U.S. Army Corps of Engineers
Wilmington District

W. Kerr Scott Dam and Reservoir Master Plan

Yadkin River Basin

January 2012

Executive Summary

W. Kerr Scott Dam and Reservoir Master Plan

The W. Kerr Scott Dam and Reservoir (W. Kerr Scott Reservoir or the project) is operated by the U.S. Army Corps of Engineers (USACE). It includes approximately 1,475 acres of open water at normal pool (USACE 2010) and an additional 2,279 acres of fee land in Wilkes County, North Carolina. The dam is located approximately four (4) miles west of the Town of Wilkesboro.

W. Kerr Scott Reservoir was initially authorized by the 79th Congress through the Flood Control Act of 1946 (Public Law 79-526). Additional legislation authorized water supply, fish and wildlife conservation, and recreation. Additional purposes of the reservoir were authorized by the River and Harbor Act of 1958 and the Fish and Wildlife Coordination Act of 1958.

Along portions of the reservoir, USACE manages considerable amounts of the surrounding land. In other locations, federal lands are confined to a ribbon of land surrounding the water. The larger land holdings are located on the eastern, western, and northern sides of the reservoir. USACE maintains recreational and wildlife areas in these locations. USACE built and maintains the structures located in these recreational and wildlife areas, as well.

Purpose of Master Plan

The Master Plan provides a programmatic approach to the management of all of the lands included within the W. Kerr Scott Reservoir boundary. The Master Plan is the basic document guiding USACE responsibilities pursuant to Federal laws to preserve, conserve, restore, maintain, manage, and develop the project lands, waters, and associated resources. The Master Plan is a planning document anticipating what could and should happen and is flexible based upon changing conditions. Detailed management and administration functions are handled in the operational management plan (OMP), which translates the concepts of the Master Plan into operational terms. Master Plans are required for civil works projects and other fee-owned lands for which USACE has administrative responsibility for management of natural and manmade resources.

The primary goals of the Master Plan are to prescribe an overall land and water management plan, resource objectives, and associated design and management concepts, which: (1) Provide the best possible combination of responses to regional needs, resource capabilities and suitability, and expressed public interests and desires consistent with authorized project purposes; (2) Contribute towards providing a high degree of recreation diversity within the region; (3) Emphasize the particular qualities, characteristics, and potentials of the project; (4) Exhibit consistency and compatibility with national objectives and other state and regional goals and programs.

Master Plan Revision

The Master Plan, approved in 1983, provides USACE with a series of detailed construction projects for the different sites located within the project boundary. Over the last 30 years, these construction projects have either been completed or have been found to be not the best use of project resources. The construction based Master Plan does not provide USACE with means of refining these plans or taking proactive action to anticipate and respond to needs that are not included in the document. Furthermore, once the elements were constructed, there was no opportunity for USACE to work to further improve individual sites at W. Kerr Scott Reservoir.
USACE has updated its policies directing the development and implementation of Master Plans. Specifically, Master Plan requirements are contained in Engineer Pamphlet (EP) 1130-2-550 Project Operations – Recreation Operations and Maintenance Guidance and Procedures which was last updated on August 30, 2008.

The current guidance includes revised categories of Land Classifications used to define project lands, as well as shifting from a construction-based document to a policy-based document. All lands are acquired for authorized project purposes and allocated for these uses. The classification process is a further distribution of project lands by management categories which, based upon resources available and public needs, will provide for full utilization while protecting project resources. The current guidance also includes requirements for an interdisciplinary team approach will be used for the development, reevaluation, and supplementation or updating of Master Plans. Coordination with other agencies and the public is an integral part of the master planning process.

The Master Plan includes a Geographic Information Systems (GIS) database. The database can be continually updated throughout the life of the plan to allow USACE to take proactive management actions and adapt existing strategies.

Public Involvement

Coordination with other agencies and the public is an integral part of the master planning process. In October 2009, USACE began an extensive data collection effort that included coordination with federal, state, and local agencies, as well as institutions and groups with knowledge of the project resources. In February 2010, USACE published notices and hosted an open house to solicit public input on the planning process. The comments received during the open house, and the subsequent 30-day public comment period, were used to inform the master planning process.

On October 1, 2011, the Master Plan, PEA, and Draft FONSI were made available for a 30-day review and comment period. Notification of this comment period was mailed to local media, regulatory agencies, and individuals and provided on the W. Kerr Scott Reservoir website. Copies were placed in the local Wilkes County library. All comments received were considered in the preparation of the Master Plan as well as the PEA and subsequent Finding of No Significant Impact (FONSI).

Proposed Master Plan – Land Classifications

During the Master Planning process, options were developed for classifying project lands and identifying Resource Objectives and Development Needs for these lands. These decisions are captured within Resource Plans for various sites at W. Kerr Scott Reservoir and detailed mapping of these sites.

Comments received during public meetings and the subsequent comment periods provided USACE with insight into public desires for the future use of project lands, as well as regulatory and resource concerns of other agencies. This information was used in identifying the appropriate Land Classifications for different management areas within the project, as well as the Resource Objectives that should govern these classifications. Resource Objectives are written statements that specify the attainable options for resource development and/or management. Resource Objectives were consistent with authorized project purposes, Federal laws and directives, regional needs, resource capabilities, and expressed public desires. Land Classifications are distributions of project lands by management categories which, based upon resources available and public needs, provide for full utilization while protecting project resources.

General review of some of the project-wide goals and USACE plans to achieve them at W. Kerr Scott Reservoir were conducted. One of USACE's top priorities at W. Kerr Scott was identified as developing new and improving existing trails. The Master Plan provides a Resource Plan with site sheets for each of the management areas located within the project. Each site sheet identifies the Land Classification and Recommended Future Use and provides a rationale for how these designations were reached, describes the location and existing condition within each area, and lists site-specific Resource Objectives and Development Needs for the given management area.
The decision process for whether Resource Objectives were appropriate at the broader Land Classification level or a focused site specific level included evaluation of the sensitivity of certain resources, their degree of current protection, and the potential for disturbance from existing or future use of the sites. Specific future Development Needs were identified for each site, if required to maintain public use of the site, or required to achieve the recommended future use. The Master Plan focused on the most cost effective actions needed to achieve the Resource Objectives.

Comparison of the 1983 and 2012 Master Plan Classifications

The different Land Classifications used in the two Master Plans make a direct comparison difficult; however, some similarities do exist. The table which follows shows how the 1983 Master Plan Land Classifications have translated into the proposed Master Plan.

The definition of and use of Flowage Easements remains the same in the two documents. The Low Density Use definition used in the 1983 Master Plan is incorporated into the Multiple Resource Management classification presented in the 2012 Master Plan. The Intensive Use classification used in the 1983 Master Plan can be divided between the

Recreation and Multiple Resource categories included in the 2012 Master Plan. Finally, the Operations classification presented in the 2012 Master Plan includes lands identified as Intensive Use in the 1983 Master Plan. Definitions for the three primary current Land Classifications included in the 2012 Master Plan include:

- **Project Operations**: Lands required for the structure, operations center, office, maintenance compound, and other areas that are used solely for project operations.

- **Recreation**: Land developed for intensive recreational activities by the visiting public, including developed recreation areas and areas for concession, resort, and quasi-public development. Recreation areas planned for initial development will be included in this classification. Planned future recreation areas will be classified as Multiple Resource Management until initiation of the development.

- **Multiple Resource Management**: Lands managed for one or more, but not limited to, these activities to the extent that they are compatible with the primary allocation(s). The activities include: Recreation-Low Density, Wildlife Management General, Vegetation Management, Inactive and/or Future Recreation Areas, Easement Lands.

Table ES-1: Conversion of Land Classifications between 1983 Master Plan and 2012 Master Plan

1983 Master Plan	2012 Master Plan
Flowage Easement	Flowage Easement
Low Density Use	Multiple Resource Management
Intensive Use	Recreation or Multiple Resource Management
Operations	Operations

Table ES-2: Current and Proposed Land Classifications

Land Classification	Acreage	
	1983 Master Plan	2012 Master Plan
Flowage Easements	2,021	2,021
Low Density Use	44	N/A
Multiple Resource Management	N/A	1,614
Recreation	N/A	692
Intensive Use	1,543	N/A
Operations	840	72

N/A means not applicable. This classification not used for the indicated Master Plan

The inconsistency in total acreage listed above is based on the technology used for each plan. In either case, acreages presented in a Master Plan are for planning purposes only (official acreages are maintained by USACE Real Estate Division). The different Land Classifications used in the two Master Plans make a direct comparison difficult; however, some similarities do exist.

Given that the 1983 Master Plan had grouped over 90 percent of project lands in one Land Classification and there are no definitive boundaries between most of the management areas within the project, the boundaries between different Land Classification were based on existing land uses. The future uses are most important to the Multiple Resource Land Classification. In some cases, the Recommended Future Use calls for continued management as low-density recreation, wildlife management, and/or vegetation management. In other cases, the Recommended Future Use identifies areas that could support additional recreational development.

Using the Master Plan

The Master Plan serves two primary purposes that are equal in importance. First, it is the primary management document for the project and provides direction for many of the other plans that guide the management of W. Kerr Scott Reservoir. Second, it is a land use management tool. This Master Plan sets the stage for the update of many of the project's resource management plans, such as the Wildlife Management Plan. For example, the Resource Objectives approved in this plan can serve as a basis for developing plans to manage wildlife at the project. Regular updates to the Master Plan will allow the project to maintain active resource management plans, as well.

As a land use tool, this Master Plan provides USACE and the public with the current classification and preferred future uses of project lands. The current land classification of project lands allows USACE and the public to visually evaluate the distribution of uses of project lands. An example of how this

illustration may be beneficial is through the identification of project lands that are suitable for the development of a new recreation facility by USACE, a current lease holder, or a future developer. Maintaining an up-to-date Master Plan will allow USACE to respond effectively to development plans made internally or by outside parties.

Updating the Master Plan

This policy-based Master Plan, along with the accompanying Programmatic Environmental Assessment and GIS database, provides USACE with a "living" management document. This living document sets goals and objectives but does not establish concrete development plans. This allows USACE flexibility in the management and development of W. Kerr Scott Reservoir, within a clear policy framework.

NEPA - Programmatic Environmental Impact Assessment

The 2012 Master Plan provides a programmatic approach to the management of all of the lands included within the W. Kerr Scott Reservoir boundary. A Programmatic Environmental Assessment (PEA) was prepared to cover all environmental features that could be affected by adoption of the proposed Master Plan. The project area for the PEA, included all areas of lands and waters within the reservoir boundary.

The PEA evaluated the implementation of the 2012 W. Kerr Scott Reservoir Master Plan and a No Action Alternative (continued use of the 1983 Master Plan). The PEA analyzed the potential impact that implementing the 2012 Master Plan would have on the natural, cultural, and human environment. This document was prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended; regulations of the Council on Environmental Quality (CEQ) (40 CFR 1508.9); and USACE regulations, including Engineer Regulation 200-2-2: Procedures for Implementing NEPA.

The typical focus of NEPA compliance consists of environmental impact assessments for individual projects, rather than for long-range plans. However, application of NEPA to earlier and more strategic decisions not only meets the CEQ implementing regulations (40 CFR 1500-1508) and USACE regulations for implementing NEPA (ER 200-2-2), but allows USACE to begin considering the environmental consequences of its actions long before any physical activity is planned.

As the intention of the Master Plan is to develop a guide to the sustainable use of resources within the W. Kerr Scott Reservoir, it was not possible to define the exact nature of potential impacts prior to receiving specific project proposals. Therefore, environmental consequences may be less than or may exceed what is described in the PEA. To ensure future environmental consequences are captured and coordinated as accurately as possible, additional review and NEPA coordination is prescribed for specific proposed projects.

Based on the circulation of the Draft Master Plan and the PEA, and comments received, the finding was that the 2012 Master Plan would not significantly impact the quality of the human environment; therefore, an Environmental Impact Statement will not be prepared.

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Acronyms and Abbreviations

ACHP – Advisory Council on Historic Preservation
ADA – Americans with Disabilities Act

CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act
cfs – cubic feet per second

DM – Design Memorandum

EA – Environmental Assessment
EIS – Environmental Impact Statement
EM – Engineer Manual
EOP – Environmental Operating Principle
ER – Engineer Regulation
EP – Engineer Pamphlet

FONSI – Finding of No Significant Impact

GIS – Geographic Information Systems

MBTA – Migratory Bird Treaty Act
mph – miles per hour
msl – relative to mean sea level

National Register – National Register of Historic Places
NCDWQ – North Carolina Department of Water Quality
NCNHP – North Carolina Natural Heritage Program
WRC – North Carolina Wildlife Resources Commission
NEPA – National Environmental Policy Act of 1969, as amended
NHPA – National Historic Preservation Act of 1966, as amended

OMP – Operational Management Plan
Overmountain Victory Trail – Overmountain Victory National Historic Trail

PEA – Programmatic Environmental Assessment
the project – W. Kerr Scott Dam and Reservoir

REAS – Recreation Economic Assessment System

SCORP – State Comprehensive Outdoor Recreation Plan
SHPO – State Historic Preservation Officer

USACE – U.S. Army Corps of Engineers
USGS – U.S. Geological Survey

W. Kerr Scott Reservoir – W. Kerr Scott Dam and Reservoir
WMA – Wildlife Management Area

1.0 Introduction

1.1 Project Description

W. Kerr Scott Dam and Reservoir (W. Kerr Scott Reservoir or the project) is operated by the U.S. Army Corps of Engineers (USACE) and includes approximately 1,475 acres of open water at normal pool elevation (USACE 2010) and an additional 2,279 acres of surrounding fee land in Wilkes County, North Carolina. The dam is located approximately four (4) miles west of the Town of Wilkesboro, North Carolina (Appendix H, Figure 1). This area is easily accessible via the principal highways in the region, including U.S. Highway 421 and State Highway 268. Secondary and county highways provide access to lands surrounding the reservoir.

W. Kerr Scott Reservoir is located in the upper reaches of the Yadkin-Pee Dee River Basin. The Yadkin River rises on the eastern slope of the Appalachian Mountains, flowing in a southeasterly direction for nearly 200 miles until it joins the Uwharrie River near the City of Albemarle, North Carolina. The two rivers form the Pee Dee River, which flows over 250 miles until it enters the Atlantic Ocean at Georgetown, South Carolina. The Yadkin-Pee Dee River Basin has an estimated drainage area of 16,340 square miles. W. Kerr Scott Reservoir drains approximately 350 square miles within the larger drainage basin. W. Kerr Scott Reservoir's pertinent data is included in Appendix A of this document.

1.2 Project Authorization

W. Kerr Scott Reservoir (Appendix H, Figure 2) was initially authorized by the 79th Congress through the Flood Control Act of 1946 (Public Law 79-526). The project was initially named the Wilkesboro Reservoir. In 1963, when the dam was completed and placed in operation, the name was changed to W. Kerr Scott Dam and Reservoir to pay tribute to William Kerr Scott (1869-1958); such an honor was common USACE practice at the time. The former Governor of North Carolina and U.S. Senator was well known for his works as a farmer and dairyman, and for his interest in the development of water resources. He served with numerous state and national agricultural associations and, while Senator, greatly assisted in obtaining approval for construction of this dam and reservoir.

Additional purposes of the reservoir, discussed below, were authorized by the Flood Control Act of 1944, the Rivers and Harbors Act of 1958, the Flood Control Act of 1958, the Water Supply Act of 1958, and the Fish and Wildlife Coordination Act of 1958.

1.3 Project Purposes

W. Kerr Scott Reservoir was originally designed and constructed for the primary purpose of flood control within the Yadkin River Basin. Previous legislation, the Flood Control Act of 1944, allowed for the immediate provision of public recreation in the purposes of the project. These provisions were supplemented by additional legislation passed during the development and operation of the reservoir. The mandated project purposes: flood

control, water supply, fish and wildlife conservation, and recreation are described below and summarized in Table 1. Additional purposes, such as environmental stewardship, are a mission of all USACE projects and applied through agency guidance documents.

1.3.1 Flood Control

Flood control at W. Kerr Scott Reservoir was authorized in the Flood Control Act of 1946. This objective is achieved by capturing floodwaters and releasing them downstream at a controlled rate. In Fiscal Year 2010, W. Kerr Scott Reservoir prevented an estimated $19,348,370 in flood damages, resulting in an estimated $203,270,970 in cumulative damage prevention over the life of the project.

1.3.2 Water Supply

Water supply was authorized as a purpose of W. Kerr Scott Reservoir in the Rivers and Harbors Act of 1958 (Public Law 500, 85th Congress). Currently, there are no municipal water supplies that are fed by the waters in the reservoir. Local communities, however, have the right to establish water supply intakes in the reservoir. Currently, water supply withdrawals are made downstream of the dam and USACE targets releases to meet this purpose. Plans have been initiated by Wilkes County to begin withdrawing drinking water in the coming years. In addition, the City of Winston-Salem has reserved rights to water withdrawal if needed to serve future demand.

1.3.3 Conservation of Fish and Wildlife

USACE was authorized to conserve and enhance fish and wildlife resources and habitat at W. Kerr Scott Reservoir through the Fish and Wildlife Coordination Act (Public Law 624, 85th Congress). This authorization led to the development of the wildlife management areas (WMAs) that exist on project lands and the efforts taken to provide appropriate habitat on these lands. The authorization also dictates the type and level of development that exists on project lands. USACE also meets this purpose at W. Kerr Scott Reservoir by maintaining adequate downstream flow during dry periods.

1.3.4 Recreation

Provisions for allowing public recreation on project lands were included in the Flood Control Acts of 1944 and 1946. In addition to the reservoir's authorizing legislation, the development of public recreational facilities at power, flood control, and navigation projects is authorized by Section 209 of the Flood Control Act of 1958, Section 207 of the Flood Control Act of 1962, and by the Land and Water Conservation Fund Act of 1965, as amended. Today, project lands include campgrounds, WMAs, boat ramps, a marina, and day-use areas with picnic shelters, outdoor amphitheaters, swimming beaches, a Visitor Assistance Center, and interpretive, hiking, and biking trails.

1.4 Purpose and Scope of the Master Plan

The Master Plan provides a programmatic approach for the responsible stewardship of project resources for the benefit of present and future generations. The Master Plan identifies conceptual types and levels of activities. It is not a design document, like the 1983 Master Plan. All actions by USACE and the agencies and individuals granted leases to project lands must be consistent with the Master Plan. Therefore, the Master Plan must

be kept current in order to provide effective guidance in USACE decision-making. The original W. Kerr Scott Reservoir Master Plan was approved in 1965. The last update was in 1983. The 1983 Master Plan and other pertinent studies are listed in Table 2.

Table 1: W. Kerr Scott Reservoir Authorized Purposes

Authorized Purpose	Authorizing Law	Date	Statute	Common Name
Recreation	PL 78-534	22 Dec 1944	58 Stat 887	Flood Control Act of 1944
Flood Control	PL 79-526	24 Jul 1946	60 Stat 641	Flood Control Act of 1946
Water Supply	PL 85-500	3 Jul 1958	72 Stat 297	Rivers and Harbors Act of 1958
Fish and Wildlife	PL 85-624	12 Aug 1958	72 Stat 563	Fish and Wildlife Coordination Act

The Master Plan is based on responses to regional and local needs, resource capabilities and suitabilities, and expressed public interests consistent with authorized project purposes and pertinent legislation and regulations. The Master Plan provides a District-level policy consistent with national objectives and other state and regional goals and programs. The plan is distinct from the project-level implementation emphasis of the Operational Management Plan (OMP). Policies in the Master Plan are guidelines implemented through provisions of the OMP, specific Design Memorandums (DMs), and the Annual Management Plans. The broad intent of this Master Plan is to accomplish the following:

- Determine appropriate uses and levels of development of project resources;
- Provide a framework within which the OMP and Annual Management Plans can be developed and implemented; and,
- Establish a basis on which out-grants and recreational development proposals can be evaluated.

Table 2: Pertinent Prior Reports

DM No.	Title	Date Approved
-	General Design Memorandum	31 Mar 59
1	Sources of Construction Materials	16 Jun 59
2	Relocations – Cemeteries	1 Jul 59
3	Hydrology	8 Jul 59
4	Reservoir Clearing	13 Jan 61
5	Relocations – Power and Telephone Lines	21 Apr 61
6A	Preliminary Master Plan – Part of the Master Plan	14 Oct 59
-	Supplement No. 1	17 Apr 64
6B	Master Plan	21 Jul 65
6B (C1)	Public Use and Access	20 Nov 61
6B (C2)	Public Use and Access Facilities (Appalachia Program – 1965)	14 May 65
7	Dam, Spillway and Diversion Works	4 Dec 59
8	Relocation – Highways and Construction of Access Road	23 Dec 59
9	Outlet Works	15 Mar 60
9A	Hydroelectric Power – Part of the Outlet Works	4 May 60
10	Administration	10 May 62
11	Master Plan Update	May 83

1.4.1 Master Plan Scope

This Master Plan includes guidance for appropriate uses, development, enhancement, protection, and conservation of the natural, cultural, and man-made resources at W. Kerr Scott Reservoir. The Master Plan includes:

- A discussion of factors influencing resource management and development (Chapter 2);
- An identification of special problems faced by project managers, including conservation and enhancement of natural and cultural resources, conflicts in user needs, and adjacent land uses (Chapter 3);
- A synopsis of public involvement and input (Chapter 4);
- Land Classifications (Chapter 5);
- Programmatic Resource Objectives and identification of existing uses and needed development (Chapter 6);
- Review of and adherence to USACE Environmental Operating Principles (EOPs) (Chapter 7);
- Conclusions and Recommendations (Chapters 8 and 9); and,
- A listing of pertinent data, the associated Programmatic Environmental Assessment (PEA), and other data (Appendices).

The proposed Land Classifications, recreation development, and management practices in this Master Plan apply to USACE project lands at W. Kerr Scott Reservoir. USACE has the mission of managing, conserving, and enhancing environmental and cultural resources at USACE reservoir projects while providing quality public recreational experiences to serve the needs of present and future generations. To ensure consideration of natural and cultural resources throughout the Master Plan, a PEA is integrated into the document and included in Appendix C.

1.4.2 Master Planning Process

USACE six-step planning process (Appendix B) was followed in developing the Master Plan. The master planning process was a cooperative effort involving USACE; federal, state, and local governmental agencies; non-governmental organizations; and members of the general public. Scoping comments from these groups were important for identifying issues that needed to be addressed in the Master Plan. Details regarding the public involvement efforts for the Master Plan are provided in Chapter 4.

One of the primary contributions these groups and agencies made to the master planning process was through their geographic information systems (GIS) data. The different layers of GIS data provided by participants were combined with USACE data to create a

GIS database for the master planning process. The database helped inform the resource analysis, Land Classifications, and Resource Objectives of this Master Plan. The GIS database also was used to create many of the figures included in this document. These figures are designed to display the level of data available to USACE for future management of project lands. Figures that illustrate the reservoir and surrounding water bodies were created using a number of different data layers. These layers provide USACE with a picture of all of the data available for making decisions related to the location of these water bodies. As a result of the combination of layers, however, extra lines may be visible along the edges of water areas. These lines represent varying elevations at which the reservoir and surrounding streams were measured for GIS data. Future use of this data will allow USACE and its contributing agencies and groups to communicate and plan with the same data.

The PEA, included in Appendix C, considers adoption of this Master Plan as a Preferred Alternative that provides the most appropriate level of stewardship, management activities, and types and levels of recreational use for W. Kerr Scott Reservoir project lands. The PEA identifies potential impacts on the human or natural environment related to the proposed programmatic management approach and indicates how these impacts can be avoided or minimized. This Master Plan and associated PEA were prepared in accordance with the following guidance:

- Engineer Manual (EM) 1110-1-400, *Engineering and Design – Recreation Planning and Design Criteria*, 01 November 2004;

- Engineer Pamphlet (EP) 1130-2-550, *Project Operations – Recreation Operations and Maintenance Guidance and Procedures*, 15 November 1996, 01 Oct 1999 (change 1), 01 Mar 2002 (change 2), 15 Aug 2002 (change 3), 30 Aug 2008 (change 4);

- Engineer Regulation (ER) 200-1-5, *Environmental Quality – Policy for Implementation and Integrated Application of the U.S. Army Corps of Engineers Environmental Operating Principles and Doctrine*, 30 October 2003;

- ER 200-2-2, *Environmental Quality – Procedures for Implementing the National Environmental Policy Act (NEPA)*, 4 March 1988;

- ER 1105-2-100, *Planning Guidance*, 22 April 2000, 30 Jun 2004, 31 Jan 2007, 30 Jun 2004, 20 Nov 2007; and,

- ER 1130-2-550, *Project Operations – Recreation Operations and Maintenance Guidance and Procedures*, 15 November 1996, 1 October 1999, 1 March 2002, 15 August 2002, 30 Aug 2008, 30 Mar 2009.

1.4.3 Project–wide Resource Objectives

The W. Kerr Scott Reservoir Master Plan is not a construction document for future recreational facilities. The document provides a programmatic approach to managing project resources by classifying project lands, developing general and site specific Resource Objectives, and identifying appropriate Development Needs. Sound stewardship requires the development and management of project resources for the public benefit, consistent with resource capabilities. An important component of this approach is the establishment of viable Resource Objectives.

Resource Objectives are realistically attainable goals for the use, development, and management of natural and manmade resources. They are guidelines for attaining maximum public benefit within USACE safety guidelines and security levels, while minimizing the potential for adverse impacts and protecting and enhancing environmental quality. The objectives are developed with full consideration of authorized project purposes, applicable federal laws and directives, resource capabilities, regional needs, plans and goals of regional and local governmental units, and expressed public desires. The project-wide Resource Objectives for W. Kerr Scott Reservoir, not in priority order, are as follows:

- To develop and manage land in full cooperation and coordination with other public management agencies and appropriate private sectors;
- Develop and manage project lands to support various types and levels of recreation activities consistent with carrying capacities and aesthetics, cultural, and ecological values;
- Provide public education about the history of the area, project resources, and USACE's role in developing and managing these resources;
- Develop and manage the project lands to support a diversity of wildlife species;
- Preserve and enhance threatened and endangered species and unique and important ecological and aesthetic resources;
- Maintain and manage project lands to support regional management programs, such as regional water quality initiatives;
- Preserve, monitor, and protect significant cultural resource sites; and,
- Manage resources in response to changing conditions in a developing region.

Specific Resource Objectives for each of the Land Classifications identified for W. Kerr Scott Reservoir are found in Chapter 5. Site-specific resources objectives are listed for the individual management units in Chapter 6.

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2.0 Factors Influencing Resource Management and Development

This chapter includes an inventory and analysis of the resources within the boundary of W. Kerr Scott Reservoir. In some cases, the description of resources extends beyond the boundaries of the reservoir lands to provide an accurate description of the existing conditions. Resource conditions covered in this chapter include: hydrology and ground water; sedimentation; surface water quality; accessibility; climate; topography, geology, and soils; land use; borrow areas and utilities; forest resources; fish and wildlife resources; rare and endangered species and communities; visual quality; mineral and timber resources; paleontology; cultural resources; interpretation; demographics; economic characteristics; real estate; recreation facilities; recreation activities and needs; visitation profile; and related recreational, historical, and cultural areas. This chapter also documents pertinent public laws and management plans, as well as the implications the resource conditions and regulations have on the master planning process.

2.1 Description of the Reservoir

W. Kerr Scott Reservoir is located in Wilkes County, North Carolina, on the Yadkin River (Appendix H, Figure 1). The dam is approximately four (4) miles west of the Town of Wilkesboro, North Carolina, and 65 miles north of Charlotte, North Carolina. W. Kerr Scott Dam is an earthen structure with a top elevation of 1,107.5 feet relative to mean sea level (msl) and an overall length of 1,750 feet. USACE manages the surrounding lands up to an elevation of 1,080 feet msl. The record high pool level at W. Kerr Scott Reservoir, 1,061.2 feet msl, was recorded in 1977. The following year, a record low pool was recorded at 1,019.85 feet msl.

USACE divides its reservoirs into different pools that meet the purposes of the given reservoir. The capacity and elevation of these pools are unique to each reservoir, and data for those at W. Kerr Scott Reservoir is included in Appendix A Operation of W. Kerr Scott Reservoir is influenced by regional and site specific conditions, including annual and seasonal precipitation patterns and water needs above and below the dam. These conditions dictate current and future management of the reservoir, as USACE must determine how the reservoir should be managed to meet its authorized purposes and operating objectives: flood control, water supply, conservation of fish and wildlife, and recreation.

W. Kerr Scott Reservoir includes approximately 1,475 acres of open water at normal pool (USACE 2010) and an additional 2,279 acres of surrounding project lands. USACE actively manages all of these lands through several partnerships and cooperative associations. Along some portions of the reservoir, USACE manages considerable portions of the surrounding land. In other locations, federal lands are confined to a ribbon of land surrounding the water. The larger land holdings are located on the eastern, western, and northern sides of the reservoir. USACE maintains recreational and wildlife areas in these locations. These areas are discussed in greater detail under Section 2.22.

2.2 Lake Operation

The Water Control Plan for W. Kerr Scott Reservoir provides for a conservation pool elevation of 1,030 feet msl. Under normal conditions, this is achieved by maintaining equal outflow and inflow (USACE 1993). The primary objective of W. Kerr Scott Reservoir is flood control. This is accomplished through the storage and controlled release of over 112,000 acre-feet of water between elevations 1,030 and 1,075 feet msl within the reservoir. An additional 153,000 acre-feet of surcharge storage exists above the free-overflow spillway crest between elevations 1,075 and 1,102.5 feet msl. Prior to or during storm events, changes in the storage and release pattern may be made to provide optimum flood control and protection (USACE 1993).

Meeting the W. Kerr Scott Reservoir water supply objective usually does not require special operations. Water supply storage consists of 33,000 acre-feet between the elevations of 1,000 and 1,030 msl. USACE entered into a contract with Wilkes County and the City of Winston-Salem on June 29, 1960. The contract allows these entities to withdraw water from this storage space or through releases from the dam, as necessary, provided that such releases will not contribute to damaging floods (USACE 1993). Currently water from this storage is released downstream to meet the minimum flow at Wilkesboro and is then available for withdrawal further downstream by the City of Winston-Salem as needed. The City of Winston-Salem has proposed that the minimum flows at Wilkesboro be reduced to conserve water supply storage, since considerably more water is released to meet this minimum flow than is currently needed for water supply withdrawal by Winston-Salem. In addition, Wilkes County has proposed construction of an in-reservoir intake structure for water supply withdrawals. Both of these proposals are under review.

Achieving USACE fish and wildlife objectives at W. Kerr Scott Reservoir is accomplished by maintaining releases during low flow and drought conditions to maintain healthy river conditions downstream. These objectives also are met by maintaining a relatively stable water level in the reservoir during spawning seasons and other important times in different aquatic species' life cycles. The *Water Control Manual: W. Kerr Scott Dam and Reservoir Project, Yadkin River Basin, North Carolina* includes guidance on how releases should be maintained during low flow conditions (USACE 1993).

Finally, W. Kerr Scott Reservoir is operated to support recreation. Recreation facilities were designed to operate at a lake elevation of 1,030 feet msl. This elevation is available during the main recreation season in all but extremely dry years. Water levels are maintained to achieve the other goals discussed above. When water levels are too low (or high), USACE must modify its recreational offerings to achieve its other goals at W. Kerr Scott Reservoir (USACE 1993).

2.3 Hydrology and Ground Water

The movement of water into, through, and out of the project lands is influenced by regional and site specific conditions, including annual and seasonal precipitation patterns and the geology and landforms that make up the project. The volume of surface water and ground water present on site and its ability to move through the project lands dictates current and future placement and use of facilities at W. Kerr Scott Reservoir.

2.3.1 Surface Water

W. Kerr Scott Reservoir is designed to maintain a normal pool elevation of approximately 1,030 feet msl. At this elevation, the reservoir is nearly eight (8) miles long with approximately 55 miles of shoreline. This equates to nearly 1,475 acres of open water surface area. The project design and operation provide for a full flood control pool at 1,075 feet msl. One location where water level is measured is at a stream gauge maintained by the U.S. Geological Survey (USGS) at the dam.

Water control operations at W. Kerr Scott Reservoir have remained relatively unchanged since the publication of the 1983 Master Plan. This has resulted in predictable fluctuations in water levels within the reservoir as were documented in the 1983 Master Plan.

2.3.2 Ground Water

In addition to surface waters, ground water resources also exist within the project boundary. Neither the USGS nor the North Carolina Division of Water Resources maintain active ground water monitoring stations in close proximity to W. Kerr Scott Reservoir (USGS 2009, NCDWR 2009a). The most recent ground water data for the region was collected by the North Carolina Division of Water Resources between 1976 and 1991. The monitoring well that was used to gather this information was located in the Town of North Wilkesboro. This well measured consistent ground water levels ranging from 1,150 to 1,155 feet. Changes within this range followed a fairly regular pattern of draw-downs and recharges (NCDWR 2009a). Without any recent well data, it is not possible to determine if increased development or the extension of municipal water supplies have had an impact on previously monitored ground water patterns.

In addition to the North Carolina Division of Water Resources data, some general conclusions can be made, given the reservoir's location in the North Carolina Blue Ridge geologic province. Like the Piedmont province, the Blue Ridge physiographic province (Appendix H, Figure 4) contains two aquifer systems: the surficial aquifer and the bedrock aquifer. Surficial aquifer systems consist mostly of beds of unconsolidated sand, cavity-riddled limestone and shells, sandstone, sand, and clayey sand with minor clay or silt. These systems create unconfined aquifer systems where ground water moves relatively freely. This aquifer system feeds the more confined bedrock surface that is located at greater depths (NCDWR 2009b). It can be assumed that the ground water resources beneath the reservoir follow this pattern.

Since the publication of the 1983 Master Plan, USACE has closed some of its ground water wells and switched to municipal water supplies. In 2011, municipal water was provided at Fort Hamby Park, Berry Mountain Park, Fish Dam Creek Park, Dark

Mountain Park, and the Visitor Assistance Center. The remaining management areas within the project continue to rely on groundwater for potable water. The quality and condition of public water supply systems is monitored through the state's Safe Drinking Water Information System (NCDENR 2010a).

2.4 Sedimentation

The rate of sedimentation within the reservoir is influenced by regional and site specific conditions, including annual and seasonal precipitation patterns and associated stormwater runoff, as well as shoreline erosion. Sedimentation is an unavoidable problem for reservoirs like W. Kerr Scott Reservoir due to steep banks, upstream erosion, erodible soils, and wind and wave action. Accounting for sedimentation was included in the design and management of the reservoir.

During the construction of the reservoir, an allocation of 8,300 acre-feet below elevation 1,000 feet msl was designated for sediment accumulation and storage. This area was designated based on the predicted levels of erosion for the lands surrounding W. Kerr Scott Reservoir (USACE 1983). There is growing visual and anecdotal evidence that suggests sedimentation is becoming a more serious issue, especially in the smaller coves and tributaries. In some cases, high sedimentation in such areas can negatively impact recreational opportunities or environmental quality in the reservoir.

A sedimentation survey was conducted in 2010, the first re-survey since 1978. Based on the 2010 re-survey, the reservoir original capacity has decreased by about 5.5 percent due to sedimentation. A general shoaling of the reservoir thalweg has occurred over the years as a result of sedimentation and indicates the majority of shoaling has occurred in the upper (upstream) half of the reservoir. These finding are likely a combination of both actual sedimentation as well as more precise and dense 2010 re-survey data.

2.5 Surface Water Quality

The quality of surface water within the reservoir is influenced by conditions throughout its watershed, including land use patterns and the presence of pollution sources. The quality of surface water dictates current and future management of W. Kerr Scott Reservoir's water releases and recreational opportunities.

The Yadkin-Pee Dee River Basin is the second largest river basin in North Carolina, covering over 7,200 square miles within North Carolina. It includes parts of 83 municipalities and all or part of 24 counties. The basin originates on the eastern slopes of the Blue Ridge Mountains in Caldwell, Wilkes, and Watauga Counties. W. Kerr Scott Reservoir intercepts the river in its headwater region before it flows northeasterly for about 100 miles, then southeasterly until it joins the Uwharrie River to form the Pee Dee River (Yadkin-Pee Dee River Basin Association 2009). In North Carolina, the basin contains approximately 5,990 miles of freshwater streams and rivers and is currently home to approximately 1.6 million people. Over the next 25 years, it is anticipated that this population will grow by 50 percent, resulting in a population of approximately 2.4

million people (Yadkin Riverkeeper 2009). This growth is expected to lead to increased levels of urbanization.

Increasing levels of urbanization, along with existing land use practices and industrial pollution sources, pose a number of threats to water quality in the river basin. Recent assessments of water quality in the basin by the North Carolina Division of Water Quality (NCDWQ) identified the following conditions:

- 17 percent of monitored stream miles were classified as impaired for aquatic habitat;
- 56 percent of lake acres monitored were classified as impaired for aquatic habitat;
- 14.5 percent of monitored stream miles were impaired for primary recreation; and,
- 100 percent of the limited number of fish tested had some level of toxins present (Yadkin Riverkeeper 2009).

Located in the headwaters of the Yadkin River Basin, W. Kerr Scott Reservoir is not subjected to the levels of pollutants that are accumulated throughout the length of the basin. However, the lake still faces threats to its water quality. Since the publication of the 1983 Master Plan there have been a number of new residential developments constructed around the reservoir. Agricultural activity in the area has continued since the previous Master Plan. The new development and continued agricultural practices increase the potential for short-term and long-term increases in pollutant loads entering the reservoir.

NCDWQ publishes data on water quality throughout the state in its 303(d) Impaired Waters Assessment. The most current 303(d) list available for North Carolina was completed in 2008. The report identifies the Yadkin River, as it empties into W. Kerr Scott Reservoir, as being impaired for supporting aquatic life because the body of water fails to meet the national water quality criteria established in the Clean Water Act (NCDWQ 2009a). These impairments are due to turbidity, which prevents appropriate conditions for natural processes within aquatic habitats. Based on current pollutant levels, however, the North Carolina Department of Health and Human Services has not issued any fish consumption advisories for W. Kerr Scott Reservoir or its surrounding tributaries (NCDHHS 2009).

NCDWQ also classifies water bodies by their ability to support different uses. The majority of the creeks that flow into the reservoir are categorized as supporting primary recreation (swimming) and trout waters, while providing water supply in a relatively highly developed region. Some areas of the Yadkin River immediately above or below the reservoir do not support primary recreation but still support healthy aquatic life and secondary recreation (boating) (NCDWQ 2009b)

2.6 Accessibility

W. Kerr Scott Reservoir is located about an hour's drive west on North Carolina Highway 421 from Winston-Salem, North Carolina, and about an hour and a half north on Interstate 77 from Charlotte, North Carolina. Highway 421, between the Town of Wilkesboro and points east, is a divided four-lane free access highway. Access to the north side of the lake is provided via a number of county roads connecting with Highway 421. North Carolina Highway 268 initiates outside of Hanging Rock State Park, north of Winston-Salem, North Carolina, and extends in a southwesterly direction through the Town of North Wilkesboro and Wilkesboro, past the reservoir, and continues to Pisgah National Forest. The road provides the main access to the reservoir paralleling the south side of the lake.

Access varies from site to site within the project. At most locations, access is provided by one of the county roads that terminate at a parking lot or entrance gate to the site. Some locations also are connected by USACE-maintained or regional trails that are contained within the project boundary or pass through the site, respectively.

2.7 Climate

The regional climate has influenced the development and management of W. Kerr Scott Reservoir, by determining the rainfall and stormwater runoff that are received and maintained in the reservoir, and the project's ability to provide high-level recreational opportunities. Microscale climatic conditions, such as the amount of sunlight or exposure to wind a specific site receives, influence resources and recreational opportunities at individual locations around the reservoir. The regional climate and specific microscale climatic conditions dictate current and future management of W. Kerr Scott Reservoir's water management and recreational opportunities.

The climate in the region surrounding W. Kerr Scott Reservoir is temperate, characterized by warm summers and cold, but generally not severe winters. Table 3 and Figure 5, Figure 6, and Figure 7 provide detailed information on regional climate data. Average annual precipitation in the region is approximately 50 inches including nearly 10 inches of snowfall. Given the region's location in the foothills of the Blue Ridge Mountains, it could be expected that more snowfall would occur. However, the general movement of clouds from west to east through the region results in tremendous amounts of snow falling in the higher elevations west of W. Kerr Scott Reservoir. The result of this release is a wintery mix of sleet and frozen rain throughout the lower elevations (North Wilkesboro 2006).

Average annual high temperatures in the region are approximately 69 degrees Fahrenheit with average low temperatures reaching 42 degrees Fahrenheit (Town of North Wilkesboro 2006). Figure 6 illustrates annual high and low temperatures in the region (US Climate Data 2011). Winter temperatures often reach or drop below 32 degrees Fahrenheit (freezing). In 2008, the average wind speed was just over one mile per hour (mph). During the year, high winds exceeded 20 mph on a monthly basis, with the highest speed reaching 41 mph (Wilkes County 2009). Tropical hurricanes impact the

coast of the state approximately one to two times per year, most often in the late summer and early fall. Since W. Kerr Scott Reservoir is located well inland, the main impact of hurricanes felt at the reservoir is increased precipitation.

Table 3: Historical Climate Report

Climate Phenomenon	Annual
Average High Temperature (degrees Fahrenheit)	68.9
Average Low Temperature (degrees Fahrenheit)	42.8
Average Total Precipitation (inches)	50.0
Average Total Snowfall (inches)	9.9

Figure 5: 2008 Precipitation Patterns (in inches)

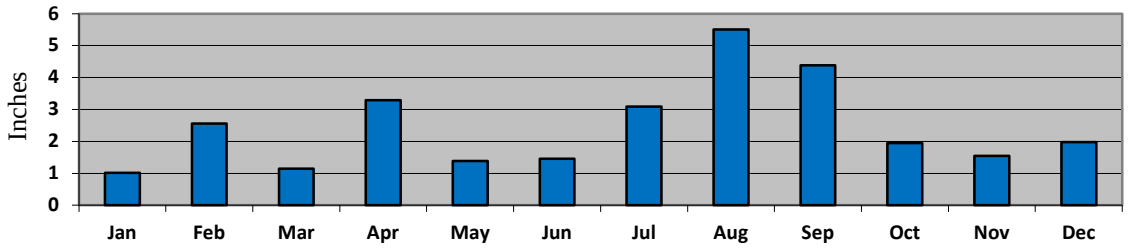


Figure 6: Annual High and Low Temperatures (degrees Fahrenheit)

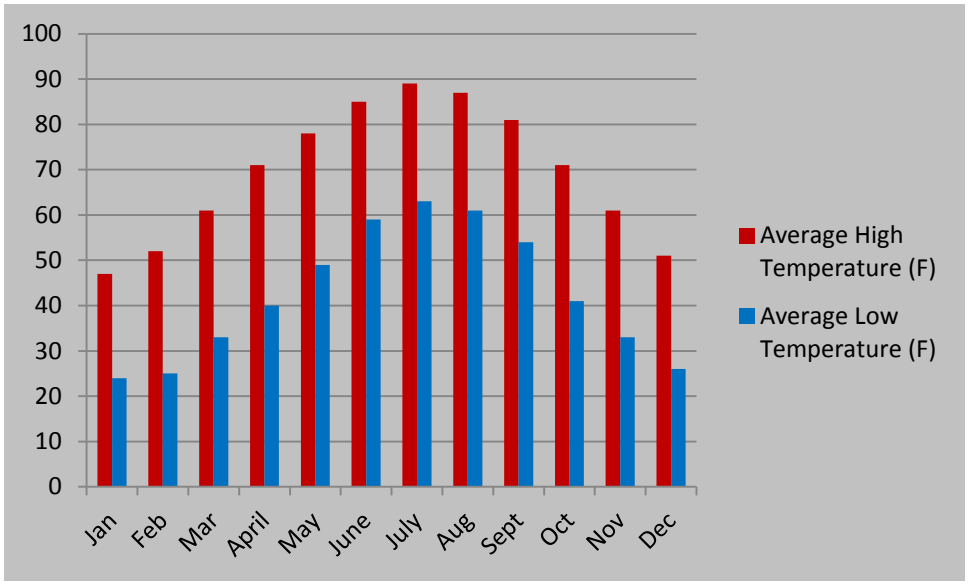
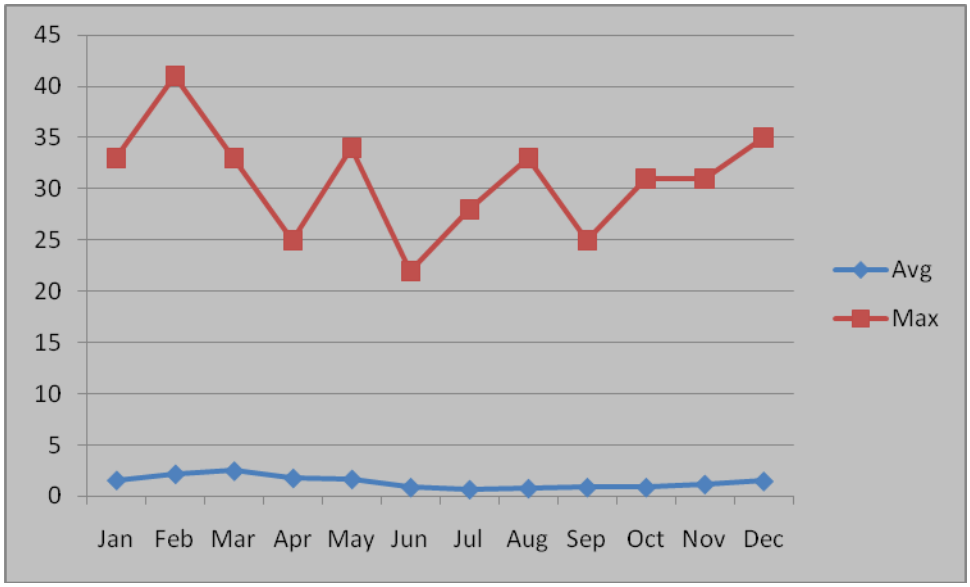


Figure 7: 2008 Average and Maximum Wind Speeds (mph)



2.8 Geology, Topography, and Soils

The local geology (Appendix H, Figure 8), topography (Appendix H, Figure 9), and soils have been an important influence in the development and management of W. Kerr Scott Reservoir. The relationship between these three resources dictates the type of vegetation that can succeed in a given area, the availability of ground water, susceptibility to flooding, and appropriate recreational uses. Since the publication of the 1983 Master Plan, there have been limited changes to the topography, geology, or soils on project lands. Any measureable changes that have occurred have been a result of the construction of new facilities or shoreline erosion. The development of new facilities has required grading of existing land surface, construction of impervious surfaces over undeveloped soils, and some subsurface disturbance to access utilities or ground water supplies. Shoreline erosion also results in changes in topography within a confined area; however, the cumulative effects of shoreline erosion can result in more notable impacts to soils and geologic resources. As the shoreline erodes, the subsurface rocks and minerals are exposed to similar erosive conditions.

2.8.1 Geology

The project is located within the inner belt of the Piedmont physiographic province between the Blue Ridge and Brushy Mountain ranges (Appendix H, Figure 4). The general area is underlain by ancient metamorphic rocks of sedimentary origin, most of which belong to a broad geologic group known as the "Carolina Gneiss" (USACE 1983). Since the publication of the 1983 Master Plan, there has been little development that may have impacted geologic resources. The geology beneath the project lands has an impact on soil conditions, described below, and ground water, discussed under Section 2.3.2.

2.8.2 Topography

Located in the foothills of the Blue Ridge Mountains, the topography within the W. Kerr Scott Reservoir watershed is rather varied. In the northern reaches of the watershed, elevations reach 4,000 feet msl. Elevations drop to approximately 1,000 feet msl within the floodplain below the reservoir before rising to nearly 2,600 feet msl in the southern reaches of the watershed (USACE 1983).

The terrain in the immediate vicinity of the reservoir ranges from steep hills and wooded slopes to sheer rock cliffs in the river gorge sections above the main body of the reservoir. The topography is ideally suited for the development of primitive camping, picnicking, and similar recreational facilities. In the 1983 Master Plan, some locations were identified for development based on their relatively flat conditions, while steeper slopes were used to develop some of the extensive trails around the reservoir and provide for additional vistas of the surrounding region.

2.8.3 Soils

Since the publication of the 1983 Master Plan, changes have occurred in the names, definitions, and categories of soils that exist on project lands. The properties of these resources, however, remain unchanged (NRCS 1997). The soil association for the project lands is the Civil-Pacolet Association. This association is made up of well drained, moderately deep to deep, upland soils with firm, clay to clay loam subsoil on fairly narrow ridges and choppy sloping to steep side slopes (USACE 1983). These soil conditions support most types of development. The primary constraint has been and continues to be the slope at which these soils exist. A more complete listing of the soils present on project lands is shown in Appendix E, Table E-1.

Since the publication of the 1983 Master Plan, there have been changes on project lands that have altered natural soil conditions. Recreational development that has occurred since the publication of the 1983 Master Plan can alter soil conditions in the immediate vicinity of any new structure. This can include compaction and grading of soils. These developments change the soil's ability to absorb or retain water. Significant grading also can change the depth to ground water or bedrock. The introduction of impervious surfaces compacts soils and increases stormwater runoff to surrounding areas. This can alter the condition of soils, result in increased rates of erosion or compaction, and overwhelm natural water absorption capacity (Shuster et al. 2005).

2.9 Land Use

W. Kerr Scott Reservoir contains 2,279 acres of public land above elevation 1,030 feet msl (top of conservation pool). The majority of this area is devoted to public recreational use or USACE project operations. These areas, and the remaining project lands, are discussed in the subsections below.

2.9.1 Project Operations Lands

Project Operations are those lands required for the dam structure, operations center, office, maintenance compound, and other areas that are used solely for project operations. At W. Kerr Scott Reservoir, these lands are confined to the lands around the dam,

spillway, tailrace, and Visitor Assistance Center. While these also lands support recreational opportunities, they are maintained to meet USACE operation needs at the project.

2.9.2 Recreation Lands

Designated land uses within the project boundaries include project operations, easement lands, intensive recreation, and low density recreation. Of the total amount of recreation lands, approximately 75 percent are designated for developed recreation (e.g., campgrounds, swim beaches, playgrounds, etc.) while the remaining are designated as WMAs. The six WMA lands, comprising approximately 690 acres, are managed by USACE and designated by the North Carolina Wildlife Resources Commission (WRC) as state game lands. WMAs are managed for the continuous improvement of wildlife habitat, forest stand improvement, and dispersed-use recreation, such as hunting, hiking and bird watching.

2.9.3 Ribbon Lands

Of the estimated 2,279 acres of public land above elevation 1,030 feet msl, approximately 540 acres make up the ribbon lands which extend around the 55-mile shoreline. These 540 acres are primarily wooded areas and land use is determined by allocations made under the project's Shoreline Management Plan. These lands are held by USACE to maintain its flood control mission at W. Kerr Scott Reservoir. Given the limited width of these lands, USACE has not developed any recreational facilities on them. USACE, however, does permit local landowners to construct approved docks and other structures on these lands that connect private properties to the reservoir under the terms of the W. Kerr Scott Shoreline Management Plan (USACE 2009b).

2.9.4 Adjacent Lands

Adjacent to the project lands, forest and agriculture are the predominant land uses, with pockets of single family residential development along the north and south shores of the reservoir. W. Scott Kerr Reservoir lies within Wilkes County and Caldwell County. Wilkes County adopted a Growth Management Plan in 2001 (Wilkes County 2001). This plan notes that the Town of Boomer, located along North Carolina Highway 18, south of the reservoir, is experiencing scattered residential growth. Higher density commercial and residential development is concentrated about 5 miles east of the project, in the twin towns of Wilkesboro and North Wilkesboro. These towns contain the area's highest concentration of commercial, industrial, and visitor services.

Project lands within Caldwell County consist of Flowage Easements. Caldwell County has produced projections that anticipate a population of 92,336 by the year 2030 (Caldwell County 2011). This represents an estimated 18 percent growth in population over a 30 year period. The 2010 Census suggests that these projections are accurate, with a reported population of 83,029 (Census 2011).

Growth of mountain communities west of this area, near Boone and surrounding communities, and the resulting increase in tourist related traffic has driven commercial

services expansion (e.g., restaurants, fuel, etc.) westward along the Highway 421 corridor from Wilkesboro and North Wilkesboro (Appendix H, Figure 10).

2.10 Borrow Areas and Utilities

During the construction process for W. Kerr Scott Reservoir, borrow areas were developed to extract the fill material necessary to complete the earthen dam. Currently, there are no active borrow areas within the project lands. Utilities that serve the project run along the Route 421 and Route 268 road corridors. Drinking water to the recreation sites is delivered by a combination of ground water wells and community sources. As of 2011, municipal water is provided to users in Ft. Hamby Park, Berry Mountain Park, Fish Dam Creek Park, Dark Mountain Park, and the Visitor Assistance Center from the Town of Wilkesboro and Millers Creek. Municipal wastewater lines run along NC 268 and serve the Dam Site Park Area, the Marina Area, Berry Mountain Park, and Bandit's Roost Campground. Community sewer is not available to parks located on the north side of the reservoir as municipal lines do not extend out to these lands. All parks are served by electric and telephone lines as well.

2.11 Vegetation Resources

Vegetation resources within project lands are influenced by regional and site specific conditions, including past land use, climate, water supply and quality, soils, and topography. The condition of vegetative communities dictates current and future management of W. Kerr Scott Reservoir, as USACE must determine how communities should be managed to meet the multiple purposes at the reservoir. USACE is responsible for the forest management on project lands. This includes forest thinning, regeneration cuts, and prescribed burns designed to achieve conditions that promote native vegetation and wildlife populations. Given the multiple purposes at the reservoir, management of vegetative resources has and should continue to focus on community types rather than specific species. Therefore, the discussion below will focus on community types.

Since the publication of the 1983 Master Plan, there have been no new studies or surveys of vegetative communities on W. Kerr Scott Reservoir project lands. Previous studies of vegetative communities at W. Kerr Scott Reservoir have noted that the project lies on the boundary of two forest regions, Northern and Central. In the Northern forest region, the white pine (*Pinus strobus*) and hemlock (*Tsuga canadensis*) are predominant forest types. In the Central Forest Region the predominant type is white pine with various species of hickory (*Carya* spp.), sycamore (*Platnus* spp.), and beech (*Fagus* spp.). Within project lands, there are areas where hardwoods predominate and other areas where pines are predominating. The largest forest type, however, is mixed forest. The understory of these forests is populated with sour wood (*Oxydendrum arboreum*), dogwood (*Cornus florida*), rhododendron (*Rhododendron* spp.), mountain laurel (*Kalmia latifolia*), chinquapin (*Castanea pumila*), witch hazel (*Hamamelis virginiana*), and sassafras (*Sassafras albidum*).

Along with management actions described above, changes to the previously documented vegetative communities also have been influenced by development outside the project boundaries. For example, the development of trails and wildlife management areas has changed forest management goals and objectives with emphasis now on sustaining healthy forest for dispersed-use recreation. Another change that has occurred in forest communities since the publication of the 1983 Master Plan is the growing presence of imported forest pests, invasive species, and the threat of infestations. Additional changes are anticipated as regional vegetation adapts to changing climatic conditions (Dukes and Mooney 1999).

2.12 Fish and Wildlife Resources

Enhancing and protecting fish and wildlife resources within project lands is crucial to achieving the missions of USACE at W. Kerr Scott Reservoir. These resources are influenced by regional and site specific conditions, including climate, water supply and quality, as well as appropriate habitat for breeding, nesting, and feeding. The condition of fish and wildlife resources is a determining factor in current and future management of W. Kerr Scott Reservoir. Given the different missions of USACE at the reservoir, management of fish and wildlife resources is focused on the promotion of species to support recreational opportunities, including fishing, wildlife viewing, photography, and hunting.

Common mammals found at W. Kerr Scott Reservoir include White-tailed Deer (*Odocoileus virginianus*), Red Fox (*Vulpes vulpes*), Gray Squirrel (*Sciurus carolinensis carolinensis*), Eastern Cottontail (*Sylvilagus floridanus mallurus*), Raccoon (*Procyon lotor lotor*), Opossum (*Didelphis virginianus*), American Beaver (*Castor canadensis*), and Striped Skunk (*Mephitis mephitia*).

Birds found in the area include Wild Turkey (*Meleagris gallopavos*), Woodpeckers (*Melanerpes* spp.), Carolina Chickadee (*Poecile carolinensis*), Red-eyed Vireo (*Vireo olivaceus)*, Ovenbird (*Seiurus aurocapillus*), Mallard (*Anas plattyrhyochos*), and Wood Duck (*Aix sponsa*). A complete listing of the birds currently known to exist within project lands is included in Appendix E.

Many species of game fish can be found within W. Kerr Scott Reservoir, as well. The primary species include Largemouth Bass (*Micropterus salmoides*), Striped Bass (*Morone saxatilis*), Smallmouth Bass (*Micropterus dolomieui*), Spotted Bass (*Micropterus punctulatus*), Crappie (*Pomoxis* spp.), Sauger (*Sander canadensis*), Walleye (*Stizostedion vitreum vitreum*), and Catfish (*Ictalurus* spp.). Spotted Bass were introduced to the reservoir to fill a void left due to the lack of success with trout.

While these population increases can be attributed to changing regional conditions and the role the undeveloped lands around the reservoir play in these species' life cycle, their success also is due to the work USACE and its partners have done to develop and maintain conditions within the recently developed WMAs that contribute to healthy population dynamics. USACE has partnered with the WRC to include 690 acres of its WMAs at W. Kerr Scott Reservoir in the state's game land's system. The WMAs are

maintained by USACE natural resource specialists and rangers to provide desirable feeding, breeding, and nesting habitat for game and nongame species. W. Kerr Scott Reservoir lands included in the state's system are located in the Dark Mountain, Smithey's Creek, Fort Hamby, Marley's Ford, and Boomer WMAs. Figure 11 (Appendix H) illustrates the different habitat values that exist within and around project lands.

To ensure hunter safety and adherence to established rules and regulations, North Carolina Wildlife Enforcement Officers and USACE Park Rangers patrol all WMAs throughout the year. Generally, prior to 2004, there was a complete ban on hunting on project lands. Limited hunting was re-introduced to reservoir wildlife lands with the development of WMAs. Hunting of state designated big game species is restricted to archery and black powder methods. Restricting big game hunting methods reduces the overall numbers of hunters thereby reducing safety concerns of nearby residential developments and conflicts with other types of dispersed recreational use within WMAs. Waterfowl and small game hunting is allowed in WMAs and on reservoir waters per state and federal regulations. Copies of all rules are available at the Visitor Assistance Center.

Many disciplines are involved in managing the WMAs, including land management, forestry, and wildlife biology. Some of the techniques involved include establishment of permanent forest openings, planting of wildlife food plots, restoration of native grasses, periodic mowing or burning of old fields, thinning of pines and hardwood stands, erection of artificial nesting structures, establishment of waterfowl impoundments, and placement of artificial fishing reefs in the reservoir. The improved wildlife habitat and increased populations provide wildlife watching and hunting opportunities at W. Kerr Scott Reservoir.

2.13 Rare and Endangered Species and Communities

A specific component of USACE's commitment to preserving fish and wildlife species at W. Kerr Scott Reservoir is the consideration and protection of rare and endangered species and communities. Within Wilkes County, one federally-listed threatened species is known to exist, the bog turtle (*Clemmys muhlenbergii*) (USFWS 2010). In addition, the North Carolina Natural Heritage Program (NCNHP) has identified two State significantly rare species within one mile of the reservoir's shoreline: the Necklace Sedge (*Carex projecta*) and Mountain Camellia (*Stewartia ovate*) (NCNHP 2011). Additional species of concern that are known to exist in the county, and may occur on projects lands, are listed in Appendix E.

Bog turtles inhabit slow, shallow, muck-bottomed rivulets of sphagnum bogs, calcareous fens, marshy/sedge-tussock meadows, spring seeps, wet cow pastures, and shrub swamps; the habitat usually contains an abundance of sedges or mossy cover. The turtles depend on a variety of microhabitats for feeding, nesting, basking, hibernation, and shelter. Bog turtles commonly bask on tussocks during the morning in spring and early summer. They burrow into soft substrate of waterways, crawl under sedge tussocks, or enter muskrat burrows during periods of inactivity in summer (NatureServe 2010).

The NCNHP maintains inventories of rare wildlife species and habitats within the state. Those areas that provide unique wildlife opportunities are designated as conservation sites. As of 2011, the NCNHP had yet to complete an inventory of Wilkes County, North Carolina (NCNHP 20011). When this inventory is complete, USACE will work with the NCNHP to identify and protect any potential conservation sites on W. Kerr Scott Reservoir project lands.

Areas that support conditions conducive for the species included in NCNHP surveys include flood plains and wetlands. The 100-year floodplain elevation within the project boundary is at 1,075 feet msl.

Wetlands that occur within W. Kerr Scott Reservoir also provide unique habitats for many species. Wetlands are lands that are wet at least part of the year due to either saturated soils or standing water. Wetlands include a variety of natural systems, such as marshes, swamps, and bottomland hardwoods. While each wetland type looks and functions differently, all wetlands share certain properties, including characteristic wetland vegetation, hydric soils and hydrologic features. Wetlands usually are covered by plants, ranging from marsh grasses to trees. All wetland plants must tolerate living in saturated soil without oxygen during parts of the growing season (NCDENR 2010b).

Wetlands provide essential habitat for a diverse range of species (fish, wildlife and plants). In North Carolina, more than 70 percent of the species listed as endangered, threatened or of special concern depend on wetlands for survival. Many common species of waterfowl, fish, birds, mammals and amphibians live in wetlands during certain stages of their lives. Bottomland hardwood wetlands provide abundant food, nesting sites, resting areas and escape cover for many wildlife species. Many fish species use spring-flooded bottomlands as spawning and feeding locations (NCDENR 2010b). General wetland mapping is provided on a nationwide basis by the National Wetland Inventory. This mapping is very general and does not provide the detail necessary to accurately map wetlands within the project boundary. Limited wetland mapping has been completed at the project, in conjunction with development projects and natural resource studies. Future efforts will allow USACE to develop more accurate wetland mapping at W. Kerr Scott Reservoir.

2.14 Visual Quality

The steep slopes, mature vegetation, and clear water that comprise W. Kerr Scott Reservoir, coupled with the backdrop formed by the Blue Ridge Mountains, are highlights of the project's dramatic visual quality. The minimal development on the project lands enhances this visual quality. Due to the steep slopes around the reservoir, almost any location within the project boundary provides dramatic views of the water and the surrounding mountains. Residential development and demand for shoreline access (including boat docks, piers, etc.) and shoreline stabilization efforts have resulted in increased human presence adjacent to project lands; however, the vegetated ribbon lands tend to mask views of development features, preserving a generally natural appearance. Policies covering vegetation and vegetation removal are addressed in the project's Shoreline Management Plan (USACE 2009b).

The long, relatively straight, and broad main channel of the reservoir allows for extended views across the water surface with the mountain backdrop to the west and the dam to the east. In addition, the pattern of inlets along the reservoir shoreline provides spaces for boaters to experience the serenity of the forested shoreline off the main channel. Views from the water are moderate in overall distance as they are limited by the configuration of the channel, the steep slopes, and mature forest cover. The longest range views are provided from areas near the dam with high quality shorter range views provided throughout the project.

2.15 Mineral and Timber Resources

Mineral and timber extraction have been and continue to be important pieces of the regional economy. During the development of W. Kerr Scott Reservoir, a great deal of timbering was carried out. Since the establishment of the reservoir, resource extraction has been limited to the timbering activities discussed below. There are no active mineral extraction activities on or immediately adjacent to project lands at W. Kerr Scott Reservoir. Mineral extraction has not been permitted on project lands since the establishment of the reservoir. Recent requests have been made to USACE to allow dredging of the lake for the purposes of sand harvesting. The consideration and approval of these requests is outside the scope of the Master Plan; however, the results of these activities may be included during future updates to this Master Plan.

Timber resources within project lands are discussed under Section 2.11. Although there were some commercial timber harvests during the initial development of the reservoir, currently timber harvest activities are conducted when necessary to achieve management objectives, such as fire hazard reduction, wildlife disease management, or wildlife habitat enhancement. Timber resources within project lands are sold to commercial loggers from time to time to meet a variety of project purposes. It is likely that these practices will continue in the future.

2.16 Paleontology

W. Kerr Scott Reservoir is located within the Piedmont physiographic province, just east of the Blue Ridge Province. Meta-sedimentary rocks, most of which are included in the geologic group known as the Carolina Gneiss, underlie the area. There are no known paleontological resources in these crystalline rocks. Geologic resources and soils associated with the area are discussed under Section 2.8.

2.17 Cultural Resources

W. Kerr Scott Reservoir was authorized and constructed prior to the passage and implementation of the various Public Laws, Executive Orders, and administrative guidelines and regulations which deal with the identification, administration and management of historical and archaeological properties under federal ownership or control. Background research, including consultation with USACE archaeologists and the State Historic Preservation Office (SHPO) of North Carolina, identified a total of 18 previously recorded archaeological sites and three archaeological surveys within the

boundary of the W. Kerr Scott Reservoir. Of these sites, three have been determined to be not eligible for eligible for inclusion in the National Register of Historic Places (National Register); the eligibility of the remaining 15 sites has not been determined. A total of 10 prehistoric sites are located within the project boundary. Prehistoric Site 31WK96 is a habitation site from the Early to Late Woodland periods, while the remaining prehistoric sites' functions are unknown and range from the Early Archaic to the Late Woodland periods. A total of six historic archaeological sites are located within the reservoir boundaries and consist of cemeteries, an industrial complex, and a dwelling/military site. The sites date from the eighteenth to twentieth century. According to the site form, Site 31Wk95 (Fort Hamby Site) had cabins that were used by deserters during the Civil War. None of the above-ground features have survived, and only pits where the structures once stood remain. The remaining two sites are of unknown time period.

2.18 Interpretation

W. Kerr Scott Reservoir includes a wide range of recreational, historical, and cultural resources that represent a major visitor attraction. USACE has a dedicated Visitor Assistance Center located adjacent to the dam that provides natural history displays, environmental education materials, as well as a library of local and natural history, cultural events, and other local topics important to the history of settlement throughout the region. USACE and its partners operate an Environmental Education Center on the lower floor of the Visitor Assistance Center. The Environmental Education Center provides visitors with new opportunities relating to exhibits targeting environmental subjects, a Native Species Trail, an environmental learning classroom, a bookstore offering educational items and publications, and other free information.

To help meet the growing demand for interpretive activities at the project, USACE has developed a number of education and outreach programs highlighting the natural and cultural wonders surrounding the area. Outreach program titles include: Environmental Reading, Outdoor Laboratory, Parks in the Classroom, Nature Scavenger Hunt, Project Learning Tree, NCA Wild Basic, Project Wet, and the Junior Ranger Program. These programs incorporate topics such as environmental education, water safety, cultural and natural history, and natural resources. Programs are presented in the campgrounds throughout the summer in the Environmental Education Center and at other locations (e.g., schools, youth organizations, etc.).

2.19 Demographics

2.19.1 Market Area

W. Kerr Scott Reservoir was constructed on the upper Yadkin River and is centrally located within Wilkes County. Compared to other USACE reservoirs, as well as some other regional water resources, the project is modest in size. Although the project receives visitors from neighboring counties and is well suited to provide overnight accommodations for cross-country trips; the majority of visitors are local. As such, the market area for this analysis is focused solely on Wilkes County.

2.19.2 Population

Wilkes County was identified for demographic analysis due to the size of the project, its geographic setting, and visitor profile. All data comes from the North Carolina Office of State Budget and Management, which is based on U.S. Census data. Wilkes County has an area of 757.19 square miles, making it geographically the 13th largest of North Carolina's 100 counties. With a population density of 88.9 persons per square mile, however, it ranks as North Carolina's 60th most densely populated county. Likewise, counties surrounding Wilkes are sparsely populated (Census 2011). The population densities for some of the nearby counties surrounding the project are illustrated in Appendix H, Figure 12. The City of Lenoir, in Caldwell County, is the only city in the neighboring counties that exceeds a population of 50,000.

While the population of North Carolina has grown by more than 55 percent since 1990, population growth in Wilkes County has grown at a much more modest rate (Table 4). Population growth within the state over the past decade has been centered in its urban areas. One third of the growth in North Carolina's population this decade has occurred in the two largest counties, Mecklenburg and Wake counties (NCDENR 2008). Urban growth has been largely absent from Wilkes County, as the nearest major population center, the city of Winston-Salem, is 60 miles away. Regional population growth, however, inevitably causes the landscape to change from a more rural character to more urban. Communities around the fast growing urban areas (such as the Triangle, Triad, and Charlotte areas) will experience an increase in demand for outdoor recreation opportunities outside their immediate local area which may result in more trips further from home. W. Kerr Scott Reservoir is one of many locations that residents from these rapidly growing regions may target for future outdoor recreation opportunities. The role of the project in meeting regional recreational demand is discussed in more detail in Section 2.24.

The population of Wilkes County is projected to grow by approximately 0.4 percent each year through 2019 (Figure 13). This growth rate is similar to what the county has experienced since 2000. By 2020, the population is projected to total an estimated 70,900 persons.

The racial and ethnic makeup of Wilkes County is primarily White (93.0 percent), with Black representing the largest minority group at 4.2 percent of the population. Reflecting national trends, the Hispanic population is growing faster than other racial and ethnic populations. This shift in demographics has not been noticeable within the available data for Wilkes County; however, anecdotal evidence from USACE rangers indicates an increase in visitation to the project from Hispanic users.

The median age in Wilkes County is 38.5 years old, which is just slightly older than the North Carolina's median age of 35.3 years. The proportion of male to females in Wilkes County is nearly the same as North Carolina, with 50.7 percent female population in Wilkes County versus 51 percent female in North Carolina (Census 2011).

Table 4: Current Population and Growth Since 1990

	1990	2000	2010	Population Growth 1990-2000 (%)	Population Growth 2000-2010 (%)
North Carolina	5,880,095	8,079,152	9,535,485	37.3	18.0
Wilkes County	58,657	65,636	69,340	11.9	5.6
Wilkes County Municipalities					
Elkin	3,790	4,109	4,001	8.4	-2.6
North Wilkesboro	3,384	4,116	4,245	21.6	3.1
Ronda	367	460	417	25.3	-9.3
Wilkesboro	2,573	3,159	3,413	22.8	8.0

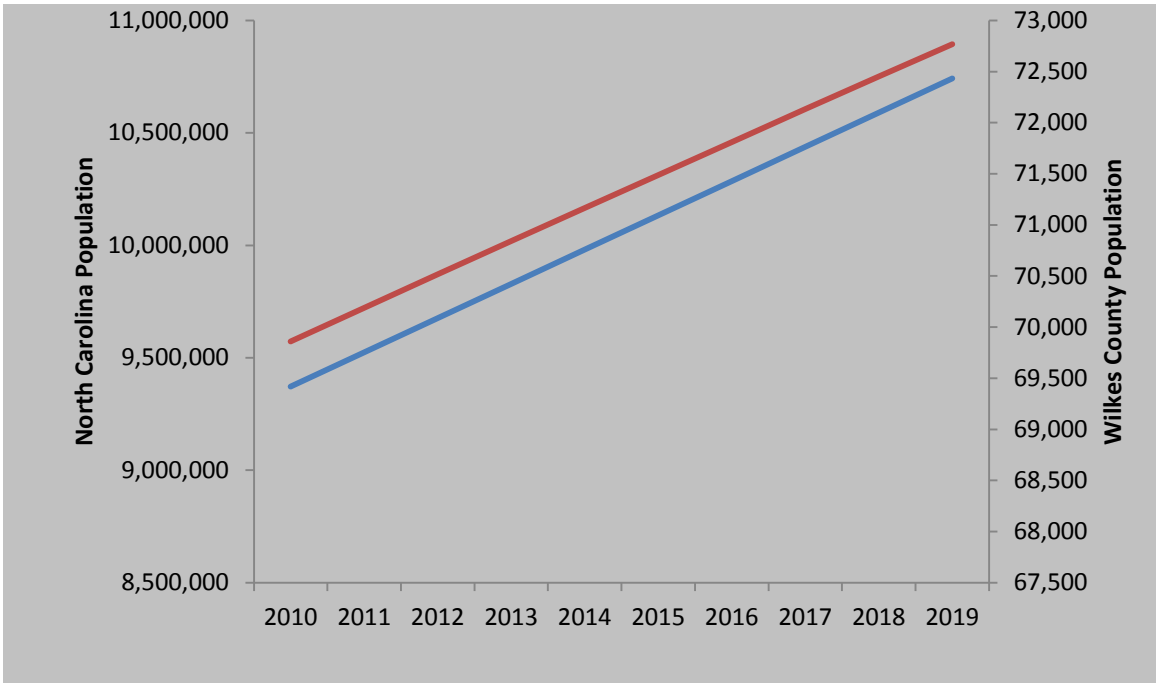
Source: Census 2011 and NCOSBM 2010

2.20 Economic Characteristics

2.20.1 Income and Poverty Status

In 2008, the median household income in Wilkes County was $34,692, with nearly 21 percent of the population recorded below the poverty line. Wilkes County is significantly poorer than the state's average median household income of $46,574 or nearly 15 percent of the population recorded below the poverty line. Starting in late 2007 and continuing on through the present, the United States entered a severe and prolonged economic downturn. Wilkes County has not been immune to the effects of the national economic downturn during this period. Manufacturing jobs were among the worst affected throughout the country, as well as Wilkes County. With 28.1 percent of persons over the age of 16 employed in manufacturing, Wilkes County experienced higher unemployment rates than other North Carolina counties which depend less on manufacturing. In February 2010, Wilkes County had an unemployment rate of nearly 15 percent, while the statewide unemployment rate was nearly 12 percent (NCESC 2010).

Figure 13: Annual Population Growth Projections through 2020 for Wilkes County and North Carolina



= North Carolina Population
= Wilkes County Population
Source: North Carolina Office of Budget and Management 2011

2.20.2 Area Industries

Wilkes County extends from the western extent of the Piedmont region to the eastern edge of the Blue Ridge Mountains. The county is bisected by the main road corridors for travelers heading to the northwest portion of the state, which includes the mountains and surrounding areas such as Boone. Proximity to natural resources and good transportation corridors assist the manufacturing trade in the county, the largest industry in the county as measured by the number of persons employed. Retail trade is the second largest industry in the county providing a significant amount of goods and services to the large number of visitors passing through the county via the Highway 421 corridor. Table 5 lists the major industries and employment number for Wilkes County.

2.20.3 Economic Impact of Recreation Related Spending

USACE provides water-based recreation opportunities throughout the country, which provides economic benefits to the local and regional communities in which USACE projects exist. To estimate the economic impact from the recreation related spending at these projects USACE, in collaboration with researchers at Michigan State University, developed the "Recreation Economic Assessment System (REAS)". The REAS is an economic input-output model that was developed for all USACE projects based on recreation visits in 2006 and a set of economic ratios and multipliers for a region. Without recent survey data to justify making any specific adjustments to the user inputs, the REAS estimates that recreation

visitors spent an estimated $21.4 million on trips within 30 miles of W. Kerr Scott Reservoir. Of this spending, 52 percent was captured by the local economy yielding $11 million in direct sales to tourism related firms. These sales generated $4 million in direct personal income and supported 198 direct jobs. With multiplier effects, visitor spending resulted in $16 million total sales, $5.7 million in total personal income, and supported 259 jobs.

Table 5: Employment by Industry in Wilkes County (for Persons Over the Age of 16)

Industry	Number of Persons Employed	Percent of Employed Persons
Manufacturing	8,883	28.1
Retail trade	5,081	16.1
Educational, health and social services	4,492	14.2
Construction	2,524	8.0
Arts, entertainment, recreation, and food services	1,746	5.5
Professional, scientific, administrative, waste services	1,460	4.6
Finance, insurance, real estate, and rental and leasing	1,395	4.4
Other services (except public administration)	1,355	4.3
Wholesale trade	1,160	3.7
Transportation and warehousing, and utilities	1,162	3.7
Agriculture, forestry, fishing and hunting, and mining	1,115	3.5
Public administration	798	2.5
Information	461	1.5
Total population over age 16	52,377	
In labor force	31,632	
Percent of population employed	60.4	
Percent of labor force unemployed	7.9	

Source: Census 2011

Table 6: W. Kerr Scott Reservoir Project Lands (acres)

	Caldwell	Wilkes	Total
Fee Land	-	3,775.54	3,775.54
Easement	15.92	1,902.25	1,918.17
Total	**15.92**	**5,677.79**	**5,693.71**

Source: USACE Real Estate Data

2.21 Real Estate

Under the authority of the Flood Control Act of 1944, the United States government acquired large tracts of land for W. Kerr Scott Reservoir. Construction of the reservoir required the acquisition (purchase) of various real estate interests in lands for the authorized project purposes, including operation for flood control. Table 6 summarizes the amount and type of project lands acquired for project purposes.

There are a number of real estate outgrants associated with the W. Kerr Scott Reservoir project lands. These outgrants include: one commercial concession marina lease, and one commercial recreation lease. Currently, there is one license, 19 easements, and 68 consents.

The flowage easements acquired at the W. Kerr Scott Reservoir support the project's ability to exercise certain real estate rights to flood, occasionally overflow and contain other "protections" regarding the government's rights necessary for project operations. Each tract of easement lands have unique and specific limitations on permitted activities and development within that particular property.

The majority of the easement interest's which the government acquired, restrict and/or prohibit the construction, operation and maintenance of "habitable structures" within them (each parcel of land should be reviewed to ensure what "real estate interests" were purchased by the government). USACE has historically maintained a "non-habitable" structure policy within its purchased easement areas. The easements also make any development subject to approval by the District Engineer.

2.22 Recreation Facilities

USACE has developed and manages all 18 recreation and wildlife management areas at W. Kerr Scott Reservoir, with the support of its partners. The marina is operated under a lease agreement with a concessioner. The recreation sites are dispersed across the project lands and are located on the largest contiguous pieces of USACE-owned land. Recreation opportunities at the project include biking, boating, camping, fishing, hiking, hunting, picnicking, and swimming. A complete listing of the recreational sites and facilities available at W. Kerr Scott Reservoir is shown in Appendix E, Table E-3 with a more thorough review of each site in Chapter 6.

2.23 Recreation Activities and Needs

Western North Carolina is an area that has faced numerous economic challenges; however, the area contains an abundance of natural resources. The presence of these resources has made recreation an important part of the future of this portion of the state. Recreation opportunities at W. Kerr Scott Reservoir include biking, boating, camping, fishing, hiking, hunting, picnicking and swimming. USACE also has facilities to accommodate large outdoor shows at the Forest Edge Amphitheater at Fort Hamby Park.

2.23.1 Camping

Camping is available at Bandit's Roost Campground, Fort Hamby Park, and Warrior Creek Campground. All three parks offer both water and electric campsites and primitive tent sites. Facilities at each campground include shower houses, dump stations, swim beaches, basketball courts, playground equipment, and multiple use trails. USACE reservation data indicates that over 85 percent of campground users are from North Carolina. Florida and Virginia are the second and third most common home states but together represent less than 3 percent of the project's campers.

2.23.2 Swimming

Swimming is a popular activity during the summer months at W. Kerr Scott Reservoir. In addition to the locations at the campgrounds for the overnight guests, swim beaches also are provided to day users at Berry Mountain Park, Fort Hamby Park, and Boomer Park. Swimming is prohibited at boat ramps and near courtesy docks and along some shorelines as marked.

2.23.3 Fishing

Fishing is permitted in all areas of the reservoir by boat and in many areas from shore. Currently WRC Fisheries Division stocks the reservoir with Striped Bass and Striped Bass hybrids. Sunfish also are common in the reservoir and are desirable sportfish. As part of USACE overall wildlife management strategy for the project, natural resource managers have initiated a number of fish habitat improvements around the lake. These improvements include submerging Christmas tree bundles, gravel spawning beds, wooden pallets, sunken tree tops, and cut and cabled trees to provide attractive habitat for the fishery. Fish attractors and reefs are marked by USACE informational buoys. Public fishing docks have been developed on the reservoir; however, fishing from boat ramp courtesy docks is prohibited.

2.23.4 Hunting

Hunting opportunities exist in the six WMAs which are managed by USACE. These areas are open to hunters pursuing all game animals found on project lands. Special regulations include weapons restrictions for deer and turkey hunting. Waterfowl hunting is allowed in certain designated water areas and closed parks with USACE permits. WMAs are closed to hunting on Sundays per North Carolina law.

2.23.5 Trails

There are approximately 22 miles of shared use trails around the W. Kerr Scott Reservoir (USACE 2009a). This includes seven miles of trails in Dark Mountain Park and WMA with additional trails in the Fort Hamby Park and WMA. Two sections (over seven miles) of the Overmountain Victory National Historic Trail (Overmountain Victory Trail) are located on USACE lands. One section extends from the Dam Site Park, along the south side of the reservoir, through Berry Mountain Park to Bandit's Roost Campground. The second segment extends through Warrior Creek Campground and Marley's Ford WMA. Other trails include: Shiner's Run Loop at Skyline Marina and the Lake Side Trail near USACE Visitor Assistance Center. Plans for future trails include a connection to the Yadkin River Greenway for both the Overmountain Victory Trail and Dark Mountain

Trail and the connection of the Overmountain Victory Trail to the Bandit's Roost Campground. Table 7 summarizes the named trails at the project and their approximate lengths.

Horses are not allowed on trails at the project. Trails at the project are designed to follow grades that allow sustainable multiple uses while providing less demanding hike/bike routes than many of those found in the nearby Blue Ridge Mountains.

The reservoir is located in the center of the National Blue Ridge Heritage Area and within the Yadkin River Heritage Corridor. National Heritage areas are congressionally designated areas where natural, cultural, historic, and recreational resources combine to form a cohesive, nationally distinctive landscape arising from patterns of human activity shaped by geography. The Yadkin River Corridor is a multi-county project establishing a heritage and recreational corridor to link, protect, and preserve the major historic, natural and cultural assets of the region. It includes the counties of Caldwell, Wilkes, Surry and Yadkin, as well as the towns of Wilkesboro, North Wilkesboro, Ronda, Jonesville, Boonville, East Bend, Elkin and Pilot Mountain (Evans et al. 2007). The Corridor covers a 113-mile stretch of the Yadkin River, from the headwaters in Caldwell County, continuing along the Yadkin River through Wilkesboro, Ronda, Elkin and Siloam on southward to Huntsville and the historic Shallow Ford.

In addition to land based trails, the Yadkin River Trail, a paddle trail, starts at the base of W. Kerr Scott Dam. The Yadkin River Trail runs for 126 miles from the outflow of W. Scott Kerr Reservoir to York Hill access near the beginning of High Rock Lake. It is the longest river trail with developed access sites in North Carolina's trail system.

2.24 Visitation Profile

Visitation to W. Kerr Scott Reservoir and other regional points of interest is fueled primarily by recreational activities. Both short-term and long-term trends in recreational activities point to continued growth in outdoor recreation across all segments of the population, with growth particularly strong in both viewing and learning activities. Nationally, participation in non-consumptive wildlife activities is expected to increase 61 percent through 2040 and should increase more rapidly than the population (Cordell et al. 1999). The largest relative increase is expected to come in the southern region of the United States, including North Carolina (Cordell et al. 1999). In addition to non-consumptive wildlife viewing, biking, horseback riding, and picnicking participation rates will experience the greatest increase throughout the southern US, outpacing population growth. The visitor profile for North Carolina, Wilkes County, and the reservoir are described below.

Table 7: Multipurpose Trails at W. Kerr Scott Reservoir	
Trail Name	**Miles**
Existing Trails	
Bushwacker Falls Trail	0.6
Dark Mountain	5.0
Fort Hamby Trail	0.8
Lake Side	0.3
Overmountain Victory Trail – Keowee to Marley's Ford	1.7
Overmountain Victory Trail – Visitor Assistance Center to Bandits Roost sections	7.3
Shiner's Run Loop	2.6
Upper Yadkin Trail	4.0
Total Existing Trails	*22.3*
To Be Constructed	
Boomer	0.6
Dark Mountain	1.0
Fort Hamby	0.7
Keowee	0.1
Marley Ford Loop	1.4
Smithey's Creek Park	0.8
Warrior Creek Headwaters Loop	1.8
Total To Be Constructed	*6.4*
Total	**28.7**

Source: USACE 2009a

2.24.1 North Carolina

According to the 2008 North Carolina Statewide Comprehensive Outdoor Recreation Plan (SCORP), walking for pleasure is the number one activity among residents. Developed setting outdoor recreation is by far the most popular form of recreation. More residents indicated participation in walking for pleasure (82 percent) and outdoor family gatherings (74.6 percent) than in any other overall activity (NCDENR 2008). The top ten activities, including participation rates in North Carolina, are included in Table 8. Other activities, such as gardening or landscaping (65.4 percent) or driving for pleasure (58.2 percent) also are favorites with North Carolina residents. Other top activities relevant to the W. Kerr Scott Reservoir include attending outdoor family events, viewing or photographing scenery, visiting a nature center, sightseeing, picnicking, attending a sporting event, and going to the beach. Nature-based land recreation in North Carolina, such as visiting primitive areas, hiking, visiting a farm, driving off-road, camping, and mountain biking, also are within the top 40 popular activities. Water based recreation accounts for activities such as swimming, boating, and fishing. North Carolina residents also found many other recreational activities popular. According to the SCORP, close to half of North Carolina's residents have visited a beach and nearly 40 percent have swum in a pool, lake, or stream in the last year. In addition, between 20 percent and 30 percent of residents have done some type of boating, gone fresh- or warm-water fishing, or

motor-boating. Table 8 provides the percentage of North Carolina residents who reported participating in outdoor recreation activities in the SCORP.

The population in North Carolina has increased dramatically in the last several years, and is expected to continue to increase in the future, which will result in an increased demand and participation in outdoor recreation. The changes in the demographics also are expected to influence the demands for various recreational activities and resources. For example, a population that is aging exerts demands different than those that are younger so one would expect to see a decrease in demand for active sports and an increase in demand for individual and passive types of recreation such as walking and nature viewing. In general, participation in outdoor recreation appears to be increasing, which would fuel the demand for additional recreational lands and facilities throughout North Carolina in the future. In North Carolina, the population is remaining active for longer periods, and therefore, still contributes to the use of natural areas. Of late, the Hispanic population has become the largest minority in the United States and a population with documented healthy growth rates within North Carolina during the most recent census. This suggests that additional opportunities could be implemented with a focus on this group (NCDENR 2008).

2.24.2 Wilkes County

As discussed in Section 2.19, Wilkes County is a rural county, with about 89 persons per square mile. The presence of W. Kerr Scott Reservoir and associated federal and state lands results in a half acre of state and federal park lands for every resident in the county. This metric will be challenged in the future, as strong population growth throughout the state, coupled with demand for mountain or lakefront lifestyle retirement opportunities, put additional pressure on outdoor recreation opportunities. Although most of this population growth may not occur directly within Wilkes County, the growing metropolitan areas throughout the Piedmont region (the Triangle, Triad, and Charlotte areas) are within close enough proximity for those residents to plan trips to and recreate within the county and surrounding areas.

2.24.3 Project Specific Visitation

Annual visitation to W. Kerr Scott Reservoir from 2000 through 2009 is listed in Appendix E. Visitation numbers show a general decreasing trend over the past 10 years; however, recording methods have changed a number of times during this period and likely account for the differences. In general, W. Kerr Scott Reservoir is a popular destination for day users, most of whom live within Wilkes County. These users visit the reservoir to picnic, fish, and swim at the lake. Visitation at the reservoir also is influenced by a mountain bike club whose members not only use the trails, but also volunteer to maintain the trails.

Table 8: Percentage of North Carolina Residents Participating in Outdoor Recreation Activities

Rank	Activity	Percent (%)
1	Walking for pleasure	82
2	Family gathering	74.6
3	Gardening or landscaping	65.4
4	Driving for pleasure	58.2
5	View/photo natural scenery	57
6	Visit nature centers, etc.	52.9
7	Sightseeing	52.9
8	Picnicking	50
9	Attend sports events	48.6
10	Visit a beach	44.2
11	Visit historic sites	43.1
12	View/photo other wildlife	43
13	View/photo wildflowers, trees	43
14	Swimming in an outdoor pool	39.9
15	Swimming in lakes, streams, etc.	39.7
19	Boating (any type)	31
23	Day hiking	29.7
28	Warm water fishing	25.9
29	Visit other waterside (non beach)	24.4
37	Mountain biking	15.7
42	Hunting	9.9
50	Use PWC	8
53	Horseback riding (trails)	7.3
55	Canoeing	6.7
57	Waterskiing	6.4

Source: NCDENR 2008

Appendix E also includes a summary of visitation to the reservoir from October 1, 2008 through September 30, 2009. Bandit's Roost Campground is the most popular campground, as measured in the total number of visits, while the Dam Site is the most popular day-use site, as measured in the total number of visitor hours. Visitation is reported by visitor-hours based on raw vehicle counts. The presence of one or more persons on an area of land or water for the purpose of engaging in one or more recreation activities during continuous, intermittent, or simultaneous periods of time aggregating to 60 minutes is known as a visitor-hour. Visitor-hour incorporates both the number of participants and duration of use and provides an estimate on the amount of use.

2.25 Related Recreational, Historical, and Cultural Areas

W. Kerr Scott Reservoir is located in the foothills of the Blue Ridge Mountains and is in close proximity to a multitude of outdoor recreation opportunities. Regional recreation resources in the region include national forests, several state parks, and vehicle touring along the Blue Ridge Parkway. Pisgah National Forest, Cherokee National Forest, and Jefferson National Forest are west of the project. State parks in the region include Stone Mountain State Park, Rendezvous Mountain State Educational Forest, Mount Jefferson State Natural Area, Pilot Mountain, South Mountain, Lake Norman, Lake James, and New River in North Carolina, with Roan Mountain State Park in Tennessee. Other lakes with similar water-based and water-oriented recreation opportunities within the region include Lake Norman, Lake James, Lake Hickory, Lake Rhodhiss, Lookout Shoals Lake, Watauga Lake, and Norris Lake.

In addition to these sites, there are a number of historic trails that provide recreational opportunities in the region. The Blue Ridge Parkway passes within 15 miles of the project area and provides scenic viewing opportunities of the Blue Ridge Mountains. The Overmountain Victory Trail follows a revolutionary war route from Virginia through eastern Tennessee, North Carolina, and ending at the Kings Mountain National Military Park in South Carolina. This route includes a portion of the project. There also are several local parks and state and national historic sites in the regional area. Figure 14 (Appendix H) shows the locations of the other parks and game lands within the greater region and Table 9 lists regional recreation sites greater than 100 acres in size. The table also summarizes the public lands available for hunting within 60 miles of the project.

2.26 Pertinent Public Laws

Civil Authority. Unless otherwise provided by federal law or regulation, state and local laws and ordinances apply on W. Kerr Scott Reservoir project lands and waters, unless those laws and ordinances interfere with a Federal purpose. Enforcement of state and local laws and ordinances will be handled by the appropriate agencies with the support of USACE.

USACE Authority. Rules and regulations governing public use of water resources development projects administered by USACE are contained in Title 36, Part 327 of the Code of Federal Regulations. Persons designated by the District Engineer have the authority to issue citations for violations of rules and regulations governing public use of USACE water resource projects. If a citation is issued, the person charged with the violation may be required to appear before a U.S. Magistrate for trial.

Federal Authority. A number of federal public laws and Executive Orders pertain to authorization of the project, present and future development, and operation of project lands. A listing of federal laws that guide the management of W. Kerr Scott Reservoir are included in Appendix G.

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Table 9: Parks and Game Lands/WMAs greater than 100 acres in size within 60 miles of W. Kerr Scott Reservoir

	Acreage	Owner/Manager
North Carolina Parks		
Cherokee National Forest WMA	55,341	Federal
Crowder Mountain State Park	2,144	State
Lake James State Park	1,926	State
Grayson Highlands State Park	4,960	State
Hungry Mother State Park	2,221	State
Lake James State Park	6,510	State
Mount Jefferson State Natural Area	464	State
New River State Park	2,200	State
Pilot Mountain State Park	3,488	State
Rendezvous Mountain State Educational Forest	250	State
Roan Mountain State Park	2,080	State
South Mountain State Park	18,000	State
Stone Mountain State Park	14,406	State
Gaston County South Fork River Park	102	Local
Julian Price Memorial Park	8,877	Local
Latta Plantation Park	666	Local
Moses H. Cone Memorial Park	6,758	Local
Rankin Lake Park	147	Local
Tanglewood Park	1,158	Local
Total	**109,952**	

Table 9: Parks and Game Lands/WMAs greater than 100 acres in size within 60 miles of W. Kerr Scott Reservoir

	Acreage	Owner/Manager
North Carolina Game Lands		
Alcoa	1,629	Private
Buffalo Cove	6,654	State
Catawba	1,098	Private
Cherokee	339	Federal
Elk Knob	729	State
Johns River	3,870	State
Mitchell River	1,729	State
Perkins	1,048	Local
Pisgah National Forest	185,024	Federal
Pisgah WRC	2,847	State
Second Creek	1,131	State
South Mountains	21,530	State
Three Top Mountain	2,932	State
Thurmond Chatham	6,403	State
Sub-total	**236,962**	
Virginia Game Land		
Big Survey	7,528	State
Crooked Creek	1,732	State
Stewarts Creek	1,079	State
Sub-total	**10,339**	
Total	**247,301**	

Source: ESRI 2008, WRC 2009

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2.27 Management Plans

In accordance with ER 1130-2-550 and EP 1130-2-550, a Master Plan should establish broad management guidelines and policies which will form the basis for preparing a number of detailed management plans. Currently, W. Kerr Scott Reservoir is operating under the plans included in the *W. Kerr Scott Reservoir Operational Management Plan* (USACE 1983). The OMP generally describes natural resource and park management conditions and objectives, as well as specific plans for achieving these objectives. These plans prescribe techniques that represent the best known technology available to USACE at the time of their publication. Adherence to these plans has led to the development of current resource conditions at W. Kerr Scott Reservoir. The management plans are listed on Table 10, with a general description of their content and date of most recent update.

Table 10: W. Kerr Scott Reservoir Management Plans

Management Plan	Description	Last Update
Forest	Documents existing and desired forest conditions.	1993
Fisheries	Documents existing and desired water conditions.	1993
Wildlife	Documents known and probable wildlife species.	1993
Aquatic Plant Control	Documents potential infestations.	1993
Endangered Species	Documents known and probable endangered species.	1993
Safety	Identifies safety concerns, responsibilities, and management techniques.	1993
Security	Identifies authority for security actions.	1993
Environmental Compliance	Describes authority and procedure for compliance with USACE environmental regulations.	1993
Visitor Assistance	Identifies authority for managing visitor activities.	1993
Shoreline	Creates management zones along the reservoir shoreline.	2009
Sign Plan	Directs staff to develop a sign plan.	1993
Private Exclusive Use	Provides authority and guidance for issuing and managing permits for private use facilities.	1993
Outgrants	Identifies responsibilities for providing and managing special events.	1993

Table 10: W. Kerr Scott Reservoir Management Plans

Management Plan	Description	Last Update
Fire Protection	Directs USACE on its acquisition and maintenance of firefighting equipment.	1993
Maintenance	Identifies responsibilities, standards, and procedures for maintaining facilities.	1992
Recreation Use Fee Program	Provides authority, background, and guidance on fee collection for use of recreational facilities.	1993
Interpretation	Provides direction on interpretive resources.	1992
Cultural Resources	Provides direction for management of cultural resources.	1992
Recreation Area Closure and Consolidation	Identifies recreation areas that have been closed and documents the resources available at each site.	1992
Recreation Area Renovation	Identifies previous and planned renovations to recreational areas.	1992
Special Programs	Provides guidance for administering special programs.	1992

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2.28 Summary

The preceding discussion of the physical, natural, historic, and socioeconomic resources identified the following important implications for the use, management, and development of resources at W. Kerr Scott Reservoir. The table below summarizes these discussions and identifies issues to be addressed in this Master Plan.

Table 11: Summary of Factors Influencing Resource Management and Development at W. Kerr Scott Reservoir

Resource	Summary
Reservoir	The W. Kerr Scott Reservoir includes approximately 1,475 acres of water and an additional 2,279 acres of surrounding project lands. Compared to other regional reservoirs, this is a relatively small area of land in which to achieve all of USACE's missions and goals.
Lake Operation	USACE does not alter the normal pool elevation to account for seasonal changes in precipitation. Water management strategies are geared to provide flood control and other project purposes.
Hydrology and Ground Water	Like many reservoirs, the movement of water into, through, and out of the project lands is influenced by regional and site specific conditions, including annual and seasonal precipitation patterns and the geology and landforms.
Sedimentation	W. Kerr Scott Reservoir was designed to absorb certain levels of sedimentation. Although no formal surveys have been completed, there is evidence that sedimentation is becoming a problem at W. Kerr Scott Reservoir.
Surface Water Quality	The quality of surface water within the reservoir is influenced by conditions throughout its watershed, including land use patterns and the presence of pollution sources. Despite water quality concerns throughout the watershed, water quality in the reservoir remains high enough to allow all forms of recreational use to continue.
Climate	The regional climate has influenced the development and management of W. Kerr Scott Reservoir, including the need for a dam for flood damage reduction, monitoring of precipitation and inflows, management of water levels in the reservoir, and maintenance and enhancement of the project's ability to provide high-level recreational opportunities.
Topography, Geology, and Soils	Since the publication of the 1983 Master Plan, physical development and changing natural conditions have altered previously documented soil and topographic conditions. These changes may not have generally affected the current or future use of project lands, but their effects have presented visitor hazards to be resolved in some locations .
Land Use	Adjacent to the project lands, forest and agriculture are the predominant land uses, with pockets of single family residential development along the north and south shores of the reservoir.
Borrow Areas and Utilities	During the construction process for W. Kerr Scott Reservoir, borrow areas were developed to accumulate the soil necessary to complete the earthen dam. Currently, there are no active borrow areas within the project lands. Utilities, such as water and sewer lines, power lines, and communication lines, run through various parts of the project, providing service to individual sites and the surrounding region.
Vegetation Resources	Vegetation resources within project lands are influenced by regional and site specific conditions, including climate, water supply and quality, soils, and topography. Increasing levels of invasive species and infestations across the region is a developing management problem at W. Kerr Scott Reservoir.
Fish and Wildlife Resources	Conserving and protecting fish and wildlife resources within project lands is one of the purposes of USACE at W. Kerr Scott Reservoir. Since the 1983 Master Plan, USACE has continued its efforts to enhance aquatic and terrestrial habitat at the project.

Table 11: Summary of Factors Influencing Resource Management and Development at W. Kerr Scott Reservoir

Resource	Summary
Rare and Endangered Species and Communities	Within Wilkes County, one federally-listed threatened species is known to exist: the bog turtle (*Clemmys muhlenbergii*) (USFWS 2010). Additional species of concern are known to exist in the county, and may occur on project lands. Existing floodplain and wetland habitats play an important role in the location and success of these species.
Visual Quality	The steep slopes, mature vegetation, and clear water, that comprise W. Kerr Scott Reservoir, coupled with the backdrop formed by the Blue Ridge Mountains, highlight the project's dramatic visual quality. The low density of development on project lands along with extensive stands of mature vegetation along the shoreline enhances this visual quality Residential development and demand for shoreline access (including boat docks, piers, etc.) and shoreline stabilization efforts have resulted in increased visual evidence of human presence on and adjacent to project lands.
Mineral and Timber Resources	Currently there is no mineral harvesting activities within the project boundaries. Timber harvesting is accomplished to maintain USACE's wildlife conservation purposes. In the future, these activities could be expanded.
Paleontology	There are no known paleontological resources beneath project lands at W. Kerr Scott Reservoir.
Cultural Resources	Many of the existing cultural resources within the project boundary were damaged or lost before federal regulations were enacted to protect them. Existing resources play an important role in the history and interpretation of project lands, but are not considered eligible for the National Register.
Interpretation	USACE has a dedicated Visitor Assistance Center located at the dam that provides natural history displays, environmental education materials, as well as a library of local and natural history, cultural events, and other local topics important to the history of settlement throughout the region. The facility includes an environmental education center to enhance existing and future interpretive programs at the project.
Demographics	W. Kerr Scott Reservoir is located in Wilkes County, North Carolina, which ranks as the state's 60th most densely populated county. The rural character of many of the communities that surround the reservoir is part of what makes the project so unique.
Economic Characteristics	Wilkes County is significantly poorer than the state average median household income. Meeting the needs of the communities with these economic characteristics, while also providing opportunities to other visitors, is one of the goals of USACE at W. Kerr Scott Reservoir.
Real Estate	Construction of the reservoir required USACE to purchase lands to protect property associated with the authorized purposes including operation for flood control. Monitoring these lands and permitting the use of these lands requires a great investment of time and resources by USACE.
Recreation Facilities	Recreation opportunities at the project include biking, boating, camping, fishing, hiking, hunting, picnicking, and swimming. Maintaining the availability of high quality recreational experiences for the public is one of the primary purposes of USACE at W. Kerr Scott Reservoir.
Visitation Profile	Visitation to W. Kerr Scott Reservoir and other regional points of interest is fueled primarily by recreational activities. USACE strives to meet this demand at W. Kerr Scott Reservoir while remaining consistent with its other purposes.
Related Recreational, Historical, and Cultural Areas	W. Kerr Scott Reservoir is one of many sites in the region that provide a wealth of both land- and water-based recreation opportunities in the region. Although it is located an hour or more from any major population centers, it is situated among a number of other recreational destinations for travelers.

3.0 Special Problems

This chapter provides an overview of the key administrative, social, and environmental factors that influence and constrain present and future options for use, management, and development at W. Kerr Scott Reservoir. This information supplements the discussion in Chapter 2. Considered together with the Resource Objectives and Development Needs presented in Chapter 5 and Chapter 6, these factors determine the most appropriate uses of project lands.

3.1 Adapting to Regional Growth

Despite the relatively low levels of population growth, the region has continued to experience growth in outdoor-based tourism and recreation. This is due in part to the region's wide range of natural resources, all within close proximity to the rapidly growing population centers in North Carolina. The demand for natural resource based outdoor recreation places increasing pressure on USACE to meet a broad range of recreational needs at W. Kerr Scott Reservoir. The Land Classifications presented in this Master Plan, along with the Resource Plan and general management recommendations, will provide USACE with a tool for planning balanced recreational development on project lands. The specific details for new development projects; however, are beyond the scope of this Master Plan and will be addressed on a case-by-case basis as needs and/or opportunities arise.

Regional growth has resulted in increased demand for lands adjacent to the project and will continue to do so. The increasing number of residential properties and the individual interests in maximizing their benefits from the property result in visual and physical encroachments on project lands. Physical encroachments are addressed through regulation enforcement or by bringing them into compliance as permitted private docks and waterfront structures. Although these structures are permitted by USACE they still encroach upon the natural and recreational vistas around the reservoir. Physical development outside the project boundary also results in similar visual impacts. The Land Classifications, Resource Objectives, and Development Needs attempt to address these impacts through enhanced management to buffer project lands from surrounding development. Future updates to the W. Kerr Scott Reservoir OMP will further develop this strategy.

3.2 Changing Environmental Conditions

Like much of the surrounding region, W. Kerr Scott Reservoir continues to experience changes in its natural resource conditions. These changes include the effects of global climate change, which continue to alter the composition of forest and wildlife populations in and around project lands and could continue to do so (EPA 2010). Many of the activities and facilities that exist within the project boundary were designed to take advantage of the surrounding natural conditions. Changing conditions could affect the use of existing facilities or the need for future recreational sites. The Land Classifications in this Master Plan seek to protect sensitive environmental areas that are most susceptible to change, by directing future development into other areas and providing recommendations

for the management of existing developments. In addition to the Master Plan, the W. Kerr Scott Reservoir Forest Management Plan will further address these areas and changing forest conditions.

Another changing environmental condition is the increasing spread of invasive species across project lands. The spread of invasives is the result of regional development, global climate change, changing atmospheric conditions, and increased movement of people and materials through different regions (Dukes and Mooney 1999). The spread of hemlock woolly adelgid (*Adelges tsugae*) across the western portion of the state is one example of this phenomenon. Such an event can result in temporary or permanent closure of select project lands, reduction or loss of vegetation and habitat within the project, and changes in aesthetic values within the project. Future updates to W. Kerr Scott Reservoir's natural resource management plans and the OMP will allow USACE to continue to adapt and respond to these conditions.

Changing conditions also can result in hazardous conditions. Hazardous conditions include natural or manmade toxins in the water and soil, pollutant accumulation in the air and water, as well as eroding slopes and other unsafe conditions. The 1983 Master Plan identified natural conditions that were not ideal for development. This Master Plan has provided an updated "snapshot" of resource conditions in Chapter 2. In some cases, unsafe conditions are known and can be avoided through updated Land Classifications presented in this Master Plan. This Master Plan also includes Resource Objectives that provide guidance on protecting resources from future erosion and other harmful conditions. Future monitoring of these conditions will provide USACE with up-to-date information on hazardous conditions on project lands at W. Kerr Scott Reservoir. The OMP will provide guidance on how these conditions may be addressed.

3.3 Balancing User Needs

Along with its multiple purposes, USACE serves a large variety of user groups at W. Kerr Scott Reservoir. These groups use the project for day-uses, such as hiking, mountain biking, boating, fishing, wildlife viewing, hunting, and for camping. As visitation has grown and residential development around the lake has increased, USACE and its partners have increased their efforts to provide balanced recreational opportunities. This includes identifying means of avoiding conflicts between different user groups. Despite these management actions, conflicts continue to exist at locations where different uses intersect, like at Dark Mountain WMA where both mountain bikers and hunters use the site. This Master Plan provides additional direction through updated land use classifications that designate project lands for specific uses. The Resource Plan portion of the document also provides guidance on providing appropriate facilities for different user groups. The implementation and enforcement of this guidance, however, will come through site development plans.

3.4 Managing for High Pool and Low Pool Levels

Management of any reservoir requires the consideration of high and low pool conditions. Any changes in water levels due to flood or drought events pose a clear disturbance to routine project operations. Pool levels affect when and how certain areas within the project are accessible or when boat ramps and docks may be safely used for water access. Water levels exceeded 0.5 feet above the guide curve begin impacting shoreline features, such as walkways, parking lots, etc. The Resource Plan portion of this document identifies locations where future water-based recreational facilities could be developed. The design of these facilities should take into account the pool level fluctuations that occur in W. Kerr Scott Reservoir. The management of these fluctuations is beyond the scope of this Master Plan and is addressed in the W. Kerr Scott Reservoir Water Control Plan.

3.5 Addressing Unauthorized and Inappropriate Use

Unauthorized and inappropriate use occurs whenever visitors engage in activities that are not appropriate for the given area of the project, conflict with federal, state, and local laws and regulations, and USACE regulations for use. Some of these inappropriate uses are addressed in this Master Plan, by updating land use classifications to define more appropriate use of project lands or by recommendations to address growing trends. Overall, unauthorized and inappropriate uses are handled under the headings of activities, project regulations, and illegal activities.

3.6 Physical Capacity

Many of the recreational facilities at W. Kerr Scott Reservoir were constructed during the early years of the project. Although the sites have been expanded and enhanced over the years, the vehicle parking capacity has remained relatively constant. This has been done in part to avoid further environmental impacts and maintain the undeveloped character of many of the sites. However, the limited amount of parking has become a constraint for some locations and activities. This is especially true during special events and holiday weekends. This Master Plan does address the need for additional parking, but the design of specific projects for additional parking is outside its scope and would be accomplished by specific development plans. This Master Plan does include Land Classifications, Resource Objectives, and Development Needs aimed at improving the visitor experience at W. Kerr Scott Reservoir. These elements of the plan provide direct and indirect guidance on improving parking capacity on project lands.

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4.0 Public Involvement and Coordination

In 2009, USACE initiated the planning process to update the existing W. Kerr Scott Reservoir Master Plan. The planning process involved federal, state, and local agencies; national and local organizations; local businesses; and private citizens. Additional information on the agency and public review of this document will be included in the Final Master Plan.

4.1 Public Scoping Meetings and Comments

During the initial stages of the planning process, USACE held a public open house on February 17, 2010 at the W. Kerr Scott Reservoir Visitor Assistance Center. Prior to the open house, announcements were sent to individuals, organizations, and agencies on the W. Kerr Scott Reservoir mailing list. Announcements also were posted in local newspapers, on USACE web sites, and announced on local television and radio stations.

The open house allowed guests to come and go in a timeframe that suited their schedules. The open house format also allowed members of the planning team to interact with their guests, to answer questions about the planning process, and to solicit input that would help guide the master planning process. A public comment period was held from the date of the mailings (January 19, 2010) until 30 days following the open house. Comments could be submitted in writing, via email, or on USACE web site during the comment period. All written comments received during this period, along with responses, will be included in Appendix D in the Final Master Plan. While not all of the subjects raised during the comment period can be addressed in the master planning process, the comments obtained during the comment period helped guide the master planning process.

4.2 Agency Scoping Meetings

As part of the effort to update the W. Kerr Scott Reservoir Master Plan, USACE held a meeting with local governments and state and federal agencies to solicit additional input on the master planning process. USACE invited representatives from federal and state agencies in North Carolina, with jurisdiction or interest in the resources at W. Kerr Scott Reservoir, to a meeting in Raleigh, North Carolina on January 23, 2009. The location was selected based on its proximity to many of the state agency headquarters. During the agency meetings, the planning team presented an overview of the master planning process, discussed existing plans and resources concerns, and initiated coordination for a data exchange with those agencies that had additional data on resources on and around project lands. Agency comments documented during the scoping period or at the agency meeting are included in Appendix D or will be included in the appendix of the Final Master Plan. While not all of the subjects raised by the agencies and elected officials can be addressed in the master planning process, their comments helped guide the master planning process.

4.3 Public Review and Comment on the Draft Master Plan/PEA

The Preliminary Final Master Plan/PEA was made available for a 30-day public review beginning on October 1, 2011. Notices of availability for the public review were distributed to the W. Kerr Scott Reservoir mailing list on October 1 2011. A copy of the mailing list is included with the PEA in Appendix C.

5.0 Land Allocation, Land Classifications, and Resource Objectives

This chapter presents the land use plan for W. Kerr Scott Reservoir. In the plan, specific parcels of land are assigned to land use categories based on resource capability. Combined with the project-wide and site-specific Resource Objectives presented in this chapter and Chapter 6, respectively, the land use plan provides a programmatic approach for the use, management, and development of all project lands. Together, these elements are the core of this Master Plan.

5.1 Land Allocation

Land allocations identify the authorized purposes for which project lands were acquired. The entire W. Kerr Scott Reservoir project has a land allocation of Project Operations. Project Operations lands are those lands acquired to provide safe, efficient operation of the project for its authorized purposes. These project purposes include flood control, water supply, conservation and enhancement of fish and wildlife, and recreation. No specific parcels were acquired or assigned for individual purposes of recreation, fish and wildlife conservation and enhancement, or mitigation.

5.2 Land Classifications

All lands acquired for project purposes are classified to provide for development and resource management consistent with authorized project purposes and other federal regulations. The classification process refines the land allocation to fully define the management and use of project lands and considers public preferences and needs, legislative authority, regional and project-specific resource requirements, and suitability. Management and use of the lands assigned to each Land Classification are discussed in connection with the appropriate Resource Objectives in the following section. Six categories of Land Classifications are used, and are described below. Their locations within the project are shown on Figure 15 and Figure 16 (Appendix H).

5.3 Resource Objectives for Specific Land Classifications

Resource Objectives are attainable goals for resource development and/or management which are consistent with authorized project purposes, federal laws and directives, regional needs, resource capabilities, and expressed public preferences and needs. These objectives provide a consolidation of the information presented in the previous chapters of this Master Plan. The Resource Objectives will be met, either wholly or partially, through the implementation of the Site-Specific Resource Objectives established for each management area described in Chapter 6. The Resource Objectives that were developed for each Land Classification at W. Kerr Scott Reservoir and the rationale used to develop the objectives are provided below. Table 12 summarizes the Resource Objectives for each Land Classification.

5.3.1 Project Operation Lands

This classification includes lands required for the dam and associated structures, operations center, administrative offices, maintenance compounds, and other areas that are used to operate and maintain W. Kerr Scott Reservoir. When compatible with operational requirements, these lands may be used for Recreation and Multiple Resource Management, as well. Approximately 72 acres of land at W. Kerr Scott Reservoir are classified as Project Operations.

Resource Objectives for Project Operations Lands

Resource Objectives for Project Operations lands include the following:

- Maintain and operate project structures in a manner that allows them to effectively fulfill project purposes;
- Renovate and improve existing recreational facilities on operation lands where such use is feasible and does not interfere with other project purposes;
- Enhance Americans with Disabilities Act (ADA) access to appropriate locations;
- Maintain and improve trail and water access in a manner that improves visitor opportunities without interfering with other project purposes;
- Reserve adequate areas for operations activities that are required to meet overall project purposes;
- Provide for public use and access within USACE safety guidelines and security levels, where such use is feasible and does not interfere with other project purposes;
- Manage forest resources and other vegetation for balanced uses of recreation and fisheries and wildlife conservation and enhancement;
- Monitor forest conditions to document health and to identify pests;
- Control noxious weeds and other pests in a manner that avoids damage to existing desirable vegetation and sensitive areas (wetlands and streams); and,
- Preserve and protect existing wetlands and other sensitive or unique habitats that support threatened and endangered species, along with other wildlife.

Rationale

All of the Project Operations lands at W. Kerr Scott Reservoir are located in the area of the dam and Visitor Assistance Center at the eastern end of the reservoir. The operation and maintenance of W. Kerr Scott Reservoir is the primary purpose of these lands. While the operation of the reservoir is outside the scope of the master planning process, designation of the portion of the project lands that are dedicated to supporting operations

is an important part of the Master Plan. Uses that interfere with operational activities, compromise the structural integrity of the project or its facilities, or create a safety hazard for visitors or project personnel cannot be allowed. Within these constraints, Project Operations lands provide important opportunities for varying levels of recreation.

5.3.2 Recreation Lands

Recreation lands are designated for intensive levels of recreational use to accommodate and support the preferences and needs of project visitors. They include lands on which existing or planned recreational facilities are located and allow for developed public recreation facilities, concession development, and high-density or high-impact recreational use. Low-density recreation and wildlife management activities compatible with intensive recreation use are acceptable. Permits, licenses, and easements are not issued for non-compatible manmade intrusions such as pipelines, overhead transmission lines, and non-project roads, except where warranted by the public interest. Approximately 690 acres of land at W. Kerr Scott Reservoir are classified as Recreation lands.

Resource Objectives for Recreation Lands

Resource Objectives for Recreation lands include the following:

- Provide for camping and day-use opportunities;
- Allow for several activities in the same general vicinity;
- Maintain boating access to the reservoir while enhancing waterfront access for hiking, fishing, and sight-seeing;
- Provide opportunities for the elderly and people with disabilities to access and use recreation lands and resources;
- Maintain diverse natural communities to enhance hiking and sight-seeing opportunities, and to control shoreline and soil erosion;
- Manage forest resources and other vegetation for balanced uses of recreation, wildlife, and fisheries;
- Monitor forest conditions to document health and to identify pests;
- Control noxious weeds and other pests in a manner that avoids damage to existing desirable vegetation and sensitive areas (wetlands and streams);
- Preserve and protect existing wetlands and other sensitive or unique habitats that support threatened and endangered species, along with other wildlife; and,
- Interpret cultural resources to benefit visitors' understanding, while preserving and monitoring the resources' integrity.

Rationale
Recreation lands at W. Kerr Scott Reservoir are located throughout the project. The location and design of recreation areas and facilities take into account the desired recreation experience. This classification does not restrict visitor use only to areas classified 'Recreation'. Other classifications can also incorporate visitor use for recreation at a less-intensive level, while simultaneously maintaining their primary purposes.

5.3.3 Environmentally Sensitive Lands
This classification consists of areas where certain physical, ecological, cultural, or aesthetic features have been identified as especially sensitive to adverse environmental impacts. These lands exist within other Land Classifications. Development of public use on lands within this classification is normally limited or prohibited to ensure that the sensitive areas are not adversely impacted. No lands are currently classified as Environmentally Sensitive Lands at W. Kerr Scott Reservoir.

5.3.4 Multiple Resource Management Lands
This classification, which contains nearly 1,615 acres, includes lands managed for one or more of the following activities: recreation-low density, wildlife management, vegetation management, and inactive and/or future recreation areas. Past, present, and future management of lands under this classification may include the following sub-categories.

Recreation-Low Density: These lands are designated for dispersed and/or low-impact recreation use. Development of facilities on these lands is limited. Emphasis is on providing opportunities for non-motorized activities such as hiking, biking, fishing, hunting, sight-seeing, or nature study. Site-specific, low-impact activities such as primitive camping and picnicking may be allowed. Some limited facilities are permitted, including boat ramps, trails, and parking areas, as well as camping and picnic facilities.

Manmade intrusions, including utility lines, may be allowed under conditions that minimize adverse effects on the natural environment. Vegetation management is allowed for a variety of purposes, including erosion control, retention and improvement of scenic qualities, and wildlife management. Where not in conflict with the safety of visitors and project personnel, hunting and fishing are allowed in accordance with state fish and wildlife management regulations.

Wildlife Management: These lands are designated specifically for wildlife management, although all project lands are managed for fish and wildlife habitat in conjunction with other land uses. Wildlife management lands contain valuable wildlife habitat components that are maintained to yield habitat suitable for designated game and non-game species.

At W. Kerr Scott Reservoir, these lands are jointly administered with the WRC. Licenses, permits, and easements usually are not allowed for such manmade intrusions as pumping plants, pipelines, cables, transmission lines, or non-project roads. Exceptions to this policy are allowable where necessary for the public interest. Wildlife lands are available for sightseeing, wildlife viewing, nature study, hiking, and biking. Consumptive uses of

wildlife, including hunting, fishing, and trapping, are allowed when compatible with the wildlife objectives for a given area and with federal and state fish and wildlife management regulations.

Vegetation Management: Management activities in these areas focus on the protection and enhancement of forest resources and vegetative cover. W. Kerr Scott Reservoir conducts regular vegetation management activities to maintain natural screening around various recreational sites and accomplish its wildlife habitat mission. Other activities are conducted under the guidance of the project's forest management and wildlife management plans.

Inactive and/or Future Recreation Areas: This sub-classification consists of lands for which recreation areas are planned for the future or lands that contain existing recreation areas that have been temporarily closed.

Resource Objectives for Multiple Resource Management Lands
Resource Objectives for Multiple Resource Management lands include the following:

- Provide trail opportunities in conjunction with other local and regional trail systems;
- Accommodate and support non-consumptive resource uses, such as hiking, biking, bird watching, photography, nature study, wildlife observation, and/or the pursuit of peace and solitude;
- Employ good stewardship practices, such as the use of soil conservation measures;
- Enhance natural propagation of diverse game and non-game fish and wildlife species;
- Manage forest resources and other vegetation for appropriate uses of recreation, wildlife, and fisheries;
- Monitor forest conditions to document health and to identify and respond to pests;
- Control noxious weeds and other pests in a manner that avoids damage to existing desirable vegetation and sensitive areas (wetlands and streams);
- Preserve and protect existing wetlands and other sensitive or unique habitats that support threatened and endangered species, along with other wildlife; and,
- Interpret cultural resources to benefit visitors' understanding, while preserving and monitoring the resources' integrity.

Rationale
In addition to the intensively developed recreation areas, the project provides many opportunities for a variety of dispersed recreation activities. Boating, fishing, hunting, hiking, biking, and other such uses support and complement this objective. Given the existing and growing demand for these activities on a national, regional, and local scale, the use of these lands is expected to increase. W. Kerr Scott Reservoir is an ideal location for these activities given its high-quality habitat and proximity to the Blue Ridge Mountains and other natural resources, as well as the growing number of local and regional trail systems.

5.3.5 Mitigation Lands
This classification includes those lands specifically designated to offset or mitigate for habitat losses associated with the development of a USACE project. No lands are currently classified as mitigation lands at W. Kerr Scott Reservoir.

5.3.6 Easement Lands
This classification consists of lands that USACE did not acquire fee title but did acquire (1) the right to enter onto the property in connection with the operation of W. Kerr Scott Reservoir and (2) the right to flood the property to meet the purposes of the project. Management of easement lands is performed in strict accordance with the terms and conditions of the easement acquired for the project. Easement lands were acquired for a specific purpose and do not convey the same rights or ownership to USACE as fee lands. While these lands are outlined and discussed in this Master Plan, the document does not attempt to specifically define their locations or boundaries. Any change to easement lands would occur through an action by USACE Real Estate Division. There are approximately 1,935 acres under easement.

Resource Objectives for Easement Lands
Resource Objectives for Easement Lands include the following:

- Monitor any activities occurring on easement lands to ensure that the USACE rights to enter and flood the property according to terms and conditions of the legal easement remain unimpeded; and,

- Promote an understanding of USACE boundary and mission by the public and owners of Easement Lands.

Rationale
Easement lands were acquired to allow USACE to achieve its purposes at W. Kerr Scott Reservoir. These lands were specifically selected to ensure adequate flood water storage. While these lands are not actively managed to meet other USACE missions at the project, maintaining the conditions established in the easement is vital to the success of the project.

Table 12: Land Classification Resource Objectives

Land Classification	Resource Objectives
Project Operations	• Maintain and operate project structures in a manner that allows them to effectively fulfill project purposes; • Renovate and improve existing recreational facilities where such use is feasible and does not interfere with other project purposes; • Enhance ADA access to appropriate locations; • Maintain and improve trail and water access in a manner that improves visitor opportunities without interfering with other project purposes; • Reserve adequate areas for operations activities that are required to meet overall project purposes; • Provide for public use and access within USACE safety guidelines and security levels, where such use is feasible and does not interfere with other project purposes; • Manage forest resources and other vegetation for balanced uses of recreation and fisheries and wildlife conservation and enhancement; • Monitor forest conditions to document health and to identify pests; • Control noxious weeds and other pests in a manner that avoids damage to existing desirable vegetation and sensitive areas (wetlands and streams); and, • Preserve and protect existing wetlands and other sensitive or unique habitats that support threatened and endangered species, along with other wildlife.
Recreation	• Provide for camping and day-use opportunities; • Allow for several activities in the same general vicinity; • Maintain boating access to the reservoir while enhancing waterfront access for hiking, fishing, and sight-seeing; • Provide opportunities for senior citizens and people with disabilities to access and use recreation lands and resources; • Maintain a diverse natural community to enhance hiking and sight-seeing opportunities, and to control shoreline and soil erosion; • Manage forest resources and other vegetation for balanced uses of recreation, wildlife, and fisheries; • Monitor forest conditions to document health and to identify pests; • Control noxious weeds and other pests in a manner that avoids damage to existing desirable vegetation and sensitive areas (wetlands and streams); • Preserve and protect existing wetlands and other sensitive or unique habitats that support threatened and endangered species, along with other wildlife; and, • Interpret cultural resources to benefit visitors' understanding, while preserving and monitoring the resources' integrity.

Table 12: Land Classification Resource Objectives

Land Classification	Resource Objectives
Multiple Resource Management	• Provide trail opportunities in conjunction with other local and regional trail systems; • Accommodate and support non-consumptive resource uses, such as hiking, biking, bird watching, photography, nature study, wildlife observation, and/or the pursuit of peace and solitude; • Employ good stewardship practices, such as the use of soil conservation measures; • Enhance natural propagation of diverse game and non-game fish and wildlife species; • Manage forest resources and other vegetation for appropriate uses of recreation, wildlife, and fisheries; • Monitor forest conditions to document health and to identify and respond to pests; • Control noxious weeds and other pests in a manner that avoids damage to existing desirable vegetation and sensitive areas (wetlands and streams); • Preserve and protect existing wetlands and other sensitive or unique habitats that support threatened and endangered species, along with other wildlife; and, • Interpret cultural resources to benefit visitors' understanding, while preserving and monitoring the resources' integrity.
Easement Lands	• Monitor any activities occurring on easement lands to ensure that the USACE rights to enter and flood the property according to terms and conditions of the legal easement remain unimpeded; and, • Promote an understanding of USACE boundary and mission by the public and owners of Easement Lands.

6.0 Resource Plan

A wide variety of factors must be considered when developing W. Kerr Scott Reservoir project lands and resources. These factors include physical characteristics; land and lake access; compatibility with adjacent land uses; existing and projected visitation levels and visitor-use pattern; visitor safety and project security; the economics of operation and maintenance; and federal, state, and local initiatives. The overall objective of the Resource Plan is to maximize the recreational benefits while preserving and enhancing the area's natural resources and scenic qualities.

The purpose of this Master Plan is to provide a programmatic approach to the use of project lands. As such, it is important to (1) examine the condition and use of existing facilities and structures and (2) examine each management area within the various segments and determine how each area can be developed to fit with the overall goals of W. Kerr Scott Reservoir.

Within the W. Kerr Scott Reservoir project boundary, there are 18 management areas. These areas range from fully developed campgrounds to primitive access points. The existing management areas and corresponding Land Classifications are listed in Table 13. All the areas are managed by USACE, with a concessioner leasing the marina. USACE receives support from the WRC in managing all of its WMAs. The sites are shown on Figure 15 and Figure 16 (Appendix H) and described later in this section of the document. Each site number on Figure 15 and Figure 16 corresponds with the section number in this chapter of the Master Plan. Acreages presented in Table 13 and throughout this chapter are based on GIS data and not official USACE real estate information.

In addition to these 18 management areas and easements, the project includes approximately 540 acres of "ribbon land". These lands are held by USACE to accomplish project purposes and maintain its flood control mission at W. Kerr Scott Reservoir. Given the limited width of these lands, USACE has not developed any recreational facilities on them. USACE, however, does permit local landowners to construct approved docks and other structures on these lands, under conditions specified in the Shoreline Management Plan. Given these uses, all ribbon lands at W. Kerr Scott Reservoir are classified as Multiple Resource Management. A specific discussion of these lands is not included in the following sections of this chapter, but they are managed in accordance with the Multiple Resource Management Resource Objectives.

Easement lands are illustrated in Figure 15 and Figure 16 (Appendix H). These lands are not included within the boundaries of individual recreation sites but occur along ribbon lands, described above, and along the tributaries to the reservoir. Many occurrences of these lands are illustrated in the insets on Figure 16 (Appendix H). These lands cover an estimated 1,935 acres.

Table 13: Land Classifications for W. Kerr Scott Reservoir

		Land Classification (acres)		
Site Name	**Location in Chapter 6**	**Project Operations**	**Recreation**	**Multiple Resource Management**
Dam Site Park Area	6.1	58	13	76
Marina Area	6.2		11	90
Berry Mountain Park	6.3		41	69
Bandit's Roost Campground	6.4		80	21
Blood Creek Overlook	6.5		5	
Boomer Park	6.6		28	
Boomer WMA	6.7			61
Keowee Park	6.8		16	
Warrior Creek Campground	6.9		344	130
Marley's Ford WMA	6.10			237
Fort Hamby WMA	6.11			113
Fort Hamby Park	6.12		116	
Smithey's Creek WMA	6.13			65
Smithey's Creek Park	6.14		21	
Dark Mountain WMA	6.15			211
Dark Mountain Park	6.16	14		
Fish Dam Creek Park	6.17	11		
Tailwater Access Area	6.18	6		
Total		**78**	**686**	**1,073**

This chapter provides a detailed description of each site at W. Kerr Scott Reservoir. The descriptions are organized into nine sections, and include:

1) Management Agency – the agency responsible for day-to-day operation of the management area as of the date of this Master Plan.

2) Land Classification – the designated land use classification category for each management area. The classification categories are described in detail in Chapter 5.

3) Recommended Future Use – the recommended future use of the given management area. This may include the existing Land Classification, a change to a different classification, or a specific activity allowed within the Land Classification.

4) Rationale – a discussion of the needs and intent of the identified Resource Objectives and recommended Development Needs.

5) Location – a brief description of the location of the site, including visitor access points.

6) Description – a brief description of the site focusing on the natural, cultural, or recreational resources at the site.

7) Land Classification Resource Objectives – a reference to the Land Classification Resource Objectives presented in Chapter 5.

8) Site Specific Resource Objectives – the Resource Objectives presented here are specific to each recreation area and build on the project-wide Resource Objectives identified in Chapter 1 and the Land Classification Resource Objectives presented in Chapter 5. Resource Objectives are defined as attainable goals for development, conservation, and management of natural, cultural, and manmade resources at W. Kerr Scott Reservoir. The objectives establish guidelines for attaining maximum public benefit within USACE safety guidelines and security levels, while minimizing the potential for adverse impacts to the local environment. Each recreation area has more than one Resource Objective, but the Resource Objectives are not prioritized. In some of the areas, the Resource Objectives may not be implemented for some time.

9) Development Needs – summary descriptions of the actions that could or should be undertaken to implement the Resource Objectives for each recreation area. The Development Needs include a range of potential construction projects and management strategies that could be used to implement the Resource Objectives. They are based on needs identified for each recreation area with input from the public, as well as state and federal agencies. The Development Needs will be further refined and detailed in subsequent planning and design documents,

including the OMP and future DMs. Final decisions regarding the actions to be implemented will be made following coordination between USACE, federal, state, and local agencies, and other interested parties, where appropriate and as opportunities arise. Prior to site-specific development, additional environmental studies would be conducted, as required.

As noted in Chapter 2, visitation at W. Kerr Scott Reservoir is made up of local residents and visitors from more developed areas in the region that are attracted to the natural resources in and around the reservoir. During the primary visitation season (Memorial Day – Labor Day), the number of sites and resources at W. Kerr Scott Reservoir are more than capable of meeting the visitor demand. On summer holidays and other popular weekends, these sites and resources may meet or exceed capacity. Following the summer season, many of the sites are closed, or kept open on a limited basis, due to reduced demand and the need to reduce maintenance costs. Noting the recreational demands and population projections presented in Chapter 2, it is reasonable to assume that this yearly cycle could continue for some time into the future. This Resource Plan focuses on means of improving the existing sites and resources to meet current and future visitor demands.

As noted in Section 2.23.5, trail use in and around the project is growing in popularity. USACE has developed over 30 miles of trails on project lands and provided connection to regional trails, as well.

Existing trails on project lands include over 11 miles of the Overmountain Victory Trail. The significance of the trail is tied to its role in the Revolutionary War. The 330-mile trail, which runs through Virginia, Tennessee, North Carolina, and South Carolina, follows the route of Patriot militia as they tracked down the British force. This effort eventually resulted in the Battle of King's Mountain. While much of the trail's motor route has been developed, as of 2009, only 70 miles of the path were available for nonmotorized use (NPS 2010). The 11 miles of the trail that run through project lands are the only portions of the nonmotorized trail that are currently located on federal land. Segments of the trail extend from Dam Site Park, along the south side of the reservoir, through Berry Mountain Park to Bandit's Roost Campground. The second segment extends through Warrior Creek Campground and Marley's Ford WMA. Recently, a new trailhead was developed beyond Marley's Ford, called Upper Yadkin Trailhead. As the trail continues to be developed, USACE plans to develop additional trailheads and connections to the Overmountain Victory Trail as it runs through the project.

Other existing trails include the Warrior Creek Loop, Dark Mountain Trails at Dark Mountain WMA, Shiner's Run Loop adjacent to the marina, and the Lake Side Trail near the Visitor Assistance Center. The Master Plan includes objectives that address maintenance, additional connections, and improved interpretation along these trails, as well.

The Master Plan also addresses USACE's plans to develop new trails at W. Kerr Scott Reservoir. Proposed trails include the Yadkin River Trail, the Fort Hamby Connector Trail, Bushwacker Trail, and the Boomer Trail.

- The Yadkin River Trail would extend 4 miles from Marley's Ford Wildlife Management Area along the Yadkin River to the western most project boundary. Initially the trail would end at a trailhead located along Highway 268. If local efforts to extend the trail in areas outside of project lands are successful, the trail may continue west along the river.
- The Fort Hamby Connector would extend approximately 2.3 miles across portions of the Dark Mountain, Fort Hamby, and Smithy's Creek areas of the projects.
- The Boomer Trail would run approximately 0.8 miles south from Keowee Park to Boomer Park. From Boomer Park, the trail would create approximately 2.7 miles of loops extending along either side of Warrior Creek Campground.
- The proposed Bushwacker Falls Trail would be approximately 0.6 miles long and connect Fort Hamby Park with the Smithey's Creek sites.

It is beyond the scope of this Master Plan to design or identify the specific location of these trails. Plans for these trails are included in USACE's Environmental Assessment (EA) for the Construction, Operation, and Maintenance of the W. Kerr Scott Reservoir Trail Network (USACE 2009a). The Master Plan and accompanying PEA, however, provide a programmatic approach, through the Land Classifications and Resource Objectives, to allow these plans to move forward. This document also identifies additional Development Needs that will improve existing and future trails within the project boundary.

A PEA addressing the impacts of the implementation of the Master Plan is included as Appendix C.

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6.1 Dam Site Park Area

Management Agency: USACE

Land Classification: Project Operations, Recreation, Multiple Resource Management

Recommended Future Use: Project Operations, Recreation, Permanent Wildlife and Low-Density Recreation

Rationale: The Dam Site Park area is the heart of the visitor experience at W. Kerr Scott Reservoir. Along with providing various recreational and educational opportunities, it also contains facilities that are critical for USACE to maintain its mission at the reservoir. The area also contains lands that have been left undeveloped to support natural conditions and vistas. During the master planning process, all of these uses were considered and evaluated. Classifying the entire area as Project Operations would allow for some of the uses included in other Land Classifications but would limit the extent that these other uses could be developed. The dam and maintenance complex require the Project Operations Land Classification, preventing the use of another classification across the site. Therefore, USACE elected to divide the Dam Site Park Area into unique Land Classifications that will allow for current and most beneficial uses. The Land Classification, Resource Objectives, and Development Needs allow USACE to continue to maintain project operations, while improving visitor opportunities, protecting surrounding natural and cultural resources, and continuing operations related to other project purposes. The Recommended Future Use of the site allows these activities to continue, with a focus on enhancing permanent wildlife and low-density recreation.

Location: The Dam Site Park area is located in the southeast corner of the reservoir, just south of W. Kerr Scott Dam. The site is just east of the marina and south of Fish Dam Creek Park. It is accessible from Route 268 via Reservoir Road and the Overmountain Victory Trail. The area surrounding the park includes the dam and large tracts of undeveloped forest.

Description: Dam Site Park is a 147-acre site with additional project lands surrounding the park. The area includes the Visitor Assistance Center, W. Kerr Scott Dam, the maintenance complex, the spillway, and the surrounding trails and undeveloped project lands. The primary recreational activities at this site include boating, picnicking, hiking, walking, and visiting the Visitor Assistance Center. Visitation at these sites peaks during holidays and on weekends. As part of the development of the reservoir, much of the construction areas were cleared of mature vegetation. The area surrounding the site's eastern and southern boundaries contains more mature vegetation and adjoins a number of private properties. USACE has maintained an open environment at the site to facilitate access through the site and views of the reservoir. The primary feature is the USACE Visitor Assistance Center, which provides educational displays, books and maps related to the site, and general visitor assistance. As of September 2011, USACE and its contributors and partners have constructed and opened a new environmental education center on the lower floor of the Visitor Assistance Center. The Environmental Education

Center provides visitors with new exhibits targeting environmental subjects, a Native Species Trail, an environmental learning classroom, a bookstore offering educational items and publications, and free information. The center also will host community events and serve to interpret the nearby Overmountain Victory Trail.

Surrounding the Visitor Assistance Center, USACE maintains a group picnic shelter, a gazebo, and interpretive trails. The Overmountain Victory Trail also runs north to south through the park, providing a connection to the Visitor Assistance Center. USACE also maintains a boat ramp, boathouse, and courtesy dock at the site. To facilitate visitor use of the park, USACE maintains restrooms, informational signs, trash cans, and security lighting.

Land Classification Resource Objectives:
See Table 12

Site Specific Resource Objectives:

- Provide appropriate facilities for day-use activities;
- Promote non-consumptive uses of resources, such as hiking, biking, photography, and sightseeing;
- Improve water access for fishing and boating;
- Incorporate the Overmountain Victory Trail and other regional trails into the activities provided at the site; and,
- Develop appropriate interpretive and educational resources.

Development Needs:

- Develop sufficient waterfront access for fishing, hiking, biking, and sightseeing;
- Continue updating and upgrading aging facilities; and,
- Install appropriate restroom facilities for public use.

6.2 Marina Area

Management Agency: USACE – as of September 2011 (marina operated by concessioner through lease agreement)

Land Classification: Recreation and Multiple Resource Management

Recommended Future Use: Recreation, Permanent Wildlife, and Low-Density Recreation

Rationale: The Marina Area contains the only marina on W. Kerr Scott Reservoir. This unique location requires a Land Classification of Recreation to maintain current operations. The remainder of the area surrounding the marina remains undeveloped, hence the classification of Multiple Resource Management. In the absence of further development, USACE has recognized the value of these undeveloped lands. Undeveloped lands provide a buffer between developed recreation sites and areas that provide for passive use (hiking or sightseeing). These lands also provide a buffer between USACE managed sites and neighboring properties. Undeveloped lands also meet priorities USACE has developed since the publication of the 1983 Master Plan. Recent policy has focused USACE on maintaining natural resources and increasing opportunities for passive uses of project lands. The Land Classifications selected for the Marina Area allow for the continued operation of the site, as well as some limited future growth.

The Recommended Future Use recognize USACE policy and focus the use of the undeveloped lands on permanent wildlife and low-density recreation. The remainder of the site will be left undeveloped, to support wildlife and low-intensity recreational uses. The Land Classification, Resource Objectives, and Development Needs allow USACE to continue to provide a quality experience at the site while improving visitor opportunities and protecting surrounding natural and cultural resources.

Location: The Marina Area is located in the southeastern corner of W. Kerr Scott Reservoir. It is bordered to the east by Dam Site Park and to the west by Berry Mountain Park. Coves form the boundaries between these sites. The marina site is accessible by Route 268 and the Overmountain Victory Trail.

Description: The Marina Area is part of a 101-acre peninsula that is heavily wooded. Small coves line the banks of the site, creating smaller peninsulas. A clearing exists on the northwest corner of the site where the marina is located. The marina includes a snack bar, restrooms, a boat fueling station, 50 covered boat slips, 28 uncovered boat slips, a maintenance shop, a picnic area, and a house used by the concessioner. The marina is open for seasonal operations. The primary activity at this site is boating. The marina also offers a bait shop, which contributes to fishing activities on the lake. Hiking and biking opportunities are also available nearby at the Overmountain Victory Trail and Shiner's Run Loop.

Land Classification Resource Objectives:
See Table 12

Site Specific Resource Objectives:

- Provide appropriate facilities for day-use activities;
- Promote non-consumptive uses of resources, such as hiking, biking, photography, and sightseeing; and,
- Develop appropriate interpretive and educational resources.

Development Needs:

- Develop municipal water and sewer connections to enhance marina operations; and,
- Develop and maintain facilities to serve the recreating public.

6.3 Berry Mountain Park

Management Agency: USACE

Land Classification: Recreation and Multiple Resource Management

Recommended Future Use: Recreation and Permanent Wildlife and Low-Density Recreation

Rationale: Berry Mountain Park is one of the primary recreation sites managed by USACE at W. Kerr Scott Reservoir. This unique location requires a Land Classification of Recreation to maintain current operations. The remainder of the area surrounding the park remains undeveloped. Initial plans for the site included additional recreational development. In the absence of this development, USACE has recognized the value of these undeveloped lands. Undeveloped lands provide a buffer between developed recreation sites and areas that provide for passive use (hiking or sightseeing). These lands also provide a buffer between USACE managed sites and neighboring properties. Undeveloped lands also meet priorities USACE has developed since the publication of the 1983 Master Plan. Recent policy has focused USACE on maintaining natural resources and increasing opportunities for passive uses of project lands. The Land Classifications selected for Berry Mountain Park allow for the continued operation of the site, as well as some limited future growth. The remainder of the site will be left undeveloped, to support wildlife and low-intensity recreational uses.

Location: Berry Mountain Park is located on the south shore near the eastern end of the reservoir, between Bandit's Roost Campground and the marina. The park is accessible from Route 268 and the Overmountain Victory Trail.

Description: The 110-acre park is geographically separated from the adjacent lands by large coves to the east and west. The park is heavily wooded with a large clearing at the northwest corner of the site where access to the water is provided. The Overmountain Victory Trail runs east to west through the southern portion of the site, connecting it to the adjacent USACE lands.

Berry Mountain Park is a seasonal park. Access to the site is provided through a gated entrance station. Inside the gate, there are campsites for the station attendants that provide power and water hookups, camper/trailer access, as well as picnic and grilling areas. Throughout the site there are picnic sites and picnic shelters for the public. The picnic shelters include electricity, water, and grills. The site also has a designated swim beach located in the clearing at the northwest corner of the site. The beach area includes parking lots, a playground, and a basketball court. Playground equipment was installed and a bathhouse constructed at the park in 2009 as part of the American Recovery and Reinvestment Act of 2009, and to upgrade aging infrastructure. Additional parking, restrooms, informational signs, trash cans, and security lighting are located throughout the site.

Land Classification Resource Objectives:
See Table 12

Site Specific Resource Objectives:

- Provide appropriate facilities for day-use activities;
- Promote non-consumptive uses of resources, such as hiking, biking, photography, and sightseeing; and,
- Develop appropriate interpretive and educational resources.

Development Needs:

- Develop additional waterfront access for fishing, swimming, hiking, and sightseeing;
- Continue updating and upgrading aging facilities; and,
- Improve bulletin boards to address lake and safety information.

6.4 Bandit's Roost Campground

Management Agency: USACE

Land Classification: Recreation and Multiple Resource Management

Recommended Future Use: Recreation and Permanent Wildlife and Low-Density Recreation

Rationale: Bandit's Roost Campground is one of the primary camping sites managed by USACE at W. Kerr Scott Reservoir. The level of development that comprises the campground requires a Land Classification of Recreation to maintain current operations. The remainder of the area surrounding the site remains undeveloped. In the absence of additional development, USACE has recognized the value of these undeveloped lands. Undeveloped lands provide a buffer between developed recreation sites and areas that provide for passive use (hiking or sightseeing). These lands also provide a buffer between USACE managed sites and neighboring properties. Undeveloped lands also meet priorities USACE has developed since the publication of the 1983 Master Plan. Recent policy has focused USACE on maintaining natural resources and increasing opportunities for passive uses of project lands. The Land Classifications selected for the campground allow for the continued operation of the site. The remainder of the site will be left undeveloped, to support wildlife and low-intensity recreational uses.

Location: Bandit's Roost Campground is located on the south bank near the eastern end of W. Kerr Scott Reservoir. Berry Mountain Park is located immediately east of the site. To the west, USACE land is comprised of ribbon lands that form a boundary between the reservoir and private properties. The site is accessible by Route 268 via Jess Walsh Road and the Overmountain Victory Trail.

Description: Bandit's Roost Campground is a 101-acre site on the south shore of the lake comprised of various sized peninsulas that are created by the main body of W. Kerr Scott Reservoir and its surrounding tributaries. Most of the site is wooded, with clearings around some of the campsites and day-use areas at the eastern end of the park.

Bandit's Roost Campground is one of the parks at W. Kerr Scott Reservoir that is open seasonally. The site provides a wide range of water and land-based recreation opportunities. The primary activities include boating, camping, fishing, hiking, picnicking, and swimming. Access to the site is provided by a gated entrance station at the southwest corner of the park. The Overmountain Victory Trail intersects the access road just south of the entrance station. Just inside the entrance gate, parking and campsites are provided for the entrance station attendants. These campsites have electric and water hookups, a showerhouse, and the standard pads, tables, and fire pits. From this point, the access road splits in two directions: one road heading north to the western peninsula and one road heading east towards the eastern half of the park. The northern road provides access to both primitive campsites and campsites that include electric and water supplies and are capable of supporting trailers/campers. All of these campsites

include a fire ring or grill, a picnic or utility table, and a lantern post. This portion of the park also contains a boat ramp with courtesy dock and a group picnic shelter. A trail runs along the shoreline connecting the two areas of the park.

The eastern road through the park provides access to a basketball court, playground, and amphitheater that are located in the central portion of the park. Primitive campsites are located south of these facilities, along the southern bank of the peninsula. Additional sites that provide electric and water supplies and are capable of supporting trailers/campers are situated throughout the eastern half of the park. A small cluster of primitive sites also are located in this side of the park. These campsites include the same grilling and picnic amenities as those included in the northern portion of the site. Swim beaches are located along the peninsula for overnight visitors. Additional amenities located throughout the site include vault toilets, security lighting, garbage disposal sites, parking, informational signs and bulletin boards.

Land Classification Resource Objectives:
See Table 12

Site Specific Resource Objectives:

- Enhance amenities for overnight use;
- Promote non-consumptive uses of resources, such as hiking, biking, photography, and sightseeing;
- Incorporate the Overmountain Victory Trail and other regional trails into the activities provided at the site; and,
- Develop appropriate interpretive and educational resources.

Development Needs:

- Improve bulletin boards to address lake and safety information;
- Develop sufficient waterfront access for boating, fishing, hiking, and sightseeing;
- Develop municipal water connections; and,
- Continue updating and upgrading aging facilities.

6.5 Blood Creek Overlook

Management Agency: USACE

Land Classification: Recreation

Recommended Future Use: Recreation

Rationale: Blood Creek Overlook is small, developed location within the project. The developed nature of the site requires a Land Classification of Recreation to maintain current operations. There are no plans to change the use of the site in the future. Therefore, the Land Classification selected for Blood Creek Overlook allows for the continued operation of the site.

Location: Blood Creek Overlook is located in the southwest corner of the reservoir. The site is situated at the end of a peninsula at the confluence of Warrior Creek and Blood Creek. The peninsula includes private lands and Boomer Park. The site is accessible by Route 268, Boomer Road, and other local roads.

Description: Blood Creek Overlook is a 5-acre site that contains a number of cleared areas with a wooded shoreline. The primary activities at this day-use site include viewing scenery, walking, fishing, and picnicking. The Highway 268 Bridge forms the southern boundary of the site, as it crosses the adjacent creeks and connects with Boomer Road. Access to the site is provided by a driveway that leads to the site's parking lot. A steep slope separates this portion of the site from the waterfront. Along the water, one of the project's primary fishing piers provides access for fishing and scenic views of the reservoir. Security lights, trash cans, and informational signs are included throughout the site to support visitor use.

Land Classification Resource Objectives:
See Table 12

Site Specific Resource Objectives:

- Provide appropriate facilities for day-use activities related to existing fishing opportunities;
- Promote non-consumptive uses of resources, such as hiking, biking, photography, and sightseeing;
- Develop appropriate interpretive and educational resources; and,
- Enhance awareness of littering and other unauthorized use.

Development Needs:

- Develop ADA accessibility;
- Install appropriate restroom facilities;
- Develop municipal water and sewer connections; and,
- Improve bulletin boards to address lake and safety information.

6.6 Boomer Park

Management Agency: USACE

Land Classification: Recreation

Recommended Future Use: Recreation

Rationale: Boomer Park is one of the primary recreation sites managed by USACE at W. Kerr Scott Reservoir. The developed nature of the site requires a Land Classification of Recreation to maintain current operations. There are no plans to change the use of the site in the future. Therefore, the Land Classification selected for Boomer Park allows for the continued operation of the site.

Location: Boomer Park is located in the southern end of W. Kerr Scott Reservoir, along Warrior Creek Cove. The site is located south of Blood Creek Overlook. It is accessible by Route 268 via Boomer Road.

Description: Boomer Park is a 28-acre seasonal park used for water- and land-based day-use recreation. The park has a mix of open and wooded areas. Boomer Road and some private residences border the site to the east, while relatively undeveloped, wooded lands form the northern and southern borders. Access to the site is provided through a gated entrance station. Adjacent to the entrance station, two campsites are set aside for the station attendants. The campsites include power and water hookups and include trailer/camper access. The park's facilities include a boat ramp with courtesy dock, a group picnic shelter, picnic sites, a playground, and a designated swim beach. These facilities are supported by vault toilets, drinking fountains, trash cans, informational signs, and security lights.

Land Classification Resource Objectives:
See Table 12

Site Specific Resource Objectives:

- Enhance appropriate facilities for day-use activities;
- Improve water access for swimming, fishing, and boating;
- Promote non-consumptive uses of resources, such as hiking, biking, photography, and sightseeing;
- Identify means of incorporating the Boomer Trail and other regional trails into the activities provided at the site; and,
- Develop appropriate interpretive and educational resources.

Development Needs:

- Develop a new road plan to create two-lane road that requires traffic to enter and exit at same entrance;
- Improve ADA accessibility;
- Continue updating and upgrading aging facilities;
- Develop trailhead and other supporting trail facilities; and,
- Convert single-lane boat ramp into two-lane facility.

6.7 Boomer WMA

Management Agency: USACE

Land Classification: Multiple Resource Management

Recommended Future Use: Permanent Wildlife and Low-Density Recreation

Rationale: Boomer WMA is one of the WMAs managed by USACE at W. Kerr Scott Reservoir. The low-intensity use and limited development that exist at the site requires a Land Classification of Multiple Resource Management to maintain current operations. Undeveloped lands provide a buffer between developed recreation sites and areas that provide for passive use (hiking or sightseeing). These lands also provide a buffer between USACE managed sites and neighboring properties. Undeveloped lands also meet priorities USACE has developed since the publication of the 1983 Master Plan. Recent policy has focused USACE on maintaining natural resources and increasing opportunities for passive uses of project lands. These activities also are consistent with surrounding land uses. Applying a Land Classification of Recreation would open the site up to future high-intensity development that would not be consistent with the work USACE has put into developing wildlife habitat at its WMAs. The Land Classifications selected for the WMA allow for the continued operation of the site as a WMA that supports low-intensity recreation and wildlife habitat.

Location: Boomer WMA is located in the far southern end of W. Kerr Scott Reservoir. The site straddles Warrior Creek upstream of its confluence with the main body of the reservoir. The WMA is located south of Boomer Park, about 10 miles from the Town of Wilkesboro. The site is accessible by Glenn Carlton/Old Mill Road which is just off of Boomer Road.

Description: Boomer WMA is a 61-acre site that is bisected by Warrior Creek. The primary visitor activities for these lands are hunting, hiking, fishing, and wildlife viewing. The site is a combination of forest and managed food plots (e.g., dove fields). The boundary of the site follows Warrior Creek as it meanders north towards the reservoir. A small gravel parking area is located just off of Glenn Carlton/Old Mill Road. A trail extends from the parking lot north, along the west bank of the creek, to one of the WMA's food plots. Larger, more extensive dove fields occur on the east side of the river and dominate much of the WMA's southeastern lands. In the northwest corner of the site, a waterfowl impoundment occurs just north of the creek.

Land Classification Resource Objectives:
See Table 12

Site Specific Resource Objectives:

- Enhance appropriate facilities for day-use activities;
- In addition to hunting, provide for nonconsumptive resource uses such as hiking, biking, photography, and sightseeing; and,
- Develop appropriate interpretive and educational resources.

Development Needs:

- Develop trailhead and other supporting trail facilities;
- Pave existing gravel parking lots and trails; and,
- Support existing and future hunting facilities.

6.8 Keowee Park

Management Agency: USACE

Land Classification: Recreation

Recommended Future Use: Recreation

Rationale: Keowee Park is one of the primary day-use sites managed by USACE at W. Kerr Scott Reservoir. The level of development that comprises the park requires a Land Classification of Recreation to maintain current operations. The small site is relatively developed and does not lend itself to the low-intensity uses of the other Land Classifications. Keowee Park is a popular destination on the reservoir and USACE has no plans to change its use. The Land Classification selected for the park allows for the continued operation of the site.

Location: Keowee Park is located on the western bank of W. Kerr Scott Reservoir. The park is located on a small peninsula along the southern border of the Warrior Creek Campground. The site is accessible on Route 268 via Warrior Creek Road.

Description: Keowee Park is a 16-acre site that consists of a mix of densely forested and cleared areas. The primary activities include boating, fishing, and picnicking. The day-use site is accessed through a gated entrance station. Facilities within the site include a boat ramp with courtesy dock, fishing piers, a playground, a group picnic shelter with toilets and a water supply, and individual picnic sites.

Land Classification Resource Objectives:
See Table 12

Site Specific Resource Objectives:

- Enhance appropriate facilities for day-use activities;
- Promote non-consumptive uses of resources, such as hiking, biking, photography, and sightseeing;
- Incorporate the Overmountain Victory Trail and other regional trails into the activities provided at the site; and,
- Develop appropriate interpretive and educational resources.

Development Needs:

- Continue updating and upgrading aging facilities;
- Improve ADA accessibility (fishing platforms);
- Develop sufficient waterfront access for boating, fishing, hiking, and sightseeing; and,
- Install appropriate restroom facilities.

6.9 Warrior Creek Campground

Management Agency: USACE

Land Classification: Recreation, Multiple Resource Management

Recommended Future Use: Recreation, Future Recreation, and Permanent Wildlife and Low-Density Recreation

Rationale: Warrior Creek Campground is the largest camping sites managed by USACE at W. Kerr Scott Reservoir. The large site includes developed campsites, as well as undeveloped lands that support low-intensity recreation and wildlife habitat. Given the potential conflicts between these different uses, the master planning process identified two Land Classifications that were appropriate for the site. These classifications allow for the continued use of the campsites for more intensive use, as well as the passive use of the surrounding areas. USACE has plans to expand camping opportunities offered at the site. Therefore, the area currently classified as Recreation within the site is expected to increase. The Land Classifications selected for the campground allow for the continued operation and future development of the campground. The remainder of the site will be left undeveloped, to support wildlife and low-intensity recreational uses.

Location: Warrior Creek Campground is located on the western end of W. Kerr Scott Reservoir. The site is bordered to the north by the Yadkin River and to the south by Keowee Park and private lands. Marley's Ford WMA borders the site to the southwest. The site is accessible by Route 268. The Overmountain Victory Trail also provides access along the site's southern, western, and northern boundaries.

Description: Warrior Creek Campground is a heavily wooded 474-acre site. The site's shoreline contains a number of coves that create small peninsulas along the bank of the reservoir. Park roads weave through the site providing access to its various camping facilities. The primary activities at Warrior Creek Campground include swimming, camping, and trail use. Access to the site is controlled through a gated entrance station in the southeast corner of the park. This entrance provides access to Keowee Park, as well as Warrior Creek Campground. The southernmost camping area in the park is located across a cove from Keowee Park. This area includes individual campsites with power and water hookups and access for trailers/campers. The campsites are separated from the water by the park road, additional parking, a bathhouse, and a dump station. A swim beach is located on the south shore of this area.

The peninsula north of the above area includes primitive campsites and a group shelter. These campsites are set back from the water, like the sites to the south. A playground, an amphitheater, and additional parking are located near this area.

West of the amphitheater, additional campsites with power and water hookups and access for trailers/campers are situated near the border of the Marley's Ford WMA. Just north of this site, there are additional campsites with similar facilities.

At the north end of the park, there are more primitive campsites and a group shelter. The camping facilities throughout the park are supported by restrooms, parking, trails and walkways, informational signs, trash cans, and security lighting.

Land Classification Resource Objectives:
See Table 12

Site Specific Resource Objectives:

- Enhance opportunities for overnight camping;
- Promote non-consumptive uses of resources, such as hiking, biking, photography, and sightseeing;
- Incorporate the Overmountain Victory Trail, Warrior Creek Trail, and other regional trails into the activities provided at the site;
- Improve water access for swimming, fishing, and boating; and,
- Develop appropriate interpretive and educational resources.

Development Needs:

- Continue updating and upgrading aging facilities (restrooms);
- Renovate swim beach;
- Provide additional waterfront access for fishing, hiking, and sightseeing; and,
- Develop a trailhead and supporting facilities for Warrior Creek Trail.

6.10 Marley's Ford WMA

Management Agency: USACE

Land Classification: Multiple Resource Management

Recommended Future Use: Permanent Wildlife and Low-Density Recreation

Rationale: Marley's Ford WMA is one of the WMAs managed by USACE at W. Kerr Scott Reservoir. The low-intensity use and limited development that exist at the site requires a Land Classification of Multiple Resource Management to maintain current operations. Undeveloped lands provide a buffer between developed recreation sites and areas that provide for passive use (hiking or sightseeing). These lands also provide a buffer between USACE managed sites and neighboring properties. Undeveloped lands also meet priorities USACE has developed since the publication of the 1983 Master Plan. Recent policy has focused USACE on maintaining natural resources and increasing opportunities for passive uses of project lands. These activities also are consistent with surrounding land uses. Applying a Land Classification of Recreation would open the site up to future high-intensity development that would not be consistent with the work USACE has put into developing wildlife habitat at its WMAs. The Land Classifications selected for the WMA allow for the continued operation of the site as a WMA that supports low-intensity recreation and wildlife habitat.

Location: Marley's Ford WMA is located at the western end of W. Kerr Scott Reservoir, where the Yadkin River transitions from a riverene environment to the reservoir. It is bordered to the east by Warrior Creek Campground and to the north by the Yadkin River. The remainder of the site is bordered by private lands. It is accessible by Route 268 via South Marley Ford Road.

Description: Marley's Ford WMA is the largest WMA at the project. The 237-acre site is defined by its rolling topography and forested land cover. The primary visitor activities for these lands are hunting, hiking, fishing, wildlife viewing, mountain biking, and canoe access to the Yadkin River/Upper Reservoir. Popular locations within the site include Mountain View Scenic Overlook and the waterfowl impoundment. The overlook provides unique views of the reservoir and surrounding lands. The overlook is accessible via Mountain View Road which provides access through the site. Parking lots are located along Mountain View Road in the southern half of the WMA. Segments of the Overmountain Victory Trail cross the eastern portion of the site, connecting it to the Warrior Creek Campground. In addition to the Overmountain Victory Trail, two secondary trails provide access from Mountain View Road into the center of the site. A small food plot is located north of Mountain View Road, in the eastern half of the site, and a waterfowl impoundment is located along the river at the western end of the site. The waterfowl impoundment includes ADA access. The Boomer-Ferguson Elementary School is located adjacent to the southern boundary along Boomer-Ferguson Road. "No Hunting" zones exist along the border between the WMA and Warrior Creek Campground.

Land Classification Resource Objectives:
See Table 12

Site Specific Resource Objectives:

- In addition to hunting and fishing, provide for nonconsumptive resource uses such as hiking, biking, photography, and sightseeing;

- Incorporate the Overmountain Victory Trail and other regional trails into the activities provided at the site;

- Provide adequate separation between the local school and the entrance to WMA; and,

- Develop appropriate interpretive and educational resources.

Development Needs:

- Improve management road and parking.

6.11 Fort Hamby WMA

Management Agency: USACE

Land Classification: Multiple Resource Management

Recommended Future Use: Permanent Wildlife and Low-Density Recreation

Rationale: Fort Hamby WMA is one of the WMAs managed by USACE at W. Kerr Scott Reservoir. The low-intensity use and limited development that exist at the site requires a Land Classification of Multiple Resource Management to maintain current operations. Undeveloped lands provide a buffer between developed recreation sites and areas that provide for passive use (hiking or sightseeing). These lands also provide a buffer between USACE managed sites and neighboring properties. Undeveloped lands also meet priorities USACE has developed since the publication of the 1983 Master Plan. Recent policy has focused USACE on maintaining natural resources and increasing opportunities for passive uses of project lands. These activities also are consistent with surrounding land uses. Applying a Land Classification of Recreation would open the site up to future high-intensity development that would not be consistent with the work USACE has put into developing wildlife habitat at its WMAs. The Land Classifications selected for the WMA allow for the continued operation of the site as a WMA that supports low-intensity recreation and wildlife habitat.

Location: Fort Hamby WMA is located on the north bank in the center of W. Kerr Scott Reservoir. It is bordered to the east by Fort Hamby Park and to the west by Lewis Fork Creek, as it enters the main body of the reservoir. The site is accessible by South Recreation Road and other local roads. The site is located less than 2 miles from the commercial district of the Town of North Wilkesboro along Highway 421.

Description: The 113-acre site is a mix of forested land cover and open fields. The primary visitor activities for these lands are hunting, hiking, and wildlife viewing. Visitor amenities at the site are limited to gravel roads and parking lots, providing limited access through the site. Fort Hamby Trail extends from the northernmost parking lot through the center of the site. The trail dates back to the Civil War-era history of the site. The historic site that lends its name to the WMA is located along the trail. The site had cabins that were used by deserters during the Civil War. None of the above-ground features have survived, and only pits where the structures once stood remain. The site's eligibility for the National Register has yet to be determined.

In addition to the trail, several firebreaks run through the site. These corridors provide access from the trail to other portions of the site. The trail and the firebreaks intersect with food plots that exist within the site. The food plots are maintained by USACE to provide improved habitat and food sources for different species. Beyond the food plots, the trail and firebreaks extend to different portions of the shoreline which is characterized by varying sized coves and peninsulas.

Land Classification Resource Objectives:
See Table 12

Site Specific Resource Objectives:

- In addition to hunting, provide for nonconsumptive resource uses such as hiking, biking, photography, and sightseeing; and,

- Develop appropriate interpretive and educational resources.

Development Needs:

- Enhance Fort Hamby historic trail and the interpretation of the site;

- Continue to improve trail system; and,

- Improve management road and parking.

6.12 Fort Hamby Park

Management Agency: USACE

Land Classification: Recreation

Recommended Future Use: Recreation

Rationale: Fort Hamby Park is one of few sites that provides day-use and camping facilities at W. Kerr Scott Reservoir. The level of development that comprises the campground requires a Land Classification of Recreation to maintain current operations. The site is relatively developed and does not lend itself to the low-intensity uses of the other Land Classifications. The park is a popular destination on the reservoir and USACE has no plans to change its use. The Land Classification selected for the park allows for the continued operation of the site.

Location: Fort Hamby Park is located on the north bank of the center of W. Kerr Scott Reservoir. The site is bordered to the west by Fort Hamby WMA and to the east by Smithey's Creek WMA. Private lands form the northern boundary to the site. The site is accessible by Route 421 via South Recreation Road.

Description: Fort Hamby Park is a heavily wooded 116-acre site. Several coves create peninsulas along the southern shore of the site. The primary activities include boating, swimming, camping, hiking, biking, and picnicking. The site provides day-use and camping sites and is accessible through a gated entrance station located in the northwest corner of the park. Firewood sales and garbage disposal sites are located inside the park entrance before the park road splits in two directions: to the southern end of the main peninsula and to the eastern half of the park. The southern road extends to the end of the peninsula where there are picnic shelters, picnic sites, a swim beach, a boat launch, the Forest Edge Amphitheater, a shower and restroom facility, and a number of designated parking areas.

The eastern road provides access to campsites with power and water hookups and access for campers/trailers, as well as the Robber's Den Group Camp Area. The group camp area includes campsites with electric hookups, picnic tables, fire rings, and vault toilets. The group area also includes an amphitheater, group shelters, and a basketball court. Vault toilets and showers are provided in several locations throughout the camp site. A hiking trail provides waterfront access along the southeastern corner of the camp site. Throughout the park, USACE maintains parking, trash cans, informational signs, and security lighting to facilitate visitor use.

Land Classification Resource Objectives:
See Table 12

Site Specific Resource Objectives:

- Promote non-consumptive uses of resources, such as hiking, biking, photography, and sightseeing;
- Enhance opportunities for overnight camping;
- Improve water access for swimming, fishing, and boating;
- Incorporate regional trails into the activities provided at the site; and,
- Develop appropriate interpretive and educational resources.

Development Needs:

- Enhance waterfront access for fishing, hiking, and sightseeing;
- Continue updating and upgrading aging facilities; and,
- Develop municipal water and sewer connections.

6.13 Smithey's Creek WMA

Management Agency: USACE

Land Classification: Multiple Resource Management

Recommended Future Use: Permanent Wildlife and Low-Density Recreation

Rationale: Smithey's Creek WMA is one of the WMAs managed by USACE at W. Kerr Scott Reservoir. The low-intensity use and limited development that exist at the site requires a Land Classification of Multiple Resource Management to maintain current operations. Maintaining these low-intensity activities is consistent with USACE plans at W. Kerr Scott Reservoir. Undeveloped lands provide a buffer between developed recreation sites and areas that provide for passive use (hiking or sightseeing). These lands also provide a buffer between USACE managed sites and neighboring properties. Undeveloped lands also meet priorities USACE has developed since the publication of the 1983 Master Plan. Recent policy has focused USACE on maintaining natural resources and increasing opportunities for passive uses of project lands. These activities also are consistent with surrounding land uses. Applying a Land Classification of Recreation would open the site up to future high-intensity development that would not be consistent with the work USACE has put into developing wildlife habitat at its WMAs. The Land Classifications selected for the WMA allow for the continued operation of the site as a WMA that supports low-intensity recreation and wildlife habitat.

Location: Smithey's Creek WMA is located on the north shore in the center of W. Kerr Scott Reservoir. It is bordered to the west by Fort Hamby Park and to the south by Smithey's Creek Park. The area is bounded by Smithey's Creek to the north and private property to the east. The site is accessible by South Minton Road. The area is located less than 2 miles from the commercial businesses of the Town of North Wilkesboro along Highway 421.

Description: Smithey's Creek WMA is a 65-acre site that surrounds Smithey's Creek Park. The primary visitor activities for these lands are hunting, hiking, and wildlife viewing. The site has a mix of forest areas interspersed with managed game plots. The narrow site provides a variety of habitats that are bordered by residential development and USACE recreational sites. An access road to a boat ramp associated with Smithey's Creek Park on the eastern-most peninsula traverses the site.

Land Classification Resource Objectives:
See Table 12

Site Specific Resource Objectives:

- In addition to hunting, provide for non-consumptive resource uses such as hiking, biking, photography, and sightseeing; and,

- Develop appropriate interpretive and educational resources.

Development Needs:

- Improve management road and parking; and,

- Connect site to Fort Hamby Park via Bushwacker Falls Trail.

6.14 Smithey's Creek Park

Management Agency: USACE

Land Classification: Recreation

Recommended Future Use: Recreation

Rationale: Smithey's Creek Park is a large day-use park managed by USACE at W. Kerr Scott Reservoir. The level of development that comprises the campground requires a Land Classification of Recreation to maintain current operations. The site is relatively developed and does not lend itself to the low-intensity uses of the other Land Classifications. The park is a popular destination on the reservoir and USACE has no plans to change its use. The Land Classification selected for the park allows for the continued operation of the site.

Location: Smithey's Creek Park is located on the north bank of the central portion of W. Kerr Scott Reservoir. The site borders Smithey's Creek WMA. The site is accessible on Route 421 via South Minton Road.

Description: Smithey's Creek Park is a 21-acre site consisting mainly of paved and grassy areas. The day-use site contains a boat launch and courtesy dock, an information kiosk, a playground, an ADA accessible fishing pier, and 10 picnic sites. The picnic sites include grills, a water supply, and vault toilets. Additional toilets, informational signs, and security lights are located in the site to support visitor use.

Land Classification Resource Objectives:
See Table 12

Site Specific Resource Objectives:

- Provide appropriate facilities for day-use activities;
- Promote non-consumptive uses of resources, such as hiking, biking, photography, and sightseeing; and,
- Develop appropriate interpretive and educational resources.

Development Needs:

- Increase lighting at the fishing pier;
- Continue updating and upgrading aging facilities (courtesy dock);
- Install appropriate restroom facilities;
- Convert single-lane boat ramp into two-lane facility; and,
- Develop sufficient waterfront access for fishing, hiking, and sightseeing.

6.15 Dark Mountain WMA

Management Agency: USACE

Land Classification: Multiple Resource Management

Recommended Future Use: Permanent Wildlife and Low-Density Recreation

Rationale: Dark Mountain WMA is one of the WMAs managed by USACE at W. Kerr Scott Reservoir. The WMA is unique because it supports some of the most actively used trails within the project boundary, along with the standard hunting and low-intensity activities found in a WMA. Despite the high use of trails within the site, the limited development that exists at the site requires a Land Classification of Multiple Resource Management to maintain current operations. Maintaining these low-intensity activities is consistent with USACE plans at W. Kerr Scott Reservoir. Undeveloped lands provide a buffer between developed recreation sites and areas that provide for passive use (hiking or sightseeing). These lands also provide a buffer between USACE managed sites and neighboring properties. Undeveloped lands also meet priorities USACE has developed since the publication of the 1983 Master Plan. Recent policy has focused USACE on maintaining natural resources and increasing opportunities for passive uses of project lands. Applying a Land Classification of Recreation would open the site up to future high-intensity development that would not be consistent with the work that has gone into developing the trails and wildlife habitat at the site. The Land Classifications selected for the WMA allow for the continued operation of the site as a WMA that supports trail use, low-intensity recreation, and wildlife habitat.

Location: Dark Mountain WMA is located on the north shore of the eastern end of W. Kerr Scott Reservoir. The site is located less than 2 miles from Town of North Wilkesboro. To the west, USACE land is comprised of ribbon lands that form a boundary between the reservoir and private properties. The site is accessible by South Holiness Church Road and other local roads. Dark Mountain WMA lands are visible from Bandit's Roost Campground, Berry Mountain Park, the marina, and the Dam Site Park.

Description: Dark Mountain WMA is a 211-acre site that is bisected by a relatively wide cove that extends midway through the site. The varying topography and shoreline that exists along the boundary of the adjacent coves and the reservoir create a variety of habitats within the site. The primary visitor activities for these lands are hunting, hiking, biking, fishing, and wildlife viewing. The western portion of the site is managed as a traditional WMA to support hunting and sightseeing. The eastern end of the site, however, supports the Dark Mountain Trails. The trail system is heavily wooded, and consists of approximately 7.5 miles of multi-use trails. The Dark Mountain Trails are designated a National Recreation Trail. The two portions of the WMA are connected by the Dark Mountain Trails. The proximity of these two sites has created some challenges between the recreational and timber management goals of USACE.

Land Classification Resource Objectives:
See Table 12

Site Specific Resource Objectives:

- Provide appropriate facilities for day-use activities;
- In addition to hunting, provide for nonconsumptive resource uses such as hiking, biking, wildlife viewing, photography, and sightseeing;
- Reduce impact of existing trails;
- Ensure the Memorandum of Understanding between USACE and mountain bikers is adequate and appropriate; and,
- Develop appropriate interpretive and educational resources.

Development Needs:

- Develop formal trails/roads to access the western end of the site; and,
- Construct parking and management roads.

6.16 Dark Mountain Park

Management Agency: USACE

Land Classification: Project Operations

Recommended Future Use: Project Operations

Rationale: Dark Mountain Park provides unique recreational opportunities near the base of the W. Kerr Scott Dam. Along with providing various recreational opportunities, it also contains the reservoir's emergency spillway that is critical for USACE to maintain its mission at the reservoir. During the master planning process, the recreational and operational uses were considered and evaluated. Classifying the entire area as Project Operations would allow for some of the uses included in other Land Classifications but would limit the extent that these other uses could be developed. The emergency spillway requires the Project Operations Land Classification, preventing the use of another classification across the site. Therefore, the site is classified as Project Operations but is still capable of supporting its current level of recreational use.

Location: Dark Mountain Park is located on the north side of W. Kerr Scott Reservoir. The site is situated between Dark Mountain WMA and Fish Dam Creek Park. Access to the park is provided by Route 268 via Reservoir Road.

Description: Dark Mountain Park is a 14-acre site located in the reservoir's emergency spillway. The site is maintained as open mowed space to meet its function as a spillway. This area is appropriate for special events, providing water access, and hosting races that take advantage of the Dark Mountain Trails that are located in the hills above the park. Major trail events and community functions represent the primary visitation to the park. To accommodate these activities, the site includes a bike wash station.

Land Classification Resource Objectives:
See Table 12

Site Specific Resource Objectives:

- Promote non-consumptive uses of resources, such as hiking, biking, photography, and sightseeing;
- Incorporate the Overmountain Victory Trail and other regional trails into the activities provided at the site; and,
- Develop appropriate interpretive and educational resources.

Development Needs:

- Develop a paved trailhead for Dark Mountain Trails.

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6.17 Fish Dam Creek Park

Management Agency: USACE

Land Classification: Project Operations

Recommended Future Use: Project Operations

Rationale: Fish Dam Creek Park is a unique day-use site located along the edge of the dam. The level of development that comprises the site does not meet the definition of Multiple Resource Management. During the master planning process, some consideration was given to classifying the site as Recreation. It was determined, however, that access and use of the site is dependent on the surrounding operations. Therefore, it was classified as Project Operations. The Land Classification selected for the park allows for the continued operation of the site.

Location: Fish Dam Creek Park is located in the northeast corner of W. Kerr Scott Reservoir, just north of the dam. The site is east of Dark Mountain Park and north of Dam Site Park. Access to the site is provided by a USACE road over the dam.

Description: Fish Dam Creek Park is an 11-acre site that sits on the northern side of the W. Kerr Scott Dam. As part of the development of the reservoir, the area was cleared of mature vegetation. The area surrounding the site contains mature vegetation and includes a number of private properties and USACE trails. The day-use site includes a Yadkin River Greenway Trailhead, a playground, a picnic shelter, and individual picnic sites. To support visitor use at the site, USACE maintains vault toilets, informational signs, trash cans, and security lighting.

Land Classification Resource Objectives:
See Table 12

Site Specific Resource Objectives:

- Provide appropriate facilities for day-use activities;
- Promote non-consumptive uses of resources, such as hiking, biking, photography, and sightseeing;
- Incorporate the Overmountain Victory Trail and other regional trails into the activities provided at the site; and,
- Develop appropriate interpretive and educational resources.

Development Needs:

- Continue updating and upgrading aging facilities;
- Construct additional parking and group picnic shelters;
- Improve ADA accessibility; and,
- Pave existing gravel parking lots and trails.

6.18 Tailwater Access Area

Management Agency: USACE

Land Classification: Project Operations

Recommended Future Use: Project Operations

Rationale: Tailwater Access Area provides unique recreational opportunities along the W. Kerr Scott Dam tailrace. Along with providing various recreational opportunities, it also contains the reservoir's tailrace that is critical for USACE to maintain its mission at the reservoir. During the master planning process, the recreational and operational uses were considered and evaluated. Classifying the entire area as Project Operations would allow for some of the uses included in other Land Classifications but would limit the extent that these other uses could be developed. The tailrace requires the Project Operations Land Classification, preventing the use of another classification across the site. Therefore, the site is classified as Project Operations but is still capable of supporting its current level of recreational use.

Location: Tailwater Access Area is located on the southern bank of the Yadkin River as it exits the W. Kerr Scott Dam. The site is located along Old Highway 268 and connects to the W. Kerr Scott Visitor Assistance Center via Ranger Road.

Description: Tailwater Access Area is a 6-acre site comprised of paved areas and open grass fields. The primary activities at this site are fishing, trail use, and sightseeing. The site provides day-use fishing with a fishing pier that parallels the river and a Yadkin River Greenway Trailhead. Vault toilets, informational signs, and security lights are located at the site to facilitate visitor use. A hiking trail provides access over the tailrace to the other side of the river.

Land Classification Resource Objectives:
See Table 12

Site Specific Resource Objectives:

- Provide appropriate facilities for day-use activities, including fishing;
- Promote non-consumptive uses of resources, such as hiking, biking, photography, and sightseeing;
- Incorporate access to the Yadkin River Greenway, the Overmountain Victory Trail, and other regional trails into the activities provided at the site; and,
- Develop appropriate interpretive and educational resources.

Development Needs:

- Continue updating and upgrading aging facilities (fishing platform, rip-rap, etc.);
- Develop ADA accessibility (fishing platform);
- Install appropriate restroom facilities; and,
- Develop sufficient waterfront access for fishing, hiking, and sightseeing.

7.0 Environmental Operating Principles

In 2003, USACE adopted seven EOPs. The purpose of the EOPs is to integrate natural resource laws, values, and sound environmental practices into USACE decision making. The following sections explain how the W. Kerr Scott Reservoir Master Plan fulfills all seven EOPs.

#1: Strive to achieve environmental sustainability. An environment maintained in a healthy, diverse and sustainable condition is necessary to support life.
USACE has and continues to work collaboratively with federal, state, and local agencies and groups to propose development plans that maintain a healthy, diverse and sustainable environment at W. Kerr Scott Reservoir. USACE also has coordinated with these groups to develop, manage, and monitor resources at the reservoir. For example, USACE works with the WRC to monitor and manage fisheries and game species population numbers and habitat conditions.

The policies and management strategies proposed in this Master Plan are intended to maintain a healthy, diverse, and sustainable environment at W. Kerr Scott Reservoir. The Master Plan does not propose developing new management areas, but rather proposes upgrades and expansions of facilities at existing recreation areas. This will allow recreational needs to be met while continuing to protect the environment around W. Kerr Scott Reservoir.

#2: Recognize the interdependence of life and the physical environment, and consider environmental consequences of USACE programs and activities in all appropriate circumstances.
In the Master Plan, USACE considers the relationships between human activities and the natural environment. The impact of these relationships is examined in Chapter 2 and considered in the development of Land Classifications and the Resource Plan presented earlier in this document. The PEA, included in Appendix C, considers the environmental consequences of the proposed recreational development and resource protection proposals in the Master Plan. Specific actions that are undertaken to implement the Master Plan will undergo separate environmental analysis.

#3: Seek balance and synergy among human development activities and natural systems by designing economic and environmental solutions that support and reinforce one another.
The proposed Master Plan for W. Kerr Scott Reservoir seeks balance and synergy between human development and natural systems by focusing development activities in limited areas around the lake. This strategy balances human uses and wildlife resources. In addition, USACE proposes actions, such as vegetation restoration and improvements to water and sewage systems to further improve this balance. Vegetation restoration would enhance the quality of undisturbed areas around the reservoir, providing more habitat opportunities for species that continue to use the reservoir for feeding, breeding, or nesting, despite the continued development of the area. Improvements to water and

sewage systems would reduce the impact this development has on the surrounding habitat.

#4: Continue to accept corporate responsibility and accountability under the law for activities and decisions under USACE control that impact human health and welfare and the continued viability of natural systems.

This Master Plan and associated PEA fulfills the requirements of NEPA, which establishes a policy to "…encourage productive and enjoyable harmony between man and his environment; promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; enrich the understanding of ecological systems and natural resources important to the Nation …"

The Master Plan and associated PEA fulfills NEPA by:

- Describing the existing environmental conditions (Chapter 2) and environmental consequences associated with the Preferred Alternative on (but not limited to) the following resources: water quality, vegetation, fish and wildlife, threatened and endangered species, cultural resources, and socioeconomic resources.

- Identifying and comparing the incremental and cumulative effects of the No Action Alternative and the Preferred Alternative.

- Examining a No Action Alternative.

The Master Plan also is in compliance with other applicable environmental and cultural resource laws and Executive Orders, as described in Chapter 2. These include the Clean Water Act, Endangered Species Act, and Archaeological Resources Protection Act among others.

USACE also accepts corporate responsibility and accountability for following federal laws in regard to future activities undertaken to implement the Master Plan. Future implementation of the Master Plan will require USACE staff to follow the steps outlined in Chapter 9. Project staff also will follow procedures in the OMP and relevant resource plans in order to comply with state and federal regulations. In addition, site-specific development proposals outside the scope of this Master Plan must be accompanied by an EA or EIS prior to interdisciplinary review at the W. Kerr Scott Reservoir project office and the Wilmington District Office and USACE issuance of a decision document and declaration of land availability prior to any development.

#5: Seek ways and means to assess and mitigate cumulative impacts to the environment; bring systems approaches to the full life cycle of our processes and work.

The cumulative impacts of the proposed Master Plan are evaluated in Appendix C. This Master Plan is not expected to contribute to significant cumulative impacts. Furthermore, the PEA that is a part of this Master Plan, as well as the recommendations included in the plan, commit USACE to regular coordination with regulatory agencies and updates to the plan to allow any cumulative impacts to be mitigated with the best available science and technology.

#6: Build and share an integrated scientific, economic, and social knowledge base that supports a greater understanding of the environment and impacts of our work.

This Master Plan helps build an integrated, scientific, economic, and social knowledge base of W. Kerr Scott Reservoir. Chapter 2 of this document includes new information on project resources and the economic and social conditions around the project. USACE also has worked with other agencies and organizations to develop a GIS database of data pertaining to project lands. This data was used to inform the master planning process and present graphic information in this document. Maintaining and updating this database in the future will allow USACE to manage the project effectively, educate the public, and share in the information exchange with other agencies and groups.

#7: Respect the views of individuals and groups interested in USACE activities, listen to them actively, and learn from their perspective in the search to find innovative win-win solutions to the nation's problems that also protect and enhance the environment.

USACE has been proactive in seeking the views of individuals and groups interested in the W. Kerr Scott Master Plan. As documented in Chapter 4, USACE has distributed mailings on the master planning process and held scoping meetings at key locations around the project. USACE recorded all comments presented at the scoping meetings and those submitted during the scoping period. Responses to the comments during the scoping period were developed by USACE staff and will be incorporated into Appendix D in the Final Master Plan. These comments were considered in developing the objectives, policies, and recommendations presented in this document.

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8.0 Conclusions

W. Kerr Scott Reservoir is operated by USACE and includes approximately 1,475 acres of open water at normal pool (USACE 2010) and an additional 2,279 acres of surrounding land in Wilkes County, North Carolina. The dam is located approximately four (4) miles west of the Town of Wilkesboro.

Visitation to W. Kerr Scott Reservoir and other regional points of interest is fueled primarily by recreational activities. In general, W. Kerr Scott Reservoir is a popular destination for day users, most of whom live within Wilkes County. These users visit the reservoir to picnic, fish, swim, hike, boat, and photograph/observe wildlife. The project also supports special events and camping.

The locations of natural, cultural, and physical resources, as well as the purposes USACE accomplishes, have influenced the distribution of developed management areas around the reservoir. These sites are evenly distributed across project lands such that WMAs, lower-use areas, and ribbon lands, which separate the reservoir from surrounding developed areas, maintain a natural aspect to the overall environment.

This Master Plan presents a programmatic approach for the management of the recreational, natural, and cultural resources at W. Kerr Scott Reservoir. Preparation of this plan required (1) an appraisal of the natural and cultural resource conditions of the project and the surrounding region, and (2) an examination of environmental and administrative constraints and influences. The plan includes the classification of project lands and Resource Objectives for each classification and specific management area.

Extensive federal, state, and local agency coordination and citizen involvement was incorporated in all aspects of the master planning process. Planning for the development, preservation, or enhancement of project resources will continue to be coordinated through other governmental agencies and special interest groups to ensure the efficient and timely implementation of the Resource Objectives.

Sound stewardship of public lands requires development and management of project resources for the public benefit consistent with resource capabilities. An important element of this approach is the establishment of viable Resource Objectives. This Master Plan sets forth a broad range of Resource Objectives and management and development concepts covering both the overall project, as well as specific areas within it. These recommendations are summarized in Table 12. An effective OMP is a critical element in implementing the policies and achieving the Resource Objectives specified in the Master Plan. The latest OMP for W. Kerr Scott Reservoir was approved in 1995.

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9.0 Recommendations

It is recommended that this Master Plan be closely followed in managing the resources at W. Kerr Scott Reservoir. The policies and objectives within this Master Plan are consistent with authorized project purposes and resource capabilities and accommodate federal, state, and local needs. They represent sound stewardship of resources and will result in increased opportunities for public enjoyment of outdoor recreation activities.

9.1 Using the Master Plan

This Master Plan serves two primary purposes that are equal in importance. First, it is the primary management document for the project and provides direction for many of the other plans that guide the management of W. Kerr Scott Reservoir. Second, it is a land use management tool. This Master Plan sets the stage for the update of many of the project's resource management plans, such as the Wildlife Management Plan. For example, the Resource Objectives approved in this plan can serve as a basis for developing plans to manage wildlife at the project. Regular updates to the Master Plan, discussed in the next section of this chapter, will allow the project to maintain active resource management plans, as well.

As a land use tool, this Master Plan provides USACE and the public with the current classification and preferred future uses of project lands. The current land classification of project lands (Appendix H, Figure 15 and Figure 16) allows USACE and the public to visually evaluate the distribution of uses of project lands. The future uses graphic (Appendix H, Figure 17 and Figure 18) illustrates locations within the project that have been identified for future uses that are different from their current classification. An example of how this illustration may be beneficial is through the identification of project lands that are suitable for the development of a new recreation facility by USACE, a current lease holder, or a future developer. Maintaining an up-to-date Master Plan will allow USACE to respond effectively to development plans made internally or by outside parties.

9.2 Updating the Master Plan

This policy-based Master Plan, along with the accompanying PEA and GIS database, provides USACE with a "living" management document. This living document sets goals and objectives but does not establish concrete development plans. This allows USACE flexibility in the management and development of W. Kerr Scott Reservoir, within a clear policy framework.

Maintaining an up-to-date Master Plan is best accomplished through the following steps:

1) Regular review of project needs and USACE priorities;

2) Annual updates to the GIS database;

3) Regular review of the updates to the reports used to inform this plan (see Section 10.3;
4) Regular consultation and coordination with local, state, and federal agencies and groups with regulatory purview or interest in the management of W. Kerr Scott Reservoir; and,

5) Review annual visitation statistics included in Appendix E. Sites with spikes in visitation or regular high levels of use would likely hold high priority in actions taken to achieve important Resource Objectives and Development Needs.

In addition, a review of the Master Plan should be included in the project's annual schedule. The review should include the following:

1) Identifying resource conditions that have changed and require documentation in Chapter 2;

2) Reviewing of the issues described in Chapter 3 and noting changes in the manner in which these issues are addressed or other issues that have arisen over the last year;

3) Updating public involvement efforts that included or were focused on the Master Plan;

4) Reviewing the Resource Objectives and Development Needs to identify priorities or changes in management strategy; and,

6) Review annual visitation statistics included in Appendix E. Sites with spikes in visitation or regular high levels of use would likely hold high priority in actions taken to achieve important Resource Objectives and Development Needs.

These annual reviews will help prepare for a general revision of the Master Plan that should occur every five years. Each five year update will be accompanied by the appropriate NEPA documentation. The five-year revision may be as simple as updating the Resource Objectives for a Land Classification or specific site; however, it may be as complex as changing Land Classifications presented in this Master Plan (2011). The process through which the plan is updated should follow standard USACE approval protocols. An example of how this approval process may work is illustrated by two theoretical changes to the Master Plan. As noted above, a change may only involve the

addition/removal of Resource Objectives or Development Needs. Such a change could be approved by the Project Manager. More complex changes, that that involve district-wide personnel or resources, such as the change in a Land Classification, would require approval by the Project Manager and the Chief of Wilmington District's Lakes Branch.

In either case, the following steps would be taken to document the change.

1) A Master Plan Update Memorandum (Appendix F) should be completed and signed by the appropriate USACE managers;

2) A strikethrough version of the text change(s) should be attached to the memorandum;

3) The memorandum should be attached to Appendix F of this Master Plan to document the changes made through the life of the plan; and,

4) A revised version of the text should be inserted into the document and should include the date of the revision in the header.

The information obtained during regular revisions of this Master Plan also will serve to benefit other activities at the project. Data may be applied to updating a specific resource management plan, improving educational programs, or informing project staff about relevant issues.

9.3 Including Others in the Master Planning Process

This Master Plan emphasizes the need for consultation and coordination with regulatory agencies prior to implementing elements included in the Resource Objectives and Development Needs outlined in Section 5.3 and Section 6.0. Coordination also may occur in updating the Master Plan and obtaining additional data sources to inform the plan.

In some cases, coordination with other government agencies is required by regulation. The regulatory requirements applicable to USACE in implementing any action are generally outlined in Section 2.26. In all cases, however, coordination with the appropriate groups and agencies prior to implementing an action will ensure a well informed plan that avoids unnecessary impacts to project resources. Such an approach also streamlines the review and approval process with regulatory agencies. Table 14 lists the federal and state agencies that commonly would be included in the consultation process for a proposed project at W. Kerr Scott Reservoir. The table also lists the resources included in each agency's purview. It should be noted that similar agencies and groups exist at the local level and also should be included in the planning process.

Further agency consultation and coordination is critical to the success of this policy-based, programmatic document and associated PEA.

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Table 14: Federal and State Agencies Included in Regular Consultation Process

	Federal Agencies							State Agencies							
	Advisory Council on Historic Preservation	Federal Highway Administration	U.S. Coast Guard	U.S. Army Corps of Engineers	U.S. Department of Agriculture	U.S. Environmental Protection Agency	U.S. Fish and Wildlife Service	North Carolina Department of Cultural Resources	North Carolina Department of Transportation	North Carolina Division of Coastal Management	North Carolina Division of Land Management	North Carolina Division of Waste Management	North Carolina Division of Water Resources	North Carolina Division of Water Quality	North Carolina Natural Heritage Program
Cultural Resources	X							X							
Erosion and Sediment Control				X							X				
Ground Water													X		
Hazardous Materials						X						X			
Navigable Waters			X	X											
Rare, Threatened & Endangered Species							X								X
Soils					X						X				
Transportation		X							X						
Water Resources				X		X				X			X	X	
Wetlands				X			X			X				X	

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10.0 Preparers and References

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10.2 Glossary

A

Acre-foot. The volume of water, 43,560 cubic feet, which will cover an area of one acre to a depth of one foot.

Aquifer. A layer of underground sand, gravel, or permeable rock in which water collects. Aquifers may lie close to the surface or at great depths. Aquifers can be hundreds of miles long and wide or narrow, shallow veins running through rock. When the water source becomes of significant size, it is termed an aquifer, especially when drilling into the rock allows the tapping of the aquifer for use in crop irrigation and animals as well as human use.

B

Bedrock. The solid rock layer beneath sand or silt.

Biodiversity. The number and variety of organisms found within a specified geographic region.

Borrow pit/area. An area from which earth is taken to be used in the construction of an embankment.

C

Conservation pool. The area dedicated to water storage. Water stored below the conservation pool elevation may be used for any of the project's non-flood control purposes.

D

Dam. A barrier built, usually across a watercourse, for impounding or diverting the flow of water.

Day-use. Day-use activities including picnicking, hiking, swimming, boating, photography. Generally, the term includes any activity that does not include overnight camping. Day-use sites are locations that provide specific facilities to support these activities.

Drawdown. Releasing water to lower the reservoir elevation. Drawdowns are used for energy production or to create additional space in the reservoir to hold back floodwaters; to reduce the cross-sectional area of the reservoir, increasing the current to aid downstream fish passage; and to expose normally submerged structures for maintenance.

E

Earth fill dam. A dam built of gravel, earth, broken rock, sand, or silt, and usually containing an impervious clay core or facing.

Endangered/threatened species. Any species of plant or animal in danger of extinction through all or a significant part of its range [16 USC 1532 (6)].

F

Fee lands. Land that the U.S. Government owns outright in fee simple title.

Fish consumption advisory. Caution about the amount/type of fish that you eat and how it is filleted/prepared. The North Carolina Department of Health and Human Services is responsible for issuing such advisories around the reservoir.

***Floodplain*.** Land along a river that experiences occasional flooding when the river overflows its banks.

100-year, 500-year flood zones. Areas where the probability of being inundated is once in 100 years or 500 years.

G

Geographic Information Systems (GIS). A computer program that integrates hardware, software, and data for capturing, managing, analyzing, and displaying all forms of geographically referenced information.

Ground water. Water contained within a defined subterranean structure, i.e. sand or gravel formations.

H

Habitat. An area that provides some portion of the requirements for the life history of a given species.

Hydroelectric power. The process of generating electricity by harnessing the power of moving water.

Hydrology. The scientific study of the waters of the earth, especially with relation to the effects of precipitation and evaporation upon the occurrence and character of water in streams, lakes, and on or below the land surface.

I

Impaired water body. A water body (i.e., stream reaches, lakes, waterbody segments) with chronic or recurring monitored violations of the applicable numeric and/or narrative water quality criteria.

Impervious surface. Constructed surfaces - rooftops, sidewalks, roads, and parking lots - covered by impenetrable materials such as asphalt, concrete, brick, and stone.

Interpretation. Activities or media designed to help people understand, appreciate, enjoy, and care for the natural and cultural environment.

Invasive species. Species that are not native to the area, and whose presence may be harmful to native species.

M

Mean sea level (msl). A point of reference to measure lake elevation. It refers to the elevation of the ocean halfway between high and low tide. Lake elevations are measured in feet above mean sea level.

Mitigation. Any action designed to avoid, minimize, reduce, rectify, compensate for, or eliminate adverse impacts of a Preferred Alternative.

Municipal water system. A water system that has at least five service connections or which regularly serves 25 individuals for 60 days; also called a public water system

N

National Register of Historic Places (National Register). A comprehensive list of districts, sites, buildings, and structures of national, regional, state, and local significance in American history, architecture, archaeology, engineering, and culture. The list is maintained by the National Park Service under the authority of the National Historic Preservation Act of 1966.

Normal pool. See Conservation Pool.

P

Paleontology. The study of life in past geologic time.

Peninsula. An elongated body of land nearly surrounded by water and connected to a larger body of land by a neck or isthmus.

Physiographic Province. A region of which all parts are similar in geologic structure and climate and which has consequently had a unified geomorphic history; a region whose patterns of relief features or landforms differs significantly from that of adjacent regions.

Primitive camp site. Camp site with no electricity, water, or sewage hook-ups. These sites usually provide a camping pad, picnic table, and grill/fire pit.

Programmatic Environmental Assessment (PEA). A NEPA document that evaluates typical actions that may occur as the result of the implementation of a general plan. Because the details of these specific actions are not known at the time the PEA is developed, the document provides general impact analysis and commits the federal agency to additional NEPA analysis and agency consultation.

R

Reservoir. An impoundment for water storage either above or below the ground.

River basin. The portion of land drained by a river and its tributaries.

S

Scoping. Early consultation with interested and affected members of the public, as well as with staff and other federal, state, and local agencies having regulatory or planning responsibilities to identify issues to be considered in a plan.

Sedimentation. The depositing or formation of soil and rock particles carried by moving water.

Spillway. Dams without floodgates are designed with an area called a spillway that allows water to flow freely over it during floods. A controlled spillway has floodgates.

Surface water. Water above the surface of the ground, such as a lake or river. The term is used to distinguish it from ground water.

T

Tailrace. The canal or channel that carries water away from the dam.

Threatened and endangered species. Plants and animals that are listed by the U.S. Fish and Wildlife Service or state government as being offered protection under the Endangered Species Act or state law.

W

Water supply pool. The space within the reservoir reserved for water supply.

Watershed. A region or area over which water flows into a particular, lake, reservoir, stream, or river; a drainage basin.

Wetland. Areas saturated or inundated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil. Wetlands generally include swamps, marshes, bogs, and similar areas [33 CFR 328.3(b)].

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APPENDIX A
PERTINENT DATA

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W. KERR SCOTT DAM AND LAKE PROJECT
YADKIN-PEE DEE RIVER BASIN, NC

PERTINENT DATA

Other names

During the design and construction phases, the project was known as the Wilkesboro Reservoir. In 1963 the dam was completed and placed in operation and the name was changed to honor William Kerr Scott, 1896-1958, former Governor and Senator from North Carolina.

Location of dam

At Latitude 36 081 04'1, Longitude 81 13' 30"; in Wilkes County, NC, about 4 miles west of Wilkesboro, North Carolina. This location is about 55 miles west of Winston-Salem, NC, and about 65 miles north of Charlotte, NC. The dam is 5.8 river miles upstream of the USGS stream gage at Wilkesboro, NC, about 26 river miles above Elkin, NC, 132 river miles above High Rock Dam near High Rock, NC, and 388 river miles upstream of the mouth of the Pee Dee River in Winyah Bay near Georgetown, South Carolina.

Purposes

For flood control, water supply, recreation, and low flow releases.

Drainage areas	Square Miles
Yadkin River at Patterson, NC ----------	29
Elk Creek at Elkville, NC ----------	48
W. Kerr Scott Dam near Wilkesboro, NC---------	367
Reddies River at North Wilkesboro, NC --------	89
Yadkin River at Wilkesboro, NC ----------	504
Roaring River near Roaring River, NC ---------	128
Yadkin River at Elkin, NC ----------	869
Yadkin River at Enon, NC ----------	1,694
Yadkin River at Yadkin College, NC ----------	2,280
Yadkin River at High Rock, NC ----------	3,973
Pee Dee River at mouth (approximate) ---------	18,500

Elevations	Feet, m.s.l.
Original Spillway design flood----------	1102.5
July 1992 spillway design flood----------	1105.2
Standard project flood----------	1083.0
Flood of record August 1940 computed----------	1074.5
Top of Dam----------	1107.5
Base of Dam----------	965.0
Maximum design pool----------	1102.5
Top of flood control pool (spillway crest)----	1075.0

Top of normal pool (bottom of flood pool)-----	1030.0
Minimum operative pool----------	1000.0
Upper clearing limit----------	1032.0
Guide acquisition line----------	1047.0
Elevation to which flowage easement obtained--	1080.0
Conduit entrance portal invert elevation------	965.0
Conduit exit portal invert elevation----------	960.0
Stilling basin bottom elevation----------	952.0
Stilling basin end sill elevation----------	955.5

Tailwater elevations:

Original spillway design flood----------	998.0
July 1992 spillway design flood----------	999.4
Standard project flood----------	984.6
Flood of record (August 1940)----------	973.7
Minimum (125 c.f.s.)----------	963.0

Reservoir Data

	Runoff Inches	Acre-feet
Storage Volumes:		
Original spillway design flood (elev. 1102.5)- -		290,000
Latest spillway design flood (elev. 1105.2)--- -		328,300
Standard project flood (elev. 1083)---------- -		190,000
Top of dam (elevation 1107.5)---------- -		347,300
Maximum design pool (elev. 1102.5)---------- -		306,000
Top of flood control pool (elev. 1075.0)------ -		153,000
Top of normal pool (elev. 1030.0)---------- -		41,000
Top of minimum operative pool (elev. 1000.0)-- -		8,000
Uncontrolled flood storage (1075.0-1102.5)---	7.82	153,000
Controlled flood storage (1030.0-1075.0)-----	5.72	112,000
Water supply storage (1000. 0-1030.0)---------	1.69	33,000
Sediment and conserv. sto. (below 1000.0)-----	0.41	8,000

Surface areas:	Acres
Original spillway design flood (elev. 1102.5)--------	7,240
Latest spillway design flood (elev. 1105.2)----------	7,590
Standard project flood (elev. 1083)----------	4,835
Maximum design pool (elev. 1102.5)----------	7,240
Top of flood control pool (elev. 1075.0)----------	4,000
Top of normal pool (elev. 1030.0)----------	1,475
Top of minimum operative pool (elev. 1000.0)---------	675
Counties affected----------	Wilkes, Caldwell

Length at elevation 1030.0 ft. m.s.l.	Miles
Reservoir, (along Yadkin River)----------	9.7
Shoreline----------	55

Dam and Spillway

Type: Earth and rockfill (zoned), with side channel uncontrolled spillway, intake structure, and circular conduit

Length of dam (feet)----------	1,750
Length of spillway crest (feet)----------	400
Spillway capacity at elevation 1105.2 (c.f.s.)--------	199,300
Height of dam (feet)----------	148

Outlet Works:
Intake tower:
Conduit intakes:

Number----------	2
Size----------6 feet wide by 12.25 feet high each	
Conduit length (feet)----------	749.0
Conduit diameter (feet)----------	12.25
Max. discharge (approximate) at elevation 1030 (c.f.s.)	5,300

Service Gates:

Number----------	2
Size--------- 6 feet 9 inches wide by 12 feet 8 inches high each	

Emergency Gate:
Type:----- Gravity/electric hoist on a hand-operated trolly hanging from a monorail located on top of the intake tower. Gate is dogged and stored just above the outside platform at elevation 1033 feet m.s.l., on the face of the intake tower.

Number:----------	1
Size:----------6 feet 9 inches wide by 13 feet 8 inches high	

Stilling basin:

Minimum width (feet-inches)----------	12-3
Maximum width (feet-inches)----------	54-1

Estimated Natural Streamflow at Dam	c.f.s.
Mean discharge for period 1922-1991----------	581
Minimum discharge:	
Instantaneous prior to 1963 (September 28, 1954)----------	72
Daily prior to 1963 (September 18, 1956)----------	80
Monthly for period 1922-1991 (October 1954)----------	112

Maximum discharge for period 1922-1991:	
Instantaneous (August 14, 1940)----------	116,500
Monthly (August 1940)----------	3,050
Bankfull discharge below dam----------	5,400
Standard Project Flood	
Maximum estimated outflow----------	29,000
Maximum estimated inflow----------	193,100

Original Spillway Design Flood

Derivation: Runoff based on analysis of the greatest 48-hour period of Probable Maximum Precipitation storm rainfall from the U. S. Weather Bureau (National Weather Service) Hydrometeorological Report No. 33, using a drainage area of 348 square miles.

Total average rainfall (inches)----------	25.6
Initial loss (inches)----------	0.50
Average infiltration rate (inches per hour)----------	0.10
Total storm runoff (inches)----------	21.5
Peak inflow to full reservoir (c.f.s.)----------	318,000
Regulated peak outflow (c.f.s.)----------	183,000

Spillway Design Flood (July 1992)

Derivation: Runoff based on analysis of the greatest 72-hour period of Probable Maximum Precipitation from the National Weather Service Hydrometeorological Report No. 52, using a drainage area of 367 square miles.

Total average rainfall (inches)----------	31.3
Initial loss (inches)----------	0.50
Average infiltration rate (inches per hour)----------	0.10
Total storm runoff (inches)----------	24.9
Peak inflow to full reservoir (c.f.s.)----------	326,600
Regulated peak outflow (c.f.s.)----------	206,200

APPENDIX B
USACE SIX-STEP PLANNING PROCESS

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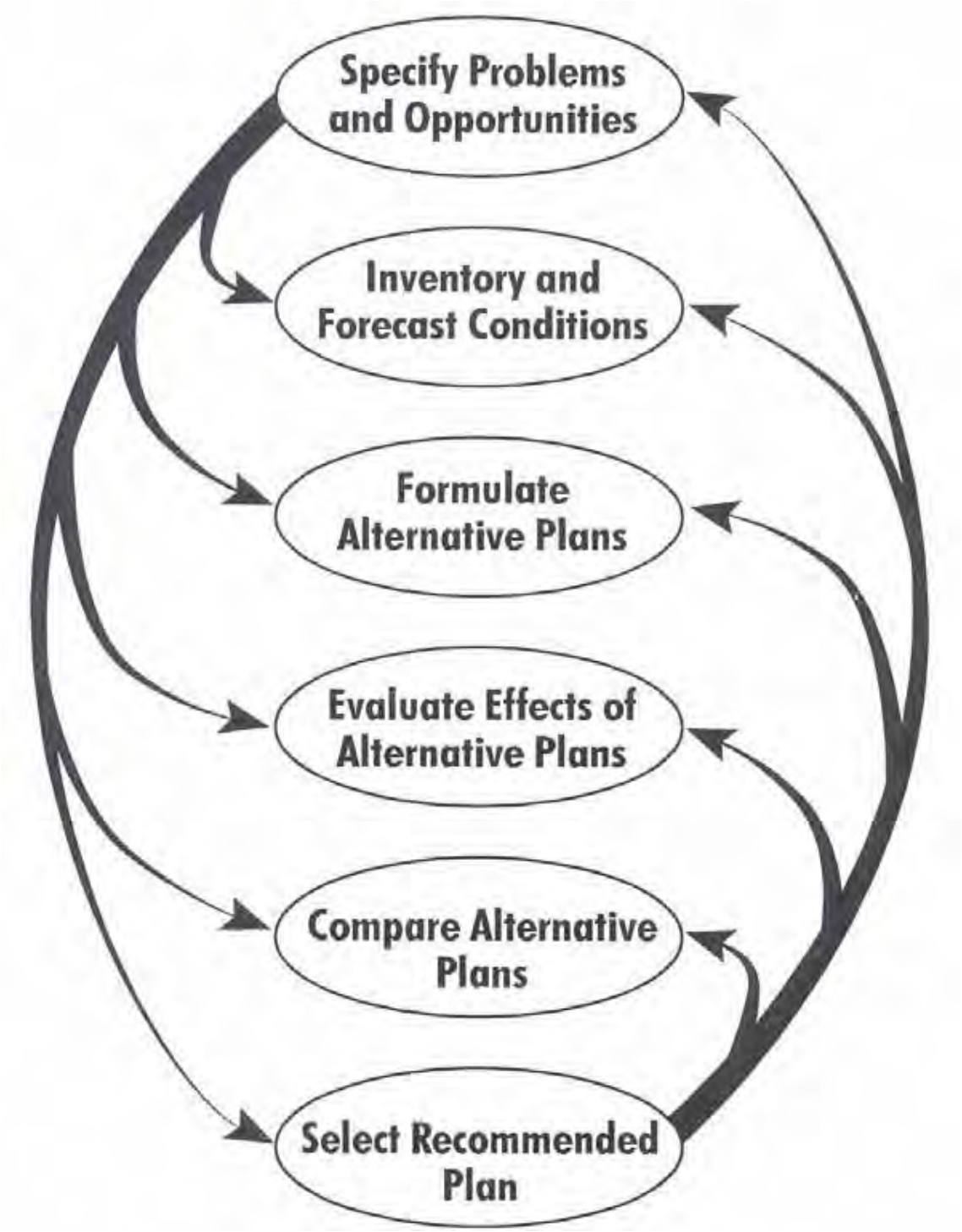
The U.S. Army Corps of Engineers Planning Process

The planning process is a structured approach to problem solving. Although ideally, the process starts with Step 1 (identifying problems and opportunities) and proceeds sequentially through the other steps, ending in Step 6 (selecting a plan), planning can begin with any step. Because the process can begin anywhere, it is an iterative process - as more information is acquired and developed, some of the previous steps may be reiterated. The six steps of the planning process are shown below and are described as follows:

Identifying Problems and Opportunities
This is the most important step in the planning process. Once the problems and opportunities are described, the next task is to define the objectives and constraints that will guide efforts to solve those problems and achieve those opportunities. Problems are existing, negative conditions, whereas opportunities focus on desirable, future conditions. Objectives are statements that describe the results you want to get by solving the problems and taking care of the opportunities you identified. Constraints are statements about things you want to avoid doing, or things you cannot change, while meeting your objectives.

Inventorying and Forecasting Conditions
This is the information gathering step. Inventories and forecasts are generally concerned with the historic, existing, and future conditions of resources that will be affected by solutions to the problems. These resources may be natural, economic, or social. They will help to shape the plans to be considered, or they will be affected, intentionally or unintentionally, by one or more of the plans to be considered.

Formulating Alternative Plans
Plan formulation is the process of identifying specific solutions to achieve planning objectives while avoiding constraints so as to solve the problems and realize the opportunities that got the investigation started. Solutions consist of alternative plans built from management measures. A management measure is a feature or an activity that can be implemented at a specific geographic site to address one or more planning objectives.


Specify Problems and Opportunities
Inventory and Forecast Conditions
Formulate Alternative Plans
Evaluate Effects of Alternative Plans
Compare Alternative Plans
Select Recommended Plan

Evaluating Alternative Plans
The evaluation step considers what difference each plan can make. The difference is quantified by comparing without project and with project conditions to identify the effects of alternative plans. The essential purpose of the evaluation step is to determine whether or not a formulated plan is worthy of further consideration.

Comparing Alternative Plans
In this step, the plans that qualified for further consideration are compared to come up with the best plan. Whereas in the previous evaluation step the effects of each plan were assessed individually, in the comparison step the important effects across all plans are assessed. The purpose of plan comparison is to identify the most important effects, and to compare the plans against one another across those effects. Ideally, the comparison will conclude with a ranking of plans or some identification of advantages and disadvantages of each plan for use by decision makers.

Selecting a Plan
This is the big decision making step. The first choice is always to do nothing. Planners have the burden of demonstrating that any plan that is recommended is better than doing nothing. The second choice is to select the plan that is required by law or policy, and the third choice is to do something else. Regardless of the choice, those who do the choosing must have good reasons for the final selection.

Source: U.S. Army Corps of Engineers. 1997. Planning Primer. Institute for Water Resources Report 97-R-15. http://www.au.af.mil/au/awc/awcgate/army/97r15.pdf

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APPENDIX C
PROGRAMMATIC ENVIRONMENTAL ASSESSMENT

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U.S. Army Corps
of Engineers
WILMINGTON DISTRICT

Finding of No Significant Impact For The W. Kerr Scott Dam and Reservoir Master Plan

January 2012

Finding of No Significant Impact For The W. Kerr Scott Dam and Reservoir Master Plan

January 2012

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1.0 Introduction

The National Environmental Policy Act of 1969, as amended (NEPA), requires consideration of the environmental impacts for major federal actions. The proposed action and the environmental impacts of the proposed action were addressed in the Programmatic Environmental Assessment (PEA) for the Implementation of Master Plan for W. Kerr Scott Dam and Reservoir, dated October 2011.

During the agency and public review of the PEA and attached Master Plan, comment letters were submitted by several regulatory agencies. These comments are included in Appendix D of the attached Master Plan. The purpose of this Finding of No Significant Impact (FONSI) is to ensure the environmental consequences of the proposed plan are considered and that environmental and project information are available to the public.

This FONSI has been prepared pursuant to NEPA in accordance with the Council on Environmental Quality (CEQ) regulations as contained in 40 CFR 1500 to 1508, which directs federal agencies on how to implement the provisions of NEPA.

2.0 Background

The W. Kerr Scott Dam and Reservoir (W. Kerr Scott Reservoir or the project) is operated by the U.S. Army Corps of Engineers (USACE) and includes approximately 1,475 acres of open water at normal pool elevation (USACE 2010) and an additional 2,279 acres of surrounding land in Wilkes County, North Carolina. USACE is the federal agency responsible for maintaining and operating the dam, as well as the lands and water that comprise and surround the reservoir. To facilitate the management and use of these lands, USACE maintains a Master Plan for the project. The 1983 Master Plan, approved in 1983, provided USACE with a series of detailed construction projects for the different sites located within the project boundary. Over the last 30 years, these construction projects have either been completed or have been found to be not the best use of project resources. Over that time, USACE also has updated its policies directing the development and implementation of Master Plans. This includes updating the categories of Land Classifications used to define project lands, as well as shifting from a construction-based document to a policy-based document. In order to meet these new directives and comply with USACE policy that requires regular updates to a project's Master Plan, USACE will adopt the attached Master Plan at W. Kerr Scott Reservoir. The project area for the proposed Master Plan includes all of the lands within USACE project border.

3.0 Alternatives

Development of the alternatives to update the W. Kerr Scott Reservoir Master Plan began in 2009. USACE and its partners embarked upon an extensive data collection effort that included coordination with federal, state, and local agencies, as well as institutions and groups with knowledge of the project resources. In February 2010, USACE hosted an open house to solicit public input on the planning process. The comments received during the open house, and the subsequent 30-day public comment period, were used to inform the master planning process and are included in Appendix D of the Master Plan.

Over the following year, USACE and its consultants worked to develop options for classifying project lands and identifying Resource Objectives and Development Needs for these lands. The data collection, public comments, and findings of the planning team revealed that there was only one action alternative that would meet the purpose, need, and objectives of the Preferred Alternative. Based on these needs, the PEA identified one action alternative, the adoption of the Master Plan, which is USACE's Selected Action. The PEA also analyzed a No Action Alternative.

3.1 Selected Action – Adoption of the Master Plan

The policy-based Master Plan is USACE's Selected Action. Under the Selected Action, USACE will adopt the proposed Master Plan for W. Kerr Scott Reservoir. This will allow the project to comply with USACE regulations on maintaining an up-to-date Master Plan that includes the most recent USACE Land Classifications and management policies. It also will present USACE with a programmatic management tool for the project's lands.

The primary elements of the Selected Action are the new USACE Land Classifications that will be applied to project lands. The existing and proposed Land Classification acreages are presented in Table FONSI 1.

The definition of and use of Flowage Easements (See Master Plan Section 2.21) remains the same between the two documents. The Low Density Use definition used in the 1983 Master Plan is incorporated into the Multiple Resource Management classification presented in the Selected Action. The Intensive Use classification used in the 1983 Master Plan can be divided between the Recreation and Multiple Resource categories included in the Selected Action. Finally, the Operations classification presented in the Selected Action includes lands identified as Intensive Use in the 1983 Master Plan. Definitions for the three primary Land Classifications included in the Selected Action are provided below.

- Project Operations: This classification category should include those lands required for the structure, operations center, office, maintenance compound, and other areas that are used solely for project operations.
- Recreation: Land developed for intensive recreational activities by the visiting public, including developed recreation areas and areas for concession, resort, and quasi-public development. At new projects, recreation areas planned for initial development will be

included in this classification. Future areas will be classified as Multiple Resource Management until initiation of the development.

- Multiple Resource Management: Lands managed for one or more, but not limited to, these activities to the extent that they are compatible with the primary allocation(s). The activities include: Recreation-Low Density, Wildlife Management General, Vegetation Management, Inactive and/or Future Recreation Areas, Easement Lands.

Table FONSI 1: Current and Proposed Land Classifications

Land Classification	Acreage	
	1983 Master Plan	Selected Action
Flowage Easements	2,021	2,021
Low Density Use	44	N/A
Multiple Resource Management	N/A	1,614
Recreation	N/A	692
Intensive Use	1,543	N/A
Operations	840	72

The inconsistency in total acreage listed in Table FONSI 1 is based on the technology used for each plan. In either case, acreages presented in a Master Plan are for planning purposes only (official acreages are maintained by USACE Real Estate Division). The different Land Classifications used in the two Master Plans make a direct comparison difficult; however, some similarities do exist. Table FONSI 2 shows how the 1983 Master Plan Land Classifications have translated into the proposed Master Plan.

Table FONSI 2: Conversion of Land Classifications Between 1983 Master Plan and Proposed Master Plan

1983 Master Plan	Proposed Master Plan
Flowage Easement	Flowage Easement
Low Density Use	Multiple Resource Management
Intensive Use	Recreation or Multiple Resource Management
Operations	Operations

The proposed Land Classifications will be accompanied by Resource Objectives. Resource Objectives will be applied on three levels: project-wide, Land Classifications, and individual sites. At each level, the Resource Objectives will provide goals and objectives related to the management of natural, cultural, and recreational resources. On the individual site level, Resource Objectives could be accompanied by Development Needs. Development Needs include specific actions to implement the Resource Objectives.

The policy-based nature of the Selected Action will allow USACE to update the Master Plan as it implemented the Resource Objectives and Development Needs. Updates will document completed actions and refocus the management of the given site. These updates could be made by the W. Kerr Scott Reservoir staff, as they are most involved in the day-to-day management of

the project. Updates also could include changes in Land Classifications. This level of update will involve coordination with USACE Wilmington District Office.

3.2 Alternatives Considered

The EA also considered a No Action Alternative. Under the No Action Alternative, an updated Master Plan would not be approved for W. Kerr Scott Reservoir and the project would fail to comply with USACE regulations. The 1983 Master Plan would continue to provide the only source of comprehensive management guidance and philosophy. Information provided in the current plan is out of date and no longer adequately addresses the needs of USACE, its partners, or the visitors at W. Kerr Scott Reservoir. Furthermore, the 1983 Master Plan does not include revised Land Classifications.

Under the direction of the 1983 Master Plan, USACE and its partners would continue to implement the outdated development plans it prescribed. Management of the project would lack the support of an up-to-date guidance document. The original development focused document would prevent USACE from taking a proactive approach to managing W. Kerr Scott Reservoir. Future major developments or resource management policies would require approval on a case-by-case basis without the benefit of evaluation in the context of an overall plan.

4.0 Impacts of the Selected Alternative

Table FONSI 3 provides a brief summary and comparison of impacts to the physical and natural environment for the Selected Alternative and the No Action Alternative.

Table FONSI 3: Environmental Impact Comparison of Alternatives

Resource Topic	Selected Action	No Action Alternative
Physical Environment	• Confine future intensive development to previously disturbed lands (+) • Limit intensity of human activity within project boundary (+) • Buffer natural resources from actions on USACE-managed/neighboring lands (+) • Maintain compliance with regulations described in Section 4.1.1 through 4.1.8 of PEA (+)	• Allow future intensive development throughout the project (-) • Allow intense human activity through the project (-) • Maintain buffer only until future development is proposed (+/-) • Maintain compliance with regulations described in Section 4.1.1 through 4.1.8 of PEA (+)
Natural Resources	• Confine future intensive development to previously disturbed lands (+) • Limit intensity of human activity within project boundary (+) • Avoid impacts to wetlands and threatened and endangered species (+) • Allow USACE and its partners to provide more focused natural resource management actions to larger areas for a longer period of time (+) • Maintain compliance with regulations described in Section 4.2.1 through 4.2.4 of PEA (+)	• Allow future intensive development throughout the project (-) • Allow intense human activity through the project (-) • Avoid impacts to wetlands and threatened and endangered species (+) • Compromise current/future USACE work to improve wildlife habitat by failing to set aside lands for low-intensity activity (-) • Maintain compliance with regulations described in Section 4.2.1 through 4.2.4 of PEA (+)

Table FONSI 3: Environmental Impact Comparison of Alternatives

Resource Topic	Selected Action	No Action Alternative
Socioeconomic Characteristics	• Continue to serve the community and attract tourists to the region (+) • Maintain existing level of recreational activity with focus on future low-intensity activities (+) • Recognize the need for growth of local community services before the project can expand (+) • Maintain compliance with the regulations described in Section 4.3.1 through 4.3.4 of PEA (+)	• Continue to serve the community and attract tourists to the region (+) • Continue to develop new intensive recreation sites throughout the project (+/-) • Require investments in roads and utilities to support future growth (+/-) • Maintain compliance with the regulations described in Section 4.3.1 through 4.3.4 of PEA (+)

5.0 Environmental Commitments

The Master Plan and PEA commit to future NEPA analysis and agency consultation as specific projects are developed under the direction of the Master Plan. If additional environmental commitments are made as a result of the public and agency scoping process, they will be included in this section of the final FONSI.

6.0 Public and Agency Coordination

Agency and public involvement was initiated in February 2010 when USACE published notices announcing the potential project and the first public open house. This was followed by public comment periods, agency meetings, and additional public open houses. These public involvement activities are described in greater detail in Section 4 of the Master Plan. This information will be expanded in the Final Master Plan to document public scoping activities during the release of the document.

On October 1, 2011, the Master Plan, attached PEA, and Draft FONSI were made available for a 30-day public comment period on the W. Kerr Scott Reservoir web site, at the USACE project office, and at the Wilkes County Public Library. A public notice was published in the Wilkes Journal-Patriot newspaper to announce the location and availability of the document. Copies of the document also were mailed to the regulatory agencies listed in Appendix A of the attached PEA. Responses to comments received during the review period are included in Appendix D of the attached Master Plan. Correspondence was received from the following:

Federal Agencies

- U.S. Department of Agriculture, Natural Resources Conservation Service

State Agencies

- North Carolina Department of Cultural Resources
- North Carolina Department of Environment and Natural Resources, Natural Heritage Program
- North Carolina Wildlife Resources Commission

Local Agencies

- No comments received

Elected Officials

- No comments received

Interested Groups and Individuals

- No comments received

None of the comments received identified any reasonable alternatives or major substantive issues that are not already addressed in the attached PEA. In addition, none of the comments require substantive changes to the Selected Action or impact determinations in the PEA.

7.0 Finding of No Significant Impact

I have reviewed the Programmatic Environmental Assessment (PEA) for the Implementation of Master Plan for W. Kerr Scott Dam and Reservoir, the information provided by interested parties, and the information contained in ths Finding of No Significant Impact, and I find that the adoption of the W. Kerr Scott Dam and Reservoir Master Plan will not significantly affect the quality of the human environment. Therefore, preparation of an Environmental Impact Statement, pursuant to Section 102(2)© of the National Environmental Policy Act of 1969, as amended, is not required.

Date: 15 FEB 12

Steven A. Baker
Colonel, U.S. Army
District Commander

U.S. Army Corps
of Engineers
WILMINGTON DISTRICT

Programmatic Environmental Assessment

Implementation of Master Plan
For
W. Kerr Scott Dam and Reservoir

October 2011

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Executive Summary

The W. Kerr Scott Dam and Reservoir (W. Kerr Scott Reservoir or the project) is operated by the U.S. Army Corps of Engineers (USACE) and includes approximately 1,475 acres of open water at normal pool elevation (USACE 2010) and an additional 2,279 acres of surrounding land in Wilkes County, North Carolina. The USACE is the federal agency responsible for maintaining and operating the dam, as well as the lands and water that comprise and surround the reservoir. To facilitate the management and use of these lands, USACE maintains a Master Plan for the project. The 1983 Master Plan, approved in 1983, provided USACE with a series of detailed construction projects for the different sites located within the project boundary. Over the last 30 years, these construction projects have either been completed or have been found to be not the best use of project resources. Over that time, USACE also has updated its policies directing the development and implementation of Master Plans. This includes updating the categories of Land Classifications used to define project lands, as well as shifting from a construction-based document to a policy-based document. In order to meet these new directives and comply with USACE policy that requires regular updates to a project's Master Plan, USACE proposes to adopt a new Master Plan at W. Kerr Scott Reservoir. The project area for the proposed Master Plan includes all of the lands within the USACE project border.

The proposed Master Plan is needed to provide USACE with an improved management tool at W. Kerr Scott Reservoir. The 1983 Master Plan is a "construction document" that provides USACE with specific direction on developing select sites and structures. The construction document does not provide USACE with means of refining these plans or taking proactive action to anticipate and respond to needs that are not included in the document. Furthermore, once the elements included in the 1983 Master Plan have been constructed or eliminated, there is no opportunity for USACE to work to further improve individual sites at W. Kerr Scott Reservoir. The proposed Master Plan provides a policy approach to managing the project. This proactive approach would allow for refinement and adaptively managing the project resources. This approach also would allow USACE to use the updated document to manage the project into the future. The management tool includes a Geographic Information Systems (GIS) database. The database can be continually updated throughout the life of the plan to allow USACE to take proactive management actions and adapt existing strategies.

The primary elements of the Preferred Alternative are the new USACE Land Classifications that would be applied to project lands. The proposed Land Classifications would be accompanied by Resource Objectives. Resource Objectives would be applied on three levels: project-wide, Land Classifications, and individual sites. At each level, the Resource Objectives would provide goals and objectives related to the management of natural, cultural, and recreational resources. On the individual site level, Resource Objectives could be accompanied by Development Needs. Development Needs would include specific actions to implement the Resource Objectives.

The policy-based nature of the Preferred Alternative would allow USACE to update the Master Plan as it implemented the Resource Objectives and Development Needs. Updates would document completed actions and refocus the management of the given site. These updates could be made by the W. Kerr Scott Reservoir staff, as they are most involved in the day-to-day management of the project. Updates also could include changes in Land Classifications. This level of update would involve coordination with USACE Wilmington District Office.

This Programmatic Environmental Assessment (PEA) evaluated resources in the project area for potential effects by the proposed adoption of the Master Plan. The following resource and policy issues were considered during preparation of this PEA: geology, topography, and soils; floodplains; water resources; air quality; noise; cultural resources; hazardous materials; recreation and aesthetic resources; vegetation; fish and wildlife; threatened and endangered species; wetlands; socioeconomic characteristics; transportation; utilities and conservation potential; and safety and security, as well as applicable Executive Orders. This PEA determined that, while minor impacts would be imposed on several resource/policy areas, there would be no significant or adverse impacts from the Proposed Action, and that no mitigating actions would be required. No permits would be immediately required.

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ACRONYMS AND ABBREVIATIONS

CEQ	Council on Environmental Quality
EP	Engineer Pamphlet
EPA	U.S. Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Maps
FONSI	Finding of No Significant Impact
GIS	Geographic Information Systems
JPA	Joint Permit Application
msl	relative to mean sea level
National Register	National Register of Historic Places
NCDENR	North Carolina Department of Environment and Natural Resources
NEPA	National Environmental Policy Act of 1969, as amended
NHPA	National Historic Preservation Act of 1966, as amended
PEA	Programmatic Environmental Assessment
the project	the W. Kerr Scott Dam and Reservoir
SHPO	State Historic Preservation Office
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
W. Kerr Scott Reservoir	W. Kerr Scott Dam and Reservoir

1.0 Introduction

The W. Kerr Scott Dam and Reservoir (W. Kerr Scott Reservoir or the project) is operated by the U.S. Army Corps of Engineers (USACE). It includes approximately 1,475 acres of open water at normal pool (USACE 2010) and an additional 2,279 acres of fee land in Wilkes County, North Carolina. The dam is located approximately four (4) miles west of the Town of Wilkesboro. These areas are easily accessible via the principal highways in the region, including U.S. Highway 421 and State Highway 268. Secondary and county highways provide access to lands surrounding the reservoir.

W. Kerr Scott Reservoir was initially authorized by the 79th Congress through the Flood Control Act of 1946 (Public Law 79-526). Additional legislation authorized water supply, fish and wildlife conservation, and recreation. Additional purposes of the reservoir were authorized by the River and Harbor Act of 1958 and the Fish and Wildlife Coordination Act of 1958.

Along portions of the reservoir, USACE manages considerable amounts of the surrounding land. In other locations, federal lands are confined to a ribbon of land surrounding the water. The larger land holdings are located on the eastern, western, and northern sides of the reservoir. USACE maintains recreational and wildlife areas in these locations. USACE built and maintains the structures located in these recreational and wildlife areas, as well. The Master Plan provides a programmatic approach to the management of all of the lands included within the W. Kerr Scott Reservoir boundary. Since this Programmatic Environmental Assessment (PEA) must cover all environmental features that could be affected by adoption of the proposed Master Plan, the project area, for purposes of this PEA, includes all areas of lands and waters within the reservoir boundary.

This PEA evaluates the implementation of the W. Kerr Scott Reservoir Master Plan. The PEA further analyzes the potential impact that implementing the Master Plan would have on the natural, cultural, and human environment. This document has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended; regulations of the Council on Environmental Quality (CEQ) (40 CFR 1508.9); and USACE regulations, including Engineer Regulation 200-2-2: Procedures for Implementing NEPA.

The typical focus of NEPA compliance consists of environmental impact assessments for individual projects, rather than for long-range plans. However, application of NEPA to earlier and more strategic decisions not only meets the CEQ implementing regulations (40 CFR 1500-1508) and USACE regulations for implementing NEPA (ER 200-2-2), but allows USACE to begin considering the environmental consequences of its actions long before any physical activity is planned. Multiple benefits can be derived from such early consideration. Effective and early NEPA integration with the master planning process can significantly increase the usefulness of the plan to the decision maker, if environmental information can be provided to the correct individuals, at the right time, and in the right form. If such utility can be realized, organizational outcomes, such as support for the

project mission and NEPA compliance can be improved. Environmental documents prepared concurrently with the Master Plan can influence and modify strategic land use decisions, whereas environmental documents prepared after the Master Plan would have little influence on strategic decisions already made.

The intention of the Master Plan is to develop Land Classifications that will guide the sustainable development of resources within the W. Kerr Scott Reservoir. It is not feasible to define the exact nature of potential impacts prior to receiving specific project proposals. Therefore, environmental consequences may be less than or may, in fact, exceed what is described in this PEA. To ensure future environmental consequences are captured and coordinated as accurately as possible, additional NEPA coordination will be conducted, as appropriate, for construction projects proposed.

2.0 Purpose and Need for the Master Plan

W. Kerr Scott Reservoir was authorized by the Flood Control Act of 1946. The reservoir's initial authorizing legislation also included providing for hydroelectric production in support of the surrounding region. This initial authorization included provisions for public recreation. These provisions were supplemented by additional legislation passed during the development and operation of the reservoir and include water supply, fish and wildlife, and recreation (Table C-1). Adoption of the proposed Master Plan is consistent with the authorized purposes of W. Kerr Scott Reservoir.

Table C-1: W. Kerr Scott Reservoir Authorized Purposes

Authorized Purpose	Authorizing Law	Date	Statute	Common Name
Recreation	PL 78-534	12/22/1944	58 Stat 887	Flood Control Act of 1944
Flood Control	PL 79-526	7/24/1946	60 Stat 641	Flood Control Act of 1946
Water Supply	PL 85-500	7/3/1958	72 Stat 297	Rivers and Harbors Act of 1958
Fish and Wildlife	PL 85-624	8/12/1958	72 Stat 563	Fish and Wildlife Coordination Act

An important purpose of the Master Plan is to allow W. Kerr Scott Reservoir to meet updated USACE regulations. Specifically, the new Master Plan complies with Engineer Pamphlet (EP) 1130-2-550 Project Operations – Recreation Operations and Maintenance Guidance and Procedures which was last updated on August 30, 2008. Included in the EP were new Land Classification categories. These categories are different than the ones used in the 1983 W. Kerr Scott Master Plan and reflect USACE's new direction in master planning.

The proposed Master Plan is needed to provide USACE with an improved management tool at W. Kerr Scott Reservoir. The 1983 Master Plan is a "construction document" that provides USACE with specific direction on developing select sites and structures. The construction document does not provide USACE with means of refining these plans or taking proactive action to anticipate and respond to needs that are not included in the document. Furthermore, once the elements included in the 1983 Master Plan have been constructed, there is no opportunity for USACE to work to further improve individual sites at W. Kerr Scott Reservoir. The proposed Master Plan provides a policy approach to managing the project. This proactive approach would allow for refinement and adaptively managing the project resources. This approach also would allow USACE to use the updated document to manage the project into the future. The management tool includes a Geographic Information Systems (GIS) database. The database can be continually updated throughout the life of the plan to allow USACE to take proactive management actions and adapt existing strategies.

3.0 Alternatives

This chapter describes alternatives for updating the W. Kerr Scott Reservoir Master Plan. The Preferred Alternative was designed to update existing inventories and plans, while providing a policy-based document that would provide a programmatic approach to the future management of the reservoir. This PEA examines two alternatives: the Preferred Alternative of adopting the Master Plan and a No Action Alternative.

3.1 Development of Alternatives

Development of the alternatives to update the W. Kerr Scott Reservoir Master Plan began in 2009. USACE and its partners embarked upon an extensive data collection effort that included coordination with federal, state, and local agencies, as well as institutions and groups with knowledge of the project resources. In February 2010, USACE hosted an open house to solicit public input on the planning process. The comments received during the open house, and the subsequent 30-day public comment period, were used to inform the master planning process and are included in Appendix D of the proposed Master Plan.

Over the following year, USACE and its consultants worked to develop options for classifying project lands and identifying Resource Objectives and Development Needs for these lands. The data collection, public comments, and findings of the planning team revealed that there was only one action alternative that would meet the purpose, need, and objectives of the master planning process. This alternative is the Preferred Alternative and is discussed in detail Section 3.2 of this PEA.

The Preferred Alternative was selected as it would meet the need for sustainable management and conservation of natural resources within the reservoir while providing for current and future quality outdoor recreational needs of the public.

3.2 Preferred Alternative: Adoption of the Master Plan

The proposed policy-based Master Plan is USACE's Preferred Alternative. Under the Preferred Alternative, USACE would adopt the proposed Master Plan for W. Kerr Scott Reservoir. This would allow the project to comply with USACE regulations on maintaining an up-to-date Master Plan that includes the most recent USACE Land Classifications and management policies. It also would present USACE with a programmatic tool for management of the project's lands.

The primary elements of the Preferred Alternative are the new USACE Land Classifications that would be applied to project lands. The existing and proposed Land Classification acreages are presented in Table C-2.

The definition of and use of Flowage Easements (See Section 2.21 of the proposed Master Plan) remains the same between the two documents. The Low Density Use definition used in the 1983 Master Plan is incorporated into the Multiple Resource Management classification presented in the Preferred Alternative. The Intensive Use

classification used in the 1983 Master Plan can be divided between the Recreation and Multiple Resource categories included in the Preferred Alternative. Finally, the Operations classification presented in the Preferred Alternative includes lands identified as Intensive Use in the 1983 Master Plan. Definitions for the three primary Land Classifications included in the Preferred Alternative are provided below.

- Project Operations: This classification category should include those lands required for the structure, operations center, office, maintenance compound, and other areas that are used solely for project operations.
- Recreation: Land developed for intensive recreational activities by the visiting public, including developed recreation areas and areas for concession, resort, and quasi-public development. At new projects, recreation areas planned for initial development will be included in this classification. Future areas will be classified as Multiple Resource Management until initiation of the development.
- Multiple Resource Management: Lands managed for one or more, but not limited to, these activities to the extent that they are compatible with the primary allocation(s). The activities include: Recreation-Low Density, Wildlife Management General, Vegetation Management, Inactive and/or Future Recreation Areas, Easement Lands.

Table C-2: Current and Proposed Land Classifications

Land Classification	Acreage	
	1983 Master Plan	Preferred Alternative
Flowage Easements	2,021	2,021
Low Density Use	44	N/A
Multiple Resource Management	N/A	1,614
Recreation	N/A	692
Intensive Use	1,543	N/A
Operations	840	72

The inconsistency in total acreage listed in Table C-2 is based on the technology used for each plan. In either case, acreages presented in a Master Plan are for planning purposes only (official acreages are maintained by USACE Real Estate Division). The different Land Classifications used in the two Master Plans make a direct comparison difficult; however, some similarities do exist. Table C-3 shows how the 1983 Master Plan Land Classifications have translated into the proposed Master Plan.

Table C-3: Conversion of Land Classifications Between 1983 Master Plan and Proposed Master Plan

1983 Master Plan	Proposed Master Plan
Flowage Easement	Flowage Easement
Low Density Use	Multiple Resource Management
Intensive Use	Recreation or Multiple Resource Management
Operations	Operations

The proposed Land Classifications would be accompanied by Resource Objectives. Resource Objectives would be applied on three levels: project-wide, Land Classifications, and individual sites. At each level, the Resource Objectives would provide goals and objectives related to the management of natural, cultural, and recreational resources. On the individual site level, Resource Objectives could be accompanied by Development Needs. Development Needs would include specific actions to implement the Resource Objectives.

The policy-based nature of the Preferred Alternative would allow USACE to update the Master Plan as it implemented the Resource Objectives and Development Needs. Updates would document completed actions and refocus the management of the given site. These updates could be made by the W. Kerr Scott Reservoir staff, as they are most involved in the day-to-day management of the project. Updates also could include changes in Land Classifications. This level of update would involve coordination with USACE Wilmington District Office.

3.3 No Action Alternative

Inclusion of the No Action Alternative is prescribed by CEQ regulations and serves as the benchmark against which federal actions can be evaluated. Under the No Action Alternative, an updated Master Plan would not be approved for W. Kerr Scott Reservoir and the project would fail to comply with USACE regulations. The 1983 Master Plan would continue to provide the only source of comprehensive management guidance and philosophy. Information provided in the current plan is out of date and no longer adequately addresses the needs of USACE, its partners, or the visitors at W. Kerr Scott Reservoir. Furthermore, the 1983 Master Plan does not include revised Land Classifications.

Under the direction of the 1983 Master Plan, USACE and its partners would continue to implement the outdated development plans it prescribed. Management of the project would lack the support of an up-to-date guidance document. The original development focused document would prevent USACE from taking a proactive approach to managing W. Kerr Scott Reservoir. Future major developments or resource management policies would require approval on a case-by-case basis without the benefit of evaluation in the context of an overall plan.

3.4 Alternatives Considered but Eliminated

During the master planning process, a variety of different Land Classifications, Resource Objectives, and Development Needs were considered for W. Kerr Scott Reservoir. These different elements were refined or revised to best meet the missions, purposes, goals, and objectives of USACE and its partners at W. Kerr Scott Reservoir. The result of these refinements and revisions is illustrated in USACE's Preferred Alternative.

USACE met with local, state, and federal agencies to solicit additional input on the master planning process. USACE also held a public open house on February 17, 2010 at the W. Kerr Scott Reservoir Visitor Assistance Center. Comments received during these meetings and the subsequent comment periods provided USACE with insight into public desires for the future use of project lands, as well as regulatory and resource concerns of other agencies. This information was used in identifying the appropriate Land Classifications for different management areas within the project, as well as the Resource Objectives that should govern these classifications.

In addition to the broad Land Classification Resource Objectives that were identified and would be applied to all similarly classified lands, each site was evaluated in order to identify appropriate, site specific Resource Objectives. The decision process for whether Resource Objectives were appropriate at the broader Land Classification level instead of the focused site specific level included evaluation of the sensitivity of certain resources, their degree of current protection, and the potential for disturbance from existing or future use of the sites.

Specific future Development Needs have been identified for each site, if required to maintain public use of the site, or required to achieve the recommended future use. The Master Plan focuses on the most cost effective actions needed to achieve the Resource Objectives. Alternatives for design and siting of future development at each site is beyond the scope of the Master Plan, and would be evaluated as specific new uses are proposed, or as repair and/or upgrading of existing facilities may require.

4.0 Affected Environment

This section describes the physical, natural, and human environments in and around the project area. Resources are described below in context with W. Kerr Scott Reservoir.

4.1 Physical Environment

4.1.1 Geology, Topography, and Soils

W. Kerr Scott Reservoir is located within the inner belt of the Piedmont Physiographic Province between the Blue Ridge and Brushy Mountain ranges. The general area is underlain by ancient metamorphic rocks of sedimentary origin, most of which belong to a broad geologic group known as the "Carolina Gneiss" (USACE 1983). Since the publication of the 1983 Master Plan, there has been little development that may have impacted geologic resources.

Located in the foothills of the Blue Ridge Mountains, the topography within the W. Kerr Scott Reservoir watershed is rather varied. In the northern reaches of the watershed, elevations reach 4,000 feet relative to mean sea level (msl). Elevations drop to approximately 1,000 feet msl within the floodplain below the reservoir before rising to nearly 2,600 feet msl in the southern reaches of the watershed (USACE 1983). The terrain in the immediate vicinity of the reservoir ranges from steep hills and wooded slopes to sheer rock cliffs in the river gorge sections above the main body of the reservoir.

The soil association for the project lands is the Civil – Pacolet Association. This association is well drained, moderately deep to deep, upland soils with firm, clay to clay loam subsoil on fairly narrow ridges and choppy sloping to steep side slopes (USACE 1983). These soil conditions support most types of development. The primary constraint has been and continues to be the slope at which these soils exist. A more complete listing of the soils present on project lands is included in Appendix E, Table E-1 of the Master Plan. Additional discussion of soils, topography, and geology is included in Section 2.8 of the Master Plan. The general condition of soils within the existing Land Classifications is listed below:

- Soils and topography within lands classified as Flowage Easements exist in a natural, undisturbed state. USACE does not develop lands in this classification. Any change from natural condition would be a result of actions by adjacent landowners or others.
- Development within Low Density Use lands is limited. Developments could include the installation of trails and signage. Changes to natural soil and topographic conditions also could occur through USACE vegetation management actions. The limited area included in this classification represents a very small amount of the total project.

- Lands currently classified for Intensive Use differ from natural soil and topographic conditions. The parks, overlooks, and marina within the project contain a number of buildings and structures that have compressed the soil with impervious surfaces, reducing natural soil conditions. The Wildlife Management Areas (WMAs) are less developed, but still contain trails and supporting infrastructure that have altered natural soil conditions.

Specific agency consultation for physical resources is discussed in Chapter 9 of the Master Plan. Soils and topography are regulated by standards and laws included in the North Carolina Erosion and Sediment Control Planning and Design Manual. The manual provides guidance on designing, implementing and monitoring erosion and sediment controls and stormwater management measures. The North Carolina Division of Land Management and USACE are responsible for approving these measures.

4.1.2 Floodplains

The 100-year floodplain elevation within the project boundary is at 1,075 feet msl. This elevation is dictated by the different pool levels that are maintained by USACE to meet its mission at the project. In order to meet its mission to provide recreational resources at W. Kerr Scott Reservoir, many of the sites and facilities are located within the floodplain. These structures have been designed to withstand and not interfere with the conveyance of floodwaters. This is important, as periodically it becomes necessary for these lands to be flooded to achieve USACE's flood protection mission.

Other structures in the floodplain include shoreline stabilization structures. These structures were installed, primarily, to protect the shoreline from erosion. Although these features alter the wave action along a select portion of the project shoreline, they are not of great enough magnitude to alter the conveyance of floodwaters through the project.

Specific agency consultation for physical resources is discussed in Chapter 9 of the Master Plan. Floodplains are defined and regulated by the Federal Emergency Management Agency (FEMA) and mapped on Flood Insurance Rate Maps (FIRM). Local municipalities planning offices also may play a role in defining floodplains and regulating their use. In the case of W. Kerr Scott Reservoir, USACE works directly with FEMA to define and protect floodplains within the project boundary. All actions occurring within floodplains must be consistent with Executive Order 11988: Floodplain Management, and related USACE policy.

4.1.3 Water Resources

Located in the headwaters of the Yadkin River Basin, W. Kerr Scott Reservoir is designed to maintain a normal pool elevation of approximately 1,030 feet msl. At this elevation, the reservoir is nearly eight miles long with approximately 55 miles of shoreline. This equates to nearly 1,475 acres of open water surface area. The project design and operation provide for a full flood control pool at 1,075 feet msl.

The Yadkin-Pee Dee River Basin is the second largest river basin in North Carolina, covering over 7,200 square miles. It includes portions of 83 municipalities and all or part of 24 counties. In North Carolina, the basin contains approximately 5,990 miles of freshwater streams and rivers and is currently home to approximately 1.6 million people. Over the next 25 years, it is anticipated that this population will grow by 50 percent (Yadkin Riverkeeper 2009, Yadkin-Pee Dee River Basin Association 2009). This growth is expected to lead to increased levels of urbanization.

The North Carolina Division of Water Quality publishes data on water quality throughout the state in its 303(d) Impaired Waters Assessment. The most current 303(d) list available for North Carolina was completed in 2008. The report identifies the Yadkin River, as it empties into W. Kerr Scott Reservoir, as being impaired for supporting aquatic life because the body of water fails to meet the national water quality criteria established in the Clean Water Act (NCDWQ 2009a). These impairments are due to turbidity, which prevents appropriate conditions for natural processes within aquatic habitats. Based on current pollutant levels, the North Carolina Department of Health and Human Services has not issued any fish consumption advisories for W. Kerr Scott Reservoir or its surrounding tributaries (NCDHHS 2009).

The North Carolina Division of Water Quality also classifies water bodies by their ability to support different uses. The majority of the creeks that flow into the reservoir, and the waters of the reservoir itself, are categorized as supporting primary recreation (swimming) and trout waters, while providing water supply in a relatively highly developed region. Some select areas of the Yadkin River immediately above or below the reservoir do not support primary recreation but still support healthy aquatic life and secondary recreation (boating) (NCDWQ 2009b). Additional information on hydrology and water quality is included on pages 11 and 12 of the Master Plan, respectively.

During the construction of the reservoir, an allocation of 8,300 acre-feet below the elevation 1,000 feet msl was designated for sediment accumulation and storage. This volume was designated based on the predicted levels of erosion for the lands surrounding W. Kerr Scott Reservoir (USACE 1983). Since the publication of the 1983 Master Plan, no formal surveys have been completed of the sediment storage areas. There is growing visual and anecdotal evidence that suggests sedimentation is becoming an issue, especially in the smaller coves and tributaries. Additional information on sedimentation is included Section 2.4 of the Master Plan.

In addition to surface waters, ground water resources also exist within the project boundary. The most recent ground water data for the region was collected by the North Carolina Division of Water Resources between 1976 and 1991. The monitoring well that was used to gather this information was located in North Wilkesboro. This well measured consistent ground water levels ranging from 1,150 to 1,155 feet. Changes within this range followed a fairly regular pattern of draw downs and recharges (NCDWR 2009a).

Since the publication of the 1983 Master Plan, USACE has closed some of its ground water wells and switched to municipal water supplies at other locations. Municipal water

is now provided at Fort Hamby Park, Berry Mountain Park, Fish Dam Creek Park, Dark Mountain Park, and the Visitors' Assistance Center. The quality and condition of public water supply systems is monitored through the state's Safe Drinking Water Information System (NCDENR 2010a). Additional discussion of ground water is included in Section 2.3.2 of the Master Plan.

Within the project boundary, water quality is influenced by the different land uses. Flowage Easements are left undeveloped by USACE and retain natural characteristics that allow it to absorb stormwater before it reaches surrounding water resources. Existing Low Density lands also retain these natural characteristics, as development is limited. The majority of project lands, however, are currently classified as Intensive Use or Operations. These classifications allow for more intense development and use. This development includes impervious surfaces and compacted soils that support parking lots, buildings, and other recreational and operational infrastructure. The impervious surfaces and compacted soils allow for the accumulation of pollutants in stormwater runoff and accelerate the movement of this runoff to the surrounding water resources.

Specific agency consultation for physical resources is discussed in Chapter 9 of the Master Plan. In addition to maintaining compliance with Sections 401, 402, and 404 of the Clean Water Act, future development would follow direction provided by Executive Order 11990: Protection of Wetlands, and related USACE regulations. Along with USACE, these laws fall under the purview of the North Carolina Division of Water Resources, the North Carolina Division of Coastal Management, the North Carolina Division of Water Quality, the U.S. Coast Guard, and the U.S. Environmental Protection Agency (EPA). Executive Order 13514: Federal Leadership in Environmental, Energy, and Economic Performance provides further guidance on implementing these regulations.

4.1.4 Air Quality

W. Kerr Scott Reservoir is located in Wilkes County, North Carolina. Wilkes County is an attainment area for all federal air quality standards (EPA 2010a). Despite being in compliance with these standards, portions of the county are subjected to temporary impacts to air quality as a result of activities like large-scale construction projects. Air quality also is influenced by regional climate patterns.

Air quality within the project boundary is influenced by exhaust from motor vehicles and boats, the use of grills and fire pits, and other regional activities (such as large-scale construction projects). The large open area that is created by the reservoir allows for strong breezes to blow through the park. These breezes can rapidly reduce and/or eliminate any localized air quality concerns caused by these pollutants.

Lands currently classified for Intensive Use or Operations have the greatest potential to produce actions that may influence air quality. More specifically, the developed lands within these classifications include the heaviest concentrations of motor vehicle exhaust and building emissions within the project boundary. The undeveloped areas within these classifications, as well as lands classified as Flowage Easements or Low-Density Use,

have limited impacts to air quality. Impacts in these areas are confined to short-term effects from forestry or construction actions.

Specific agency consultation for physical resources is discussed in Chapter 9 of the Master Plan. Air quality is regulated by Clean Air Act and implemented by the EPA and the North Carolina Department of Environment and Natural Resources (NCDENR). Air quality standards are defined in the National Ambient Air Quality Standards. Actions which result in increased emissions may require a permit issued by NCDENR. Executive Order 13514: Federal Leadership in Environmental, Energy, and Economic Performance provides further guidance on implementing these regulations.

4.1.5 Noise

Wilkes County, North Carolina, is a relatively rural area. As such, obtrusive noise sources are generally confined to heavily trafficked road corridors or in close proximity to agricultural or industrial activities. Within W. Kerr Scott Reservoir, there are few obtrusive sources of noise. Primarily, noise sources are vehicles traveling local or project roads and boat engines on the water. Occasional public events that may include amplified voices or music also occur. Sensitive noise receptors adjacent to and within the project area include areas occupied by park visitors, and wildlife communities throughout the project. Some private residences are located just beyond the project boundary, as well.

Lands currently classified for Intensive Use or Operations have the greatest potential to create noise within the project boundary. More specifically, the developed lands within these classifications include the heaviest concentrations of motor vehicles and recreational activities that produce varying levels of noise. The undeveloped areas within these classifications, as well as lands classified as Flowage Easements or Low-Density Use, have limited noise sources. Impacts in these areas are confined to short-term effects from forestry or construction actions.

Specific agency consultation for physical resources is discussed in Chapter 9 of the Master Plan. Noise ordinances and regulations are developed and enforced by individual municipalities. These ordinances restrict the level of noise that can exist in certain areas and/or the time of day that they can exist.

4.1.6 Cultural Resources

Background research at the North Carolina State Historic Preservation Office (SHPO) identified a total of 18 previously recorded archaeological sites and three archaeological surveys within the boundary of the W. Kerr Scott Reservoir. Of these sites, three have been determined to be not eligible for inclusion in the National Register of Historic Places (National Register); the eligibility of the remaining 15 sites has not been determined. A total of 10 prehistoric sites are within the reservoir property. Prehistoric Site 31WK96 is a habitation site from the Early to Late Woodland periods, while the remaining prehistoric sites' function are unknown and range from the Early Archaic to the Late Woodland periods. A total of six historic archaeological sites are located within the reservoir boundaries and consist of cemeteries, industrial complex, and a

dwelling/military site. The sites range from the eighteenth to twentieth century. According to the site form, Site 31Wk95 (Fort Hamby Site) had cabins that were used by deserters during the Civil War. None of the above-ground features have survived, and only pits where the structures once stood remain. The remaining two sites are of unknown time period. No sensitive areas analysis has been developed for W. Kerr Scott Reservoir. Additional discussion of cultural resources is included in Section 2.17 of the Master Plan.

Specific agency consultation for cultural resources is discussed in Chapter 9 of the Master Plan. The National Historic Preservation Act, the Antiquities Act and the Reservoir Salvage Act regulate how cultural resources must be documented and preserved. Section 106 of the National Historic Preservation Act provides specific direction to federal agencies on protecting these resources. The North Carolina SHPO is responsible for documenting and managing cultural resources within the state and determining compliance with Section 106. Executive Order 11593: Protection and Enhancement of the Cultural Environment provides additional direction.

4.1.7 Hazardous Materials

The EPA's Toxics Release Inventory identifies one facility within close proximity to W. Kerr Scott Reservoir: Ithaca Industries, Inc. The facility is listed for its transfer of ammonium sulfate solutions to the Town of Wilkesboro Waste Water Treatment Plant. No onsite releases have been reported for the facility (EPA 2010b).

Within the project, there are two areas that contain hazardous materials. At the marina, there is a 2,000 gallon aboveground storage tank used to store fuel. The tank is located above the 1,080-foot msl flowage easement, near the marina shop. This is the only location within the lands currently classified as Intensive Use where hazardous materials are stored.

The second location within the project where hazardous materials are stored is at USACE maintenance area. A shed is used to store gasoline, paints, and other equipment. More paints are stored in the main shop of the maintenance area. The main shop contains an approved flammable cabinet for this storage. Other indoor storage occurs at the contractor office, where cleaning supplies are kept. Outside these buildings, fertilizer is stored in an open-sided shed, when it is stocked. Diesel fuel is stored in a 1,000 gallon, concrete lined aboveground storage tank within the maintenance area. Another 1,000 gallon concrete tank was used to store gasoline. This tank is currently empty and not used. This is the only location within the lands currently classified as Operations where hazardous materials exist.

Specific agency consultation for physical resources is discussed in Chapter 9 of the Master Plan. Hazardous materials are regulated by the Resource Conservation and Recovery Act, the Comprehensive Environmental Response, Compensation, and Liability Act, Oil Pollution Act, Toxic Substances Control Act, and related USACE guidelines. Any change in the storage or use of hazardous materials must comply with these

regulations. The EPA and North Carolina Division of Waste Management are responsible for ensuring compliance with these regulations.

4.1.8 Recreation and Aesthetic Resources

USACE has developed and maintains all 18 management areas at W. Kerr Scott Reservoir, with the support of its partners. The marina is operated under a lease agreement with a concessioner. The management areas are dispersed across the project lands on the largest contiguous pieces of USACE-owned land. Recreation opportunities at these areas include biking, boating, camping, fishing, hiking, hunting, picnicking, and swimming. A complete listing of the recreational sites and facilities available at W. Kerr Scott Reservoir is included in Appendix E, Table E-3 of the Master Plan with a more thorough review of each site in Chapter 6 of the Master Plan.

W. Kerr Scott Reservoir also includes a dedicated Visitor Assistance Center located in the Dam Site Park Area. The Visitor Assistance Center includes natural history displays, environmental education materials, and a library of local and natural history, cultural events, and other local topics important to the history of settlement throughout the region. USACE and its contributors and partners also operate an Environmental Education Center on the lower floor of the Visitor Assistance Center. The Environmental Education Center provides visitors with exhibits targeting environmental subjects, a Native Species Trail, an environmental learning classroom, and a bookstore offering educational items and publications. Programs are presented in the campgrounds throughout the summer and are available on request (e.g., schools, youth organizations, etc.). Additional discussions on interpretation and recreation are presented in Sections 2.18 and 2.22 of the Master Plan, respectively.

The steep slopes, mature vegetation, clear water, that comprise W. Kerr Scott Reservoir, coupled with the backdrop formed by the Blue Ridge Mountains, highlight the project's dramatic visual quality. The low intensity of development on the project lands enhances this visual quality. Due to the steep slopes around the lake, almost any location within the project boundary provides dramatic views of the lake and the surrounding mountains. Residential development and demand for shoreline access (including boat docks, piers, etc.) and shoreline stabilization efforts have resulted in increased human presence adjacent to project lands; however, the vegetated ribbon lands that line the water obstruct the views of developed areas. Policies covering vegetation and vegetation removal are addressed in the Shoreline Management Plan (USACE 2009b). Additional discussion on aesthetics and visual resources is included in Section 2.14 of the Master Plan.

Given the relatively undeveloped nature of the entire project, many appealing vistas exist throughout W. Kerr Scott Reservoir. The Flowage Easements, Low-Density Lands, and undeveloped portions of the Intensive Use areas support the natural visual quality throughout the project. These natural areas are enhanced by maintaining limited access and low levels of recreational development. Developed Recreation and Operation lands provide vistas that are unique to the project. They can be enjoyed by a large proportion of visitors, who are attracted to the educational and recreation facilities in these areas.

Specific agency consultation for physical resources is discussed in Chapter 9 of the Master Plan. Recreational development on project lands is dictated by USACE policy including ER 1130-2-550: Project Operations – Recreation Operations and Maintenance Guidance and Procedures.

4.2 Natural Resources

4.2.1 Vegetation

W. Kerr Scott Reservoir lies on the boundary of two forest regions, Northern and Central. In the Northern forest region, the white pine (*Pinus strobus*) and hemlock (*Tsuga canadensis*) are predominant forest types. In the Central Forest Region the predominant type is white pine with various species of hickory (*Carya* spp.), sycamore (*Platanus* spp.), and beech (*Fagus* spp.). Since the publication of the 1983 Master Plan, there has been a growing presence of imported forest pests, invasive species, and the threat of infestations throughout the Northern and Central forest regions. Additional changes are anticipated as regional vegetation adapts to changing climatic conditions (Dukes and Mooney 1999).

Within project lands, there are areas where hardwoods predominate and other areas where pines are the dominant species. The largest forest type, however, is mixed forest. The understory of these forests is populated with sour wood (*Oxydendrum arboreum*), dogwood (*Cornus florida*), rhododendron (*Rhododendron* spp.), mountain laurel (*Kalmia latifolia*), chinquapin (*Castanea pumila*), witch hazel (*Hamamelis virginiana*), and sassafras (*Sassafras albidum*).

The most heavily vegetated lands within the project are found on the Flowage Easements, the Low-Intensity Use lands, and the undeveloped portions of the lands classified for Intensive Use. The developed portions of the Recreation and Operations lands have more limited amounts of vegetation. Additional information on vegetation within the project boundary is included in Section 2.11 of the Master Plan.

Specific agency consultation for natural resources is discussed in Chapter 9 of the Master Plan. The clearing of vegetation is regulated by many of the same laws and regulations that apply to soil and topography. These laws are included in the North Carolina Erosion and Sediment Control Planning and Design Manual. The manual provides guidance on designing, implementing and monitoring erosion and sediment controls and stormwater management measures. The North Carolina Division of Land Management and USACE are responsible for approving these measures. Management of rare, threatened, and endangered species is discussed in Section 4.2.3.

4.2.2 Fish and Wildlife

Common wildlife species found at W. Kerr Scott Reservoir include White-tailed Deer (*Odocoileus virginianus*); Red Fox (*Vulpes vulpes*); Gray Squirrel (*Sciurus carolinensis carolinensis*), Eastern Cottontail (*Sylvilagus floridanus mallurus*), Raccoon (*Procyon lotor lotor*) Opossum (*Didelphis virginianus*); American Beaver (*Castor canadensis*) and Striped Skunk (*Mephitis mephitia*).

Birds found in the area include Wild Turkey (*Meleagris gallopavos*), Woodpeckers (*Melanerpes* spp.), Carolina Chickadee (*Poecile carolinensis*), Red-eyed Vireo (*Vireo olivaceus)*, Ovenbird (*Seiurus aurocapillus*), Mallard (*Anas plattyrhyochos*), and Wood Duck (*Aix sponsa*). A complete listing of the birds currently known to exist within project lands is included in Appendix E of the Master Plan.

Many angler species of fish can be found within W. Kerr Scott Reservoir. The primary species include Largemouth Bass (*Micropterus salmoides*), Striped (*Morone saxatilis*), and Smallmouth Bass (*Micropterus dolomieui*), Spotted Bass (*Micropterus punctulatus*), Crappie (*Pomoxis* spp.), Sauger (*Sander canadensis*), Walleye (*Stizostedion vitreum vitreum*), and Catfish (*Ictalurus* spp.). Spotted Bass were introduced to the reservoir to fill a void left due to the lack of success with Trout.

The areas within the project that experience the least disturbance to wildlife and wildlife habitat are found on the Flowage Easements, the Low-Intensity Use lands, and the undeveloped portions of the lands classified for Intensive Use. The developed lands and Operations lands have higher levels of disturbance.

Specific agency consultation for natural resources is discussed in Chapter 9 of the Master Plan. The U.S. Fish and Wildlife Service (USFWS) is one agency responsible for fish and wildlife protection, and has management authority under the U.S. Fish and Wildlife Coordination Act and subsequent regulations. Hunting and fishing of game species at W. Kerr Scott Reservoir is managed by the WRC and USACE. Permits and/or licenses are issued to manage populations of different species. Management of rare, threatened, and endangered species is discussed in Section 4.2.3.

4.2.3 Threatened and Endangered Species

Within Wilkes County, one federally-listed threatened species is known to exist, the bog turtle (*Clemmys muhlenbergii*) (USFWS 2010). Bog turtles inhabit slow, shallow, muck-bottomed rivulets of sphagnum bogs, calcareous fens, marshy/sedge-tussock meadows, spring seeps, wet cow pastures, and shrub swamps; the habitat usually contains an abundance of sedges or mossy cover. The turtles depend on a mosaic of microhabitats for foraging, nesting, basking, hibernation, and shelter. Beaver, deer, and cattle may be instrumental in maintaining the essential open-canopy wetlands the turtles rely on. They burrow into soft substrate of waterways, crawl under sedge tussocks, or enter muskrat burrows during periods of inactivity in summer (NatureServe 2010). Additional species of concern that are known to exist in the county, and may occur on projects lands, are listed in Appendix E, Table E-2 of the Master Plan. Additional discussion of threatened and endangered species and habitat is included in Section 2.13 of the Master Plan.

The areas within the project that experience the least disturbance to threatened and endangered species habitat are found on the Flowage Easements, the Low-Intensity Use lands, and the undeveloped portions of the lands classified for Intensive Use. The developed Intensive Use lands and Operations lands have higher levels of disturbance.

Specific agency consultation for natural resources is discussed in Chapter 9 of the Master Plan. Rare, threatened, and endangered species are defined and protected under the federal and state Endangered Species Acts. Additional protection is provided by specific legislation, such as the Bald Eagle Protection Act. These laws set limits on the types of actions that can occur within habitat that supports these species. The laws and regulations also define the permitting or mitigation process that must occur to offset impacts to rare, threatened, or endangered species. The North Carolina Natural Heritage Program and the U.S. Fish and Wildlife Service are responsible for implementing these laws and ensuring appropriate compliance.

4.2.4 Wetlands

Wetlands are lands that are wet at least part of the year due to either saturated soils or standing water. Wetlands include a variety of natural systems, such as marshes, swamps, and bottomland hardwoods (NCDENR 2010b). Available mapping of wetlands is very generalized; therefore, proposed development requires wetland determination for potential permitting on a site-by-site basis.

Specific agency consultation for wetland resources is discussed in Chapter 9 of the Master Plan. Wetlands are regulated under Section 401 and 404 of the Clean Water Act. A Section 401 Water Quality Certification ensures compliance with water quality standards. Section 404 regulates activities within Waters of the U.S., which includes W. Kerr Scott Reservoir and its surrounding tributaries. Further direction is provided by Executive Order 11990: Protection of Wetlands and related USACE regulations. The North Carolina Division of Coastal Management, the North Carolina Division of Water Quality, the U.S. Fish and Wildlife Service, and USACE are responsible for these regulations.

4.3 Socioeconomic Characteristics

4.3.1 Population and Economy

W. Kerr Scott Reservoir is located in Wilkes County, North Carolina, just west of the Town of Wilkesboro, North Carolina. In 2007, Wilkes County had a population of 66,675 which ranks 60 out of the 100 most densely populated counties in the state (Census 2010). At the time of the last Census, children under five years of age made up approximately 6 percent of the County population, compared to the national average of nearly 7 percent.

The median household income in the County was $35,649, while the national average was $50,007. The per capita income in the County was $19,066 and the national average was $26,178. Approximately 17 percent of the County's population was below the poverty level, compared to the national average of approximately 13 percent.

Within the general vicinity of W. Kerr Scott Reservoir, land use patterns represent a mixture of agricultural and forest uses interspersed with residences and business activity. Within W. Kerr Scott Reservoir, land allocations are distributed through the 1983 Master Plan. Allocations are focused on recreational facilities and wildlife management areas. Along the shoreline, land use is controlled by USACE's shoreline management plan. The

plan establishes different zones along the shoreline where private development is allowed, which lands are to be used to support public recreation, and lands where no shoreline development is allowed.

Specific agency consultation for socioeconomic resources is discussed in Chapter 9 of the Master Plan. Laws and regulations that apply to these resources include Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks, Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations, and related USACE regulations. The EPA and USACE are responsible for ensuring compliance with these regulations, respectively.

4.3.2 Transportation

Vehicular access to the region surrounding W. Kerr Scott Reservoir is provided primarily by State Route 421 and State Route 268. Route 268 provides direct access to a number of the project locations on the southern shore of the reservoir. Additional local roads and USACE maintained roads provide connections between Route 268 and other locations on the southern and western ends of the reservoir. Route 421 provides access to locations along the northern shore of the reservoir, via local and USACE maintained roads.

Within the individual locations included in the project boundary, a mix of paved and unpaved roads, parking lots, and trails provide access to the site. Internal access also is provided by regional trails, such as the Overmountain Victory Trail, and USACE developed trails. Transportation within the project also is facilitated by the existing marina and numerous boat ramps.

Developed roads and parking lots exist on lands currently classified as Operations and Intensive Use. On the Intensive Use lands, these roads and parking lots are confined to areas that support developed recreational sites. The undeveloped portions of the Intensive Use Lands, along with the Low-Intensity Use lands have limited transportation infrastructure. Trails run throughout the project and provide access to certain portions of these lands. Access to Flowage Easements is controlled by the individual property owner, with USACE retaining the right to enter these lands for inspection purposes.

Specific agency consultation for physical resources is discussed in Chapter 9 of the Master Plan. The transportation system is managed and regulated by the North Carolina Department of Transportation. Improvements on project lands fall under the jurisdiction of USACE and Federal Highway Administration. Further guidance is provided by Executive Order 13148: Greening the Government Through Leadership in Environmental Management, and related USACE regulations.

4.3.3 Utilities and Conservation Potential

Utilities in Wilkes County are provided by public and private sources. The Town of Wilkesboro maintains a water supply and wastewater system that serves a limited area. The Town's water treatment plant has the capacity to treat 10 million gallons per day. The source of this water is the Yadkin River. The town also maintains a waste water treatment plant with a design capacity of 4.9 million gallons per day. Currently, the

average flow is approximately 3.2 million gallons per day. Areas that are not served by the Town's utility system must rely on private wells and septic systems. Private companies provide electricity, water, and gas service to residential and commercial customers.

Utilities for the W. Kerr Scott Reservoir run along the Route 421 and Route 268 road corridors. Drinking water to the recreation sites is delivered by a combination of wells and community sources. Municipal water is currently being provided to Fort Hamby Park, Berry Mountain Park, Fish Dam Creek Park, Dark Mountain Park and the Dam Site Park Area from the Town of Wilkesboro and Millers Creek. Community wastewater lines run along Route 268 which serves all the project facilities along the south side of the reservoir. Community sewer service is not available to parks located on the north side of the reservoir. All parks have electric and telephone lines running to them, as well. The closure of a number of recreation sites around the reservoir during the late fall and winter months reduces the project's utility demand.

Utility use within W. Kerr Scott Reservoir is confined to Operations lands and the developed portions of the Intensive Use lands that are serviced by regional utilities. Utilities either do not exist or do not service project lands that are currently undeveloped or classified at Flowage Easement or Low-Intensity Use.

Specific agency consultation for physical resources is discussed in Chapter 9 of the Master Plan. Utility developments within the region are the responsibility of local municipalities. USACE works with these municipalities to coordinate improvements on project lands. These actions are guided by federal directives, such as Executive Order 13148: Greening the Government Through Leadership in Environmental Management and related USACE regulations.

4.3.4 Safety

USACE staff works to ensure a safe and enjoyable experience for all visitors at W. Kerr Scott Reservoir. Safety at W. Kerr Scott Reservoir is maintained through a variety of different mechanisms. The project's Safety Plan, included in the Operations Management Plan, identifies safety concerns, responsibilities, and management techniques for different environments at the project.

To promote general visitor safety, bulletin boards are posted throughout the different recreation sites with information on water safety, trail use, and hunting. Some of the project's educational programs also are focused on safety, including a strong focus on water safety.

Visitor and staff safety also is protected by closing the WMAs to hunting on Sundays. This allows hikers, mountain bikers, and other visitors' safe access on the trails that run through these sites.

To ensure hunter safety and adherence to established rules and regulations, North Carolina Wildlife Enforcement Officers and USACE Park Rangers patrol all WMAs throughout the year. Prior to 2004, there was a complete ban on hunting on project lands. Limited hunting was re-introduced to reservoir wildlife lands with the development of WMA's. Hunting of state designated big game species is restricted to archery and black powder methods. Restricting big game hunting methods reduces the overall numbers of hunters thereby reducing safety concerns regarding nearby residential developments and conflicts with other types of dispersed recreational use within WMA's.

Hunting is allowed on all undeveloped project lands, although it is concentrated in the WMAs. Biking and trail use also exist throughout the project but are confined to existing trail systems. Water access also is provided at various locations throughout the project, within developed sites.

Specific agency consultation for physical resources is discussed in Chapter 9 of the Master Plan. Safety within project lands is the responsibility of USACE, with the assistance of local emergency services. The W. Kerr Scott Operation Management Plan provides direction in developing and implementing safety measures.

5.0 Environmental Consequences

This section describes the environmental consequences associated with the alternatives presented in Section 3.0 of this PEA. NEPA requires consideration of context, intensity, and duration of adverse and beneficial impacts (direct, indirect, and cumulative) and measures to mitigate for impacts. These elements are considered in the following impact analysis.

Use of the proposed Master Plan would streamline the approval process for future actions affecting project lands, depending on whether the actions are 1) specifically included in the Master Plan, 2) not included in the Master Plan, but consistent with the Plan, or 3) not included and not consistent with the recommendations, objectives and policies stated in the Plan (see Figure C-1). For actions that are identified in the Master Plan, the approval process would still require adequate NEPA consideration prior to initiating construction.

It is important to note that this PEA assesses the impacts of adopting the Land Classifications included in the proposed Master Plan but not the Recommended Future Uses. The proposed Master Plan consists of the Land Classifications, Resource Objectives, Development Needs, or other specifically stated policies. The Recommended Future Uses identify opportunities for changes in Land Classification, should suitable development proposals be received. However, because of the wide variety of possible uses that could be proposed, an additional evaluation to determine consistency with the stated site objectives would be required. Therefore, changes of Land Classifications to accommodate the Recommended Future Use would require an additional NEPA analysis to evaluate the expected impacts of the specific proposed change in use.

For actions that are not included in this Master Plan, such as specific future development proposals, USACE must determine if they are consistent with the Master Plan's policies. The first step in determining consistency would be to evaluate if the land classification for the location of the Preferred Alternative is appropriate (Figure C-1). For example, a proposal to develop a new marina in lands classified as Multiple Resource Management would not be consistent with this Master Plan, but a proposal for new trail development on the same land would be consistent.

This decision-making process (Figure C-1) would be initiated by the submittal of an Applicant Information form, included in Appendix E of the Master Plan. The form would provide USACE with general information about the proposal, including if it is a request for a recreation or non-recreation outgrant. Such proposals must be consistent with USACE Non-recreation Outgrant Policy (USACE 2009c) and ER 1130-2-550, Chapter 14, Recreation Outgrant Policy for Outgranted Corps Lands (USACE 2009d), respectively.

If the actions are consistent with the Master Plan, then USACE review of the outgrant application would require appropriate NEPA review and other environmental compliance and consultation with appropriate agencies, but no additional administrative review and approval. Once a project is approved and compliance is complete, it would be ready for

implementation. These actions are not fully assessed in this PEA and would require additional NEPA compliance.

If the Preferred Alternative is determined to be not consistent with the Master Plan, then USACE review of the outgrant application would require administrative consideration of the Preferred Alternative to determine if it is an appropriate use of Project lands and an appropriate use of the proposed site. If the action is determined to be an inappropriate use of Project lands or the proposed site, no further action on the proposal would be considered. If however, the proposed land use were determined to be an appropriate use of both Project lands and the proposed project site, then subsequent NEPA review and other environmental compliance and consultation with appropriate agencies would be undertaken.

5.1 Impacts of the Preferred Alternative

Under the Preferred Alternative, USACE would adopt the new Master Plan for W. Kerr Scott Reservoir. Along with adopting the policies and direction included in the plan, USACE would approve the Land Classifications included in the plan. In general, the proposed Land Classifications reduce the amount of project land available to support intensive use. Instead, most of the project lands would be classified as Multiple Resource Management to support low-intensity recreation and permanent wildlife habitat.

There would be no impact to easement lands. The laws and policies that address USACE jurisdiction over these lands are referenced in the proposed Master Plan; however, the document does not propose any change to these procedures. Any change that could be made is outside the scope of the master planning process.

Under the Preferred Alternative, any sizable impacts to the physical environment (geology, topography, soils, floodplains, water resources, air quality, noise cultural resources, hazardous materials, and recreation and aesthetic resources) would be confined to previously disturbed areas. These areas would be classified as Recreation or Project Operations. The remainder and majority of projects lands would be classified as Multiple Resource Management (Figures 15 and 16 in the Master Plan). This would limit the level of development and human activity that would occur within much of the project. Limited development throughout much of the project would result in the continued buffering of the developed areas. Maintaining these buffers would reduce the impact that USACE actions, and actions on neighboring lands, would have on the resources within and surrounding the project boundary. Any development would be consistent with the regulations described in Section 4.1.1 through 4.1.8.

Like the physical environment, impacts to natural resources (vegetation, fish and wildlife, threatened and endangered species, and wetlands) would be limited through the application of the Multiple Resource Management Land Classification to much of the project. This classification would limit the amount of development and the amount of human activity throughout much of the project. It also would allow USACE and its partners to provide more focused natural resource management actions to larger areas for

a longer period of time. Future impacts primarily would be confined to previously disturbed areas that would be classified as Recreation or Project Operations. Existing and future development would avoid impacts to wetlands and threatened and endangered species. Any development also would be consistent with the regulations described in Section 4.2.1 through 4.2.4.

The Preferred Alternative would have no long-term adverse impacts to socioeconomic characteristics (population and economy, transportation, utilities and conservation potential, or safety). The project would still serve the community and attract tourists to the region. The proposed Land Classifications would maintain the existing level of recreational activity, but would result in future development that may attract visitors with an interest in the undeveloped lands around the reservoir. Short-term adverse impacts may occur during construction activities, but the proposed Master Plan recognizes the need for growth of local community services (roads and utilities) before the project can expand. This would avoid any measurable adverse impacts. Any development would be consistent with the regulations described in Section 4.3.1 through 4.3.4.

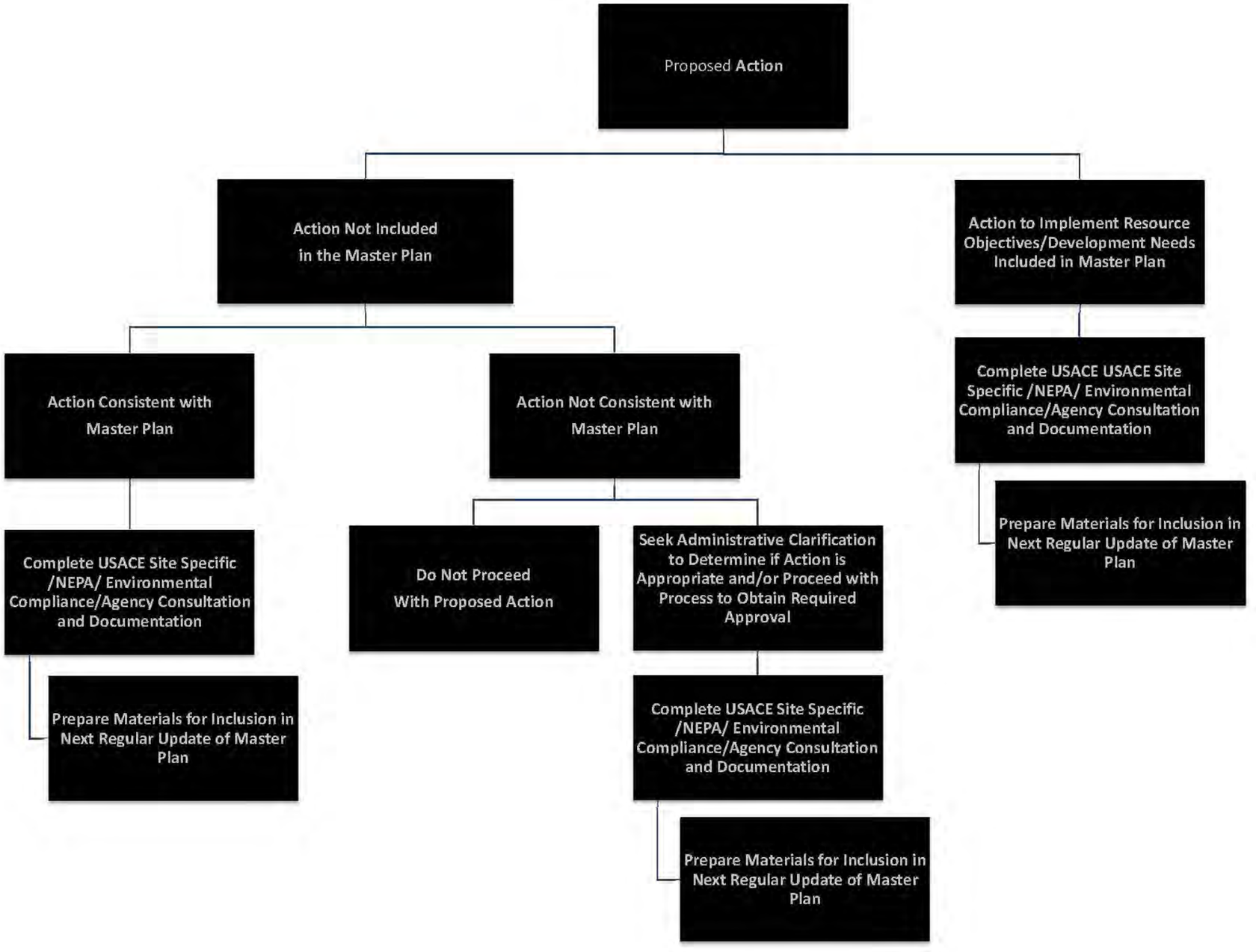
5.2 No Action Alternative

Under the No Action Alternative, USACE would not adopt a new Master Plan for W. Kerr Scott Reservoir. This would result in the majority of the project being classified as Intensive Use, with limited tracts set aside for low-intensity recreation. This does not mean that all of the lands within the project boundary would be developed, but future development would be considered appropriate on a greater expanse of project lands. The No Action Alternative also would result in USACE failing to comply with its own regulations related to Master Plans.

Like the Preferred Alternative, there would be no impact to easement lands. The laws and policies that address USACE jurisdiction over these lands would remain in effect. Any change that could be made is outside the scope of the master planning process.

Impacts to the physical environment (geology, topography, soils, floodplains, water resources, air quality, noise cultural resources, hazardous materials, and recreation and aesthetic resources) would be initially confined to previously disturbed areas. Future development proposals, however, could be located throughout the majority of the project. This would result in the potential for impacts to the physical environment to be spread over a larger area. Dispersed development also would fragment the buffer that surrounds existing Recreation and Project Operations lands. Any future development would remain consistent with the regulations described in Section 4.1.1 through 4.1.8.

Figure C-1: How the Master Plan would be Used



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Impacts to natural resources (vegetation, fish and wildlife, threatened and endangered species, and wetlands) also initially would be confined to previously disturbed areas. Future development proposals, however, could be located throughout the majority of the project. Not only would this increase the developed footprint within the project boundary, but also the intensity and presence of human activity. The potential for future development to occur across much of the project could compromise USACE's work to improve wildlife habitat at W. Kerr Scott Reservoir, as investments in such activity would need to be weighed against the potential for that land to be developed in the near future. Existing and future development would avoid impacts to wetlands and threatened and endangered species. Any development also would be consistent with the regulations described in Section 4.2.1 through 4.2.4.

The No Action Alternative would have beneficial and adverse impacts to socioeconomic characteristics (population and economy, transportation, utilities and conservation potential, or safety). The project would still serve the community and attract tourists to the region. Future development could be spread across the project and may be attractive to new visitors. This development also could deter current visitors who value the undeveloped project lands. Future growth in undeveloped portions of the project would require a greater investment in roads and utilities, as well. These developments could alter the existing aesthetic resources at W. Kerr Scott Reservoir. Any development would be consistent with the regulations described in Section 4.3.1 through 4.3.4.

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5.3 Environmental Impact Comparison of Alternatives

Table C-4 provides a brief summary and comparison of impacts to the physical and natural environment for the alternatives considered.

Table C-4: Environmental Impact Comparison of Alternatives

Resource Topic	Preferred Alternative	No Action Alternative
Geology, Topography, and Soils	**Slight adverse impacts** related to grading, soil compaction, and imperious surfaces from future development of trails and low-intensity recreation facilities, as well as the expansion of existing developed footprints.	**Minor to moderate adverse impacts** related to grading, soil compaction, and impervious surfaces from the development of intensive and low-intensity recreation sites throughout the project.
Floodplains	**No impact** as structures have been and would continue to be located primarily outside the 100-year floodplain. Those structures that were within the floodplain would not interfere with floodwaters.	**No impact** as structures have been and would continue to be located primarily outside the 100-year floodplain. Those structures that were within the floodplain would not interfere with floodwaters.
Water Resources	**No impact** as existing and future sites meet necessary stormwater management regulations.	**No impact** as existing and future sights meet necessary stormwater management regulations.
Air Quality	**Slight adverse impact** as future development would be focused on low-intensity recreation that would not require automobile access within the project or other emissions sources.	**Minor adverse impacts** as intensive future development could be spread throughout the project, increasing the presence of automobile traffic and other emissions sources.
Noise	**Slight adverse impact** as future development would be focused on low-intensity recreation that would not require automobile access within the project or other noise sources.	**Minor adverse impacts** as intensive future development could be spread throughout the project, increasing the presence of automobile traffic and other noise sources.
Cultural Resources	**Slight adverse** impact as future development of low-intensity recreation sites could avoid known resources of value.	**Slight adverse** impact as future development (intensive and low-density) would avoid impacts to resources of value. Mitigation actions may be necessary.
Hazardous Materials	**No impact** as current hazardous materials would be properly stored and used as regulated and future low-intensity development would not result in the introduction of any new materials to the project.	**No impact** as current and future hazardous materials would be stored and used as regulated.
Recreation and Aesthetic Resources	**Moderate beneficial impact** as future development would be consistent with USACE recreation policies and meet growing visitors' needs for low-density recreation.	**Minor beneficial impact** as future development would be consistent with USACE recreation policies but could result in higher levels of development, reducing the value of project lands to certain users.
Vegetation	**Slight adverse impacts** related to grading and clearing of relatively small areas to support trail development and other low-intensity recreation.	**Minor to moderate adverse impacts** related to grading and clearing of areas to support intensive and low-intensity recreation.

Table C-4: Environmental Impact Comparison of Alternatives

Resource Topic	Preferred Alternative	No Action Alternative
Fish and Wildlife	**Slight adverse impacts** related to grading, clearing, and human presence in relatively small areas for trail development/use and other low-intensity recreation.	**Minor to moderate adverse impacts** related to grading, clearing, and human presence throughout the project to support widespread development of intensive and low-intensity recreation.
Threatened and Endangered Species	**No impact** as all USACE actions at W. Kerr Scott Reservoir avoid impacts to threatened and endangered species.	**No impact** as all USACE actions at W. Kerr Scott Reservoir avoid impacts to threatened and endangered species.
Wetlands	**No impact** as all USACE actions at W. Kerr Scott Reservoir avoid impacts to wetlands.	**No impact** as all USACE actions at W. Kerr Scott Reservoir avoid impacts to wetlands.
Population and Economy	**Minor beneficial impact** as the project would maintain its current level of development, resulting in continued tourism and supporting adjacent land values.	**Minor adverse impact** as future development of intensive recreation sites could attract different user groups, but result in the loss of existing groups and a reduction in the value of properties that are currently bordered by undeveloped USACE lands.
Transportation	**Slightly adverse** as there would be no change to existing transportation networks.	**Slightly adverse** as there would be no change to existing transportation networks.
Utilities and Conservation Potential	**No impact** as existing utilities would continue to be sufficient and future low-intensity recreation would place limited demand on these systems.	**Minor adverse impact** as existing utilities are not in place to support intensive recreation development in many locations of the project and such development would place increasing demands on existing systems.
Safety	**No impact** as USACE's actions at W. Kerr Scott Reservoir are guided by mandatory safety plans and regulations.	**No impact** as USACE's actions at W. Kerr Scott Reservoir are guided by mandatory safety plans and regulations.
Security	**No impact** as public access to project areas would remain unchanged.	**No impact** as public access to project areas would remain unchanged.

5.4 Unavoidable Adverse Impacts of the Preferred Alternative

Implementation of the Preferred Alternative should not result in unavoidable adverse impacts to any or all of the resources analyzed in this PEA. The Resource Objectives and direction on agency coordination (Section 8.0 of the Master Plan) would allow USACE to avoid, offset, or mitigate these impacts and identify future mitigation techniques as the impacts become more apparent and science and technology provide new means of addressing them. Any anticipated impact is considered minor and localized and would not have significant long-term adverse impacts to project resources.

5.5 Cumulative Impacts

The CEQ regulations that implement NEPA require assessment of cumulative impacts in the decision making process for federal projects. Cumulative impacts are defined as impacts which result when the impact of the Preferred Alternative is added to the impacts of other present and reasonably foreseeable future actions, regardless of what agency (federal or nonfederal) or person undertakes such other actions (40 CFR 1508.7). The cumulative impacts associated with the Preferred Alternative and the No Action Alternative are described below.

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impacts of activities in and around W. Kerr Scott Reservoir. Past actions include the construction and operation of the reservoir, the recreation sites surrounding the reservoir, as well as residential, commercial, and industrial facilities throughout the region. All of these developments have had varying levels of adverse impacts on the physical and natural resources in the region. Many of these developments, however, have had beneficial impacts on the region's socioeconomic resources. In addition, many of the historic impacts have been offset throughout the years by USACE's and its partners' stewardship of resources within the project boundary.

The most notable past action is the development of W. Kerr Scott Reservoir. The construction of the reservoir permanently changed natural conditions in the region, converting a riverine system to a deepwater lake environment with high-ground fill across the river in the dam area. Authorization of the reservoir construction was based on the purposes described in section 2.0 of this PEA, primarily flood control, possible hydroelectric production, and recreation; with later supplements for recreation, water supply, and fish and wildlife benefit. The resulting conditions have, through careful management by USACE and its partners, resulted in new and successful habitats and natural resource conditions within the lake environment. USACE and its partners also have brought a wide variety of high-quality recreational opportunities to the reservoir. Management of the reservoir also has included shoreline zoning which has limited the type and number of private and public shoreline facilities along the reservoir. These facilities, including an existing marina, have resulted in minor adverse impacts to the natural conditions around the reservoir. Shoreline zoning has limited these impacts and

resulted in appropriate levels of mitigation to offset any loss of habitat or other natural conditions.

Existing and future actions also contribute to the cumulative impacts in and around the reservoir. Existing and future actions include the operation of project facilities, the construction and operation of future recreational sites, the development of other nearby recreation sites, as well as residential, commercial, and industrial development throughout the region. Continued project operations would result in the sustained maintenance and development of recreational facilities. These facilities would enhance the recreational offerings made by USACE and its partners, but also would result in varying levels of impacts to the surrounding natural resources. Similarly, surrounding residential, commercial, and industrial development could result in varying levels of adverse impacts to many physical and natural resources. Within the project boundary, adverse impacts would be offset through USACE resource stewardship efforts. The programmatic approach to project management, included in this Master Plan/PEA, would allow USACE to adapt its plans and mitigation responses to any adverse actions. This would allow USACE to continue to reduce the contribution of its activities to regional cumulative impacts through proactive actions and adaptive resource management strategies.

The No Action Alternative would be expected to contribute moderate increments to the overall impacts past, present, and future actions have on the region. Without up-to-date land classification and guidance for current and future action, levels of intensive recreational use could increase throughout the project. This would raise the potential of adverse cumulative impacts.

The Preferred Alternative would contribute minor increments to the overall impacts past, present, and future actions have on the region, through the implementation of the Resource Objectives and Development Needs outlined in the proposed Master Plan. The Preferred Alternative also would contribute readily apparent beneficial increments to the overall impacts past, present, and future projects have on the region, by providing USACE with a proactive management tool.

6.0 Executive Orders

Executive Order 11988: Floodplain Management – Both the Preferred Alternative and the No Action Alternative could involve placement of fill material in the floodplain and impact the movement of floodwaters. Neither alternative would affect the impact of floods on human safety, health and welfare.

Executive Order 11990: Protection of Wetlands – This order requires agencies to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agency's responsibilities. Neither the Preferred Alternative nor the No Action Alternative would allow for the placement of fill material in wetlands or Waters of the U.S. without appropriate permitting and mitigation.

Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low Income Communities and Low Income Populations - The EPA defines environmental justice as the fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people; including a racial, ethnic, or socioeconomic groups; should bear a disproportionate share of the negative environmental consequences of industrial, municipal, or commercial operations or the execution of federal, state, local, or tribal programs and policies. Neither the Preferred Alternative nor the No Action Alternative would have the potential for disproportionate health or environmental effects on minorities or low-income populations or communities.

Executive Order 11593: Protection and Enhancement of the Cultural Environment– All future activities would be coordinated with USACE Wilmington District Archaeologist prior to initiation of ground disturbing activities. Chapter 9 of the Master Plan (Pages 104 through 112) also commits W. Kerr Scott Reservoir to future coordination with the SHPO and other relevant local agencies before initiating any project. This could result in additional Phase I or Phase II archaeological surveys or modifications to plans and designs.

Executive Order 13045: Protection of Children from Environmental Health Risks – This order mandates federal agencies identify and assess environmental health and safety risk that may disproportionately affect children as a result of the implementation of federal policies, programs, activities, and standards (63 Federal Register 19883 – 19888). Adoption of the proposed Master Plan would allow USACE to move forward with a programmatic approach to managing W. Kerr Scott Reservoir that would result in improvements that would benefit all users. None of these improvements would result in short- or long-term actions that would disproportionately affect the safety or health of children. Chapter 9 of the Master Plan (Pages 104 through 112) commits USACE to evaluate any safety risk related to any proposed project at W. Kerr Scott Reservoir.

Executive Order 13186: Protection of Migratory Birds – Adoption of the proposed Master Plan would not result in any significant or adverse impacts to migratory bird species or their habitat. Chapter 9 of the Master Plan (Pages 104 through 112) commits USACE at W. Kerr Scott Reservoir to maintaining an inventory of birds identified within the project boundary and coordinate with other federal and state agencies that monitor these species, update the Master Plan and other project management documents to reflect changes in migratory bird populations in the region, and conduct appropriate agency coordination during planning of any proposed project.

7.0 Public Involvement

Agency and public involvement was initiated in February 2010 when USACE published notices announcing the potential project and the first public open house. This was followed by public comment periods, agency meetings, and additional public open houses. These public involvement activities are described in greater detail in Section 4.0 of the Master Plan. This information will be expanded in the Final Master Plan to document public scoping activities during the release of the document.

Agency and public review of the proposed project will continue during the 30-day public review period for this Master Plan/PEA. The distribution of the PEA for public review is described below in Section 7.0.

8.0 List of Recipients

The PEA available for a 30-day review and comment period. Notification of this comment period was mailed to numerous agencies and individuals, as listed in Appendix A of this PEA.

9.0 Point of Contact

Any comments or questions regarding this PEA should be addressed to:

Ms. Jory Shepherd
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W. Kerr Scott Reservoir
499 Reservoir Road
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(336) 921-3390 Ext. 105
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10.0 Finding

The Preferred Alternative would not significantly impact the quality of the human environment; therefore, an Environmental Impact Statement will not be required. If this opinion is upheld following circulation of this PEA, a Finding of No Significant Impact (FONSI) will be signed and circulated.

11.0 References

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2010a *Drinking Water Watch*. Available on the Internet at: https://www.pwss.enr.state.nc.us/DWW/. Last accessed on February 22, 2010.

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Yadkin-Pee Dee River Basin Association
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PEA Appendix A: List of Recipients

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This Document is being made available for a 30-day review and comment period to the following concerned agencies and individuals.

Federal Agencies

U.S. Environmental Protection Agency
Advisory Council on Historic Preservation
National Center for Environmental Health
U.S. Department of Interior- Office of Environmental Policy and Compliance
U.S. Fish and Wildlife Service – Raleigh Field Office
Federal Highway Administration
U.S. Department of Energy – Office of Environmental Compliance
U.S. Department of Housing and Urban Development
U.S. Forest Service, Southern Region
US Department Of Agriculture - National Resources Conservation Service

State Agencies

North Carolina Department of Environment and Natural Resources
  Resource Library
  Water Quality Section
North Carolina Council of Governments – Region D
North Carolina Department of Cultural Resources
North Carolina Department of Transportation – Environmental Planning
North Carolina Department of Administration/State Clearinghouse
North Carolina Commission of Indian Affairs
South Carolina Indian Affairs Commission
Virginia Council on Indians

Elected Officials

North Carolina United States Senators and Local District Congressmen
Local State Senators and Representatives
Chairman, Board of Wilkes County Commissioners
Wilkes County Manager
Wilkesboro Mayor
Chairman, Board of Forsyth County Commissioners
County Manager Forsyth County
City- County Planning Department, Winston-Salem, NC

Media

The Journal- Patriot, Wilkesboro, NC
Winston-Salem Journal

Conservation Groups

The Nature Conservancy, NC Chapter
National Audubon Society
National Wildlife Federation
The Wilderness Society
Environmental Defense Fund of North Carolina
Friends of W. Kerr Scott Lake
District Headquarters, Ducks Unlimited
Wilkes County Chapter, Ducks Unlimited

APPENDIX D
USACE RESPONSE TO PUBLIC COMMENTS RECEIVED ON MASTER PLAN/PEA

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1. U.S. Department of Agriculture Natural Resources Conservation Service, Dated October 12, 2011

Comment: Thank you for the opportunity to provide comments on Public Notice and Notice of Availability, W. K Scott Dam and Reservoir, draft Master Plan and Programmatic Environmental Assessment (PEA) in Wilkes County, North Carolina. The Natural Resources Conservation Service does not have any comments at this time.

Response: Comment noted.

2. North Carolina Department of Environment and Natural Resources Natural Heritage Program, Dated November 3, 2011

Comment: The NC Natural Heritage Program has reviewed the W. Kerr Scott Dam and Reservoir Master Plan. There are two current records of rare plant species within one mile of the W. Kerr Scott Reservoir shoreline:

- Necklace Sedge (*Carex projecta*) - NC: Significantly Rare
- Mountain Camellia (*Stewartia ovata*) - NC: Significantly Rare

Response: Comment noted. Section 2.13 of the Master Plan has been updated to include this information.

Comment: The North Carolina Natural Heritage Program conducts inventories of rare species, natural communities, and Significant Natural Heritage Areas (SNHAs) within the state. At this time, Wilkes County has not yet been surveyed, but will be Initiated in 2012. It is quite likely that SNHAs and other rare species occurrences will be identified in the area managed by the USACE surrounding the W. Kerr Scott Reservoir. We greatly appreciate the willingness of the USACE to work with the Natural Heritage Program, as stated in the Master Plan, to protect any potential conservation sites that are identified once the inventory is completed In the next couple of years.

Response: Comment noted.

Comment: As stated in the Master Plan, the Natural Heritage Program supports current timber harvest activities that support management of habitat enhancement or restoration, fire hazard reduction, or wildlife disease management. We strongly encourage that data from the upcoming Wilkes County Natural Inventory, when available, be considered in management decisions.

Response: Comment noted.

Comment: You may wish to check the Natural Heritage Program database website at www..ncnhp.org for a listing of rare plants and animals and significant natural communities in the county and on the quad map. Our Program also has a new website that allows users to obtain information on element occurrences and significant natural heritage areas within two miles of a given location: http://nhpweb.enr.state.nc.us/public/virtual_workroom.pthml. To log-in, see the instructions on the log-in screen. You may want to click "Help" for more information, once you get into the website.

Response: The information available at these web sites was incorporated into Figure 11 and Appendix E of the Master Plan.

3. North Carolina Wildlife Resources Commission, Dated November 4, 2011

Comment: Section 2.23.3 should be revised to more accurately reflect current fish stocking and fishery resources in the reservoir. Currently, the NCWRC is only stocking striped bass and striped bass hybrids. Also, small mouth bass, walleye, and sauger should not be listed in this section because they either are not found in the reservoir or are very rare. Alternatively, sunfish should be mentioned because they are abundant and a desirable sportfish group.

Response: Comment noted. Text modified accordingly.

Comment: The Corps should consider adding a fishing pier at the Dark Mountain Park site (site #16) or the Dam Site Park (site # 1). All the current fishing piers/platforms are in the upper half of the lake and it would be beneficial to have fishing access on the lower part of the lake as well. Dark Mountain Park is already heavily used by bank anglers. The NCWRC is considering a possible shoreline restoration at this location in cooperation with the Corps, so it may be possible to incorporate some sort of fishing access into this effort.

Response: Comment noted. Dam Site Park Area includes a Development Need that states, “Develop sufficient waterfront access for fishing, hiking, biking, and sightseeing”. This is intended to include the potential for the future development of a fishing pier. Dark Mountain Park has been classified as Project Operations, as the site serves as the reservoir’s emergency spillway. Given this designation, it would not be possible for USACE to develop a fishing pier in this location.

Comment: Fish Dam Creek Park (site # 17) contains a catwalk-type fishing structure that runs parallel to the tailrace channel. It is heavily used, but there is currently no handicap access to the structure. We recommend that the Corps incorporate handicap access here.

Response: Comment noted. Fish Dam Creek Park includes a Development Need to “Improve ADA accessibility”. This statement could include providing handicap access to the fishing structure.

Comment: The boat ramps on the reservoir could use some improvement. One requires partially submerging tow vehicles and the dock abutments can become submerged during periods of high water. The NCWRC constructs and maintains boat access areas throughout the state and may be able to assist the Corps in some fashion with needed improvements on the reservoir.

Response: Comment noted.

4. North Carolina Department of Cultural Resources, Dated November 4, 2011

Comment: The Master Plan and Environmental Assessment generally address our concerns regarding the preservation of archaeological resources in the reservoir project area. However, the previously completed Historic Properties Management Plan resulted in a set of specific recommendations for managing cultural resources at the W. Kerr Scott Dam and Reservoir. These recommendations included, for example, additional inventory of unsurveyed areas and evaluation of historic properties with respect to National Register criteria. Please provide us with additional information concerning how the Historic Properties Management Plan will be integrated with the currently proposed W. Kerr Scott Dam and Reservoir Master Plan.

Response: Thank you for your comments concerning the integration of the Historic Properties Management Plan with the W. Kerr Scott Dam and Reservoir Preliminary Final Master Plan (ER 10-0240). As you are aware, we recently completed revision to the Historic Properties Management Plan. The revised Historic Properties Management Plan will replace the earlier Historic Properties Management Plan as an appendix to the Operational Management Plan. Preservation of archaeological resources in the reservoir project area, as provided for in the Operational Management Plan, will be implemented through provisions of the Historic Properties Management Plan.

The Master Plan provides direction for project development and use and promotes the protection, conservation and enhancement of natural, cultural, and man-made resources. Once the Master Plan is approved, the project will revise and implement the Operational Management Plan to achieve the resource objectives outlined in the Master Plan. The revised Operational Management Plan will also include the Historic Properties Management Plan discussed above.

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United States Department of Agriculture

NRCS

Natural Resources Conservation Service
4407 Bland Road, Suite 117
Raleigh, North Carolina 27609

Michael J. Hinton, ASTC-Easements & WR
Fax: (919) 873-2103
Fax: (919) 873-2156
Email: mike.hinton@nc.usda.gov

October 12, 2011

U.S. Corps of Engineers
499 Reservoir Road
CESAW-OP-LP
Wilkesboro, NC 28697

Dear Sir/Madam:

Thank you for the opportunity to provide comments on Public Notice and Notice of Availability, W. K. Scott Dam and Reservoir, draft Master Plan and Programmatic Environmental Assessment (PEA) in Wilkes County, North Carolina.

The Natural Resources Conservation Service does not have any comments at this time.

If you need additional information, please feel free to contact me at (919) 873-2103.

Sincerely,

Michael J. Hinton
Assistant State Conservationist for Easements & Water Resources

North Carolina
Department of Administration

Beverly Eaves Perdue, Governor

Moses Carey, Jr., Secretary

November 15, 2011

Mr. Philip Payonk
Department of the Army
Wilmington District Corps of Engineers
69 Darlington Avenue
Wilmington, NC 28403-1343

Dear Mr. Payonk:

Re: SCH File # 12-E-0000-0095; EA; Proposal updates for the W. Kerr Scott Dam and Reservoir, Preliminary Final Master Plan and Programmatic Environmental Assessment. View document at http://www.saw.usace.army.mil/Recreation/Master%20Plan/W.%20Kerr%20Scott/index.htm

The above referenced environmental impact information has been submitted to the State Clearinghouse under the provisions of the National Environmental Policy Act. According to G.S. 113A-10, when a state agency is required to prepare an environmental document under the provisions of federal law, the environmental document meets the provisions of the State Environmental Policy Act. Attached to this letter for your consideration are the comments made by agencies in the course of this review.

If any further environmental review documents are prepared for this project, they should be forwarded to this office for intergovernmental review.

Should you have any questions, please do not hesitate to call.

Sincerely,

William E. H. Creech

Attachments

cc: Region D

Mailing Address:
1301 Mail Service Center
Raleigh, NC 27699-1301

Telephone: (919)807-2425
Fax (919)733-9571
State Courier #51-01-00
e-mail state.clearinghouse@doa.nc.gov

Location Address:
116 West Jones Street
Raleigh, North Carolina

North Carolina Department of Environment and Natural Resources

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

MEMORANDUM

TO: Zeke Creech
State Clearinghouse

FROM: Melba McGee
Environmental Review Coordinator

RE: 12-0095 Environmental Review of the W. Kerr Scott Dam and Reservoir Master Plan in Wilkes County

DATE: November 10, 2011

The Department of Environment and Natural Resources has reviewed the proposed information. The attached comments are for the applicant's information.

Thank you for the opportunity to review.

Attachments

1601 Mail Service Center, Raleigh, North Carolina 27699-1601
Phone: 919-707-8600 \ Internet: http://portal.ncdenr.org

11/2

NCDENR
North Carolina Department of Environment and Natural Resources
Office of Conservation, Planning, and Community Affairs
Beverly Eaves Perdue, Governor **Linda Pearsall, Director** Dee Freeman, Secretary

November 3, 2011

To: Melba McGee, Environmental Coordinator

From: Laura Gadd, Botanist, NC Natural Heritage Program

Re: Environmental Review of the W. Kerr Scott Dam and Reservoir Master Plan, Wilkes County, NC.

Project: 12-0095

The NC Natural Heritage Program has reviewed the W. Kerr Scott Dam and Reservoir Master Plan. There are two current records of rare plant species within one mile of the W. Kerr Scott Reservoir shoreline:

Necklace Sedge (*Carex projecta*) – NC: Significantly Rare
Mountain Camellia (*Stewartia ovata*) – NC: Significantly Rare

The North Carolina Natural Heritage Program conducts inventories of rare species, natural communities, and Significant Natural Heritage Areas (SNHAs) within the state. At this time, Wilkes County has not yet been surveyed, but will be initiated in 2012. It is quite likely that SNHAs and other rare species occurrences will be identified in the area managed by the USACE surrounding the W. Kerr Scott Reservoir. We greatly appreciate the willingness of the USACE to work with the Natural Heritage Program, as stated in the Master Plan, to protect any potential conservation sites that are identified once the inventory is completed in the next couple of years.

As stated in the Master Plan, the Natural Heritage Program supports current timber harvest activities that support management of habitat enhancement or restoration, fire hazard reduction, or wildlife disease management. We strongly encourage that data from the upcoming Wilkes County Natural Inventory, when available, be considered in management decisions.

You may wish to check the Natural Heritage Program database website at www.ncnhp.org for a listing of rare plants and animals and significant natural communities in the county and on the quad map. Our Program also has a new website that allows users to obtain information on element occurrences and significant natural heritage areas within two miles of a given location:
<http://nhpweb.enr.state.nc.us/public/virtual_workroom.phtml>. To log-in, see the instructions on the log-in screen. You may want to click "Help" for more information, once you get into the website.

Please do not hesitate to contact me at 919-707-8647 if you have questions or need further information.

1601 Mail Service Center, Raleigh, North Carolina 27699-1601
Phone: 919-715-4195 \ FAX: 919-715-3060 Internet: www.oneNCNaturally.org

North Carolina Wildlife Resources Commission

Gordon Myers, Executive Director

MEMORANDUM

TO: Melba McGee, Environmental Coordinator
Office of Legislative and Intergovernmental Affairs
North Carolina Department of Environment and Natural Resources

FROM: Dave McHenry, Habitat Conservation Biologist

DATE: November 4, 2011

SUBJECT: W. Kerr Scott Dam and Reservoir Master Plan
Wilkes County

OLIA No. 12-0095

Biologists with the North Carolina Wildlife Resources Commission (NCWRC) reviewed the W. Kerr Scott Dam and Reservoir Master Plan. Comments from the NCWRC on the plan are offered for your consideration under provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and the North Carolina Environmental Policy Act (G.S. 113A-1 et seq., as amended; 1 NCAC-25).

The NCWRC offers the following comments on the plan:

1. Section 2.23.3 should be revised to more accurately reflect current fish stocking and fishery resources in the reservoir. Currently, the NCWRC is only stocking striped bass and striped bass hybrids. Also, smallmouth bass, walleye, and sauger should not be listed in this section because they either are not found in the reservoir or are very rare. Alternatively, sunfish should be mentioned because they are abundant and a desirable sportfish group.
2. The Corps should consider adding a fishing pier at the Dark Mountain Park site (site #16) or the Dam Site Park (site #1). All the current fishing piers/platforms are in the upper half of the lake and it would be beneficial to have fishing access on the lower part of the lake as well. Dark Mountain Park is already heavily used by bank anglers. The NCWRC is considering a possible shoreline restoration at this location in cooperation with the Corps, so it may be possible to incorporate some sort of fishing access into this effort.

Mailing Address: Division of Inland Fisheries • 1721 Mail Service Center • Raleigh, NC 27699-1721
Telephone: (919) 707-0220 • **Fax:** (919) 707-0028

3. Fish Dam Creek Park (site #17) contains a catwalk-type fishing structure that runs parallel to the tailrace channel. It is heavily used, but there is currently no handicap access to the structure. We recommend that the Corps incorporate handicap access here.
4. The boat ramps on the reservoir could use some improvement. One requires partially submerging tow vehicles and the dock abutments can become submerged during periods of high water. The NCWRC constructs and maintains boat access areas throughout the state and may be able to assist the Corps in some fashion with needed improvements on the reservoir.

The NCWRC appreciates the opportunity to provide comments on the plan. Please call me at (828) 452-0422 extension 24 if you need to discuss these comments.

North Carolina Department of Cultural Resources

State Historic Preservation Office

Ramona M. Bartos, Administrator

Beverly Eaves Perdue, Governor
Linda A. Carlisle, Secretary
Jeffrey J. Crow, Deputy Secretary

Office of Archives and History
Division of Historical Resources
David Brook, Director

November 8, 2011

Kevin Heape
Operations Project Manager
W. Kerr Scott Dam and Reservoir
499 Reservoir Road
Wilkesboro, NC 28697

Re: W. Kerr Scott Dam and Reservoir Master Plan Update, Wilkes County, ER 10-0240

Dear Mr. Heape:

Thank you for your letter of October 3, 2011, transmitting the Preliminary Master Plan and Environmental Assessment for the W. Kerr Scott Dam and Reservoir.

The Master Plan and Environmental Assessment generally address our concerns regarding the preservation of archaeological resources in the reservoir project area. However, the previously completed Historic Properties Management Plan resulted in a set of specific recommendations for managing cultural resources at the W. Kerr Scott Dam and Reservoir. These recommendations included, for example, additional inventory of unsurveyed areas and evaluation of historic properties with respect to National Register criteria. Please provide us with additional information concerning how the Historic Properties Management Plan will be integrated with the currently proposed W. Kerr Scott Dam and Reservoir Master Plan.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919-807-6579. **In all future communication concerning this project, please cite the above-referenced tracking number.**

Sincerely,

Renee Gledhill-Earley

for Ramona M. Bartos

APPENDIX E
PROJECT DATA

Table E-1: Soils Located Within the W. Kerr Scott Reservoir Boundary

Symbol	Description	Acres	Percent of Total (%)	Prime Farmland
CeF	Chestnut-Ashe complex, 25 to 90 percent slopes, very stony	4.31	0.14	Not Prime Farmland
CoA	Codorus loam, 0 to 2 percent slopes, frequently flooded	21.31	0.67	Prime Farmland*
DaA	Dan River and Comus soils, 0 to 4 percent slopes, occasionally flooded	41.28	1.30	All areas are Prime Farmland
DAM	Dam	24.57	0.77	Not Prime Farmland
DpB2	Danripple sandy clay loam, 2 to 8 percent slopes, moderately eroded	26.53	0.83	All areas are Prime Farmland
DpC2	Danripple sandy clay loam, 8 to 15 percent slopes, moderately eroded	29.81	0.94	Farmland of statewide importance
DwF	Devotion-Rhodhiss-Bannertown complex, 40 to 95 percent slopes, very rocky	8.83	0.28	Not Prime Farmland
FaD	Fairview sandy loam, 15 to 25 percent slopes	316.71	9.97	Farmland of local importance
FcB2	Fairview sandy clay loam, 2 to 8 percent slopes, moderately eroded	3.44	0.11	Prime Farmland
FcC2	Fairview sandy clay loam, 8 to 15 percent slopes, moderately eroded	292.67	9.21	Farmland of statewide importance
HaA	Hatboro loam, 0 to 2 percent slopes, frequently flooded	10.15	0.32	Not Prime Farmland
PaB	Pfafftown fine sandy loam, 1 to 6 percent slopes, rarely flooded	4.41	0.14	Prime Farmland
RdD	Rhodhiss fine sandy loam, 15 to 25 percent slopes	16.59	0.52	Farmland of local importance
RdE	Rhodhiss fine sandy loam, 25 to 60 percent slopes	994.71	31.30	Not Prime Farmland

Table E-1: Soils Located Within the W. Kerr Scott Reservoir Boundary

Symbol	Description	Acres	Percent of Total (%)	Prime Farmland
RyB	Ronda loamy sand, 0 to 5 percent slopes, occasionally flooded	29.28	0.92	Farmland of local importance
UdC	Udorthents-Urban land complex, 1 to 15 percent slopes	15.73	0.50	Not Prime Farmland
UfB	Udorthents-Urban land complex, 1 to 6 percent slopes, rarely flooded	49.79	1.57	Not Prime Farmland
W	Water	1287.49	40.52	Not Prime Farmland

* if drained and either protected from flooding or not frequently flooded during the growing season

Source: U.S. Department of Agriculture Natural Resource Conservation Service: Soil Survey of Wilkes County, North Carolina (1997).

Table E-2 Federally- and State-listed Endangered Species, Threatened Species, Species of Concern, and Candidate Species in Wilkes County

Major Group	Scientific Name	Common Name	State Status	Federal Status	State Rank	Global Rank	County - Status
Invertebrate Animal	*Speyeria idalia*	Regal Fritillary	SR	FSC	SH	G3	Wilkes - Historical
Nonvascular Plant	*Orthotrichum keeverae*	Keever's Bristle-moss	E	None	S2	G2	Wilkes - Current
Vascular Plant	*Pycnanthemum torrei*	Torrey's Mountain-mint	SR-T	FSC	S1	G2	Wilkes - Historical
Vertebrate Animal	*Crotalus horridus*	Timber Rattlesnake	SC	None	S3	G4	Wilkes - Current
Vertebrate Animal	*Dendroica cerulea*	Cerulean Warbler	SC	FSC	S2B	G4	Wilkes - Current
Vertebrate Animal	*Falco peregrinus*	Peregrine Falcon	E	None	S1B,S2N	G4	Wilkes - Historical
Vertebrate Animal	*Glyptemys muhlenbergii*	Bog Turtle	T	T	S2	G3	Wilkes - Current
Vertebrate Animal	*Myotis leibii*	Eastern Small-footed Myotis	SC	FSC	S2	G3	Wilkes - Current
Vertebrate Animal	*Plethodon wehrlei*	Wehrle's Salamander	T	None	S1	G4	Wilkes - Current

NC NHP database updated on Friday, February 12th, 2010.
Search performed on Thursday, 8 April 2010 @ 14:46:13 EDST

Source: NCNHP 2010

Explanation of Codes:

E	Endangered	"Any species or higher taxon of plant whose continued existence as a viable component of the State's flora is determined to be in jeopardy" (GS 19B 106: 202.12). (Endangered species may not be removed from the wild except when a permit is obtained for research, propagation, or rescue which will enhance the survival of the species.)
T	Threatened	"Any resident species of plant which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range" (GS 19B 106:202.12). (Regulations are the same as for Endangered species.)

SC	Special Concern	"Any species of plant in North Carolina which requires monitoring but which may be collected and sold under regulations adopted under the provisions of [the Plant Protection and Conservation Act]" (GS 19B 106:202.12). (Special Concern species which are not also listed as Endangered or Threatened may be collected from the wild and sold under specific regulations. Propagated material only of Special Concern species which are also listed as Endangered or Threatened may be traded or sold under specific regulations.)
C	Candidate	Species which are very rare in North Carolina, generally with 1-20 populations in the state, generally substantially reduced in numbers by habitat destruction (and sometimes also by direct exploitation or disease). These species are also either rare throughout their ranges (fewer than 100 populations total) or disjunct in North Carolina from a main range in a different part of the country or world. Also included are species which may have 20-50 populations in North Carolina, but fewer than 50 populations rangewide. These are species which have the preponderance of their distribution in North Carolina and whose fate depends largely on their conservation here. Also included are many species known to have once occurred in North Carolina but with no known extant occurrences in the state (historical or extirpated species); if these species are relocated in the state, they are likely to be listed as Endangered or Threatened. If present land use trends continue, candidate species are likely to merit listing as Endangered or Threatened.
SR	Significantly Rare	Species which are very rare in North Carolina, generally with 1-20 populations in the state, generally substantially reduced in numbers by habitat destruction (and sometimes also by direct exploitation or disease). These species are generally more common somewhere else in their ranges, occurring in North Carolina peripherally to their main ranges, mostly in habitats which are unusual in North Carolina. Also included are some species with 20-100 populations in North Carolina, if they also have only 50-100 populations rangewide and are declining.
EX	Extirpated	Extinct

-L	Listed	The range of the species is limited to North Carolina and adjacent states (endemic or near endemic). These are species which may have 20-50 populations in North Carolina, but fewer than 50 populations rangewide. The preponderance of their distribution is in North Carolina and their fate depends largely on conservation here. Also included are some species with 20-100 populations in North Carolina, if they also have only 50-100 populations rangewide and declining.
-T	Throughout	These species are rare throughout their ranges (fewer than 100 populations total).
-D	Disjunct	The species is disjunct to North Carolina from a main range in a different part of the country or world.
-P	Peripheral	The species is at the periphery of its range in NC. These species are generally more common somewhere else in their ranges, occurring in North Carolina peripherally to their main ranges, mostly in habitats which are unusual in North Carolina.
-O	Other	The range of the species is sporadic or cannot be described by the other Significantly Rare categories
P_	Proposed	A species which has been formally proposed for listing as Endangered, Threatened, or Special Concern, but has not yet completed the legally mandated listing process.

Source: U.S. Fish and Wildlife Service: *Endangered Species, Threatened Species, Federal Species of Concern, and Candidate Species, Wilkes County, North Carolina* (2010)

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W. Kerr Scott Reservoir Bird List

Loons	☐Common Loon	Shrikes	☐Loggerhead Shrike	Thrushes	☐American Robin
Grebes	☐Pied-billed Grebe	Vireos	☐Red-eyed Vireo		☐Brown Thrasher
Pelicans	☐Double-crested Cormant		☐White-eyed Vireo		☐Common Yellowthroat
Herons	☐American Bittern		☐Yellow-throated Vireo		☐Eastern Bluebird
	☐Black-crowned Night -Heron	Jays and	☐American Crow		☐Gray Catbird
	☐Cattle Egret	Crows	☐Blue Jay		☐Hermit Thrush
	☐Great Blue Heron		☐Fish Crow		☐Northern Mockingbird
	☐Great Egret	Larks	☐Horned Lark		☐Northern Parula
	☐Green Heron	Swallows and	☐Purple Martin		☐Wood Thrush
	☐Little Blue Heron	Martins	☐Northern Rough-winged Swallow	Waxwings	☐Cedar Waxwing
	☐Yellow-crowned Night Heron		☐Tree Swallow	Pipits	☐American Pipit
Geese and	☐American Black Duck		☐Cliff Swallow	Starling	☐European Starling
Ducks	☐American Wigeon		☐Barn Swallow	Warblers	☐American Redstart
	☐Blue-winged Teal	Chickadees	☐Tufted Titmouse		☐Black-and-white Warbler
	☐Bufflehead	and Titmice	☐Carolina Chickadee		☐Blue-winged Warbler
	☐Canada Goose	Nuthatches	☐White-breasted Nuthatch		☐Connecticut Warbler
	☐Canvasback	Creepers	☐Brown Creeper		☐Golden -winged Warbler
	☐Common Goldeneye	Wrens	☐Bewick's Wren		☐Hooded Warbler
	☐Common Merganser		☐Carolina Wren		☐Kentucy Warbler
	☐Gadwall		☐House Wren		☐Louisiana Waterthrush
	☐Greater White-fronted Goose		☐Marsh Wren		☐Orange-crowned Warbler
	☐Green-winged Teal		☐Sedge Wren		☐Ovenbird
	☐Hooded Merganser		☐Winter Wren		☐Palm Warbler
	☐Lesser Scaup	Kinglets	☐Golden-crowned Kinglet		☐Pine Warbler
	☐Mallard		☐Ruby-crowned Kinglet		☐Prairie Warbler
	☐Northern Pintail	Gnatcatchers	☐Blue-gray Gnatcatcher		☐Prothonotary Warbler
	☐Northern Shoveler	Tanagers	☐Scarlet Tanager		☐Swainson's Warbler
	☐Redhead		☐Summer Tanager		☐Tennessee Warbler
	☐Ring-necked Duck	Sparrows	☐Chipping Sparrow		☐Yellow Warbler
	☐Ruddy Duck		☐Dark-eyed Junco		☐Yellow-Breasted Chat
	☐Surf Scoter		☐Eastern Towhee		☐Yellow-rumped Warbler
	☐Wood Duck		☐Field Sparrow		☐Yellow-throated Warbler
Birds of Prey	☐American Kestrel		☐Grasshopper Sparrow	Cuckoos	☐Yellow-billed Cuckoo
	☐Bald Eagle		☐Junco (slate-colored)	Owls	☐Barn Owl
	☐Black Vulture		☐Red Fox Sparrow		☐Barred Owl
	☐Broad-winged Hawk		☐Savannah Sparrow		☐Eastern Screech-Owl
	☐Cooper's Hawk		☐Snow Bunting		☐Great-Horned Owl
	☐Northern Harrier		☐Song Sparrow		☐Short-eared Owl
	☐Osprey		☐Swamp Sparrow	Swifts	☐Chimney Swift
	☐Peregrine Falcon		☐Thick-Billed Fox Sparrow		☐Chuck-will's-widow
	☐Red-shouldered Hawk		☐Vesper Sparrow		☐Common Nighthawk
	☐Rough-legged Hawk		☐White-crowned Sparrow		☐Whip-poor-will
	☐Sharp-shinned Hawk		☐White-throated Sparrow	Hummingbirds	☐Ruby-throated Hummingbird
	☐Turkey Vulture	Grosbeaks	☐Baltimore Oriole	Kingfishers	☐Belted Kingfisher
Gallinaceous	☐Common Moorhen		☐Blue Grosbeak	Woodpeckers	☐Downy Woodpecker
Birds	☐Killdeer		☐Evening Grosbeak		☐Hairy Woodpecker
	☐Northern Bobwhite Quail		☐Indigo Bunting		☐Northern Flicker
	☐Wild Turkey		☐Northern Cardinal		☐Pileated Woodpecker
Shorebirds	☐American Woodcock	Blackbirds	☐Brown-headed Cowbird		☐Red-bellied Woodpecker
	☐Common Snipe	and Allies	☐Common Grackle		☐Red-headed Woodpecker
	☐Least Sandpiper		☐Eastern Meadowlark		☐Yellow-bellied Sapsucker
	☐Long-billed Dowitcher		☐Orchard Oriole	Flycatchers	☐Acadian Flycatcher
	☐Spotted Sandpiper		☐Red-winged Blackbird		☐Eastern Kingbird
Gulls	☐Bonaparte's Gull		☐Rusty Blackbird		☐Eastern Phoebe
	☐Herring Gull				☐Great Crested Flycatcher
Doves	☐Mourning Dove				☐Least Flycatcher
	☐Rock Dove				☐Willow Flycatcher
				Finches	☐House Finch
					☐Purple Finch

Source: U.S. Army Corps of Engineers: http://www.saw.usace.army.mil/wkscott/documents/Bird_List.pdf. Last accessed 5/12/2011.

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Table E-3: Management Area Facility Chart

Management Area Facility Chart	Amenities																			
	Bookstore	Visitor Assistance Center	Overlook	Boat Ramp	Toilets	Picnic Area	Group Picnic Shelter	Boat Docking/Fuel	Playground	Swim beach	Drinking Water	Group Camping	Trailer Camping	Tent Camping	Trailer Dump Station	Fishing Pier	Multi-Use Trail	Interpretive Trail	Hunting	Amphitheater
Bandit's Roost Campground	x			x	x				x	x	x	x	x	x	x		x			x
Berry Mountain Park					x	x	x		x	x	x						x			
Blood Creek Overlook			x		x	x					x					x				
Boomer Park/WMA				x	x	x			x	x	x								x	
Dam Site Park	x	x		x	x	x	x				x						x	x		
Dark Mountain Park/ WMA											x						x		x	
Fish Dam Creek Park			x		x	x	x		x											
Fort Hamby Park/WMA				x	x	x	x		x	x	x	x	x	x	x				x	x
Keowee Park				x	x	x	x		x							x				
Mountain View Overlook			x		x															
Marina				x				x												
Smithey's Creek Park				x	x	x			x		x					x				
Tailwater Access					x	x										x				
Warrior Creek Campground					x				x	x	x	x	x	x	x		x			x

Table E-4: Visitation to W. Kerr Scott Management Areas for Fiscal Year 2008-2009

	Total			Overnight			Day-use		
Area	**Visits**	**Visitor Hours**	**Visitor Days**	**Visits**	**Visitor Hours**	**Visitor Days**	**Visits**	**Visitor Hours**	**Visitor Days**
Dam Site	182,148	573,252	47,771	-	-	-	182,148	573,252	47,771
Skyline Marina	49,593	73,014	6,085	-	-	-	49,593	73,014	6,085
Berry Mountain	14,905	42,897	3,575	-	-	-	14,905	42,897	3,575
Bandit's Roost Campground	43,444	486,993	40,583	6,670	418,502	34,875	36,776	68,491	5,708
Boomer Road	35,934	92,871	7,739	-	-	-	35,934	92,871	7,739
Blood Creek	48,743	99,424	8,285	32	1,080	90	48,711	98,346	8,196
Warrior Creek Campground	28,587	469,342	39,112	13,295	446,261	37,188	15,292	23,082	1,924
Keowee	34,577	104,982	8,749	-	-	-	34,577	104,982	8,749
Mt. View	32,777	131,109	10,926	-	-	-	32,777	131,109	10,926
Marley's Ford	-	-	-	-	-	-	-	-	-
Fort Hamby Park	28,070	157,706	13,142	2,633	83,957	6,996	25,439	73,749	6,146
Smithey's Creek	80,047	235,730	19,644	-	-	-	80,047	235,730	19,644
Dark Mountain Park	63,910	255,640	21,303	-	-	-	63,910	255,640	21,303
Tailwater Access	126,309	257,803	21,484	93	3,154	263	126,216	254,649	21,221
Fish Dam Creek	125,453	255,743	21,312	91	3,069	256	125,363	252,673	21,056
Dispersed	139,573	558,286	46,524	-	-	-	139,573	558,286	46,524
Total	**938,747**	**4,049,677**	**337,473**	**22,813**	**956,023**	**79,669**	**915,934**	**3,093,655**	**257,805**

Source: USACE data

Table E-5: Recent Visitation to W. Kerr Scott Reservoir

Year	Visitation
2009	938,747
2008	833,711
2007	779,793
2006	944,364
2005	859,753
2004	905,107
2003	897,540
2002	1,086,348
2001	1,194,898
2000	1,027,728
1999	1,625,084
1998	1,871,700
1997	1,740,000
1996	1,604,524
1995	1,525,100
1994	1,537,700
1993	1,628,708
1992	1,350,946
1991	1,961,087
1990	1,927,935
1989	1,306,329
1988	1,374,950
1987	1,734,300
1986	1,582,000
1985	1,562,317
1984	1,587,600
1983	1,231,600
1982	1,131,600
1981	1,258,900

Source: USACE data

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APPENDIX F
MASTER PLAN UPDATE MEMOS

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Department of the Army
Wilmington District, Corps of Engineers
69 Darlington Avenue
Wilmington, North Carolina 28403-1343

W. Kerr Scott Dam and Reservoir
Master Plan Update Memorandum

Description of Change:

Justification for Change:

Page Numbers Removed from Master Plan:
Pages Added to Master Plan:

Approvals

_____

Kevin Heape, Operations Project Manager Date

_____

Daniel Brown, Chief, Lakes Branch Date

APPENDIX G
FEDERAL LAWS

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General Laws and Authorities

Public Law 534, 78th Congress (58 Stat. 887), 22 December 1944. Flood Control Act of 1944, as amended. This Act authorizes the construction of certain public works on rivers and harbors for flood control and other purposes. Section 4 authorizes providing facilities at reservoir areas for public use, including recreation and fish and wildlife conservation. As amended in 1962 by Section 297 of Public Law 87-874, the Act authorizes USACE to develop and maintain park and recreation facilities at all water resources projects controlled by the Secretary of the Army.

Public Law 88-578 (78 Stat. 897), 3 September 1964, Land and Water Conservation Fund Act of 1965, as amended. Planning for recreation development at USACE projects is coordinated with the appropriate states so that the plans are consistent with public needs as identified in the respective state's outdoor recreation plans.

Public Law 89-72 (79 Stat. 213), 9 July 1965, Federal Water Project Recreation Act, as amended. This Act requires that full consideration be given for recreation and fish and wildlife enhancement opportunities; that recreation planning be based on coordination of use with existing and planned federal, state, and local recreation; and that non-federal administration of recreation and enhancement areas be encouraged. It requires that no facilities for recreation and fish and wildlife enhancement be provided without cost sharing except those justified to serve other project purposes or as needed for public health and safety. The views of the Secretary of the Interior regarding the extent to which proposed recreation and fish and wildlife development conforms to and is in accordance with the respective state's outdoor recreation plan shall be included in any project report.

Public Law 90-483 (82 Stat. 731), 13 August 1968, Rivers and Harbors Act of 1968, as amended. This Act authorizes the construction, repair, and preservation of certain public works on rivers and harbors for navigation, flood control, and other purposes. Section 210 restricts the collection of entrance fees at USACE lakes and reservoirs after 31 March 1970 to users of highly developed facilities requiring the continuous presence of personnel. No authorization under this Act is required to implement this Master Plan, as the law specifically exempts USACE from regulation under Section 10. Work such as a boat dock installation or water intake line requires a Section 10 permit application; for work that includes placing fill, a joint Section 404/10 permit application can be made.

Executive Order 11644, 8 February 1972, Use of Off-Road Vehicles on Public Lands. This Executive Order establishes a uniform federal policy regarding the use of vehicles; such as trail bikes, snowmobiles, dune buggies, and other off-road vehicles; on public lands. Section 3 provides guidance for establishing zones of use for such vehicles. This order was amended by Executive Order 11989. Currently USACE restricts off-road vehicle use on project lands.

Public Law 99-662 (100 Stat. 4082), 17 November 1986, Water Resources Development Act of 1986. This legislation sets forth non-federal cost-sharing requirements for all water resources projects. Section 906 of this Act supplements the responsibility and authority of the Secretary of the Army pursuant to the Fish and Wildlife Coordination Act. This section requires any mitigation for fish and wildlife losses to be undertaken or acquired before any construction of the project commences, or shall be undertaken or acquired concurrently with lands and interests in lands for project purposes. USACE will coordinate with the U.S. Fish and Wildlife Service when constructing any projects under the Master Plan and will address any fish and wildlife mitigation that is required before the construction of any project commences.

Environmental Quality Statutes

40 Stat. 755, 13 July 1918, Migratory Bird Treaty Act (MBTA), as amended. The MBTA of 1918 is the domestic law that affirms, or implements, the United States' commitment to four international conventions with Canada, Japan, Mexico and Russia for the protection of shared migratory bird resources. The MBTA governs the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts and nests. The take of all migratory birds is governed by the MBTA's regulation of taking migratory birds for educational, scientific, and recreational purposes and requiring harvest to be limited to levels that prevent overutilization. Executive Order 13186 (2001) directs executive agencies to take certain actions to implement the Act. When development proposed in the Master Plan is scheduled to occur, compliance with the MBTA will be considered along with environmental compliance for the specific activities.

54 Stat. 250, 8 June 1940, Bald Eagle Protection Act of 1940, as amended. This Act prohibits anyone, without a permit issued by the Secretary of the Interior, from taking bald eagles, including their parts, nests, or eggs. The Act provides criminal penalties for persons who take, possess, sell, purchase, barter, offer to sell, transport, export or import, at any time or any manner, any bald eagle [or any golden eagle], alive or dead, or any part, nest, or egg thereof. The Act defines take as pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb. Individual projects proposed as a result of the Master Plan will adhere to the management guidelines developed by the U.S. Fish and Wildlife Service to avoid disturbing bald eagles.

Public Law 83-566 (68 Stat. 666), 5 August 1954, Watershed Protection and Flood Prevention Act. This Act authorizes the Secretary of Agriculture to cooperate with states and other public agencies in works for flood prevention and soil conservation, as well as the conservation, development, utilization, and disposal of water. This Act imposes no requirements on USACE Civil Works projects.

Public Law 85-624 (72 Stat. 563), 12 August 1958, Fish and Wildlife Coordination Act. This law amends and renames the Fish and Wildlife Coordination Act of 10 March 1934. The 1958 Act requires that: (1) fish and wildlife conservation receive equal consideration with other features of water resources development programs; (2) proposals for work affecting any body of water be coordinated with the U.S. Fish and Wildlife Service and state wildlife agencies; (3) recommendations of the U.S. Fish and Wildlife Service and state wildlife agencies be given full consideration; and (4) justifiable means and measures for wildlife purposes, including mitigation measures, be adopted. It also required that adequate provisions be made for the use of project lands and waters for the conservation, maintenance, and management of wildlife resources, including their development and improvement. The Act provides that the use of project lands primarily for wildlife management by others be in accordance with a general plan approved jointly by the Department of the Army, Department of the Interior, and state wildlife agencies. When site-specific proposals are made under the Master Plan, USACE will coordinate with the U.S. Fish and Wildlife Service, the North Carolina Department of Natural Heritage, and other relevant state and local agencies.

Public Law 86-717 (74 Stat. 817), 6 September 1960, Conservation of Forest Lands in Reservoir Areas. This law provides for the development and maintenance of forest resources on USACE managed lands and the establishment and management of vegetative cover so as to encourage future resources of readily available timber and to increase the value of such areas for conservation. Resource Objectives and Development Needs for the management units include planting trees and shrubs to increase the amount of woody vegetation for winter and nesting cover for upland and big game species; planting trees, food plots, native grasses, and/or marsh grasses to supplement the existing food sources for upland and big game species and/or waterfowl; and developing additional woody habitat.

Public Law 87-88 (75 Stat. 204), 20 July 1961, Federal Water Pollution Control Act Amendments of 1961, as amended. Section 2 (b) (1) of this Act gives USACE responsibility for water quality management of USACE reservoirs. This law was amended by the Federal Water Pollution Control Act Amendment of 1972, Public Law 92-500.

Public Law 89-80 (79 Stat. 244), 20 July 1965, Water Resources Planning Act. This Act is a congressional statement of policy to meet rapidly expanding demands for water throughout the nation. The purpose is to encourage the conservation, development, and use of water-related land resources on a comprehensive and coordinated basis by the federal, state, and local governments; individuals; corporations; business enterprises; and others concerned. USACE held public open houses and agency meetings and invited public input on this Master Plan and associated PEA.

Public Law 90-583 (82 Stat. 1146), 17 October 1968, Noxious Plant Control. This law provides for a control of noxious weeds on land under the control of the federal government. Resource Objectives and Development Needs for management units, included in Chapter 5 and Chapter 6 of this Master Plan, include the control of noxious weeds.

Public Law 91-190 (83 Stat. 852), 1 January 1970, National Environmental Policy Act of 1969, as amended. Section 101 of this Act establishes a national environmental policy. Section 102 requires that all federal agencies shall, to the fullest extent possible, (1) use a systematic, interdisciplinary approach that integrates natural and social sciences and environmental design arts in planning and decision making; (2) study, develop, and describe appropriate alternatives to recommend courses of action in any proposal that involves unresolved conflicts concerning alternative uses of available resources; and (3) include an Environmental Impact Statement (EIS) in every recommendation or report on proposals for major federal actions significantly affecting the quality of the human environment. A PEA and Finding of No Significant Impact (FONSI) have been prepared for this Master Plan, as an EIS is not required.

Public Law 91-224 (84 Stat. 114), 3 April 1970, Environmental Quality Improvement Act of 1970. This Act assures that each federal department or agency conducting or supporting public works activities which affect the environment shall implement the policies established under existing law. USACE ensures that activities at the W. Kerr Scott Reservoir project are in compliance with existing laws.

Public Law 91-604 (84 Stat. 1676), 31 December 1970, Clean Air Act, as amended. The purpose of this Act is to protect public health and welfare by the control of air pollution at its source, and to set forth primary and secondary National Ambient Air Quality Standards to establish criteria for states to attain, or maintain. Some temporary emission releases may occur during construction activities that are recommended under this Master Plan; however, air quality is not expected to be impacted to any measurable degree.

Public Law 92-500 (86 Stat. 816), 18 October 1972, The Federal Water Pollution Control Act Amendments of 1972, as amended. This law amends the Federal Water Pollution Control Act and establishes a national goal of eliminating pollutant discharges into waters of the United States. Section 404 authorizes a permit program for the disposal of dredged or fill material in the nation's waters that is to be administered by the Secretary of the Army acting through the Chief of Engineers. This law was later amended by the Clean Water Act of 1977, Public Law 95-217, to provide additional authorization to restore the Nation's water. The project is in compliance with this law. If any planned construction activities should involve the temporary or permanent placement of dredged or fill material into any water body or wetland area at W. Kerr Scott Reservoir, a permit pursuant to Section 404 is required.

Public Law 92-574 (86 Stat. 1234), 27 October 1972, Noise Control Act, as amended. This Act establishes a national policy to promote an environment for all Americans free from noise that jeopardizes their health and welfare. Federal agencies are required to limit noise emissions to within compliance levels. Noise emission levels at sites where development was proposed in the W. Kerr Scott Reservoir Master Plan would temporarily exceed current levels temporarily during periods of construction; however, appropriate measures would be taken to keep the noise levels within the compliance levels.

Public Law 93-205 (87 Stat. 884), 28 December 1973, Conservation, Protection, and Propagation of Endangered Species Act of 1973, as amended. This law repeals the Endangered Species Conservation Act of 1969. It also directs all federal departments/agencies to carry out programs to conserve endangered and threatened species of fish, wildlife, and plants and to preserve the habitat of these species in consultation with the Secretary of the Interior. This Act establishes a procedure for coordination, assessment, and consultation. This Act was amended by Public Law 96-159.

Public Law 93-523 (88 Stat. 1660), 16 December 1974, Safe Drinking Water Act, as amended. This Act amends the Public Health Service Water Act to assure that the public is provided with safe drinking water. This law states that all potable water at civil works projects will meet or exceed the minimum standards required by law. This Act was amended by the Safe Drinking Water Act Amendments of 1986, Public Law 99-339 of 1986, and Public Law 104-182.

Public Law 93-629, (88 Stat. 2148), 3 January 1975, Federal Noxious Weed Act of 1974, as amended. Section 15, added to the Act in 1990, requires noxious weed control management on federal lands and sets forth the process by which it is to be accomplished.

Executive Order 11988, 24 May 1977, Floodplain Management. This order outlines the responsibilities of federal agencies in the role of floodplain management. Each agency shall evaluate the potential effects of actions on floodplains and should not undertake actions that directly or indirectly induce growth in the floodplain, unless there is no practical alternative. Agency regulations and operating procedures for licenses and permits should include provisions for evaluation and consideration of flood hazards. Construction of structures and facilities on floodplains must incorporate flood proofing and other accepted flood protection measures. Agencies shall attach appropriate use restrictions to property proposed for lease, easement, right-of-way, or disposal to non-federal public or private parties.

Executive Order 11990, 24 May 1977, Protection of Wetlands. This order directs federal agencies to provide leadership in minimizing the destruction, loss, or degradation of wetlands. Section 2 states that agencies shall avoid undertaking or assisting in new construction located in wetlands unless there is no practical alternative. Prior to construction of any facilities proposed in the W. Kerr Scott Reservoir Master Plan, a site-specific NEPA analysis, including an assessment of potential impacts to wetlands, would be coordinated with federal and state agencies. If a Section 404 permit is required, coordination regarding compliance with the Executive Order would be accomplished prior to permit issuance.

Public Law 95-217 (91 Stat. 1566), 27 December 1977, Clean Water Act of 1977, as amended. This Act amends the Federal Water Pollution Control Act of 1970 and extends the appropriations authorization. The Clean Water Act is a comprehensive federal water pollution control program that has as its primary goal the reduction and control of the discharge of pollutants into the nation's navigable waters. The Clean Water Act of 1977 has been amended by the Water Quality Act of 1987, Public Law 100-4. Any action involving placement of fill in waters of the U.S. at the W. Kerr Scott Reservoir by USACE or other entity, with the exception of certain minor activities as discussed in 33 CFR Part 323.4, would require a Section 404 authorization and Section 401 water quality certification.

Executive Order 12088, 13 October 1978, Federal Compliance with Pollution Control Standards. The purpose of this order is to ensure federal compliance with applicable pollution control standards. Section 1-4, Pollution Control Plan, in which each agency was required to submit an annual plan for the control of environmental pollution to the Office of Management and Budget, was revoked by Executive Order 13148, which was revoked by Executive Order 13423.

Public Law 95-632 (92 Stat. 3751), 10 November 1978, Endangered Species Act Amendments of 1978. This law amends the Endangered Species Act Amendments of 1973. Section 7 directs agencies to conduct a biological assessment to identify threatened or endangered species that may be present in the area of any proposed project. This assessment is conducted as part of a federal agency's compliance with the requirements of Section 102 of NEPA. USACE would conduct biological assessments on proposed projects when necessary.

Public Law 96-159 (93 Stat. 3751), 28 December 1979, Endangered Species Act of 1973, as amended. This amendment expanded the Act to protect endangered plants. This amendment requires the publishing of a summary and map when proposing land as critical habitat and requires federal agencies to ensure projects "are not likely" to jeopardize an endangered species. In addition, it authorizes all those seeking exemptions from the Act to get permanent exemptions for a project unless a biological study indicates the project would result in the extinction of a species. USACE would ensure that any development or management activities proposed in the Master Plan are not likely to jeopardize an endangered species.

Public Law 96-366 (94 Stat. 1322), 29 September 1980, Fish and Wildlife Conservation Act of 1980. This law enables states to obtain funds to conduct inventories and conservation plans for nongame wildlife. It also encourages federal departments and agencies to use their statutory and administrative authority to conserve and promote conservation in accordance with this Act. This Master Plan promotes conservation at W. Kerr Scott Reservoir by including Resource Objectives and Development Needs that protect and enhanced wildlife habitat and reduce erosion.

Public Law 96-510 (94 Stat. 2797), 11 December 1980, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Typically CERCLA is triggered by (1) the release or substantial threat of a release of a hazardous substance into the environment; or (2) the release or substantial threat of a release of any pollutant or contaminant into the environment that presents an imminent threat to the public health and welfare. To the extent such knowledge is available, 40 CFR Part 373 requires notification of CERCLA hazardous substances in a land transfer. Compliance with this Act is required on a case-by-case basis for real estate activities such as easements, grants, etc.

Public Law 97-98 (95 Stat. 1341), 22 December 1981, Farmland Protection Policy Act. This Act instructs the Department of Agriculture, in cooperation with other departments, agencies, independent commissions and other units of the federal government, to develop criteria for identifying the effects of federal programs on the conversion of farmland to nonagricultural uses. The Master Plan does not propose any changes to agricultural land.

Public Law 99-339 (100 Stat. 642), 19 June 1986, Safe Drinking Water Act Amendments of 1986. These amendments provide further regulation regarding national primary drinking water, enforcement of these regulations, and variances and exemptions to the Act. These amendments also provide for the protection of underground sources of drinking water.

Public Law 100-4 (101 Stat. 7), 4 February 1987, Water Quality Act of 1987. This Act amends the Federal Water Pollution Control Act to not only provide for renewal of the quality of the nation's waters but also provide construction grant amendments, standards, enforcement, permits, and licenses. This Act includes more provisions for monitoring non-point source pollution (contaminants that come from many different sources).

Public Law 101-233 (103 Stat. 1968), 13 December 1989, North American Wetlands Conservation Act. This Act establishes the North American Wetlands Conservation Council (NAWCC, 16 U.S.C. 4403) to recommend wetlands conservation projects to the Migratory Bird Conservation Commission. Section 9 of the Act addresses the restoration, management, and protection of wetlands and habitat for migratory birds on federal lands. federal agencies acquiring, managing, or disposing of federal lands and waters are to cooperate with the U.S. Fish and Wildlife Service to restore, protect, and enhance wetland ecosystems and other habitats for migratory birds, fish and wildlife on their lands, to the extent consistent with their missions and statutory authorities. Prior to construction of any facilities proposed in this Master Plan, a site-specific NEPA analysis, including an assessment of potential impacts to wetlands, would be coordinated with federal and state agencies.

Executive Order 12692, 7 June 1995, Recreational Fisheries. This Executive Order mandates that federal agencies, to the extent permitted by law and where practicable, improve the quality, function, and sustainable productivity and distribution of aquatic resources for increased recreational fishing opportunities. USACE will continue to cooperate with state and local agencies to manage fisheries at W. Kerr Scott Reservoir. Many management units include a resource objective to provide and maintain access to W. Kerr Scott Reservoir for fishing.

Public Law 104-182 (110 Stat. 1613), 6 August 1996, Safe Drinking Water Act Amendments of 1996. These amendments strengthen protections on tap water, improve public access to tap water contaminant information, strengthen standards to protect public health from the most significant threats to safe drinking water, and provide money that communities need to upgrade drinking water systems. The state of North Carolina enforces the amendments at public works systems throughout the state.

Executive Order 13112, 3 February 1999, Invasive Species. This Executive Order directs federal agencies to Act to prevent the introduction of or to monitor and control invasive (non-native) species, to provide for restoration of native species, to conduct research, to promote educational activities, and to exercise care in taking actions that could promote the introduction or spread of invasive species. Resource Objectives and Development Needs for management units include the control of invasive species.

Executive Order 13195, 18 January 2001, Trails for America in the 21st Century. This Executive Order requires federal agencies to protect, connect, promote, and assist trails of all types throughout the United States. Development of additional trails will be included in the analysis and recommendations later in this document.

Executive Order 13352, 26 August 2004, Facilitation of Cooperative Conservation. This Executive Order requires that the Secretaries of the Interior, Agriculture, Commerce, and Defense and the Administrator of the Environmental Protection Agency shall carry out the programs, projects, and activities of the agency that they respectively head that implement laws relating to the environment and natural resources in a manner that: a) facilitates cooperative conservation; b) takes appropriate account of and respects the interests of persons with ownership or other legally recognized interests in land and other natural resources; c) properly accommodates local participation in federal decision making; and d) provides that the programs, projects, and activities are consistent with protecting public health and safety. The W. Kerr Scott Reservoir office coordinates with federal, state and local agencies and non-governmental organizations to develop, manage, and monitor resources at the W. Kerr Scott Reservoir.

Executive Order 13423, 24 January 2007, Strengthening Federal Environmental, Energy, and Transportation Management. This Executive Order requires federal agencies to conduct their environmental, transportation, and energy-related activities under the law in support of their respective missions in an environmentally, economically and fiscally sound, integrated, continuously improving, efficient, and sustainable manner. The order sets goals in the areas of energy efficiency, acquisition, renewable energy, toxic chemical reduction, recycling, sustainable buildings, electronics stewardship, fleets, and water conservation.

Executive Order 13443, 17 Aug 2007, Facilitation of Hunting Heritage and Wildlife Conservation. The purpose of this order is to direct federal agencies that have programs and activities that have a measurable effect on public land management, outdoor recreation, and wildlife management, including the Department of the Interior and the Department of Agriculture, to facilitate the expansion and enhancement of hunting opportunities and the management of game species and their habitat. Resource Objectives and Development Needs for many management units at W. Kerr Scott Reservoir include providing and maintaining lake access for hunting and providing opportunities for hunting.

Executive Order 13514, 5 Oct 2009, Federal Leadership in Environmental Energy and Economic Performance. This order expanded upon the energy reduction and environmental performance requirements of Executive Order 13423. It sets numerous federal energy requirements. Future development and operation of the project, including the implementation of the Resource Objectives and Development Needs described in this Master Plan, would comply with these requirements.

Cultural Resource Statutes

Public Law 59-209, 59th Congress (34 Stat. 225), 8 June 1906, The Antiquities Act. This Act makes it a federal offense to appropriate, excavate, injure, or destroy any antiquity, historic ruin, monument, or object of scientific interest located on lands owned or controlled by the United States without having permission from the Secretary of the department having jurisdiction thereof. Paleontological resources are regulated under this Act. USACE works with all law enforcement agencies to maintain a network of individuals that would be able to respond quickly to incidents of looting and artifact collecting.

Public Law 86-523 (74 Stat. 220), 27 June 1960, Reservoir Salvage Act, as amended. This Act provides for (1) the preservation of historical and archaeological data that might otherwise be lost or destroyed as the result of flooding or any alteration of the terrain caused as a result of any federal reservoir construction projects; (2) coordination with the Secretary of the Interior whenever activities may cause loss of scientific, prehistorical, or archaeological data; and (3) expenditure of funds for recovery, protection, and data preservation. This Act was amended by Public Law 93-291. Any construction proposed at W. Kerr Scott Reservoir connected to operation and maintenance of the facility is reviewed in advance by USACE Wilmington District cultural resources staff. In all cases avoidance of historic properties is the Preferred Alternative. When such disturbance is unavoidable, suitable protection or data recovery will be implemented as required by the Act.

Public Law 89-665 (80 Stat. 915), 15 October 1966, National Historic Preservation Act of 1966, as amended (NHPA). This Act states a policy of preserving, restoring, and maintaining cultural resources and requires that federal agencies (1) take into account the effect of any undertaking on any site on or eligible for the National Register; (2) afford the Advisory Council on Historic Preservation (ACHP) the opportunity to comment on such undertaking; (3) nominate eligible properties to the National Register; (4) exercise caution in the disposal and care of federal property that might qualify for the National Register; and (5) provide for the maintenance of federally owned sites on the National Register. All ground-disturbing activities proposed on W. Kerr Scott Reservoir project lands are coordinated in advance with the SHPO, ACHP, and any other interested parties under Section 106 of the Act.

Executive Order 11593, 13 May 1971, Protection and Enhancement of the Cultural Environment. Section 2 of the order outlines the responsibilities of federal agencies in accordance with NEPA, NHPA, the Historic Sites Act of 1935, and the Antiquities Act of 1906. Section 3 outlines specific responsibilities of the Secretary of the Interior including review and comment upon federal agency procedures submitted under this order.

Public Law 93-291 (88 Stat. 174), 24 May 1974 Preservation of Historical and Archeological Data. This Act amends the Reservoir Salvage Act, Public Law 86-523, to provide for the preservation of historical and archaeological data (including relics and specimens), which might otherwise be lost as the result of the construction of a dam. Section 3(a) requires any federal agency to notify the Secretary of the Interior in writing when the agency finds, or is notified in writing by an appropriate historical or archaeological authority, that its activities in connection with any federal construction project or federally licensed project, activity, or program may cause irreparable loss or destruction of significant scientific, prehistorical or archaeological data. Section 7 (a) requires any federal agency responsible for a construction project to assist/transfer to the Secretary of the Interior such funds as may be agreed upon, but not more than 1 percent of the total appropriated project costs. The costs of survey, recovery, analysis, and publication shall be considered non-reimbursable project costs. USACE will notify the Secretary of the Interior in writing if a USACE activity may destroy significant scientific, prehistoric, or archeological data.

Public Law 95-341 (92 Stat. 469), 11 August 1978, American Indian Religious Freedom Act of 1978. The Act protects the rights of Native Americans to exercise their traditional religions by ensuring access to sites, use and possession of sacred objects, and the freedom to worship through ceremonials and traditional rites. No proposals in this Master Plan would adversely affect the protections offered by this Act. Access to sacred sites by tribal members would be provided.

Public Law 96-95 (93 Stat. 721), 31 October 1979, Archaeological Resources Protection Act of 1979. This Act protects archaeological resources and sites that are on public and tribal lands, and fosters increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals. It also establishes requirements for issuance of permits by the federal land managers to excavate or remove any archaeological resource located on public or Indian lands. All persons proposing to engage in archeological excavation on W. Kerr Scott project lands are required to apply for and obtain a permit under this Act.

Public Law 101-601 (104 Stat. 3042), 16 November 1990, Native American Graves Protection and Repatriation Act. This Act provides for the protection of Native American and Native Hawaiian cultural items. It establishes a process for the authorized removal of human remains, funerary, sacred, and other objects of cultural patrimony from sites located on land owned or controlled by the federal government. The Act requires federal agencies and federally assisted museums to return specified Native American cultural items to the federally recognized Indian tribes or Native Hawaiian groups with which they are associated. Notification of all inadvertent discoveries of such items covered by the Act is reported to the appropriate affiliated descendant or tribe in order of precedence as set by the Act. Any claims to such items are reviewed and the procedures to repatriate within the Act are followed.

Executive Order 12898, 11 February 1994, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. Federal agencies shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States. Development and management activities proposed in this Master Plan will not disproportionately impact minority or low-income populations.

Executive Order 13007, 24 May 1996, Indian Sacred Sites. This Executive Order requires that agencies avoid damage to Indian sacred sites on federal land, and avoid blocking access to such sites for traditional religious practitioners. The federal government gives tribes notice when an impact to a sacred site may occur.

Executive Order 13175, 6 November 2000, Consultation and Coordination with Indian Tribal Governments. This Executive Order requires regular and meaningful consultation and collaboration with tribal officials in the development of federal policies that have tribal implications, to strengthen the United States government-to-government relationships with Indian tribes, and to reduce the imposition of unfunded mandates upon Indian tribes. Section 3 establishes policymaking criteria when formulating and implementing policies that have tribal implications. Section 5 (a) says each agency shall have an accountable process to ensure meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications. Tribal representatives were consulted with as part of the W. Kerr Scott Reservoir Master Plan and PEA scoping and were provided copies of the Draft Master Plan and Draft PEA for review.

Executive Order 13287, 3 March 2003, Preserve America. This Executive Order encourages federal agencies to recognize and manage the historic properties in their ownership as assets that can support department and agency missions while contributing to the vitality and economic well-being of the Nation's communities. This Executive Order also encourages federal agencies to seek partnerships with state, tribal, and local governments and the private sector to make more efficient and informed use of their historic, prehistoric, and other cultural resources for economic development and other recognized public benefits.

APPENDIX H
FIGURES

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