

4.18 Cultural Resources

4.18.1 Introduction

For this study, cultural resources are defined as historic properties that are archaeological sites or historic structures. Archaeological sites date from approximately 12,000 BC through the historic period, which can be as recent as AD 1950. A historic structure has been standing for 50 years or more. These two types of historic properties are addressed separately in this section because their information in the TVA database is organized separately and because the resources could be affected differently by project operations. The cultural chronology of the TVA reservoir lands is typically divided into five broad periods: Paleoindian (10000-8000 BC), Archaic (8000-1000 BC), Woodland (1000 BC-AD 900), Mississippian (AD 900-1600), and Historic (AD 1600 to present). Some regions include the Gulf Formational (1200-600 BC) as an additional chronological period. A culture history summary is contained in Appendix D7.

Resource Issues
<ul style="list-style-type: none"> ▶ Integrity of historic structures and archaeological sites eligible or potentially eligible for listing in the National Register of Historic Places

For both types of historic properties, the area of potential effect (APE) includes all areas that could be both directly affected by changes in reservoir operations (direct effects) and areas where a change could occur indirectly as a result of change in reservoir operations (indirect effects). The factors that could affect the integrity of cultural resources as a result of changes in reservoir operations include:

- **Shoreline Erosion.** Archaeological sites and historic structures could be affected around the summer pool shoreline, in the winter pool drawdown, and along tailwater streambanks, as discussed in Sections 4.16 and 5.16, Shoreline Erosion.
- **Exposure by Elevation Fluctuations.** Archaeological deposits could be saturated and/or dried out from exposure by elevation fluctuations. Exposure of archaeological sites and historic structures by elevation fluctuations could promote vandalism, looting, and disturbance from recreational activity.
- **Land Development.** Shoreline and back-lying land development could affect archaeological sites and historic structures, as discussed in Sections 4.15 and 5.15, Land Use. Development up to 2 km from the summer pool elevation was considered in this section.
- **Visual Impacts.** Archaeological sites and historic structures could be affected by changes to the view shed as discussed in Sections 4.19 and 5.19, Visual Resources.

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4.18.2 Regulatory Programs and TVA Management Activities

Part of TVA's responsibility as a lead agency in preparing an EIS that complies with the NEPA is to address requirements of the National Historic Preservation Act (NHPA) of 1966 and the Archaeological Resource Protection Act (ARPA) of 1979. Section 106 of the NHPA requires that historic properties be taken into consideration during the planning process. Historic properties are defined archaeological sites or historic structures that are eligible or potentially eligible for listing in the National Register of Historic Places (NRHP). The NRHP is the official list of historic properties throughout the nation that are worthy of preservation because of their cultural significance and research potential in American history, architecture, and archaeology. Section 110 of the NHPA pertains to historic properties owned by federal agencies and provides responsibility to federal agencies for the identification, evaluation, and protection of these resources. The primary objective and concern regarding historic properties for the TVA ROS is to identify NRHP-eligible archaeological sites and historic structures that lie within areas affected by project operations.

Impacts on historic properties are considered in the ROS because changes in reservoir operations have the potential to affect the integrity of a property, which could compromise its eligibility for listing in the NRHP. In compliance with Sections 106 and 110 of the NHPA, consideration includes identification, evaluation, and protection of resources.

4.18.3 Archaeological Sites

Existing Conditions

Archaeological investigations in the ROS study area have a long and prominent history, dating back to 19th-century Smithsonian explorations. Although the six physiographic regions vary in size and the archaeological investigations at reservoirs within each region have varied, the summary numbers are useful. A total of 7,726 archaeological sites have been recorded within the APE defined for the ROS (Table 4.18-01). Of these, 2,002 (26 percent) are considered either eligible or potentially eligible for listing in the NRHP.

The number of archaeological sites represented in Table 4.18-01 indicates substantial differences in the number of sites among the reservoirs. This reflects a wide variation in the availability of information about these sites. Some areas have been surveyed more than other areas, and NRHP eligibility has not been assessed for many sites. More comprehensive surveys and site assessments would likely result in a more equal distribution of archaeological sites and NHRP-eligible sites at each reservoir. Consequently, the variation in the distribution in the existing data was not a major consideration in the impact analysis.

Table 4.18-01 Numbers of Archaeological Sites in the Area of Potential Effects

Project and Locations	Recorded Archaeological Sites	NRHP-Eligible or Potentially Eligible Archaeological Sites	NRHP-Listed Archaeological Sites
Mainstem Projects			
Kentucky, KY/TN	330	74	0
Pickwick, AL/MS/TN	516	166	1
Wilson, AL	0	0	0
Wheeler, AL	892	219	0
Guntersville, AL/TN	600	0	0
Nickajack, TN	40	22	0
Chickamauga, TN	397	73	0
Watts Bar, TN	707	400	0
Fort Loudoun, TN	185	15	0
Total mainstem	3667	969	1
Tributary Projects			
Norris, TN	280	71	0
Melton Hill, TN	178	84	0
Douglas, TN	132	7	0
South Holston, TN/VA	70	0	0
Boone, TN	51	3	0
Fort Patrick Henry, TN	65	0	0
Cherokee, TN	460	355	0
Watauga, TN	105	0	0
Wilbur, TN	Unknown	0	0
Fontana, NC	21	0	0
Tellico, TN	735	218	0
Chatuge, NC/GA	227	9	0
Nottely, GA	185	17	0
Hiwassee, NC	258	158	0
Apalachia, NC	16	2	0
Blue Ridge, GA	143	49	0
Ocoee #1, TN	20	10	0
Ocoee #2, TN	Unknown	0	0
Ocoee #3, TN	Unknown	0	0
Tims Ford, TN	163	5	0
Normandy, TN	183	0	0
Great Falls, TN	Unknown	0	0
Upper Bear Creek, AL	237	21	0
Bear Creek, AL	231	22	0
Little Bear Creek, AL	238	0	0
Cedar Creek, AL	61	2	0
Total tributary	4,059	1,033	0
Total projects	7,726	2,002	1

NRHP = National Register of Historic Places.

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Although the entire TVA shoreline has not been surveyed, substantial archaeological information exists about the project study area. This information was used to develop a predictive model concerning the potential for the occurrence of archaeological sites in uninventoried locations. Known archaeological sites that were used in the predictive model analysis are located between the minimum winter pool elevation and 2 km of the maximum summer pool shoreline (Tables 4.18-02 and 4.18-03).

Of the 3,246 archaeological sites between the maximum summer pool (June 1) elevation and the minimum winter pool (January 1) elevation, the majority of the sites (1,955) have an identified prehistoric component, 605 have a historic component, 568 are multicomponent, and 121 have an unidentified prehistoric cultural affiliation. Approximately 37 percent of the sites located between the summer and winter elevations have been recommended as eligible or potentially eligible for inclusion in the NRHP.

Of the 7,726 archaeological sites within the APE, the majority of the sites (4,758) have an identified prehistoric component, 1,365 archaeological sites are historic, 1,005 are multicomponent, and 560 have an unidentified prehistoric cultural affiliation. Approximately 25 percent of the sites located within the APE have been recommended as eligible or potentially eligible for inclusion in the NRHP.

The probability model determined that slightly over 20 percent of the study area was classified as having a high to moderate potential for the occurrence of archaeological sites.

Future Trends

Continued operations under the existing reservoir operations policy (or the Base Case) would adversely affect archaeological sites. Direct effects of reservoir operations on archaeological sites are erosion and exposure by elevation fluctuations. Erosion occurs along the summer pool shoreline, in the winter pool drawdown, and along the tailwater streambanks.

Summer elevations erode archaeological sites along the shoreline and have the potential to disturb vulnerable cultural remains along the shoreline and above the summer pool elevation through recreational activities and human intrusions from camping, boating, and hiking. Winter pool elevations expose sites in the drawdown to erosion and archaeological deposits to saturation and drying. Sites in the drawdown are also indirectly affected by vandalism and looting.

Other indirect impacts on archaeological sites include development of shoreline- and back-lying land. Development often occurs as an indirect result of TVA operations (recreation and industrial development), impacts on archaeological sites are indirect because TVA does not undertake these actions specifically.

Table 4.18-02 Cultural Affiliation of Archaeological Sites Located between Summer and Winter Pool Elevations

Reservoir	Total Sites	Prehistoric	Historic	Multi-Component	Unknown Affiliation	NRHP-Eligible Sites
Apalachia	4	3	0	1	0	2
Boone	9	1	5	3	0	1
Fort Patrick Henry	0	0	0	0	0	0
Hiwassee	253	143	42	65	3	82
Norris	167	71	55	40	1	40
Ocoee	20	10	3	7	0	10
South Holston	12	3	3	6	0	0
Watauga	5	5	0	0	0	0
Watts Bar	375	166	164	45	0	289
Cherokee	388	78	145	148	20	318
Douglas	93	30	19	37	7	1
Chickamauga	250	215	14	12	9	42
Bear Creek	3	2	1	0	0	1
Cedar Creek	38	38	0	0	0	1
Little Bear Creek	112	88	4	20	0	0
Upper Bear Creek	0	0	0	0	0	0
Blue Ridge	58	38	5	15	0	24
Chatuge	193	94	37	59	3	6
Fontana	3	1	1	1	0	0
Nottely	126	89	3	34	0	5
Kentucky	131	94	15	20	2	10
Pickwick	235	230	2	3	0	90
Guntersville	115	37	0	4	74	0
Wheeler	383	364	7	10	2	113
Wilson	0	0	0	0	0	0
Fort Loudoun	23	9	13	1	0	15
Tellico	208	107	66	35	0	145
Melton Hill	13	10	1	2	0	5
Nickajack	0	0	0	0	0	0
Normandy	21	21	0	0	0	0
Tims Ford	8	8	0	0	0	0
Total	3,246	1,955	605	568	121	1,193

Note: NRHP = National Register of Historic Places.

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Table 4.18-03 Cultural Affiliation of Archaeological Sites in the Area of Potential Effect

Reservoir	Total Sites	Prehistoric	Historic	Multi-Component	Unknown Affiliation	Potentially Eligible/NRHP-Eligible Sites
Apalachia	16	9	5	2	0	2
Boone	51	17	23	11	0	3
Fort Patrick Henry	65	20	5	21	19	0
Hiwassee	258	116	43	98	1	158
Norris	280	65	125	50	40	71
Ocoee	20	10	3	7	0	10
South Holston	70	49	11	12	2	0
Watauga	105	72	2	13	18	0
Watts Bar	707	378	260	69	0	400
Cherokee	460	110	181	163	6	355
Douglas	132	69	28	35	0	7
Chickamauga	397	302	67	28	0	73
Bear Creek	231	194	31	6	22	22
Cedar Creek	61	59	1	1	0	2
Little Bear Creek	238	191	14	33	0	0
Upper Bear Creek	237	212	10	5	0	21
Blue Ridge	143	80	27	25	11	49
Chatuge	227	105	66	46	10	9
Fontana	21	3	11	7	0	0
Nottely	185	77	13	40	1	17
Kentucky	330	181	54	40	55	74
Pickwick	516	446	36	12	22	166
Guntersville	600	205	87	59	249	0
Wheeler	892	711	24	53	104	219
Wilson	0	0	0	0	0	0
Fort Loudoun	185	80	83	22	0	15
Tellico	735	532	99	104	0	218
Melton Hill	178	125	29	24	0	84
Nickajack	40	28	9	3	0	22
Normandy	183	177	1	5	0	0
Tims Ford	163	135	17	11	0	5
Total	7,726	4,758	1,365	1,005	560	2,002

Note: NRHP = National Register of Historic Places.

4.18.4 Historic Structures

Existing Conditions

A total of 5,322 historic structures have been recorded within the APE (Table 4.18-04). Of these, 233 are considered either eligible or potentially eligible for listing in the NRHP, 85 are listed in the NRHP, and nine NRHP historic districts have been recorded—one each at Little Bear, Normandy, Pickwick, Tims Ford, and Wheeler Reservoirs; and four at Wilson Reservoir. In addition, Wilson Dam is listed as a National Historic Landmark, the only such designated TVA property, as well as the only such property within the TVA study area.

The majority of the historic structure data came from individual county surveys on file at State Historic Preservation Offices and from past TVA surveys, primarily associated with TVA lands planning. Many of these surveys are incomplete or out of date. Recent comprehensive work at South Holston, Douglas, Chatuge, Normandy, and Tims Ford Reservoirs and partial coverage at Boone, Fort Patrick Henry, and Norris Reservoirs supplemented these surveys.

The number of historic structures represented in Table 4.18-04 indicates substantial differences in the number of structures among the reservoirs. This reflects a wide variation in the availability of information about these structures. Some areas have been surveyed more than other areas, and NRHP eligibility has not been assessed for many structures. More comprehensive surveys and structure assessments would likely result in a more equal distribution of structures and NHRP-eligible structures at each reservoir. Consequently, the variation in the distribution in the existing data was not a major consideration in the impact analysis.

Future Trends

The formation of reservoirs on the Tennessee River mainstem and its tributaries uprooted historic cultural settlement patterns and permanently changed the cultural geography of those regions. Sufficient time has passed, and these reservoirs are now historically significant and potentially eligible for listing in the NRHP, as are their dams and hydropower plants. Inundation reduced the available farmlands in reservoir valleys, with many of the remaining fragmented farms being sold off and their farm buildings abandoned. From the time of the formation of the TVA reservoirs, it was policy to develop and encourage state parks, recreational facilities, and family summer communities. TVA promoted the enhancement and use of its new reservoirs for the benefit of all the public.

Continued operations under the existing reservoir operations policy (the Base Case) would adversely affect historic structures. A direct effect of reservoir operations on historic structures is erosion. Erosion occurs at historic structures located below the summer pool elevation. These include TVA dams, pre-TVA hydro-development structures, and extant pre-inundation structures.

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Table 4.18-04 Numbers of Historic Structures in the Area of Potential Effects

Project and Location	Recorded Historic Structures	NRHP-Eligible or Potentially Eligible Historic Structures	NRHP-Listed Historic Structures/Districts
Mainstem Projects			
Kentucky, KY/TN	438	1	12
Pickwick, AL/MS/TN	151	2	1
Wilson, AL	21	1	4
Wheeler, AL	546	1	7
Guntersville, AL/TN	1,223	64	6
Nickajack, TN	50	1	0
Chickamauga, TN	138	1	10
Watts Bar, TN	91	1	10
Fort Loudoun, TN	139	1	2
Total mainstem	2,797	73	52
Tributary Projects			
Norris, TN	421	22	0
Melton Hill, TN	19	1	5
Douglas, TN	413	47	4
South Holston, TN/VA	184	17	1
Boone, TN	89	4	5
Fort Patrick Henry, TN	73	1	0
Cherokee, TN	362	12	8
Watauga, TN	67	1	0
Wilbur, TN	0	1	0
Fontana, NC	28	1	3
Tellico, TN	269	6	3
Chatuge, NC	25	4	2
Nottely, GA	23	5	2
Hiwassee, NC	25	1	2
Apalachia, NC	1	1	0
Blue Ridge, GA	38	1	0
Ocoee #1, TN	1	2	0
Ocoee #2, TN	0	1	0
Ocoee #3, TN	1	1	0
Tims Ford, TN	158	3	1
Normandy, TN	93	1	4
Great Falls, TN	111	1	0
Upper Bear Creek, AL	63	2	0
Bear Creek, AL	2	2	1
Little Bear Creek, AL	14	1	1
Cedar Creek, AL	45	21	0
Total tributary	2,525	160	42
Total projects	5,322	233	94

Notes: Due to incomplete or out of date surveys, these numbers do not necessarily reflect the actual number of sites at each reservoir.

NRHP = National Register of Historic Places.

Indirect effects of reservoir operations include development and visual impacts. Large industrial complexes associated with barge facilities have displaced farms, as well as other historic features, along the reservoirs. Residential lake front and lake view development has also become popular, and marina development has accelerated. These new large-scale developments adversely affected the remaining historic buildings and their landscapes.

Another indirect effect is the development of back-lying land. The remaining farmsteads in view of the reservoirs are being replaced with development tracts; the historic buildings that are retained (if any buildings are retained, typically only the house is) lose their historic context. This accelerating residential development is changing extensive areas of open farmland or woodland surrounding the reservoirs. The practice of building a new individual house on a single tract has been replaced by large-tract development that takes up entire farms. The already diminished number of remaining historic buildings and historic landscapes are being lost rapidly.

Development can affect the scenic integrity of adjacent historic resources. The transformation of historic rural and agricultural landscapes into dense and usually upscale housing developments is the most widespread adverse impact on historic structures and their landscapes.

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