reservoirs Shoreline Ownership Data

Reservoir	Flowage Easement Shoreline		TVA-Owned Residential Access Shoreline		TVA-Owned and Jointly Managed Shoreline		TVA-Owned and -Managed Shoreline		Total Shoreline Miles
	Miles	% of Total Miles	Miles	% of Total Miles	Miles	% of Total Miles	Miles	% of Total Miles	Miles
Chatuge	60.8	48	18.8	15	31.8	25	16.6	13	128.0
Hiwassee	0.0	0	20.3	12	141.0	86	3.5	2	164.8
Blue Ridge	14.6	21	11.4	17	37.4	55	4.7	7	68.1
Nottely	53.8	53	5.0	5	36.4	36	6.9	7	102.1
Ocoees	0.0	0	0.0	0	109.5	100	0.0	0	109.5
Apalachia	0.0	0	0.0	0	28.3	90	3.2	10	31.5
Fontana	19.3	8	0.0	0	216.6	91	1.9	1	237.8

In accordance with TVA's SMP, TVA categorized the residential shoreline for previous land plans based on resource data collected from field surveys. A resource inventory was conducted for sensitive species and their potential habitats, archaeological resources, and wetlands along the residential shoreline. The shoreline categorization system established by SMP was composed of three categories: Shoreline Protection, Residential Mitigation, and Managed Residential.

As new data are collected on the spatial location and significance of endangered species, wetlands, cultural resources, or navigation restrictions, adjustments to category boundaries may be necessary. Through experience with the shoreline categorization process set up in 1999 by the SMI EIS, TVA believes that the value of advance categorization is less than when SMP was implemented. Today's technology provides the ability to identify sensitive resources during permitting evaluations. Today's resource databases are interactive and continually updated to allow ease of use of the latest information in permitting decisions. Furthermore, TVA's experience in permitting suggests that the Shoreline Protection category is not a prohibition on permitting because mitigation techniques are often available. Because resource data are continually updated, shoreline categorized as Managed Residential may change as updated resource surveys are conducted. Based on these considerations, TVA is not providing a complete categorization of residential shoreline with the MRLMP.

With the MRLMP, TVA has categorized shoreline in areas undergoing high development pressure as indicated by the volume of permit requests in the last few years. In the future, the shoreline will be gradually categorized in response to permit requests. Because the permit reviews provide current real-time information, over time this will result in more accurate shoreline resource inventories, thus meeting the intent of the SMP shoreline categorization system.

Regulations Under Section 26a of the TVA Act for Nonnavigable Houseboats, Storage Tanks, Marina Sewage Pump-Out Stations, Wastewater Outfalls and Septic Systems, and Development Within Flood Control Storage Zones Environmental Assessment **(TVA 2001)**

Complete details on the Section 26a regulations may be obtained from TVA watershed teams or by viewing the regulations at www.tva.gov/river/26apermits/index.htm.

North Shore Road Final Environmental Impact Statement **(National Park Service [NPS] 2007)**

This study evaluated alternatives for construction of a road along the northern shore of Fontana Reservoir to discharge and satisfy obligations associated with a 1943 memorandum of agreement among the Department of Interior; TVA; Swain County, North Carolina; and the State of North Carolina. The EIS provides a detailed description of resources on the Fontana Dam Reservation and along the northern shore of Fontana Reservoir. In a record of decision issued in December 2007, the NPS selected the Monetary Settlement Alternative, under which the road would not be built. TVA was a cooperating agency in the preparation of the EIS.

Control of Oriental Bittersweet (Celastrus orbiculatus) on TVA Property Near Fontana Dam, Graham and Swain Counties, North Carolina, Environmental Assessment **(TVA 1997)**

This environmental assessment addressed invasive species control and related natural resource management issues on the Fontana Dam Reservation.

Upper Ocoee River Corridor Recreational Development Final EIS **(U.S. Forest Service [USFS] 1997)**

TVA was a cooperating agency in the development of this EIS, which described resources in the vicinity of the Ocoee projects, with an emphasis on recreational activities.

Land and Resource Management Plan - Nantahala and Pisgah National Forests **(USFS 2003)**

This report is available at the following site:
http://www.cs.unca.edu/nfsnc/nepa/nantahala_pisgah_plan/plans.htm.

Environmental Impact Statement and Revised Land and Resource Management Plan, Cherokee National Forest **(USFS 2004a)**

This USFS report may be accessed at
http://www.fs.fed.us/r8/cherokee/planning2003/final_forest_plan/plan.pdf.

Land and Resource Management Plan - Chattahoochee and Oconee National Forests **(USFS 2004b)**

To retrieve this USFS report, go to the following Web site:
http://www.fs.fed.us/conf/200401-plan/index.htm.

Ocoee and Hiwassee Rivers Corridor Management Plan, Cherokee National Forest **(USFS 2008)**

This USFS report is available at
http://www.fs.fed.us/r8/cherokee/planning2003/2008/non_nepa/CMP_021908.pdf.

1.5 The Scoping Process

The scoping process for this EIS began when TVA published in the *Federal Register* on June 1, 2007, a notice of intent (NOI) to prepare the EIS. TVA sought comments from various state and federal agencies, elected officials, resource conservation groups, tribes, and other organizations and individuals.

In addition to the notice in the *Federal Register*, TVA also advertised the scoping effort by issuing news releases and placing advertisements in 11 local newspapers and through public service announcements on local radio and television stations. Letters and questionnaires were sent to individuals in the MRLMP area, to stakeholder organizations, and to local, state, and federal agencies. Fourteen stakeholder meetings were held with state-elected officials, electric distributor cooperatives, marina operators, watershed associations, and other key stakeholders. In addition, information about the proposed land plan and an interactive questionnaire form were available on the TVA Web site. TVA hosted a public meeting at The North Georgia Technical College in Blairsville, Georgia, on June 21, 2007. During the public meeting, information forms, writing materials, and a stenographer were available on site for attendees to make comments. A total of 83 participants attended the public meeting.

1.5.1 Summary of Public Participation

TVA received 473 comments during the public scoping effort in various formats, including questionnaires completed on the TVA Web site, questionnaires mailed to TVA, letter and e-mail responses, and oral comments in the public meeting. All public comments were compiled and analyzed to identify the range of issues and concerns to be addressed in the EIS. Many commenters also recommended specific land uses or provided information regarding resources present on TVA lands. Each comment was categorized by its major issue, and comments were sorted into themes by reservoir and summarized in a scoping document, which is contained in Appendix B. This summary includes the potential environmental issues and comment themes addressed in all the public comments received during the scoping process.

1.5.2 Scoping Response

The following five predominant themes or general issues were identified from the comments: Land Planning and Policy, Recreation, Natural Resources, Compliance, and Reservoir Levels. Other comment areas included Power Delivery and Industrial Development and Appreciation for TVA Land Management Practices.

- **Land Planning and Policy**
  Land planning and policy comments were received concerning loss of public lands, maintaining natural areas, future development, land use, and other considerations for the current land planning effort.

- **Recreation**
  Most recreation comments received concerned the use of hiking and mountain biking trails and requests to build additional trails on public lands. Other comments regarding boating restrictions, off-road vehicle use, camping, and available facilities were also provided.

- **Natural Resources**
  Comments were received concerning all aspects of natural resource preservation and management including water quality and aquatic habitats, air quality, sedimentation and shoreline erosion, wildlife, and forestry. Cultural resources concerns were also addressed.

- **Compliance**
  Areas discussed as needing attention included littering/trashing of informal/dispersed camping areas, houseboats and all-terrain vehicle (ATV) use, boating restrictions, nonpermitted boat docks, and illegal waste dumps.

- **Reservoir Levels**
  Many comments were received concerning low reservoir levels and their associated impacts.

  Scoping participants were asked to describe their use of and their method of access to the reservoirs. They were also requested to indicate from a list of recreation activities the frequency of their participation in each activity. Additionally, scoping participants were asked to provide their opinion regarding the allocation of public land to specific uses and whether there is currently enough, too much, or an adequate amount or availability for these uses. As shown in Table 1-3, the majority of the 473 respondents indicated a general preference for no changes in existing land uses.

  The public scoping questionnaire results indicate that the activities with the most frequent participation on the mountain reservoirs are mountain biking on dirt trails, sightseeing and viewing natural scenery, swimming in lakes and streams (including beach use), hiking on dirt trails, motorized boating, nonmotorized/paddle-craft boating, biking on paved trails, and walking on paved trails. The next highest-ranking activities are developed camping, primitive camping, and bank fishing.

  The comments that TVA received during the public scoping period indicate that the majority of people that responded generally show a preference for the existing land uses. Of the land uses listed in Table 1-3, the majority of respondents stated that they believe that the mountain reservoirs have “about the right amount” of developed land uses such as recreation day use areas, marinas, and developed campgrounds. The exception is industry/light manufacturing, in which the majority of respondents believe there is too much land available for that use in the area. Most respondents stated that they believe more land is needed for undeveloped land uses such as natural areas and land use that supports forest management and trails. The majority of respondents felt the recreation uses that “need more land” are mountain bike trails, hiking trails, and greenways and paved trails.

Table 1-3. Land Use Preferences of Scoping Participants

Land Use	Too Much Land	About Right Amount	Need More Land	No Opinion
Industry/light manufacturing	206	97	7	59
Preserve natural areas/open space	4	113	247	15
Forest management/habitat improvement	8	154	182	24
Wildlife observation/photography areas	0	178	141	53
Horseback riding trails	62	163	42	98
Mountain bike trails	12	47	324	22
Hiking trails (dirt)	2	132	228	23
Greenways and paved trails	24	128	191	33
Stream/river access sites	6	184	146	41
Water trails	0	145	132	87
Hunting areas	79	145	33	110
Fishing berms or piers	22	177	48	117
Undeveloped or primitive camping areas	15	164	132	54
Recreation day use areas (swimming areas, picnic areas)	14	203	113	42
Year-round boat ramps	17	217	49	83
Developed campgrounds	25	194	94	54
Commercial marinas	78	184	15	79
Overnight lodging (cabins, cottages, resort lodges)	43	189	83	56
Museums/nature centers	15	173	108	70
Visitor centers/overlooks	10	217	84	53
Other (please specify)				
Off-road trails	1		2	
Ball fields			1	
Rock climbing			1	
Disc golf			1	

Finally, the respondents were asked to identify for each reservoir whether the number of facilities available met their current needs. The scoping results indicated a high level of interest in development and expansion of hiking and mountain biking trails, as well as improvements at existing recreation areas. Both hiking and mountain biking trails are compatible with several of TVA's current land use allocations on the mountain reservoirs and would be compatible with some of the allocations proposed under the Action Alternatives described below in Chapter 2. Due to the large interest identified during public scoping regarding mountain biking in the mountain reservoirs region, TVA has included an inventory of mountain bike trails in the region in Appendix C.

1.5.3 Land Use Proposals

Several parcel-specific comments were received during scoping and are listed by reservoir in Appendix B. A majority of the parcel-specific comments can be accommodated within the existing allocations such as mountain bike trails, hiking trails, and natural resource conservation efforts on lands previously allocated for Natural Resource Conservation. On both Chatuge and Hiwassee reservoirs, there were several comments suggesting new recreation areas for water access and trail expansion. A county government official also provided a comment regarding interest in ball fields. Most of the requests for recreation were for trails. A parcel on Chatuge Reservoir has also been identified for consideration as an industrial site. Several comments regarding Nottely Reservoir have called for expansion of the existing recreation facilities, such as Poteete Creek Campground, to accommodate the growing recreation demands on this reservoir.

A 2-acre parcel was identified during scoping as a potential site for a new substation to serve the Blue Ridge Mountain Electric Membership Cooperative (BRMEMC). BRMEMC expressed an urgent need to meet the projected load growth in the area and meet a substation in-service date of June 2009. Due to this urgent public infrastructure need, this 2-acre parcel (a portion of Parcel 52 on Chatuge Reservoir) is being considered for use as a substation site and is being evaluated independently from the current land planning effort.

1.5.4 Issue and Resource Identification

TVA internal reviews of current and historical information, reservoir data collected, and public input were used to identify the following resources/issues for evaluation in the MRLMP. The effects of each alternative on these issues are evaluated:

Existing Land Use patterns along the shoreline and back-lying land have been largely determined by TVA land acquisition, disposals, and land use agreements. Many of the parcels are committed to existing land uses with little to no potential for change in the 10-year planning horizon. Proposed allocations of the remaining uncommitted parcels will be evaluated using the goals of the MRLMP and TVA policies and regulations.

Recreation comprises a broad range of activities on the nine mountain reservoirs. Recreation opportunities are an important resource for public use of the mountain reservoirs lands and waters.

Terrestrial Ecology includes the plants and animals comprising the terrestrial ecosystems and natural community types found adjacent to the nine mountain reservoirs. Issues include the identification and protection of significant natural features, rare species habitat, important wildlife habitat, or locally uncommon natural community types. Pursuant to EOs 13186 and 13112, TVA considers impacts to migratory birds and invasive species.

Endangered and Threatened Species are populations of state-listed, federally listed, or rare plants and animals known to exist in the vicinity of the nine mountain reservoirs, including the occurrence and habitats on TVA lands and waters.

Wetlands are an important ecosystem for many types of plants and animals found on TVA land and along the mountain reservoirs shoreline. Pursuant to EO 11990 and the Clean Water Act, TVA considers impacts to wetlands.

Floodplains are important to flood control and water quality issues and are productive natural areas. Pursuant to EO 11988, TVA considers impacts to floodplains.

Cultural Resources are archaeological sites, historic buildings, and cultural landscapes and properties on or near the nine reservoirs lands, including sites listed in the National Register of Historic Places (NRHP).

Managed Areas and Ecologically Significant Sites are special and unique natural areas on or in the vicinity of the nine mountain reservoirs set aside for a particular management objective or lands that are known to contain sensitive biological, cultural, or scenic resources.

Visual Resources relate to the scenic qualities of the nine mountain reservoirs and the lands surrounding them.

Water Quality and Aquatic Ecology Water quality conditions affect the overall ecological conditions of the nine mountain reservoirs. Water quality is influenced by activities causing shoreline erosion as well as pollution, litter, and debris control. Aquatic ecology considers the plants and animals found in the waters of the mountain reservoirs and their tributaries. Issues include the identification and protection of rare species' habitat, important aquatic habitat, or locally uncommon aquatic community types.

Air Quality and Noise are important resources for public health and welfare. An important issue is compliance with National Ambient Air Quality Standards (NAAQS), which establish safe concentration limits of various air pollutants.

Socioeconomic issues include the impacts of the MRLMP on current population, labor force, employment statistics, income, and property values of the mountain reservoirs region. A subset of these issues is environmental justice, the potential for disproportionate impacts to minority and low-income communities.

1.6 Necessary Federal Permits, Licenses, and Consultations

No federal permits are required to develop a RLMP. Site-specific information on reservoir resources has been characterized in this EIS, and potential impacts on these resources were considered in making land use allocation recommendations. Appropriate agencies regulating wetlands, endangered species, and historic resources have been consulted during this planning process. When specific actions are proposed, additional environmental reviews for these actions would be undertaken as necessary to address site-specific impacts.