Carters Dam and Lake Project

Coosawattee River
Gilmer, Murray, and Gordon Counties, GA

Master Plan

Prepared by the
Mobile District
US Army Corps of Engineers

Revised: January 2022

[This page intentionally left blank]

CARTERS DAM AND LAKE PROJECT MASTER PLAN – FIVE YEAR UPDATE

The following updates have been made to the Carters Dam and Lake Project Master Plan Signed April 29th, 2016 by Colonel Jon J. Chytka.

1. UPDATE 1: PAGE 26

The acreage of the following recreation area has been edited to reflect the changes in the lease agreements. The original size of the Marina was 57 acres. In 2011 an amendment was issued to add 3 acres to capture developed acres near the entrance of the marina. Later that same year, a conditional lease was issued expanding the park by 273 acres. In October 2015 a new lease was issued to supersede and replace the previous agreements, permanently expanding the boundary of the leased area to 333 acres.

5.5 MARINA

Description: The Marina contains 333 acres, of which approximately 12 acres are developed. The site is mountainous and heavily wooded, and it rises from a normal pool elevation of 1,072' to an elevation of 1,250'.

2. UPDATE 2: PAGE 27

The location of the following recreation area has been edited to reflect the change of the Visitor Center's name to Nature Center. This change is also reflected in Plate Map CL 15MP-OR-02-C of North Bank Park.

5.6 NORTH BANK RECREATION AREA

Location:

Located directly north and south of the main dam; also includes the area around the Resource Management Office and Nature Center.

3. UPDATE 3: PAGE 29

Closure of camping section of Ridgeway Recreation Area was completed in 2015 after the Master Plan had begun routing for signatures. The Description section has been updated to reflect that change by removing the statement, "Historically, the campground area of this park has experienced very low visitation." The Developmental Needs section has also been updated by removing the bullet point referring to the potential closure of the campground.

5.8 RIDGEWAY RECREATION AREA

Description:

Ridgeway is a 300-acre, heavily wooded park having very steep topography. Approximately 15 acres are developed, but no utilities are present.

Development Needs:

- Upgrade aging facilities and facility infrastructure to improve operational efficiencies and to better meet visitor needs, including improved ADA accessibility.
- Expand camping access on blue trail and bike trail systems to include 4-5 additional primitive campsites.

4. UPDATE 4: PAGE 31

Due to completion of the campground section closure of Ridgeway Recreation Area Section 6.1 requires the following amendments.

6.1 CLOSURE OF RIDGEWAY RECREATION AREA

This recreation area was closed in 2015 after the original Master Plan was routed for signatures. In the original version of this Master Plan the following information was included regarding the justification for this closure:

In accordance with the Recreational Infrastructure Investment Strategy (RIIS), USACE will close the camping section of Ridgeway Park. This area has historically had low visitation, with only about 700 visitors per year, according to the most recent 5-year visitation average. In contrast, the day-use area of Ridgeway Park has averaged 6,300 visitors per year during the same period. Because the camping area is in a degraded condition, with campsites, amenities, and roadways requiring rehabilitation, Operations and Maintenance (O&M) costs for this area have risen each year, and a major investment would be required to operate this facility safely. This location also has access issues. Therefore, it is not economically feasible or cost-effective to complete the required rehabilitation. The day-use section of Ridgeway Park will remain open.

5. UPDATE 5: PAGE 31

The addition of Chapter 6.2 reflects the updated information regarding road and parking data that was collected across the Mobile District by SCA team members in 2021.

6.2 PROJECT ACCESS AND TRANSPORTATION

This master plan proposes capital improvements for existing access and entrance to recreation and other operational areas in the development needs section of the park descriptions in Chapter 5 and the Programmatic Environmental Assessment in Appendix D. An inventory of roads across the Mobile District was completed for the Mobile District in 2021. Multiple Federal Aid Highway Programs were established to provide funding to assist with managing federally and locally owned/maintained transportation asset structures leading to or on federal lands. Moving forward, this project will continue to seek funding through annual budgets and supplemental funding sources such as the Federal Land Transportation Program (FLTP) and the Federal Land Access Program (FLAP).

Carters Dam and Lake Project
Master Plan Five Year Update

January 25, 2022

The attached Master Plan for Carters Lake and Dam Project with included updates is in compliance with ER/EP 1130-2-550, Project Operations Recreation Operations and Maintenance Policies and no further action is required.

Master Plan is approved.

CHAPMAN.JEREMY.JIGGS.1187181077 Digitally signed by CHAPMAN.JEREMY.JIGGS.1187181077 Date: 2022.03.03 15:23:36 -06'00'

Jeremy J. Chapman, P.E.
Colonel, U.S. Army
District Commander

Carters Dam and Lake Project
Master Plan

April 29, 2016

The attached Master Plan for Carters Dam and Lake Project is in compliance with ER/EP 1130-2-550, Project Operations Recreation Operations and Maintenance Policies, and no further action is required.

Master Plan is approved.

Jon J. Chytka
Colonel, U.S. Army
District Commander

[This page intentionally left blank]

EXECUTIVE SUMMARY

A Master Plan (MP) is required for each civil works project and all fee-owned lands for which the U.S. Army Corps of Engineers (USACE) has administrative responsibility. It serves as a planning document that anticipates what could and should happen at a USACE project, but it is flexible enough to address changing conditions.

The primary goals of this Carters Dam and Lake 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 toward providing a high degree of recreation diversity within the region; (3) emphasize the particular qualities, characteristics, and potentials of the project; and (4) exhibit consistency and compatibility with national objectives and other state and regional goals and programs.

[This page intentionally left blank]

TABLE OF CONTENTS

1. Introduction 1
1.1 Project Description 1
1.2 Project Authorization 1
1.2.1 Project Purposes 1
1.3 Purpose and Scope of the Master Plan 1
1.3.1 Purpose 1
1.3.2 Scope 2
1.3.3 Master Planning Process 2
2. Project Setting and Factors Influencing Management and Development 3
2.1 Description of Reservoir 3
2.2 Hydrology and Ground Water 4
2.3 Topography, Geology, and Soils 4
2.4 Resource Analysis 5
2.4.1 Fish and Wildlife Resources 5
2.4.2 Vegetative Resources 5
2.4.3 Threatened and Endangered Species 6
2.4.4 Invasive Species 6
2.4.5 Ecological Setting 6
2.6.1 Zones of Influence 8
2.6.2 Visitation Profile 8
2.6.3 Recreation Analysis 8
2.7 Acquisition Policy 8
2.8 Pertinent Public Laws 9
3. Resource Objectives 12
4. Land Allocation and Classification 13
4.1 Land Allocation 14
4.2 Land Classification 14
4.2.1 Resource Objectives for Specific Land Classifications 14

4.2.2 Project Operation Lands 14
4.2.3 Recreation Lands 15
4.2.4 Mitigation Lands 16
4.2.5 Environmentally Sensitive Lands 17
4.2.6 Multiple Resource Management Lands 17
4.3 Project Easement Lands 19
4.3.1 Operations Easement 19
4.3.2 Flowage Easement 19
4.3.3 Conservation Easement 19
5. Resource Plan 19
5.1 Damsite Recreation Area 22
5.2 Doll Mountain Recreation Area 23
5.3 Harris Branch Recreation Area 24
5.4 Lower Pool Access Area 25
5.5 Marina 26
5.6 North Bank Recreation Area 27
5.7 Reregulation Dam Recreation Area 28
5.8 Ridgeway Recreation Area 29
5.9 Woodring Branch Recreation Area 30
6. Special Topics/Issues/Considerations 31
6.1 Closure of Ridgeway Camping Area 31
7. Glossary 31
Appendix A. Pertinent Data A-1
Appendix B. List of Prior Design Memoranda and Reports B-1
Appendix C. Programmatic Environmental Assessment C-1
Appendix D. Capacity Study D-1
Appendix E. Index of Plates E-1
Appendix F. Land Classification F-1
Appendix G. Recreation Areas G-1

1. INTRODUCTION

1.1 PROJECT DESCRIPTION

Operated by the U.S. Army Corps of Engineers (USACE), Carters Dam and Lake Project (also referred to as Carters Lake and Carters Project), is located in Gilmer, Murray, and Gordon Counties, GA, approximately 11 miles southeast and southwest of Chatsworth and Ellijay, GA, respectively; 60 miles north of Atlanta, GA; and 45 miles southeast of Chattanooga, TN. It includes approximately 3,880 acres of open water at normal pool and an additional 4,634 acres of surrounding fee land. The area is easily accessible via U.S. Highway 411, the principal highway in the region; secondary and county highways provide access to the land surrounding the reservoir.

Carters Dam is located on the Coosawattee River, where it emerges from a gorge near Carters, GA, approximately 26.8 miles above the river's mouth. Approximately 326 square miles drain into the Coosawattee River above Carters Dam. The terrain adjacent to both ends of the dam is rugged; the river bed has an elevation of about 680' with adjoining peaks reaching to about 1,300'. Pertinent data is included in Appendix A.

1.2 PROJECT AUTHORIZATION

Carters Dam and Lake Project was initially authorized through the Flood Control Act of 1944 (PL 78-534) enacted in the 2nd Session of the 78th Congress, as amended in 1946 and 1959, and the Carters Dam and Powerhouse were authorized by the River and Harbor Act (PL 79-14), adopted 2 March 1945, as a part of the ultimate plan of development of the Alabama-Coosa River System.

1.2.1 PROJECT PURPOSES

As authorized, the Carters Dam and Lake Project is a multipurpose project, which includes flood control, water quality, and hydroelectric power. Other purposes are the development and conservation of fee-owned lands for public use and enjoyment. The Fish and Wildlife Coordination Act (FWCA) of 1959 (PL 86-717) established additional purposes for the protection and development of forest and other vegetative cover and the establishment and maintenance of other conservation measures so as to yield maximum benefits and otherwise improve areas.

1.3 PURPOSE AND SCOPE OF THE MASTER PLAN

1.3.1 PURPOSE

This Master Plan (MP) provides a programmatic approach for the responsible stewardship of Carters Dam and Lake Project resources for the benefit of present and future generations. While it identifies conceptual types and levels of activities, it is not a design document like the Preliminary Master Plan. Because all actions by USACE and the agencies and individuals granted leases to project lands must be consistent with the

Master Plan, it must be kept current in order to provide effective guidance in USACE decision-making.

The Master Plan is based on responses to regional and local needs, resource capabilities and suitability, and expressed public interest consistent with authorized project purposes and pertinent legislation and regulations. It 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 that are implemented through provisions of the OMP, specific Design Memoranda (DMs), and Annual Management Plans. A list of project design memoranda and reports is included in Appendix B. The broad intent of this Master Plan is to accomplish the following:

- Determine the appropriate uses and levels of development of project resources
- Provide a framework within which the OMP and Annual Management Plans are developed and implemented
- Establish a basis on which outgrants and recreational development proposals are evaluated

1.3.2 SCOPE

USACE is responsible for managing, conserving, and enhancing environmental and cultural resources at all USACE reservoir projects while providing quality public recreational experiences to serve the needs of present and future generations. This Master Plan includes guidance for the appropriate use, development, enhancement, protection, and conservation of the natural, cultural, and man-made resources at Carters Lake. The specified land classifications, recreation development, and management practices apply to all USACE project lands at Carters Lake.

To ensure consideration of natural and cultural resources throughout the Master Plan, a Programmatic Environmental Assessment (PEA) is included in Appendix C. This document provides the most appropriate level of stewardship, management activities, and types and levels of recreational use for Carters Lake lands. It also 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.

1.3.3 MASTER PLANNING PROCESS

This Master Plan and associated PEA were prepared in accordance with the following USACE 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 Nov 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 Oct 2003.

- Engineer Regulation (ER) 200-2-2, *Environmental Quality—Procedures for Implementing the National Environmental Policy Act (NEPA)*, 4 Mar 1988.

- Engineer Regulation (ER) 1105-2-100, *Planning Guidance*, 22 Apr 2000, 30 Jun 2004, 31 Jan 2007, 30 Jun 2004, 20 Nov 2007.

- Engineer Regulation (ER) 1130-2-550, *Project Operations—Recreation Operations and Maintenance Guidance and Procedures*, 15 Nov 1996, 1 Oct 1999, 1 Mar 2002, 15 Aug 2002, 30 Aug 2008, 30 Mar 2009.

2. PROJECT SETTING AND FACTORS INFLUENCING MANAGEMENT AND DEVELOPMENT

2.1 DESCRIPTION OF RESERVOIR

Carters Dam and Lake Project is located in the lower limits of the Blue Ridge Mountains, a regional area that is experiencing the impact of a population with increased leisure time, larger incomes, and greater mobility. The main lake, which covers approximately 3,275 surface acres at maximum conservation pool, is wholly contained within Gilmer (approximately 3000 surface acres) and Murray (approximately 275 surface acres) Counties, GA. The reregulation pool, which covers approximately 1,030 surface acres at maximum elevation, includes approximately 975 surface acres in Murray County and approximately 55 acres in Gordon County, GA.

One interregional highway, US Route 411, passes about 1 mile west of the dam. Georgia State Route 282 runs east/west on the north side of the lake, Georgia State Route 382 runs north/south on the east side of the lake, and Georgia State Route 136 runs east/west on the south side of the lake.

The Carters Dam Powerhouse, which produces commercial electric power valued at approximately $9 million per year, consists of four hydroelectric generators capable of producing a maximum of 600 megawatts of electricity for the facility. Two of the generators have pump capability, so they can be reversed during periods of low power demand to pump water from the reregulation pool to the main pool to be used for hydroelectric power generation during times of higher power demand. The main dam, located at the northern end of the Alabama-Coosa-Tallapoosa (ACT) River Basin, controls a drainage area of 376 square miles. An additional 154 square miles is contained in the Talking Rock Creek watershed, which flows into the reregulation pool.

Carters Lake consists of three pools—the flood pool, the conservation pool, and the inactive pool. The flood pool is used for water storage. By allowing water flow to be regulated and released in a safe manner, it helps control flooding downstream. The conservation pool, often referred to as the "power pool," is used for power generation and water supply, and the inactive pool is dead storage not used for any purpose. Data for each pool is included in Appendix A.

2.2 HYDROLOGY AND GROUND WATER

The movement of water into, through, and out of Carters Lake 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 groundwater present on site and its ability to move through project lands dictates current and future placement and use of facilities at Carters Lake.

The Coosawattee River is formed by the juncture of the Ellijay and Cartecay Rivers at Ellijay, GA, approximately 21 miles upstream from the Carters Project. These tributary streams rise in the Blue Ridge Mountains, which have peaks up to 4,000' NGVD. The southern boundary of the basin is shared with the northern boundary of the Allatoona Dam basin, which drains into the Etowah River. The Carters project basin is predominantly undeveloped; the Carters Dam basin controls only 2% of the total basin area.

2.3 TOPOGRAPHY, GEOLOGY, AND SOILS

Carters Lake is located in a transitional zone from both a topographic and a geologic standpoint. The damsite is in the Piedmont Physiographic Province, just upstream from the escarpment which separates the harder crystalline rocks of that province from the softer sedimentary rocks of the Valley Physiographic Province to the south. The Oconee Series of the metasediments of the later Precambrian Age underlie the damsite and extend eastward throughout the project area. The Cartersville Fault, one of the major thrust faults of the southeastern United States, is located along the boundary escarpment. An independent mineral resource appraisal conducted prior to completion of the dam determined that there are no economically retrievable mineral deposits in the project area.

The land use and capability on either side of the transition zone are markedly different. The project area above the dam is very rugged, consisting of steep slopes and ridges with narrow valleys. In contrast, project land surrounding the reregulation pool is best described as moderate slopes with broad, smooth valleys. The soils below the dam are better suited to agricultural purposes than are those above the dam. According to the *Level One Soil Analysis*, completed in 2009, 75% of project land is steeper than 25% slope. The *Preliminary Master Plan*, completed in 1964, stated that 60% of project land is steeper than 33% slope.

Two predominant soil associations are found at Carters Lake. Soils underlying approximately 85% of project land are classified as either the Talladega-Tallapoosa

Association or the Tallapoosa-Madison-Haynesville Association. These soil types, characterized by well-drained reddish or yellowish red loamy and clayey subsoil, commonly occur together on steep uplands. On steep slopes and ridges exceeding 25%, they are thin with bedrock composed of schist, gneiss, phyllite, and slate while on 10%-25% slopes, deeper, more fertile soils weathered from mica-schist, granite, and quartz occur. A third soil association is comprised of soil types found in bottomland areas of Talking Rock Creek.

The suitability of the soils for timber growth and harvesting on slopes and ridges can range from moderately high productivity, with few equipment limitations, to moderate productivity with severe erosion potential. As slopes exceed 25%, timber productivity declines, and erosion potential increases in harvesting operations. Soil associations found on slopes and ridges are best suited for forest management and wildlife habitat while soil low in productivity is unsuitable for cultivation.

2.4 RESOURCE ANALYSIS

2.4.1 FISH AND WILDLIFE RESOURCES

Carters Lake provides habitat for an abundance of wildlife and fisheries, both in the lake and on project lands around the lake. Typical mammal species located in the general area include white-tailed deer, black bear, squirrel, rabbit, raccoon, turkey, beaver, opossum, red fox, grey fox, muskrat, skunk, and groundhog. Over 100 bird species are present in the general area, including bald eagle, red-tailed hawk, osprey, and a variety of song birds and migratory waterfowl. Typical fish species in the lake include striped bass, spotted bass, largemouth bass, channel catfish, crappie, and bluegill. Walleye are also present, although in smaller numbers, and trout are found in some tributaries flowing into the lake.

Wildlife and fisheries are managed cooperatively by the Georgia Department of Natural Resources (DNR) and USACE. The Georgia DNR, the primary agency responsible for fisheries management, conducts creel surveys to monitor current populations and ensure they are healthy, stable, and within an acceptable range. Creel and size limits are adjusted as needed in order to keep fish populations healthy. The installation and maintenance of fish attractors by both organizations have improved fishing habitat.

2.4.2 VEGETATIVE RESOURCES

Three major cover types—pine hardwood, upland hardwood, and cove hardwood—dominate the approximately 4,070 acres of forest located on project land. Planted pine and natural pine stands, which comprise approximately 10-15% of the total project acreage, are typically less than 10 acres in size. Four bottomland hardwood stands, comprising less than 2% of the total project acreage, are located in the Talking Rock Creek and Coosawattee River drainages.

2.4.3 THREATENED AND ENDANGERED SPECIES

Threatened and endangered species that may occur in the counties comprising the Carters project area are the gray bat, Indiana bat, Northern long-eared bat, blue shiner, goldline darter, Cherokee darter, amber darter, Conasauga logperch, fine-lined pocketbook, southern combshell, Coosa moccasinshell, southern pigtoe, Alabama moccasinshell, Georgia pigtoe, southern clubshell, triangular kidneyshell, large-flowered skullcap, Tennessee yellow-eyed grass, small whorled pogonia, and green pitcher-plant.

2.4.4 INVASIVE SPECIES

Several invasive species pose problems for Carters Lake and the surrounding land. The most problematic of these are kudzu and autumn olive. Both are fast-growing and both, over time, have become more pronounced throughout the lake area. Kudzu growth has typically been limited to several local areas while autumn olive has been observed in bottomland areas around the reregulation pool and in upland food plot perimeters. The succession rates of areas where these species are located are negatively impacted. Both species have been, and will continue to be, treated annually with herbicide. Autumn olive has also been removed by mechanical means, including chainsaws, handsaws, and heavy equipment.

Other invasive species present on the project include feral hogs, Chinese privet, Japanese honeysuckle, ox-eye daisy, and sericea lespedeza. Feral cats have also increasingly become an issue in localized areas.

2.4.5 ECOLOGICAL SETTING

Carters Lake lies within two Level IV ecoregions—the *Southern Metasedimentary Mountains* (within the Level III *Blue Ridge)* and the *Southern Shale Valley* (within the Level III *Ridge and Valley)*.

The Level III *Blue Ridge* ecoregion extends from southern Pennsylvania to northern Georgia, varying from narrow ridges to hilly plateaus to more massive mountainous areas, with high peaks reaching over 6600'. The mostly forested slopes; high-gradient, cool, clear streams; and rugged terrain occur primarily on metamorphic rocks, with minor areas of igneous and sedimentary geology. Annual precipitation of over 100" can occur in the wettest areas while dry basins can average as little as 40". The southern *Blue Ridge* is one of the richest centers of biodiversity in the eastern U.S. It is also one of the most floristically diverse ecoregions, including Appalachian oak forests, northern hardwoods and, at the highest elevations, Southeastern spruce-fir forests. Shrub, grass, and heath balds as well as hemlock, cove hardwood, and oak-pine communities are also significant. The Level IV *Southern Metasedimentary Mountains* ecoregion, within the *Blue Ridge ecoregion*, contains rock that is generally not as strongly metamorphosed as the gneisses and schists of the *Southern Crystalline Ridges and Mountains.* The geologic materials are mostly late Pre-Cambrian schist and gneiss. Although the highest peaks are lower than those in the *Southern Crystalline Ridges and*

Mountains and parts of the region have more open low hills, there are some isolated masses of rugged mountains, such as the biologically diverse Cohutta Mountains, Rich Mountains, and Fort Mountain.

The Level III *Ridge and Valley* ecoregion is a relatively low-lying region between the *Blue Ridge* to the east and the *Southwestern Appalachians* to the west. As a result of extreme folding and faulting events, the roughly parallel ridges and valleys come in a variety of widths, heights, and geologic materials, including limestone, dolomite, shale, siltstone, sandstone, chert, mudstone, and marble. Springs and caves are relatively numerous. Land cover is mixed, and present-day forests cover about 50% of the region. This ecoregion has great aquatic habitat diversity, supporting a diverse fish fauna. The Level IV *Southern Shale Valley* ecoregion, within the *Ridge and Valley* ecoregion, consists of undulating to rolling valleys and some low, rounded, shale-dominated hills and knobs. The soils formed in materials weathered from shale, shale limestone, and clayey sediments, and they tend to be deep, acidic, moderately well-drained, and slowly permeable. The steeper slopes are used for pasture or have reverted to brush and mixed forest land. Small fields of hay, corn, soybeans, tobacco, and garden crops are grown on the foot slopes and bottom land.

2.4.6 WETLANDS

The Carters Dam and Lake Project includes lacustrine (4,152 acres), palustrine (22 acres), and riverine wetlands (36 acres). The majority of these wetlands include the actual lake itself, the USACE-managed portion of the Coosawattee River, and the Reregulation Lake. The remaining wetlands consist primarily of small ponds on the project and several locations that may become inundated at different times through fluctuations in the lake elevation during normal operating procedures.

2.5 CULTURAL RESOURCES

Historic resource surveys conducted before and after the construction of the Carters Dam and Lake Project have identified many historic resource sites on fee-owned Government property, and data recovery was conducted at several prehistoric archaeological sites prior to impoundment. Since passage of the National Historic Preservation Act in 1966, most project lands have been surveyed. The majority of previously identified sites are located in the reregulation pool, and the majority of unsurveyed lands remain near Web Creek. A Historic Properties Management Plan has been implemented at Carters Dam and Lake Project since 1996, with stewardship responsibilities and future work outlined. This plan is currently being updated to incorporate scientific advancements in the field of cultural resource management.

2.6 RECREATION FACILITIES, ACTIVITIES, AND NEEDS

Carters Lake has 2 developed campgrounds, totaling 110 campsites; 3 primitive campgrounds, totaling 40 campsites; a group camping area; 8 day-use areas; a public beach; numerous trails; and a public marina. While a small project, Carters Lake experiences a large number of different recreational activities. Some of the more

popular activities include developed and primitive camping, boating, hiking, sightseeing, swimming, picnicking, mountain biking, hunting, birding, and fishing.

2.6.1 ZONES OF INFLUENCE

Zones of influence, which represent the study areas for evaluating recreation capacities, fall into two classifications: Zone 1 is the area falling within a 25-mile radius of a project area, and Zone 2 is the area falling within a 50-mile radius of a project area. Carters Lake is the only water-based recreation area within Zone 1. Allatoona Lake and Lake Lanier, as well as northern Metro Atlanta, lie within Zone 2.

2.6.2 VISITATION PROFILE

In general, Carters Lake is visited predominately by local residents. Peak recreation season is from May to September. Visitation is concentrated during the weekends in both peak and non-peak seasons. The Carrying Capacity Study discusses the Carters Lake visitation patterns in detail.

2.6.3 RECREATION ANALYSIS

The recreation analysis evaluated overall visitation. It looked at future population and forecasted future visitation based on current use data as well as proposed changes occurring at Carters Lake. This recreation analysis is included in full in the Carrying Capacity Study.

2.6.4 RECREATIONAL CARRYING CAPACITY

Recreational carrying capacity is established for both general recreation capacity boating capacity. The carrying capacity estimates were based on use data, current and proposed infrastructure, and best professional judgment. The analysis used the *Water and Land Recreation Opportunity Spectrum (WALROS) Handbook* as a guideline for evaluating changes to the boating capacity analysis. The full analysis is included in the Carrying Capacity Study.

2.7 ACQUISITION POLICY

The acquisition policy for purchasing lands for Carters Lake were as follows: 1) All lands below elevation 1,108' NGVD or 300' horizontal distance landward from the full pool elevation of 1,099' NGVD were acquired for the main lake, whichever criterion resulted in the acquisition of more land; and 2) all lands below elevation 703' NGVD, except for several small flowage easement parcels south of GA Highway 136, were acquired for the reregulation pool. For those areas above 1,108' NGVD for the main lake and above 703' NGVD for the reregulation pool, the acquisition policy was to purchase flowage easements to provide the right to temporarily store flood waters. Road easements were also purchased to develop ingress and egress into operational and recreational areas.

2.8 PERTINENT PUBLIC LAWS

a. Public Law 59-209, Antiquities Act of 1906—The first Federal law established to protect cultural resources on public lands; provides a permit procedure for investigating "antiquities" and consists of two parts, an act for the Preservation of American Antiquities, and Uniform Rules and Regulations.

b. Fish and Wildlife Coordination Act (FWCA) of 1934, ch. 55, 48 Statute 401—Authorizes the Secretaries of Agriculture and Commerce to provide assistance to and cooperate with Federal and State agencies to protect, rear, stock, and increase the supply of game and fur-bearing animals.

c. Public Law 74-292, Historic Sites Act of 1935—Declares it policy to preserve for (in contrast to protecting from) the public, historic (including prehistoric) sites, buildings, and objects of national significance. This act provides both authorization and a directive for the Secretary of the Interior, through the National Park Service, to assume a position of national leadership in the area of protecting, recovering, and interpreting national archaeological historic resources. It also establishes an Advisory Board on National Parks, Historic Sites, Buildings, and Monuments, a committee of eleven experts in the fields of history, archaeology, architecture, and human geography, appointed by the Secretary to recommend policies to the Department of the Interior.

d. Public Law 78-534, Flood Control Act (FCA) of 1944—Section 4, as last amended in 1962 by Section 207 of Public Law 87-874 authorizes the USACE Chief of Engineers to construct, maintain, and operate public parks and recreational facilities in reservoir areas. This act further authorizes the Secretary of the Army to grant leases and licenses for lands, including facilities, preferably to Federal, State, or local governmental agencies.

e. Public Law 79-14, River and Harbor Act (RHA) of 1945—Provides for initial and ultimate development of the Alabama-Coosa River and tributaries for navigation, flood control, power development, and other purposes.

f. Public Law 85-624 and Public Law 89-72, Amendments to the Fish and Wildlife Coordination Act (FWCA) of 1934—Provides that fish and wildlife conservation receive equal consideration with other project purposes and be coordinated with other features of water resource development programs and states that opportunities for improving fish and wildlife resources and adverse effects on these resources be examined along with other purposes which might be served by water resources development.

g. Public Law 86-717, 74 Statute 817, Forest Conservation—Provides for the protection of forest cover for reservoir areas under the jurisdiction of the Secretary of the Army and the Chief of Engineers.

h. Public Law 88-578, Land and Water Conservation Fund (LWCF) Act of 1965—Established a fund from which Congress can make appropriations for outdoor

recreation. Section 2(2) makes possible entrance and user fees at reservoirs by deleting the words “without charge” from Section 4 of the 1944 Flood Control Act as amended.

i. Public Law 89-90, Water Resources Planning Act of 1965—Established the Water Resources Council, giving it the responsibility of encouraging the development, conservation, and use of the Nation’s water and related land resources on a coordinated and comprehensive basis.

j. Public Law 89-665, National Historic Preservation Act (NHPA) of 1966—Provides for (1) an expanded National Register of significant sites and objects, (2) matching grants to states undertaking historic and archaeological resource inventories, (3) a program of grants-in-aid to the National Trust for Historic Preservation, and (4) the establishment of an Advisory Council on Historic Preservation. Section 106 requires that the President’s Advisory Council on Historic Preservation have an opportunity to comment on any undertaking which adversely affects properties listed, nominated, or considered important enough to be included on the National Register of Historic Places.

k. Public Law 90-483, River and Harbor and Flood Control Act (RHFCA) of 1968—Section 210 restricted collection of entrance fee at USACE lakes and reservoirs to users of highly developed facilities requiring continuous presence of personnel.

l. Public Law 91-190, National Environmental Policy Act (NEPA) of 1969—Declared it a national policy to “encourage productive and enjoyable harmony between man and his environment.” Specifically, it declared a “continuing policy of the Federal Government . . . to use all practicable means and measures . . . to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.” Section 102 authorized and directed that, to the fullest extent possible, the policies, regulations and public law of the United States must be interpreted and administered in accordance with the policies of the Act.

m. Public Law 91-611, River and Harbor and Flood Control Act (RHFCA) of 1970—Section 234 states that people designated by the USACE Chief of Engineers have authority to issue citations for violations of regulations and rules of the Secretary of the Army, published in the Code of Federal Regulations.

n. Public Law 92-500, Federal Water Pollution Control Act (FWPCA) Amendments of 1972—The Federal Water Pollution Control Act of 1948 (PL 845, 80th Congress), as amended in 1956, 1961, 1965 and 1970 (PL 91- 224), established the basic tenet of uniform State standards for water quality. Public Law 92-500 strongly affirms the Federal interest in this area: “The objective of this act is to restore and maintain the chemical, physical and biological integrity of the Nation's waters.”

o. Public Law 92-516, Federal Environmental Pesticide Control Act (FEPCA) of 1972—Completely revises the Federal Insecticide, Fungicide and Rodenticide Act by providing

for complete regulation of pesticides, including restrictions on use, actions within a single State, and strengthened enforcement.

p. Public Law 93-81, Amendment to the Land and Water Conservation Fund (LWCF) Act of 1965—Amends Section 4 of the Land and Water Conservation Act of 1965 to require each Federal agency to collect special recreation use fees for sites, facilities, equipment, or services furnished at Federal expense.

q. Public Law 93-205, Endangered Species Act (ESA) of 1973—Repealed the Endangered Species Conservation Act, Public Law 91-135 and provides for the conservation of ecosystems upon which threatened and endangered species of fish, wildlife, and plants depend. Section 7 of this act requires Federal agencies to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of the listed species or modify their critical habitat.

r. Public Law 93-291, Archaeological Conservation Act of 1974—Tasks the Secretary of the Interior with coordinating all Federal survey and recovery activities authorized under this expansion of the 1960 act. The Federal Construction agency may transfer up to 1% of project funds to the Secretary, with such transferred funds considered non-reimbursable project costs.

s. Public Law 93-303, Amendment to the Land and Water Conservation Act (LWCA) of 1965—Amends Section 4 of the Land and Water Conservation Act of 1965, as amended, to establish less restrictive criteria under which Federal agencies may charge fees for the use of campgrounds developed and operated at Federal areas under their control.

t. Public Law 93-523, Safe Drinking Water Act (SDWA)—Ensures that water supply systems serving the public meet minimum national standards for protection of public health. The act authorizes the Environmental Protection Agency to establish Federal standards applicable to all public water systems for protection from all harmful contaminants and establishes a joint Federal-State system for ensuring compliance with these standards and for protecting underground sources of drinking water.

u. Public Law 94-422, Amendment of the Land and Water Conservation Fund (LWCF) Act of 1965—Expands the role of the Advisory Council. Title 2 - Section 102a amends Section 106 of the Historical Preservation Act of 1966 by allowing the Council to comment on activities which will have an adverse effect on sites either included in or eligible for inclusion in the National Register of Historic Places.

v. Public Laws 94-587, Water Resource Development Act (WRDA) of 1976—Gives USACE District Commanders the authority to contract and/or enter into cooperative agreements with states and their political subdivisions to obtain increased law enforcement services at civil works water resource projects to meet needs during peak visitation periods and to augment the citation authorities granted to USACE under 36 CFR Chapter III, Part 327 (Title 36).

w. Public Law 98-63, Chapter IV General Provisions—Allows the USACE Chief of Engineers to accept the services of volunteers, and to provide for their incidental expenses, to carry out any USACE activity except policymaking or law or regulatory enforcement.

x. Public Law 98-616, Resource Conservation and Recovery Act (RCRA) of 1976—Establishes Federal standards and requirements for State and regional authorities in regard to solid waste disposal.

y. Public Law 99-662, Water Resources Development Act (WRDA) of 1986—Provides for the conservation and development of water and water-related resources and for the improvement and rehabilitation of the Nation's water resources infrastructure.

z. Native American Graves Protection and Repatriation Act (NAGPRA) of 1990—Provides for the protection of Native American graves, including human remains, funerary objects, sacred objects, and objects of cultural patrimony; also establishes procedures for inadvertent discovery or planned excavation of Native American cultural items on Federal lands.

aa. Public Law 106-580, Water Resources Development Act (WRDA) of 1992—Authorizes the Secretary of the Army to accept contributions of cash, funds, materials, and services from people, including governmental entities, but excluding the project sponsor, in connection with carrying out a water resources project for environmental protection and restoration or a water resources project for recreation.

bb. Public Law 110-325, Americans with Disabilities Act (ADA) of 1990—Title II of this act provides that public entities must provide physical and programmatic access to Americans with disabilities in accordance with U.S. Department of Justice regulations.

cc. Public Law 96-95, Archaeological Resources Protection Act (ARPA) of 1979—Protects for the present and future benefit of the American people archaeological resources and sites which are on public and Indian lands and fosters increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals.

3. RESOURCE OBJECTIVES

The Carters Lake Master Plan is not a construction document for future recreational facilities. Instead, it 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, realistically attainable goals for the use, development, and management of natural and manmade resources. These objectives serve as guidelines for attaining maximum public benefit within USACE safety guidelines and security levels (while minimizing the potential for adverse impacts) and for protecting and enhancing environmental quality. They 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 Carters Lake, not in order of priority, are as follows:

- Develop and manage project lands 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, aesthetics, and cultural and ecological values
- Educate the public about the history of the area, project resources, and USACE's role in developing and managing these resources
- Develop and manage 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
- Manage resources in response to changing conditions in a developing region

Specific resource objectives for each land classification at Carters Lake are identified in Section 4.2. Site-specific resource objectives for the individual management areas are listed in Section 5.

4. LAND ALLOCATION AND CLASSIFICATION

Land use at Carters Lake is governed by the land use category to which each parcel is assigned based on resource capability. Combined with the project-wide and site-specific Resource Objectives presented in this section and Section 5, this land use plan provides a programmatic approach to the use, management, and development of all project lands. Together, these elements are the core of this Master Plan.

4.1 LAND ALLOCATION

Project lands are allocated according to the authorized purposes for which they were acquired. The entire Carters Lake project has a land allocation of Project Operations, which means all project lands were originally acquired to provide safe, efficient operation of the project for its authorized purposes—hydropower, water supply, water quality, conservation and enhancement of fish and wildlife, and recreation. No specific parcels were acquired for or assigned to individual purposes of recreation, fish and wildlife conservation and enhancement, or mitigation.

4.2 LAND CLASSIFICATION

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 of the land classifications are discussed in connection with the appropriate resource objectives in this section. Their locations within the project are shown in Appendix E.

4.2.1 RESOURCE OBJECTIVES FOR SPECIFIC LAND CLASSIFICATIONS

Resource objectives are attainable goals for resource development and/or management that are consistent with authorized project purposes, Federal laws and directives, regional needs, resource capabilities, and expressed public preferences and needs. They consolidate the information presented in the previous sections of this Master Plan and are met, whether wholly or partially, through the implementation of the site-specific resource objectives established for each management area (identified in Section 5). The resource objectives developed for each land classification at Carters Lake and the rationale used to develop them are discussed below.

4.2.2 PROJECT OPERATION LANDS

The Project Operation classification includes lands required for the powerhouse, reregulation dam and associated structures, operations center, administrative offices maintenance compounds, and other areas used to operate and maintain Carters Lake. When it is compatible with operational requirements, management may choose to use these lands for recreation and multiple resource management as well. Approximately 320 acres are classified as Project Operation lands at Carters Lake.

Resource Objectives for Project Operations Lands

- Operate and maintain project structures in a manner that allows them to effectively fulfill project purposes.

- Renovate and improve existing recreational facilities on operations land 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 enhances 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 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.

Rationale

The primary purpose of the Project Operations lands, all of which are located in the area of the dam and the Resource Manager's Office at the southern end of the reservoir, is the operation and maintenance of Carters Lake. While reservoir operation falls outside the scope of the master planning process, designation of the portion of the project lands 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, and cannot be allowed. Within these constraints, however, Project Operations lands provide important opportunities for varying levels of recreation.

4.2.3 RECREATION LANDS

Recreation lands are designated to accommodate and support the recreational 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 also acceptable. Permits, licenses, and easements are not issued in these areas for non-compatible manmade intrusions—such as pipelines, overhead

transmission lines, and non-project roads—except where warranted by the public interest. Approximately 1,773 acres at Carters Lake are classified as Recreation lands.

Resource Objectives for Recreation Lands

- Provide for camping and day-use opportunities.
- Allow for several different activities in the same general vicinity.
- Maintain boating access to the reservoir while enhancing waterfront access for hiking, fishing, and sightseeing.
- Provide access for and use by the elderly and people with disabilities.
- Maintain diverse natural communities to enhance hiking and sightseeing 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.
- Interpret cultural resources to benefit visitors' understanding while preserving and monitoring the integrity of those resources.

Rationale

The location and design of recreation areas and facilities take into account the desired recreation experience and standards identified in EM 1110-1-400, Recreation Facilities and Customer Service Standards. Areas specifically classified as Recreation are located throughout the project. However, other classifications can also incorporate visitor use for recreation at a less-intensive level while simultaneously maintaining their primary purposes.

4.2.4 MITIGATION LANDS

The Mitigation classification includes those lands specifically designated to offset or mitigate habitat losses associated with the development of a USACE project. No lands at Carters Lake are currently classified as Mitigation.

4.2.5 ENVIRONMENTALLY SENSITIVE LANDS

The Environmentally Sensitive classification, which may exist within other land classifications, identifies areas where certain physical, ecological, cultural, or aesthetic features have been identified as especially sensitive to adverse environmental impacts. 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 at Carters Lake are currently classified as Environmentally Sensitive.

4.2.6 MULTIPLE RESOURCE MANAGEMENT LANDS

This classification, which contains nearly 6,421 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: Recreation–Low Density lands are designated for dispersed and/or low-impact recreation use. Emphasis is on providing opportunities for non-motorized activities, such as hiking, biking, fishing, hunting, sightseeing, and nature study. Site-specific, low-impact activities, such as primitive camping and picnicking, may also be allowed. Development of facilities on these lands is limited to 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: While all project lands are managed for fish and wildlife habitat in conjunction with other land uses, Wildlife Management lands are designated specifically for wildlife management. They contain valuable wildlife habitat components that are maintained to yield habitat suitable for designated game and non-game species and are jointly administered with the Georgia DNR. Licenses, permits, and easements are usually not allowed on these lands for such manmade intrusions as pumping plants, pipelines, cables, transmission lines, and non-project roads although 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 within Federal and State fish and wildlife management regulations.

Vegetation Management: Management activities on Vegetation Management lands focus on the protection and enhancement of forest resources and vegetative cover. Carters Lake conducts regular vegetation management activities to maintain natural screening around various recreational sites and to 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 that contain existing recreation areas that have been temporarily closed and lands for which recreation areas are planned for the future.

Resource Objectives for Multiple Resource Management Lands

- 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.
- Interpret cultural resources to benefit visitors' understanding while preserving and monitoring the integrity of those resources.

Rationale

In addition to the intensively developed recreation areas, the project provides many opportunities for a variety of dispersed recreation activities, such as boating, fishing, hunting, hiking, and biking. Given the growing demand for these activities on a local, regional, and national scale, use of these lands is expected to increase. Carters Lake is an ideal location for such activities given its high-quality habitat and its proximity to the Blue Ridge Mountains, other natural resources, and the growing number of local and regional trail systems.

4.3 PROJECT EASEMENT LANDS

Project Easement lands are lands on which easement interests are held but no fee title ownership exists. They typically include three different types of easements—operations, flowage, and conservation.

Resource Objectives for Easement Lands

- Monitor any activities occurring on Project Easement lands to ensure that USACE rights, according to terms and conditions of the legal easement, remain unimpeded.

- Promote an understanding of USACE boundaries and mission by the public and owners of Project Easement lands.

Rationale

Project Easement lands were specifically acquired to ensure adequate flood water storage as well as ingress and egress of USACE-operated facilities. While these lands are not actively managed to meet other project missions, maintaining the conditions established in the easement is vital to project success.

4.3.1 OPERATIONS EASEMENT

Operations easements are easements purchased for the purpose of project operations. USACE has purchased approximately 143 acres of operations easement lands for roads at Carters Dam and Lake Project.

4.3.2 FLOWAGE EASEMENT

Flowage easements are easements purchased for the right to temporarily flood private land during flood risk management operations. USACE has purchased approximately 38 acres of flowage easement lands at Carters Dam and Lake Project.

4.3.3 CONSERVATION EASEMENT

Conservation easements are purchased for the purpose of protecting wildlife, fisheries, recreation, cultural resources, environmental resources, or endangered species. There are no conservation easements at Carters Dam and Lake Project.

5. RESOURCE PLAN

A wide variety of factors must be considered when developing and operating Carters Lake project lands and resources, including 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.

Since the purpose of this Master Plan is to provide a programmatic approach to the use of project lands, it is important to examine (1) the condition and use of existing facilities and structures and (2) each management area within the various segments in order to determine how each area can be developed to fit with the overall goals of Carters Lake.

Within the Carters Lake project boundary, there are 9 primary recreation areas, ranging from fully developed campgrounds to primitive access points. Each area is described in detail later in this section. All are managed by USACE with the exception of the Marina, which is managed by concessionaire lease. The Georgia DNR provides support for the management of wildlife.

Easement lands, which cover an estimated 182 acres, are not included within the boundaries of individual recreation sites but occur primarily along the tributaries above and below the reservoir and on roadways used to access the project.

This Master Plan and the accompanying PEA (Appendix C) 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 recreation areas within the project boundary. The PEA also addresses the impacts of implementing the Master Plan.

The rest of this section provides a detailed description of each management area. The descriptions are organized in the following categories:

- **Management Agency**—The agency responsible for the day-to-day operation of the management area as of the date of this Master Plan.
- **Land Classification**—The designated land use classification (as defined in Section 4.2) for the management area.
- **Recommended Future Use**—The recommended future use of the management area. This may include the existing land classification, a change to a different classification, or a specific activity allowed within the land classification.
- **Rationale**—A discussion of the needs and intent of the management area's identified resource objectives.
- **Location**—A brief description of the management area's location, including visitor access points.
- **Description**—A brief description of the management area, focusing on its natural, cultural, or recreational resources.

- **Land Classification Resource Objectives**—A reference to the land classification Resource Objectives (as identified in Section 4.2).

- **Site-Specific Resource Objectives**—Identification of site-specific resource objectives that build on the project-wide resource objectives identified in Section 3 and the land classification resource objectives identified in Section 4.2.1. Resource objectives are attainable goals for the development, conservation, and management of natural, cultural, and manmade resources at Carters Lake. They 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 multiple resource objectives, but they are not prioritized. In some of the areas, the resource objectives may not be implemented for some time.

- **Development Needs**—Summary descriptions of the proposed actions to implement the Resource Objectives for each area. These needs, which include a range of potential construction projects and management strategies, are based on input from the public as well as from State and Federal agencies. They will be further refined and detailed in subsequent planning and design documents, including the OMP and future DMs. Final decisions regarding the specific 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 will be conducted, as required.

5.1 DAMSITE RECREATION AREA

Management Agency: USACE

Land Classification: Recreation

Recommended Future Use: Recreation

Rationale: Requires land classification of Recreation to maintain current operations. Multiple Resource Management activities also occur in this area, but they are secondary to the Recreation classification.

Location*:* Approximately ½ mile upstream from the dam on the left bank of the reservoir

Description: The site is just south of the dam and rises from normal pool elevation of 1,072' NGVD to an elevation of 1,300' NGVD. The area consists of approximately 35 acres, of which approximately 17 acres are usable. The terrain is mountainous, rugged, and heavily wooded.

Site-Specific Resource Objectives:

- Provide appropriate lake access for boaters.
- Provide appropriate facilities for day-use activities.
- Promote non-consumptive resource use, such as hiking, photography, and sightseeing.
- Promote consumptive resource use of resources, such as fishing.

Development Needs:

- Continue to provide a justified level of service by updating and upgrading aging facilities and facility infrastructure.
- Improve ADA accessibility.
- Improve the trail area across from the group shelter by adding a hard trail surface to increase accessibility to the lake. The picnic sites located in this area also require rehabilitation due to erosion.
- Install additional parking for both trailers and single-space vehicles (required due to the frequency in which the park fills to capacity during peak visitation times).

5.2 DOLL MOUNTAIN RECREATION AREA

Management Agency: USACE

Land Classification: Recreation

Recommended Future Use: Recreation

Rationale: One of the primary recreation sites managed by USACE at Carters Lake; requires land classification of Recreation to maintain current operations. Multiple Resource Management activities also occur in this area, but they are secondary to the Recreation classification.

Location: 2.3 miles upstream from the dam on the left bank of the reservoir

Description: Doll Mountain Recreation Area is a multiuse park consisting of 260 acres of heavily wooded mountainous terrain with limited opportunity for further development. The area rises from a normal pool elevation of 1,072' to an elevation of 1,300' at certain areas. Slopes above an elevation of 1,072' typically range from 25% to 60% although slopes in some areas exceed 60%.

Site-Specific Resource Objectives:

- Provide appropriate facilities for day-use and camping activities.
- Maintain boating access to the reservoir.
- Develop and maintain wildlife habitat in more secluded areas of the park.
- Promote non-consumptive resource use, such as hiking, photography, and sightseeing.
- Promote consumptive resource use, such as hunting and fishing.

Development Needs:

- Upgrade aging facilities and facility infrastructure to improve operational efficiencies and to better meet visitor needs, including improved ADA accessibility.
- Convert underutilized tent campsites to developed RV campsites.

5.3 HARRIS BRANCH RECREATION AREA

Management Agency: USACE

Land Classification: Recreation

Recommended Future Use: Recreation

Rationale: One of the primary recreation sites managed by USACE at Carters Lake and the only public beach; a unique location that requires land classification of Recreation to maintain current operations. Multiple Resource Management activities also occur in this area, but they are secondary to the Recreation classification.

Location: 2.5 miles upstream from the dam on the left bank of the reservoir

Description: Harris Branch Recreation Area consists of 110 acres of heavily wooded, mountainous terrain, of which 45 acres are usable. The areas rise from a normal pool elevation of 1,072' to an elevation of 1,300' and slopes above an elevation of 1,072' vary from 17% to 60%.

Site-Specific Resource Objectives:

- Provide appropriate facilities for day-use and camping activities.
- Maintain public beach access.
- Promote non-consumptive resource use, such as hiking, photography, and sightseeing.
- Promote consumptive resource use, such as hunting and fishing.

Development Needs:

- Upgrade aging facilities and facility infrastructure to improve operational efficiencies and to better meet visitor needs, including improved ADA accessibility.
- Modernize camping facilities.

5.4 LOWER POOL ACCESS AREA

Management Agency: USACE

Land Classification: Project Operations

Recommended Future Use: Project Operations

Rationale: Requires land classification of Project Operations to maintain current operations. Recreation and Multiple Resource Management activities also occur in this area, but they are secondary to the Project Operations classification.

Location: Directly downstream of the dam

Description: The Lower Pool Access Area is a relatively flat, open-fielded access point that offers the only boat access for the Reregulation Lake. This area consists of approximately 39 acres, of which approximately 36 acres are usable.

Site-Specific Resource Objectives:

- Maintain boating access to the lower reservoir.
- Develop and maintain wildlife habitat.
- Promote non-consumptive resource use, such as photography, and sightseeing.
- Promote consumptive resource use, such as hunting and fishing.

Development Needs:

- Upgrade aging facilities and facility infrastructure to improve operational efficiencies and to better meet visitor needs, including improved ADA accessibility.

5.5 MARINA

Management Agency: Concessioner through Lease Agreement

Land Classification: Recreation

Recommended Future Use: Recreation

Rationale: The only marina on Carters Lake; a unique location that requires land classification of Recreation to maintain current operations.

Location: Approximately 1.5 miles upstream from the dam on the left bank of the reservoir

Description: The Marina contains 333 acres, of which approximately 12 acres are developed. The site is mountainous and heavily wooded, and it rises from a normal pool elevation of 1,072' to an elevation of 1,250'.

Site-Specific Resource Objectives:

- Provide appropriate facilities for day-use activities.
- Promote non-consumptive resource use, such as hiking, biking, photography, and sightseeing.

Development Needs:

- Develop and maintain facilities to serve the recreation public.

5.6 NORTH BANK RECREATION AREA

Management Agency: USACE

Land Classification: Project Operations

Recommended Future Use: Project Operations

Rationale: Requires land classification of Project Operations to maintain current operations. Recreation and Multiple Resource Management activities also occur in this area, but they are secondary to the Project Operations classification.

Location: Located directly north and south of the main dam; also includes the area around the Resource Management Office and Nature Center

Description: The North Bank Recreation Area consists of approximately 68 acres that are directly on the north and south sides of the main dam. Approximately 30 acres are developed and have little-to-no tree cover. The area outside of the dam, park, and road areas is heavily wooded.

Site-Specific Resource Objectives:

- Provide appropriate facilities for day-use activities.
- Promote non-consumptive resource use, such as hiking, biking, photography, wildlife viewing, and sightseeing.
- Promote consumptive resource use, such as hunting and fishing.
- Develop and maintain wildlife habitat in more secluded areas of the park.

Development Needs:

- Upgrade aging facilities and facility infrastructure to improve operational efficiencies and to better meet visitor needs, including improved ADA accessibility.

5.7 REREGULATION DAM RECREATION AREA

Management Agency: USACE

Land Classification: Project Operations

Recommended Future Use: Project Operations

Rationale: Requires land classification of Project Operations to maintain current operations. Recreation and Multiple Resource Management also activities occur in this area, but they are secondary to the Project Operations classification.

Location: Directly downstream from the Reregulation Dam

Description: The Reregulation Dam Recreation Area is an open-to-partially wooded area of approximately 35 acres, of which approximately 10 acres lying immediately downstream of the Reregulation Dam are developed. The park is located in bottomland, has almost flat topography, and is divided by the river into the North and South Banks.

Site-Specific Resource Objectives:

- Provide appropriate facilities for day-use activities.
- Promote non-consumptive resource use, such as hiking, photography, wildlife viewing, and sightseeing.
- Promote consumptive resources use, such as hunting and fishing.
- Develop and maintain wildlife habitat in more secluded areas of the park.

Development Needs:

- Upgrade aging facilities and facility infrastructure to improve operational efficiencies and to better meet visitor needs, including improved ADA accessibility.

5.8 RIDGEWAY RECREATION AREA

Management Agency: USACE

Land Classification: Recreation

Recommended Future Use: Recreation

Rationale: Ridgeway Recreation Area requires land classification of Recreation to maintain current operations. Multiple Resource Management activities also occur in this area, but they are secondary to the Recreation classification.

Location: Approximately 6.4 miles upstream from the dam

Description: Ridgeway is a 300-acre, heavily wooded park having very steep topography. Approximately 15 acres are developed, but no utilities are present.

Site-Specific Resource Objectives:

- Provide appropriate facilities for day-use and camping activities.
- Promote non-consumptive resource use, such as hiking, biking, photography, and sightseeing.
- Promote consumptive resource use, such as hunting and fishing.
- Maintain boating access to the reservoir.
- Develop and maintain wildlife habitat in more secluded areas of the park.

Development Needs:

- Upgrade aging facilities and facility infrastructure to improve operational efficiencies and to better meet visitor needs, including improved ADA accessibility.
- Expand camping access on blue trail and bike trail systems to include 4-5 additional primitive campsites.

5.9 WOODRING BRANCH RECREATION AREA

Management Agency: USACE

Land Classification: Recreation

Recommended Future Use: Recreation

Rationale: One of the primary recreation sites managed by USACE at Carters Lake; a unique location that requires land classification of Recreation to maintain current operations. Multiple Resource Management activities also occur in this area, but they are secondary to the Recreation classification.

Location: Approximately 1.5 miles upstream from the dam on the right bank of the reservoir

Description: Woodring Branch is a moderately steep to very steep, heavily wooded 675-acre park. Approximately 60 acres are developed. Slopes above an elevation of 1,072' typically range from 17% to 60%.

Site-Specific Resource Objectives:

- Provide appropriate facilities for day-use and camping activities.
- Maintain boating access to the reservoir.
- Develop and maintain wildlife habitat in more secluded areas of the park.
- Promote non-consumptive resource use, such as hiking, biking, photography, and sightseeing.
- Promote consumptive resources use, such as hunting and fishing.

Development Needs:

- Upgrade aging facilities and facility infrastructure to improve operational efficiencies and to better meet visitor needs, including improved ADA accessibility.
- Expand Amadahy Trail by adding an approximately ½-mile trail loop.

6. SPECIAL TOPICS/ISSUES/CONSIDERATIONS

6.1 CLOSURE OF RIDGEWAY CAMPING AREA

This recreation area was closed in 2015 after the original Master Plan was routed for signatures. In the original version of this Master Plan the following information was included regarding the justification for this closure:

In accordance with the Recreational Infrastructure Investment Strategy (RIIS), USACE will close the camping section of Ridgeway Park. This area has historically had low visitation, with only about 700 visitors per year, according to the most recent 5-year visitation average. In contrast, the day-use area of Ridgeway Park has averaged 6,300 visitors per year during the same period. Because the camping area is in a degraded condition, with campsites, amenities, and roadways requiring rehabilitation, Operations and Maintenance (O&M) costs for this area have risen each year, and a major investment would be required to operate this facility safely. This location also has access issues. Therefore, it is not economically feasible or cost-effective to complete the required rehabilitation. The day-use section of Ridgeway Park will remain open.

6.2 PROJECT ACCESS AND TRANSPORTATION

This master plan proposes capital improvements for existing access and entrance to recreation and other operational areas in the development needs section of the park descriptions in Chapter 5 and the Programmatic Environmental Assessment in Appendix D. An inventory of roads across the Mobile District was completed for the Mobile District in 2021. Multiple Federal Aid Highway Programs were established to provide funding to assist with managing federally and locally owned/maintained transportation asset structures leading to or on federal lands. Moving forward, this project will continue to seek funding through annual budgets and supplemental funding sources such as the Federal Land Transportation Program (FLTP) and the Federal Land Access Program (FLAP).

7. GLOSSARY

ACT	Alabama-Coosa-Tallapoosa River System
ADA	Americans with Disabilities Act
ARPA	Archaeological Resources Protection Act
DM	Design Memoranda
DNR	Department of Natural Resources
EM	Engineer Manual
EP	Engineer Pamphlet
ER	Engineer Regulation
ESA	Endangered Species Act
FCA	Flood Control Act
FEPCA	Federal Environmental Pesticide Control Act
FWCA	Fish and Wildlife Coordination Act
FWPCA	Federal Water Pollution Control Act

GIS	Geographic Information System
HPMP	Historical Properties Management Plan
ICRMP	Integrated Cultural Resources Management Plan
LWCF	Land and Water Conservation Fund
OMP	Operational Management Plan
MP	Master Plan
MSL	Mean Sea Level
NAGPRA	Native American Graves Protection and Repatriation Act
NEPA	National Environmental Policy Act
NGVD	National Geodetic Vertical Datum
NHPA	National Historic Preservation Act
O&M	Operations and Maintenance
PEA	Programmatic Environmental Assessment
PL	Public Law
RCRA	Resource Conservation and Recovery Act
RHA	River and Harbor Act
RHFCA	River and Harbor and Flood Control Act
RIIS	Recreational Infrastructure Investment Strategy
RV	Recreational Vehicle
SDWA	Safe Drinking Water Act
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
WALROS	Water and Land Recreation Opportunity Spectrum
WMA	Wildlife Management Area
WRDA	Water Resources Development Act

APPENDIX A

PERTINENT DATA

Authorization
Flood Control Act (FCA) of 1944 (PL 78-534)
River and Harbor Act (RHA) of 1945 (PL 79-14)

Location
Approximately 11 miles southeast and southwest of Chatsworth and Ellijay, GA, respectively; 60 miles north of Atlanta, GA; 45 miles southeast of Chattanooga, TN

Purpose
Hydropower, Flood Control, Recreation, Natural Resources Management, and Water Supply

Construction

Main dam construction	1962-1975
Recreation area development	1976-1978

Reservoir

Carters Lake depth—in front of main dam	Over 450'
Area of maximum power pool	3,220 acres
Length at maximum power pool	11 miles
Maximum power pool elevation	1,074' above MSL
Top of primary flood control pool	1,099' above MSL
Minimum power pool	1,022' above MSL
Maximum drawdown	52'
Flood storage volume	95,700 acre-feet
Power storage volume	134,900 acre-feet
Dead storage volume	242,200 acre-feet
Total miles of project shoreline	76 miles
Drainage area above dam	376 square miles
Dam site, miles above mouth of river	26.8 miles

Reregulation Pool

Area at maximum storage pool	1,030 acres
Maximum storage pool elevation	698' above MSL
Usable storage	17,210 acre-feet
Dead storage	290 acre-feet

Recreation

Public use areas	10
Day-use areas	7

Campgrounds	3
Campsites	144
Group campsite	1 (10 campsites)
Boat ramps	6
Number of swimming beaches	1
Annual visitation, 5-year average (FY08-12)	578,558
Highest visitation in 5-year period (FY12)	701,307
Concessionaires	1 full-service marina

Stewardship

Public land managed	4,634 acres
Managed wildlife food plots	50 acres
Private shoreline development	No

Non-recreation land managed as a state Wildlife Management Area (WMA). Management is conducted in cooperation with the Georgia Department of Natural Resources (DNR)

APPENDIX B

LIST OF PRIOR DESIGN MEMORANDA AND REPORTS

Title	Submission Date
Site Selection Report	31 Mar 1961
Hydrology (Design Memorandum 1)	7 Nov 1961
Acquisition Dam Site and Recreational Areas (Design Memorandum 2)	20 Nov 1961
Draft Preliminary Master Plan	12 Jan 1962
Preliminary Master Plan (Design Memorandum 3-A)	16 Mar 1962
Public Use & Administrative Facilities (Design Memorandum 3-B[C-1])	16 Jun 1966
Hydroelectric Power Capacity (Design Memorandum 4)	April 1962
General Design (Design Memorandum 5)	July 1963
Access Road, Right Bank (Design Memorandum 6)	Feb 1962
Real Estate - Reservoir, Construction Area & Public Use Areas (Design Memorandum 7)	Sept 1963
Main Dam, Excavation for Spillway Intake, Works & Powerhouse (Design Memorandum 8	Sept 1963
Spillway (Design Memorandum 9)	Feb 1965
Powerhouse Structure (Design Memorandum 10)	Aug 1965
Supervisory Control System (Design Memorandum 11)	Jun 1965
Real Estate – Reregulation Dam (Design Memorandum 12)	May 1965
Final Environmental Statement, Carters Dam and Lake	April 1974
Planning Assistance Team Study	18 Nov 1988
Historic Properties Management Plan	1998
A Study of Boater Recreation on Carters Lake, GA	2001

Federal Storage Reservoir Critical Yield Analysis	Feb 2010
Sedimentation and Erosion Analysis for Carters Lake	31 Oct 2011

APPENDIX C

PROGRAMMATIC ENVIRONMENTAL ASSESSMENT

FINDING OF NO SIGNIFICANT IMPACT
FOR
CARTERS DAM PROJECT MASTER PLAN
GILMER, MURRAY, AND GORDON COUNTIES, GEORGIA

1. PROPOSED ACTION: The majority of the proposed Carters Dam Project Master Plan documents current improvements and stewardship of natural resources in the project area. The proposed Master Plan includes the following additions to the Carters Dam project:

- Approximate ½ mile expansion of Amadahy Trail. This will be a small loop that goes off of the main trail and returns to the main trail. Limited ground disturbance that will entail using a trenching machine in several places to level out the trail on a sloped hill. It is not anticipated that a quantifiable amount of trees will be required to be cleared. Several trees may have to be cut depending on the final trail route, but there will be the ability to adjust the route to avoid any clearing.
- Conversion of approximately 6-10 tent sites to developed RV sites in Doll Mountain Campground. Tent sites are currently used as overflow tent camping, and are lightly used. The number of developed sites will be less than the current number of tent sites due to topography and that developed sites require more area. A small amount of trees will be required to be cleared, probably ¼ acre. Ground disturbance will occur to convert the sites to full hookup (trenching, installation of septic tanks, leveling of pad areas, etc.).
- Addition of approximately 20 boat parking spaces at Damsite Boat Ramp. This will be on a piece of land next to the boat ramp. This will be a stand-alone paring area that will have a separate entry/exit from the main road. Ground disturbance will occur to level the area where the parking lot will go. It is estimated approximately 1500 +/- yards of material will be removed in order to level the site for the parking area. There are small regrowth pine trees in this area that are probably no older than 15 years old, and 6-10 feet tall, about one acre.
- Rehab of the Damsite Day Use/Picnic area to include additional single vehicle parking and construction of concrete/hard surface walking trail to access picnic areas and shoreline. A small amount of ground disturbance will be required to install hard surface trail and add additional parking. It is not anticipated that a quantifiable amount of trees will be cleared.
- Addition of 4-5 primitive blue trail campsites on the Coosawattee River/Ridgeway Mountain Bike Trail. These sites will be constructed landscape timber impact areas with regular primitive campsite amenities. Access will be canoe/kayak from the river and by foot on the trail. No ground disturbance or tree clearing is anticipated. The camp pads will be built on top of the ground and in areas that are open at the campsites.

- Proposed replacement of multiple buildings/structures over the next 25 years. All of these facilities will be within footprints of existing buildings.

2. NEED FOR PROPOSED ACTION: The Carters Dam Project is proposing a Master Plan to provide a programmatic approach for the responsible stewardship of Carters Dam Project resources for the benefit of present and future generations. While it identifies conceptual types and levels of activities, it is not a design document like the Preliminary Master Plan. Because all actions by the U.S. Army Corps of Engineers (USACE) and the agencies and individuals granted leases to project lands must be consistent with the Master Plan, it must be kept current in order to provide effective guidance in USACE decision-making.

3. **ALTERNATIVE TO THE PROPOSED ACTION CONSIDERED**: Alternative to the proposed action considered was the No Action Alternative. With the No Action Alternative, there would be no expansion of the Amadahy Trail; conversion of tent sites to developed RV sites at Doll Mountain Campground; additional boat parking spaces at Damsite Boat Ramp; rehabbing of Damsite day use and picnic area with additional boat parking spaces and construction of concrete or hard surface walking trail; additional primitive campsites on the Coosawattee River/Ridgeway Mountain Bike Trail; or replacement of buildings and/or structures would occur. These actions are intended as updates and upgrades to the Carters Dam Project which would increase the value of existing recreational resources by increasing the significant economic and social benefits for the region and the Nation. Therefore, this alternative was not further considered.

4. **FACTORS CONSIDERED IN DETERMINING THAT NO ENVIRONMENTAL IMPACT STATEMENT IS REQUIRED**: Based on the Environmental Assessment, the Carters Dam Project Master Plan will not significantly affect human health and the environment. The Carters Dam Project Master Plan is in compliance with all applicable environmental laws and regulations.

5. **CONCLUSIONS**: The environmental analysis supports the conclusion that the Carters Dam Project Master Plan will not significantly impact health and the human environment; consequently, an Environmental Impact Statement is not required.

Date: 19 APR 2016

Jon J. Chytka
Colonel, U.S. Army
District Commander

FONSI-2

PROGRAMMATIC ENVIRONMENTAL ASSESSMENT
FOR
CARTERS DAM PROJECT MASTER PLAN
GILMER, MURRAY, AND GORDON COUNTIES, GEORGIA

Prepared by

U.S. Army Corps of Engineers, Mobile District
Planning and Environmental Division
Environment and Resources Branch
Inland Environment Team

March 2016

Contents

1.0 INTRODUCTION....4
1.1 Location....4
1.2 Proposed Action....5
1.3 Purpose and Need....6
1.4 Authority....7
2.0 ENVIRONMENTAL SETTING WITHOUT THE PROJECT....7
2.1 GENERAL ENVIRONMENTAL SETTING....7
2.2 SIGINIFICANT RESCOURCES DESCRIPTION....8
2.2.1 Fishery Resources....8
2.2.2 Wildlife Resources....8
2.2.3 Land Use....8
2.2.4 Geology and Soil....8
2.2.5 Wetlands....9
2.2.6 Floodplain....9
2.2.7 Vegetation....9
2.2.8 Endangered/Threatened Species....10
2.2.9 Cultural Resources and Historic Properties....10
2.2.10 Navigation....10
2.2.11 Recreation....11
2.2.11.1 Recreation Carry Capacity....11
2.2.12 Water Quality....11
2.2.13 Air Quality....12
2.2.14 Noise....12
2.2.15 Aesthetics....12
2.2.16 Hazardous, Toxic and Radiological Waste....12
2.2.17 Socioeconomics....12
2.2.18 Prime and Unique Farmland....13
3.0 ALTERNATIVES TO THE PROPOSED ACTION....13
3.1 NO ACTION....13
4.0 POTENTIAL ENVIRONMENTAL IMPACTS....14
4.1 Fishery Resources....14
4.2 Wildlife Resources....14
4.3 Land Use....14
4.4 Geology and Soil....14
4.5 Wetlands....15
4.6 Floodplain....15
4.7 Vegetation....15
4.8 Endangered/Threatened Species....15
4.9 Cultural Resources and Historic Properties....15

4.10 Navigation.....15
4.11 Recreation.....16
4.11.1 Recreation Carry Capacity.....16
4.12 Water Quality.....16
4.13 Air Quality.....16
4.14 Noise.....17
4.15 Aesthetics.....17
4.16 Hazardous, Toxic and Radiological Waste.....17
4.17 Socioeconomics.....17
4.18 Prime and Unique Farmland.....17
4.19 Public Safety and Health.....17
4.20 Protection of Children.....17
4.21 Environmental Justice.....18
4.22 Cumulative Effects.....18
5.0 IRREVERSIBLE OR IRRETRIEVABLE COMMITMENTS.....20
6.0 ADVERSE ENVRIONMENTAL EFFECTS WHICH CANNOT BE AVOIDED.....20
7.0 THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USE OF MAN'S ENVIRONMENT AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY.....21
8.0 COORDINATION.....21

Figures
No. 1. Vicinity Map.....4
No. 2. Recreation Areas.....6

Table
No. 1. 2010 Population and Per Capita Income.....13

Appendix
EA Appendix A COORDINATION

1.0 INTRODUCTION

This programmatic environmental assessment was prepared utilizing a systematic, interdisciplinary approach integrating the natural and social sciences and the design arts with planning and decision making. The proposed actions and its alternative are evaluated in multiple contexts for short-term and long-term effects and for adverse and beneficial effects. This assessment indicates the effects on the human environment are well known and do not involve unique or unknown risk. It is not anticipated that this is a precedent-setting action, nor does it represent a decision in principle about any future consideration.

1.1 LOCATION

Carters Dam and Lake and Carters Reregulation Dam (also referred to as Carters Lake and Carters Project), is located in Gilmer, Murray, and Gordon Counties, GA, approximately 11 miles southeast and southwest of Chatsworth and Ellijay, GA; respectively, 60 miles north of Atlanta, GA; and 45 miles southeast of Chattanooga, TN (See Figure 1). It includes approximately 3,880 acres of open water at normal pool and an additional 8,475 acres of surrounding fee land. The area is easily accessible via U.S. Highway 411, the principal highway in the region; secondary and county highways provide access to the land surrounding the reservoir.

Carters Dam located on the Coosawattee River, was built in a gorge near Carters, GA, approximately 26.8 miles above the river's mouth. Approximately 374 square miles drain into the Coosawattee River above the main Carters Dam. The terrain adjacent to both ends of the dam is rugged; the river bed has an elevation of about 680 feet with adjoining peaks reaching up to about 1,300 feet.

Figure 1. Carters Lake Vicinity Map

1.2 PROPOSED ACTION

The majority of the proposed Carters Dam Project Master Plan documents current improvements and stewardship of natural resources in the project area. The proposed Master Plan includes the following additions to the Carters Dam project:

- Approximate ½ mile expansion of Amadahy Trail. This will be a small loop that goes off of the main trail and returns to the main trail. Limited ground disturbance that will entail using a trenching machine in several places to level out the trail on a sloped hill. An unknown number of trees will be removed. The exact number to be cut will depend on the final trail route with a goal of minimizing tree removal.

- Conversion of approximately 6-10 tent sites to developed RV sites in Doll Mountain Campground. Tent sites are currently used as overflow tent camping, and are lightly used. The number of developed sites will be less than the current number of tent sites due to topography and that developed sites require more area. A small number of trees will be required to be cleared, in an area approximately ¼ acre. Ground disturbance will occur to convert the sites to full hookup (trenching, installation of septic tanks, leveling of pad areas, etc.).

- Addition of approximately 20 boat parking spaces at Damsite Boat Ramp. This will be on a piece of land next to the boat ramp. This will be a stand-alone parking area that will have a separate entry/exit from the main road. Ground disturbance will occur to level the area where the parking lot will go. It is estimated approximately 1500 +/- yards of material will be removed in order to level the site for the parking area. There are small regrowth pine trees in this area that are probably no older than 15 years old, and 6-10 feet tall, about one acre.

- Rehab of the Damsite Day Use/Picnic area to include additional single vehicle parking and construction of concrete/hard surface walking trail to access picnic areas and shoreline. A small amount of ground disturbance will be required to install hard surface trail and add additional parking. It is not anticipated that a quantifiable amount of trees will be cleared.

- Addition of 4-5 primitive blue trail campsites on the Coosawattee River/Ridgeway Mountain Bike Trail. These sites will be constructed landscape timber impact areas with regular primitive campsite amenities. Access will be canoe/kayak from the river and by foot on the trail. No ground disturbance or tree clearing is anticipated. The camp pads will be built on top of the ground and in areas that are open at the campsites.

- Proposed replacement of multiple buildings/structures over the next 25 years. All of these facilities will be within footprints of existing buildings.

Best Management Practices will be implemented for all of the new actions to the Carters Dam Project. Implementation of the new actions will follow guidance from *Engineering Manual (EM)* 1110-1-400 *Recreation Facility and Customer Services Standards*.

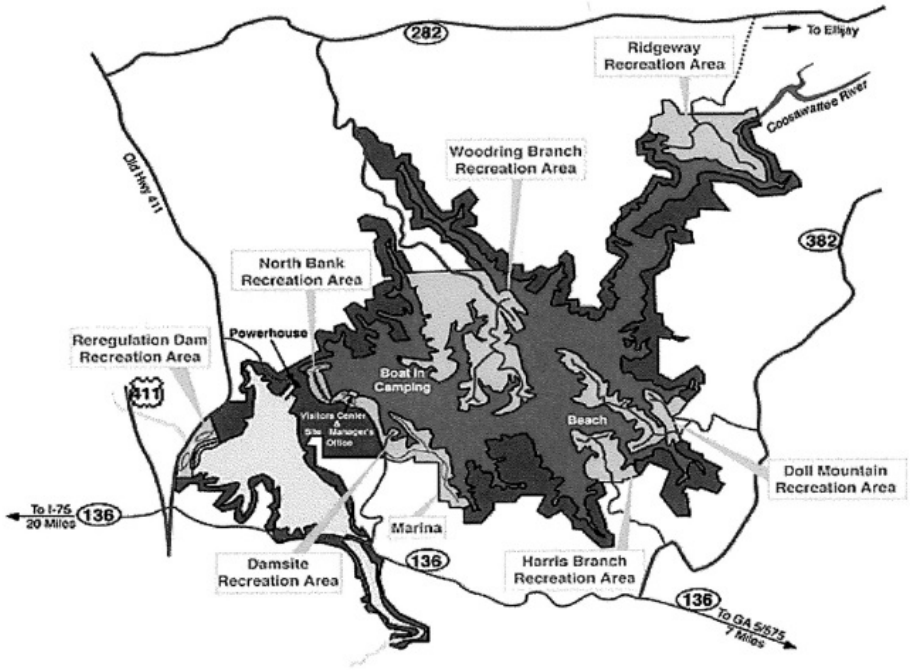


Figure 2: Carters Lake Recreation Areas

1.3 PURPOSE AND NEED

The U.S. Army Corps of Engineers (USACE), Mobile District is proposing a Master Plan to provide a programmatic approach for the responsible stewardship of Carters Project resources for the benefit of present and future generations. While it identifies conceptual types and levels of activities, it is not a design document like the Preliminary Master Plan. Because all actions by the USACE and the agencies and individuals granted leases to project lands must be consistent with the Master Plan, it must be kept current in order to provide effective guidance in USACE decision-making.

The Master Plan is based on responses to regional and local needs, resource capabilities and suitability, and expressed public interest consistent with authorized project purposes and pertinent legislation and regulations. It provides a District-level

policy consistent with national objectives and other state and regional goals and programs. The broad intent of this Master Plan is to accomplish the following:

- Determine the appropriate uses and levels of development of project resources
- Provide a framework within which the OMP and Annual Management Plans are developed and implemented
- Establish a basis on which outgrants and recreational development proposals are evaluated

The future actions proposed by the Master Plan will be addressed in detail in separate supplemental environmental assessments.

1.4 AUTHORITY

Carters Dam Project was authorized by the River and Harbor Act (PL 79-14), adopted 2 March 1945, as a part of the ultimate plan of development of the Alabama-Coosa River System. It was initially authorized through the Flood Control Act of 1944 (PL 78-534) enacted in the 2nd Session of the 78th Congress, as amended in 1946 and 1959.

2.0 ENVIRONMENTAL SETTING WITHOUT THE PROJECT

2.1 GENERAL ENVIRONMENTAL SETTING

The Carters Dam Project includes the Carters Project, Carters Main Dam and Coosawattee River drainage basins. Carters Main Dam drainage area does not include Talking Rock Creek Basin, which flows into the Reregulation Dam pool below the main dam. Talking Rock Creek is included in the Carters Project Basin.

The Coosawattee River Basin is located at the northern end of the Alabama-Coosa River Basin. It is roughly rectangular in shape, draining an area of approximately 862 square miles. Maximum length and width of the basin are approximately 40 and 25 miles respectively. The Coosawattee River is formed by the juncture of the Ellijay and Cartecay Rivers at Ellijay, Georgia, about 21 miles upstream from the Carters Project. These tributary streams rise in the Blue Ridge Mountains which have peaks up to 4,000 feet NGVD29. The southern boundary of the basin is shared with the northern boundary of the Allatoona Dam Basin, which drains into the Etowah River. The 48-mile long Coosawattee River has a total fall of 650 feet, or an average of about 13.5 feet per mile. The area above the project to the confluence of the Ellijay and Cartecay Rivers is approximately 374 square miles of forest area. Above the Reregulation Dam the total drainage basin is 520 square miles. The large increase in drainage area is due to the addition of Talking Rock Creek Basin joining the Coosawattee River in the Reregulation Dam Basin.

From its source the Coosawattee River flows in a southwest direction through an elevated semi-plateau section for about 10 miles, then about 13 miles through a gorge section, and finally, after emerging from the gorge, about 25 miles through a broad plateau to join the Conasauga River and form the Oostanaula River. Elevations in the Coosawattee River Basin range from approximately 4,000 feet NGVD29 at the basin divide to 600 at the mouth. Channel capacity below the Carters Project is estimated to be about 5,000 cfs (USACE, Mobile District 2014).

2.2 SIGNIFICANT RESOURCES DESCRIPTION

2.2.1 FISHERY RESOURCES

The Carters Reservior and Coosawattee River support sport fisheries for catfish (*Siluriformes*), striped bass (*Morone saxatilis*), spotted bass (*Micropterus punctulatus*), redeye bass (*Micropterus coosae*), and southern walleye (*Sander vitreus*) (USACE, Mobile District, 2014).

2.2.2 WILDLIFE RESOURCES

The project lands around the lake provide habitat for mammal species such as white-tailed deer (*Odocoileus virginianus*), black bear (*Ursus americanus*), red fox (*Vulpes vulpes*), American beaver (*Castor canadensis*), coyote (*Canis latrans*), bobcat (*Lynx rufus*), opossum (*Didelphis virginiana*), muskrat *(Ondatra zibethicus)*, gray fox (*Urocyon cinereoargenteus*), raccoon (*Procyon lotor*), rabbit (*Sylvilagus*), and wild pig (*Sus scrofa*). There are several species each of bats, squirrels, shrews and voles, otters, skunks, and mice in the project area. Reptiles that may be found in the project area include the snapping turtle (*Chelydra serpentine*), American alligator (*Alligator mississippiensis*), alligator snapping turtle (*Macroclemys temmincki*), green anole (*Anolis carolinensis*), and several other species of turtles, tortoises, snakes, skinks, and lizards. Birds present in the project area include the bald eagle (*Haliaeetus leucocephalus*), wild turkey (*Meleagris gallopavo*), red-tailed hawk (*Buteo jamaicensis*), osprey (*Pandion haliaetus*), and a variety of song birds and migratory waterfowl (USACE, Mobile District, 2014).

2.2.3 LAND USE

Land use bordering the Carters Lake project is primarily undeveloped, forested land. Other than the Carters Lake Marina and Resort, no development is along the lake's shoreline (USACE, Mobile District, 2014). There are picnic areas with parking spaces and restrooms as well as hiking and trails, camping sites, wildlife food plots, and both paved and unpaved maintenance and access roads (USACE, Mobile District, 2015).

2.2.4 GEOLOGY AND SOILS

The Carters Lake Project is located in the irregular escarpment which separates the Piedmont Province from the Appalachian Valley Province. The main dam is about one-

half mile upstream from the escarpment in a 600-foot deep gorge. Specifically, the main dam and reservoir are in the Dahlonega Plateau Subdivision of the Piedmont Province. This region is characterized by rugged, mountainous terrain. One of the major thrust faults of the United States, the Carterville Fault, is located along the boundary escarpment. The escarpment is the result of this fault and of differential erosion between the harder crystalline rocks of the Piedmont and the softer sedimentary rocks of the Appalachian Valley. The Reregulation Dam is located within the Appalachian Valley Province and about 1.8 miles downstream from the main dam. Broad valley lands with occasional north-trending ridges typify this province (USACE, Mobile District 2014).

2.2.5 WETLANDS

Recent GIS data prepared by USACE, Mobile District Carters Lake Project indicated that wetlands present at Carters Lake include lacustrine, palustrine, and riverine. Of these, 4,152 acres are lacustrine, 22 acres are palustrine, and 36 acres are riverine. These wetlands areas may not be the same as those considered wetlands by the USACE Regulatory Program. For example, according to the USACE Wetland Delineation Manual the open-water habitat of Carters Lake would generally not be considered wetlands.

2.2.6 FLOODPLAIN

There are no floodplains in the vicinity of the proposed project.

2.2.7 VEGETATION

Vegetative communities in and around the project area are made up of communities from the Blue Ridge and Ridge and Valley ecoregions. Vegetation may include deciduous (*Quercus* spp.), hickories (*Carya* spp.), buckeyes (*Aesculus* spp.), magnolias (*Magnolia* spp.), as well as evergreen species, chestnut (*Quercus prinus*), northern red (*Q. rubra*), southern red (*Q. falcata*), white (*Q. alba*), black (*Q. velutina*), blackjack (*Q. marilandica*), pignut (*Carya glabra*), sand or pale (*C. pallida*), mockernut (*C. tomentosa*), and tulip poplar (*Liriodendron tulipifera*), pitch pine (*Pinus rigida*) and red maple *(Acer rubrum*), mountain laurel *(Kalmia latifolia*), various azaleas (*Rhododendron* spp.), blueberries (*Vaccinium* spp.), strawberry-bush (*Euonymus americanus*), and sweet-shrub (*Calycanthus floridus*), asters (*Aster* spp.), violets (*Viola* spp.), trilliums (*Trillium* spp.), yellow star-grass (*Hypoxis hirsuta*), and spiderwort (*Tradescantia ohiensis*), mountain rosebay (*Rhododendron catawbiense*), rosebay (*R. maximum*), dwarf (*R. minus*), flame (*R. calendulaceum*), and mountain laurel, bush honeysuckle (*Diervilla sessilifolia*), spice bush (*Lindera benzoin*), sweet shrub (*Calycanthus floridus*), mountain pepperbush (*Clethra acuminata*), and red buckeye (*Aesculus pavia*). Some of the wildflower species occurring in this area are trout-lily (*Erythronium americanum*), bee-balm (*Monarda didyma*), blood root (*Sanguinaria canadensis*), mountain jewelweed (*Impatiens pallida*), giant chickweed (*Stellaria pubera*), fire pink (*Silene virginica*), and false Solomon's seal (*Smilacina racemosa*). Ferns in these communities include

maidenhair fern (*Adiantum pedatum*), southern lady fern (*Athyrium filix-femina*), marginal shield fern (*Dryopteris marginalis*), broadbeech fern (*Phegopteris hexagonoptera*), mountain spleenwort (*Asplenium montanum*), and New York fern (*Thelypteris noveboracensis*) (USACE, Mobile District, 2014).

2.2.8 ENDANGERED AND THREATENED SPECIES

Threatened and endangered species that may occur in the counties comprising the proposed project area are the Gray bat (*Myotis grisescens*), Indiana bat (*Myotis sodalis*), Northern Long-Eared bat (*Myotis septentrionalis*), blue shiner (*Cyprinella caerulea*), Goldline darter (*Percina aurolineata*), Cherokee darter (*Etheostoma scotti*), Amber darter (*Percina antesella*), Conasauga logperch (*Percina* jenkinsi), fine-lined pocketbook (*Lampsilis altilis*), southern acornshell (*Epioblasma othcaloogensis*), Coosa moccasinshell (*Medionidus parvulus*), southern pigtoe (*Pleurobema georgianum*), Alabama moccasinshell *(Medionidus acutissimus)*, Georgia pigtoe (*Pleurobema hanleyianum*), southern clubshell (*Pleurobema decisum*), triangular kidneyshell (*Ptychobranchus greenii*), large-flowered skullcap (*Scutellaria montana*), Tennessee yellow-eyed grass (*Xyris tennesseensis*), small whorled pogonia (*Isotria medeoloides*), and green pitcher-plant (*Sarracenia oreophila*). Of these species, the Indiana bat, Northern Long-Eared bat, large-flowered skullcap, and small whorled pogonia are located on project land.

2.2.9 CULTURAL RESOURCES AND HISTORIC PROPERTIES

Historic resource surveys conducted before and after the construction of the Carter's Lake Project have identified many historic resource sites on fee owned Government property. These sites span the range of prehistory and history. Data recovery was conducted at several prehistoric archeological sites prior to impoundment. Since passage of the National Historic Preservation Act in 1966, most project lands have been surveyed, however new discoveries are possible. The majority of unsurveyed lands remain near Webb Creek and in the reregulation pool. The majority of previously identified sites are located in the re-regulation pool. A Historic Properties Management Plan has been implemented for Carter's Lake Project since 1996 with stewardship responsibilities and future work outlined. This plan is currently being updated to incorporate new scientific advancements in the field of cultural resource management. One of the key cultural resource management concerns for Carter's Lake project lands are sites located within the reregulation pool and upland unsurveyed areas near Webb Creek.

2.2.10 NAVIGATION

Carters Dam while originally authorized to support downstream navigation, it is not regulated for navigation purposes because it is distant from the navigation channel, and any releases for that purpose would be captured and reregulated by Alabama Power Company reservoirs downstream. Downstream navigation in the Alabama River

benefits indirectly from the operation of the Carters Project for the other authorized purposes (USACE, Mobile District 2014).

2.2.11 RECREATION

Carters Lake is a valued recreational resource, providing significant economic and social benefits for the region and the Nation. The project contains 3,275 acres of water at summer conservation pool elevation of 1,074 feet NGVD29, plus an additional 8,514 acres of land, most of which is available for public use. A wide variety of recreational opportunities are provided at the lake including boating, fishing, camping, picnicking, water skiing, hunting and sightseeing. There are 8 parks, 147 campsites, 94 picnic sites, 6 boat ramps, and 8 public docks and fishing piers. The lake is considered one of the best spotted bass fisheries in Georgia (USACE, Mobile District 2014).

2.2.11.1 RECREATION CARRYING CAPACITY

Recreation carrying capacity evaluates the ability of Carters Lake to accommodate existing and future recreation uses, and assess whether these uses are suitable given the potential effects on recreational, environmental, and social resources. It is important to establish the carry capacity of the project so that there are appropriate parking and facilities and the quality of the recreation experience is maintained. Recreation carrying capacity can be analyzed several ways. For this analysis the parking spaces and general visitation data were used to establish general recreation carrying capacity at the project. Other analysis such as peak season weekend day visitation, design load, parking demand, boating density and boating density classification assisted in the existing and future conditions for recreation carrying capacity at Carters Lake. Currently Carters Lake is classified as a rural developed setting by water recreation experience. There is one marina which has 184 wet slips. There are also a number of boat ramps located at several of the Corps-operated recreation areas with a total of 196 spaces for boat trailer parking at these spaces (USACE, Mobile District, 2015).

2.2.12 WATER QUALITY

Carters Lake is listed by the State of Georgia's 2012 Integrated 305(b)/303(d) list as currently supporting its designated use with the exception of Coosawattee River embayment and US Woodring Branch/mid-lake area. Both Coosawattee River embayment and US Woodring Branch/mid-lake area are listed on the 2012 draft Integrated 305(b) and 303(d) list because of chlorophyll *a* and phosphorus impairment. A draft total maximum daily load has not yet been completed. The lake is now considered eutrophic due to an influx of phosphorus nutrients. Phosphorus levels have increased due to urban runoff and other non-point source pollutants. The reregulation pool downstream of the main lake serves as a buffer to improve water quality and flow condition downstream of the dam (USACE, Mobile District 2014).

2.2.13 AIR QUALITY

The Air Quality Index (AQI) is an index for reporting daily air quality. According to the 2014 AQI report for Murray County, Georgia the median AQI for each county was good with reported readings at or below 50. Reports for Gilmer and Gordon Counties, Georgia were not available for generation (EPA, 2015).

2.2.14 NOISE

There are no specific studies related to the existing noise levels in the project area. However, noise levels are typically considered low-density in rural areas. Such areas typically have very low noise levels.

2.2.15 AESTHETICS

Scenic views encompass a wide range of river, stream, and reservoir settings provide valued aesthetic resources to the residents and tourists in the region that are associated with a variety of the water-based recreational pursuits.

These aesthetic values are institutionally recognized as reflected by establishment many public access points, public use areas, national, state, and local parks within the basin, etc. There are no formally designated National Wild and Scenic Rivers within the ACT Basin (USACE, Mobile District, 2014).

2.2.16 HAZARDOUS, TOXIC AND RADIOLOGICAL WASTE

Operating and maintaining USACE projects typically requires the use of hazardous and toxic materials. The use of materials such as pesticides, paints, solvents, and petroleum products would be expected during the operation and maintenance of USACE-managed facilities, shoreline, vehicles, and equipment. The use of petroleum products would also be expected from the operation of marinas and from recreational vehicle use. The handling, use, storage, and disposal of such materials must be in accordance with label recommendations, USACE regulations, and local, state, and federal regulatory guidelines.

There are no known hazardous, toxic, or radioactive waste sites in the vicinity of the USACE reservoirs in the ACT Basin (USACE, Mobile District, 2014).

2.2.17 SOCIOECONOMICS

The 2010 population estimates for the 8 counties composing the Carters Dam Project watershed and basin below was 437,344 persons. Table shows the 2010 population and the 2010 per capita income for each county. The city of Rome, Georgia is the most populated city located within the Carters Dam Project watershed and basin. Rome, Georgia is located within Floyd County and had a population in 2010 of 36,303.

Table 1: 2010 Population and Per Capita Income

County	2010 Population	2010 Per Capita Income
Chattooga	26,896	$ 15,079
Floyd	96,531	$ 20,696
Gilmer	29,145	$ 19,320
Gordon	53,247	$ 18,219
Murray	40,460	$ 17,155
Pickens	31,375	$ 26,525
Walker	65,012	$ 19,674
Whitfield	94,678	$ 19,612

Source: US Census Bureau, 2010

The Carters Dam Project watershed and basin below consist of approximately 3,708 farms averaging 115 acres per farm. In 2005, the area produced $417 million in farm products sold and total farm earnings of more than $117 million. Agriculture in the Carters Dam Project watershed and basin consists primarily of livestock, which account for around 95 percent of the value of farm products sold. Livestock production consists primarily of poultry operations and beef cattle within the basin. The principal crops consist of nursery and greenhouse ornamentals, floriculture and sod, along with vegetable farms and orchards.

The leading industry sectors that provide non-farm employment are wholesale and retail trade, services and manufacturing. The remaining non-farm employment is provided by construction, finance, insurance, real estate, transportation and public utilities. In 2005, the Carters Dam Project area counties contained 835 manufacturing establishments that provided 62,953 jobs with total earnings of just under $3.1 billion. Additionally, the value added by the area manufactures was just under $5.6 billion (USACE, Mobile District, 2014).

2.2.18 PRIME AND UNIQUE FARMLAND

Prime farmland, or areas with soil types that are most suitable and productive for agricultural purposes, have been identified and mapped by the US Department of Agriculture. There are prime farmlands and farmlands of state importance located in Gilmer, Murray and Gordon Counties; however, none are located within or near Carters Dam Project.

3.0 ALTERNATIVE TO THE PROPOSED ACTION

3.1 NO ACTION

With the No Action Alternative, there would be no expansion of the Amadahy Trail; conversion of tent sites to developed RV sites at Doll Mountain Campground; additional boat parking spaces at Damsite Boat Ramp; rehabbing of Damsite day use and picnic

area and construction of concrete or hard surface walking trail; addition of campsites on the Coosawattee River/Ridgeway Mountain Bike Trail; or replacement of buildings/structures would not occur. These actions are intended as updates and upgrades to the Carters Dam Project which would increase the value of existing recreational resources by increasing the significant economic and social benefits for the region and the Nation. Therefore this alternative was not further considered.

4.0 POTENTIAL ENVIRONMENT IMPACTS

4.1 FISHERY RESOURCES

Fishery resources would not be impacted by the proposed Carters Dam Master Plan additions at the project. The proposed additions are not located near the banks.

4.2 WILDLIFE RESOURCES

The proposed additions at the project would have minor impacts on wildlife resources during construction. Wildlife would be displaced during construction but once construction is complete, the species would return to the area.

4.3 LAND USE

No adverse impacts to land use are anticipated from the proposed additions at the project. The proposed Carters Dam Master Plan additions at the project are in areas of the project where land disturbance has already occurred. In addition, slope recommendations from EM 1110-1-400 for new park facilities should be sited to blend with existing contours and the lay of the land. Slopes for new park facilities at campgrounds and day use areas include the allowable range of 2%-15%; most economical range of 2%-7%; range requiring extra cut and fill is 8%-15%; and slopes requiring excessive cut and fill is +15%. Areas with slopes over 15 percent require excessive earthwork and should be avoided, unless there is no acceptable alternative. Slope facings of cut and fill should be designed for ease of maintenance and passage by pedestrian ark customers. Cut and fill slopes in excess of 3:1 may require the incorporation of terraces, retaining walls, stone riprap, or other measures to hold the soil in place. Heavily sloped or terraced areas adjacent to pedestrian footpaths or routes require barriers to prohibit access or the incorporation of paths providing safe passage across the slope.

4.4 GEOLOGY AND SOILS

Minor impacts to the geology and soil of Carters Dam Project are anticipated for proposed additions.

4.5 WETLANDS

It is not anticipated that any wetland areas will be affected by the proposed project additions at Carters Lake. The proposed additions are not located in or adjacent to wetland areas.

4.6 FLOODPLAIN IMPACTS

There are no floodplains within the proposed project area; therefore, floodplains will not be affected.

4.7 VEGETATION

Clearing and grubbing of vegetation proposed by the Carters Dam Master Plan additions at the project would have long-term impacts to vegetation. There would be a loss of some timber habitat that could be a critical source of cover and food due to the expansion of hiking and biking trails, addition of primitive campsites, and conversion of tent sites to developed RV sites. However, there is the potential for the wildlife to relocate to the similar surrounding habitat and would be expected to do so.

4.8 ENDANGERED AND THREATENED SPECIES

By letter dated June 18, 2015, the USACE, Mobile District requested concurrence from the US Fish and Wildlife Service (FWS) on our determination that the proposed actions may affect, but are not likely to adversely affect the Indiana bat, Northern Long-Eared bat, large-flowered skullcap, and small whorled pogonia. By letter dated, November 19, 2015, US Fish and Wildlife Service determined that no further action is required under Section 7(a)(2) of the Endangered Species Act. However, if new information or changes in the project involve federally-listed species, further consultation with the Service will be required.

4.9 CULTURAL RESOURCES AND HISTORIC PROPERTIES

The USACE, Mobile District has determined that the proposed actions will have No Effect to cultural resources. However, each proposed action implementation plan will be reviewed by the Mobile District Archaeologist prior to construction to ensure Section 106 compliance. Federal Effects Determinations for any proposed action will be coordinated with the Georgia SHPO and Federally recognized tribal partners with an interest in the area.

4.10 NAVIGATION

There would be no impacts to navigation by the proposed additions to the project as it is not regulated for navigation purposes.

4.11 RECREATION

The proposed Carters Dam Master Plan additions to the project would not adversely impact boating, fishing, camping, picnicking, water skiing, hunting, biking and hiking trails, and sightseeing. There will be beneficial recreation opportunities for the recreational facilities (boat ramps, camping areas, and trails) because they would have increased availability upon completion of the proposed actions.

4.11.1 RECREATION CARRYING CAPACITY

The recreation carrying capacity analysis for Carters Lake determined that the parking demand and supply is likely adequate for the foreseeable future at the project. The boating density analysis concluded that the only proposed changes are at Carters Lake Marina. There are no changes anticipated at Carters Lake Corps-operated recreation areas due to the proposed Carters Dam Master Plan additions. However, there are proposed changes being developed for the Carters Lake Marina to be implemented in phases. The proposed development is anticipated to increase the number of number of wet slip from existing 184 to a total of 844 boat storage units, wet and dry. Based on the boating density classification analysis the existing facilities assumptions, an average of 19.68 acres per boat in use would classify the setting as suburban. Under the proposed action the classification shifts to urban with approximately 10 acres per boat in use. Based on conversations with Carters Project Operations personnel this shift in recreation classification is considered acceptable and would not likely change the quality of the user's experience.

4.12 WATER QUALITY

Surface and subsurface hydrology is not expected to be affected significantly, and surface modifications do not limit or precluded the habitat functions of adjacent and surrounding areas. It is not expected that the proposed additions at the project would impair the lake further due to phosphorus nutrients.

A Notice of Intent for a National Pollutant Discharge Elimination System (NPDES) Stormwater Construction Permit will be filed with the Georgia Environmental Protection Division for the proposed Carters Dam Master Plan additions to the project prior to land disturbance. An erosion and sedimentation and pollution control plan will be implemented to meet requirements of the NPDES stormwater permit.

Due to minimal direct water quality impacts, there is no significant impact to water quality.

4.13 AIR QUALITY

There would be short-term and minimal impacts to air quality in the immediate vicinity of the proposed Carters Dam Master Plan additions at the project. These impacts would

be temporary increases in particulates and emissions from the construction equipment. These impacts would subside upon completion of the work.

4.14 NOISE

Typical construction noise would be limited to the timeframe of clearing and construction. The noise will be that of machinery associated with clearing, grubbing and grading of material, pouring of concrete, cutting of timber, and bulldozing. All of these impacts are anticipated to be minor, temporary, and in low to no population areas and will cease upon completion of the action. Therefore, there are no significant impacts associated with noise at Carter's Dam.

4.15 AESTHETICS

There would be no permanent aesthetic impacts associated with the proposed action. Aesthetic impacts would be temporary, associated with the construction activities, and revert to pre-project conditions upon completion of the actions.

4.16 HAZARDOUS, TOXIC AND RADIOLOGICAL WASTE

The proposed additions included in the Carters Dam Master Plan would not involve or require the creation or disposal of hazardous, toxic or radiological materials.

4.17 SOCIOECONOMICS

The proposed Carters Dam Master Plan additions at the project would provide some economic benefits to the area. Economic benefits can be realized through temporary employment of laborers and support of local businesses for the purchase and/or rental of equipment and supplies.

4.18 PRIME AND UNIQUE FARMLAND

No prime or unique farmland would be impacted by the proposed project.

4.19 PUBLIC SAFETY AND HEALTH

It is not anticipated that there would be impacts to public safety and health associated with the proposed Carters Dam Master Plan additions at the project. However, there could be the potential for adverse impacts due to the proposed increase in storage units (wet/dry) at the Carters Lake Marina. Boaters could become distracted and cause harm to others while enjoying the lake.

4.20 PROTECTION OF CHILDREN

The EO 13045, Protection of Children from Environmental Health Risks and Safety Risks (21 April 1997), recognizes a growing body of scientific knowledge that

demonstrates that children may suffer disproportionately from environmental health risks and safety risks. These risks arise because children's bodily systems are not fully developed; because children eat, drink, and breathe more in proportion to their body weight; because their behavior patterns may make them more susceptible to accidents. Based on these factors, the President directed each Federal agency to make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children. The President also directed each Federal agency to ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks. The recommended additions of the Carters Dam Master Plan do not pose any disproportionate environmental health risk or safety risk to children.

4.21 ENVIRONMENTAL JUSTICE

Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations (11 February 1994) requires that Federal agencies conduct their programs, policies, and activities that substantially affect human health or the environment in a manner that ensures that such programs, policies, and activities do not have the effect of excluding persons (including populations) from participation in, denying persons (including populations) the benefits of, or subjecting persons (including populations) to discrimination under such programs, policies, and activities because of their race, color, or national origin. The recommended additions of the Carters Dam Master Plan will not create disproportionately high or adverse human health or environmental impacts on any low-income populations of the surrounding area.

4.22 CUMULATIVE EFFECTS

The CEQ regulations define cumulative impacts as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other action" 40 C.F.R. § 1508.7. Actions considered in the cumulative impacts analysis include implementation of the recommended action and other Federal, State, Tribal, local or private actions that impact the resources affected by the recommended action.

Within the project area, various past Federal, State, and private actions have impacted the Carters Dam Project habitat and natural flow regime including construction of the USACE dam, urban development, and agricultural activities. Urban development and agricultural activities have adversely affected water quality.

There would be cumulative impacts by the proposed actions to soil, vegetation and wildlife habitat from construction of the proposed actions. However, the actions would not significantly contribute to the cumulative impacts affecting the Carters Dam Project.

Additional actions at the Carters Dam Project that would have cumulative impacts on the environment include:

Closure of Ridgeway Campground:

In 2015, the camping section of Ridgeway Park was closed in accordance with the National Recreation Alignment Plan. This area historically had low visitation. The last five-year visitation average was approximately 700 visitors per year. Comparably, the day use area of Ridgeway Park has had an average of 6,300 visitors the last five years. The camping area was in a degraded condition, with campsites, amenities, and roadways requiring rehabilitation. Operations and maintenance costs of this area had risen per year due to the degraded condition, and a major investment was required to operate this facility in a safe condition. Access issues were present at this location, and it was not economically feasible or cost effective to complete the required rehabilitation. The day use section of Ridgeway Park remains open. There are cumulative impacts from the years of use; however, there are not significant impacts resulting from the action on Carters Lake Project.

Georgia Transmission Corporation (GTC) 230 kV Transmission Line:

In 2011, Georgia Transmission Corporation proposed a 230 kV transmission line in the Ridgeway Park area of Carters Project. The proposed transmission route enters USACE property east of the Oak Hill area, crosses the Coosawattee River, and then follows the Ridgeway Campground road north to the junction of the Ridgeway Day Use Road. From this point, it crosses country and continues north to where it exits USACE property.

In 2015, the evaluation phase of this project was completed and the National Environmental Policy Act documents were signed and construction will begin in the near future. No significant cumulative impacts resulting from the action on Carters Lake Project would occur.

Carters Lake Marina and Resort Expansion:

In 2010, Carters Lake Marina and Resort proposed an expansion project adjacent to their current lease area. The proposal includes additional USACE property to the east of the current lease, and includes additional boat docks, boat storage structures, recreational facilities and structures, and associated infrastructure to support the development.

The project is currently in the submittal/early evaluation phase. Carters Lake Marina and Resort is currently submitting additional information and documentation in support of their proposed development. It is not anticipated that there would be significant cumulative impacts on the environment from the potential action.

Carters Generator Cooling Water Supply:

Currently Carters Powerhouse is drawing raw water from Carters re-regulation reservoir to cool the four generator units. The temperature of the cooling water can vary depending on the level of the reservoir and can increase to nearly 80° F in summer months, which greatly reduces power generation capacity. The purpose of this project is to develop an alternative solution to the current cooling water system which will provide cooler water resulting in greater generator efficiency.

This project will consist of a precast or cast-in-place reinforced concrete tower, which will house the cooling water supply pumps. The tower is anticipated to be located at the south side of the jetty separating the right dam abutment from the powerhouse intake channel, which is in Northbank Park. The exact location will be dictated by the final location of the cooling water intake based on ongoing water chemistry testing, and the analysis of geotechnical information from within the building footprint. It is anticipated that recreational facilities will be impacted. The significance of impact will be determined by the final design of this project. Any impacts to recreation facilities will be mitigated for in accordance with the approved mitigation plan.

The estimated construction time to complete this project is believed to be between 18 and 24 months. During this time, Northbank Park will be closed due to safety concerns because of the construction activity. This project is still in the design phase, and the construction schedule has not yet been determined.

5.0 ANY IRREVERSIBLE OR IRRETRIEVABLE COMMITMENTS WHICH WOULD BE INVOLVED SHOULD THE RECOMMENDED PLAN BE IMPLEMENTED

The proposed Carters Dam Master Plan additions could be removed and restored to current conditions if future conditions are warranted. Therefore, any irreversible or irretrievable commitments of resources involved in the proposed action have been considered and are either unanticipated at this time, or have been considered and determined to present minor impacts.

6.0 ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

Clearing and grubbing of vegetation for the expansion of hiking and biking trails, addition of primitive campsites, and conversion of tent sites to developed RV sites represents impacts that cannot be avoided should the project be implemented. These impacts, as previously discussed are expected to be minor individually and cumulatively.

7.0 THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USE OF MAN'S ENVIRONMENT AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The proposed project constitutes a short-term use of man's environment and is not anticipated to affect long-term productivity. The proposed Carters Dam Master Plan additions at the project would provide increased values of existing recreational resources by growing the significant economic and social benefits for the region and Nation. Therefore, the proposed Carters Dam Master Plan additions would be beneficial to the community and surrounding areas.

8.0 COORDINATION

As required by the National Environmental Policy Act, the USACE, Mobile District coordinated the proposed project with various local, state, and Federal agencies. During the early stages of development, the U.S. Fish and Wildlife Service and Georgia Department of Natural Resources, Wildlife Resources Division were solicited (Appendix A, Coordination) for their comments and/or concerns regarding the proposed action.

The Georgia Department of Natural Resources, Wildlife Resources Division provided comments by letter dated, July 20, 2015 in support of development of the Master Plan and implementation of the proposed action items. They also commented on the USACE, Mobile District having the opportunity to fulfill mitigation requirements for the construction of the Carters Lake Project and understood that the USACE, Mobile District needs both the Congressional authority and funding to acquire the new lands for the mitigation. However, they requested that the Master Plan incorporate language establishing a framework for Carters Lake Project mitigation. Those impacts and recommended mitigation are not part of the current effort and outside the scope of the Master Plan.

By letter dated, November 19, 2015, US Fish and Wildlife Service determined that no further action is required under Section 7(a)(2) of the Endangered Species Act. However, if new information or changes in the project involve federally-listed species, further consultation with the Service will be required.

The final Carters Dam Master Plan and Programmatic Environmental Assessment will be made available to the public by a Notice of Availability.

REFERENCES

U.S. Army Corps of Engineers. October 2014. Final Environmental Impact Statement, Update of the Water Control Manual for the Alabama-Coosa-Tallapoosa River Basin in Georgia and Alabama.

U.S. Army Corps of Engineers. December 2014. Alabama-Coosa-Tallapoosa River Basin Water Control Manual, Appendix H, Carters Dam and Lake and Carters Reregulation Dam, Coosawattee River, Georgia. Mobile District.

U.S. Army Corps of Engineers. September 2015. Carters Lake Recreation Carrying Capacity Study. Mobile District.

APPENDIX A: COORDINATION

EA-23

DEPARTMENT OF THE ARMY
MOBILE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 2288
MOBILE, ALABAMA 36628-0001

June 18, 2015

REPLY TO
ATTENTION OF:

Inland Environment Team
Planning and Environmental Division

Dr. Donald Imm
Field Supervisor
U.S. Fish and Wildlife Service
105 Westpark Drive, Suite D
Athens, Georgia 30606

Dear Dr. Imm:

The U.S. Army Corps of Engineers (USACE), Mobile District is proposing a Master Plan for the Carters Dam Project. The proposed actions are located in Gilmer, Murray, and Gordon Counties, Georgia, approximately 11 miles southeast and southwest of Chatsworth and Ellijay, Georgia; respectively, 60 miles north of Atlanta, Georgia; and 45 miles southeast of Chattanooga, Tennessee and are located on the Coosawattee River, where it emerges from a gorge near Carters, Georgia, approximately 26.8 miles above the river's mouth.

The Master Plan will serve as a planning document that anticipates what could and should happen at the Carters Dam Project, but it is flexible enough to address changing conditions which is prepared in accordance with Engineer Manual 1110-1-400, *Engineering and Design—Recreation Planning and Design Criteria*, November 01, 2004; Engineer Pamphlet 1130-2-550, *Project Operations—Recreation Operations and Maintenance Guidance and Procedures*, November 15, 1996, October 01,1999 (change 1), March 01, 2002 (change 2), August 15, 2002 (change 3), August 30, 2008 (change 4); and Engineer Regulation 1130-2-550, *Project Operations – Recreation Operations and Maintenance Guidance and Procedures*, November 15, 1996, October 01, 1999, March 01, 2002, August 15, 2002, August 30, 2008, March 30, 2009. Master Plans are required for each civil works project and all fee-owned lands for which the USACE has administrative responsibility. The primary goals of this 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 toward providing a high degree of recreation diversity within the region; (3) emphasize the particular qualities, characteristics, and potentials of the project; and (4) exhibit consistency and compatibility with national objectives and other state and regional goals and programs.

EA-24

-2-

Endangered and threatened species that may occur in the counties comprising the proposed project area are the Gray bat (*Myotis grisescens*), Indiana bat (*Myotis sodalis*), Northern Long-Eared bat (*Myotis septentrionalis*), blue shiner (*Cyprinella caerulea*), Goldline darter (*Percina aurolineata*), Cherokee darter (*Etheostoma scotti*), Amber darter (*Percina antesella*), Conasauga logperch (*Percina* jenkinsi), fine-lined pocketbook (*Lampsilis altilis*), southern acornshell (*Epioblasma othcaloogensis*), Coosa moccasinshell (*Medionidus parvulus*), southern pigtoe (*Pleurobema georgianum*), Alabama moccasinshell *(Medionidus acutissimus)*, Georgia pigtoe (*Pleurobema hanleyianum*), southern clubshell (*Pleurobema decisum*), triangular kidneyshell (*Ptychobranchus greenii*), large-flowered skullcap (*Scutellaria montana*), Tennessee yellow-eyed grass (*Xyris tennesseensis*), small whorled pogonia (*Isotria medeoloides*), and green pitcher-plant (*Sarracenia oreophila*).

There are no proposed actions to be located in the aquatic environment, and for that reason there is no habitat located within the proposed project area for those Federally listed aquatic species in the counties. Of the remaining listed species, habitat requirements for the gray bat, Tennessee yellow-eyed grass, and Green pitcher-plant are not found throughout the project area. While most species of bats will roost during the summer months in forested habitat, Gray bats roost in caves year round. Tennessee yellow-eyed grass is usually found along riparian zones, seeps, or wet meadows. Green pitcher-plants occur within bogs or wetlands. For these species, the proposed Master Plan update would have no effect.

Listed species with potential to be affected from the proposed action include the Indiana bat, Northern Long-Eared bat, large-flowered skullcap, and small whorled pogonia. Each of these species has the potential to exist within the habitat surrounding Carters Dam. The large-flowered skullcap and the small whorled pogonia prefer moderately sloping hillsides with acidic soils and a layer of organic debris. The Indiana and Northern long-eared bats hibernate over winter in caves and emerge during summer months. Both the Indiana and the Northern Long Eared bat roost in under the bark or in the crevices of trees within forested habitat. However, no known populations of these listed species have been observed within the project area.

The USACE, Mobile District will provide information and instruction to the contractor regarding identification of the federally listed species and roost habitat potentially occurring within the project area prior to ground disturbing activities. The contractor will be directed to not harm or remove any specimens encountered. In the event tree removal is necessary an ecological approach intended to minimize impacting the Indiana bat and Northern Long-Eared bat would be implemented. This would involve a select tree removal - allowing at least seven snag trees per acre to remain standing - during the winter season when the bats have relocated to their hibernacula. If in the event the large-flowered skullcap and small whorled pogonia are identified, a 50-foot buffer would be clearly marked with flagging and/or paint to ensure that no ground disturbing activities occur at or near existing populations.

Due to the nature of the proposed action and the lack of known occurrences in or near the project area, we determined that the proposed action may affect, but is not likely to adversely affect the Indiana bat, Northern Long-Eared bat, large-flowered skullcap, and small whorled pogonia.

The majority of the proposed Carters Dam Project Master Plan documents current improvements and stewardship of natural resources in the project area. The proposed Master Plan also includes the following new actions at the project:

- Approximate ½ mile expansion of Amadahy Trail. This will be a small loop that goes off of the main trail and returns to the main trail. Limited ground disturbance that will entail using a trenching machine in several places to level out the trail on a sloped hill. It is not anticipated that a quantifiable amount of trees will be required to be cleared. Several trees may have to be cut depending on the final trail route, but there will be the ability to adjust the route to avoid any clearing.

- Conversion of approximately 6-10 tent sites to developed RV sites in Doll Mountain Campground. Tent sites are currently used as overflow tent camping, and are lightly used. The number of developed sites will be less than the current number of tent sites due to topography and the developed sites require more area. A small amount of trees will be required to be cleared, probably 1/4 acre. Ground disturbance will occur to convert the sites to full hookup (trenching, installation of septic tanks, leveling of pad areas, etc.).

- Addition of approximately 20 boat parking spaces at Damsite Boat Ramp. This will be on a piece of land next to the boat ramp and will be a stand-alone parking area that will have a separate entry/exit from the main road. Ground disturbance will occur to level the area where the parking lot will go. It is estimated approximately 1500 +/- yards of material will be removed in order to level the site for the parking area. There are small regrowth pine trees in this area that are probably no older than 15 years old, and 6-10 feet tall, about one acre.

- Rehab of the Damsite day use/picnic area to include additional single vehicle parking and construction of concrete/hard surface walking trail to access picnic areas and shoreline. A small amount of ground disturbance will be required to install hard surface trail and add additional parking. It is not anticipated that a quantifiable amount of trees will be cleared.

- Addition of firearm shooting range at Ridgeway Day Use. This facility will be in a natural draw that utilizes existing topography as a safety feature. Construction of this facility will require a minor re-route of an existing trail in the area due to safety zones. The range will consist of three stations with 25 yard, 50 yard, and 100 yard shooting lanes. The range will be designed for typical rifle and pistol rounds. Proposed location is in a draw with positive slopes on

three sides. The orientation of the range will be facing towards the closed Ridgeway Camping area. There is a trail that is located near this location, and the trail will be relocated during construction of the range. There will be limited ground disturbance, mainly to level the area for drainage and install the shooting shelters. Limited tree removal (mainly for access, the range will be build in an already cleared area). There is existing parking therefore no parking lots or roadways are required.

- Addition of 4-5 primitive blue trail campsites on the Coosawattee River/Ridgeway Mountain Bike Trail. These sites will be constructed landscape timber impact areas with regular primitive campsite amenities. Access will be canoe/kayak from the river and by foot on the trail. No ground disturbance or tree clearing is anticipated. The camp pads will be built on top of the ground and in areas that are open at the campsites.

- Proposed replacement of multiple buildings/structures over the next 25 years. All of these facilities will be within footprints of existing buildings though.

Best Management Practices will be implemented for all of the new actions to be included in the Carters Dam Project Master Plan.

We are requesting your input pursuant to the Endangered Species Act on this subject. Additionally, we request your concurrence with our determination that the proposed actions may affect, but are not likely to adversely affect the Indiana bat, Northern Long-Eared bat, large-flowered skullcap, and small whorled pogonia. Please contact Ms. Velma Diaz at 251-690-2025 or by email at velma.f.diaz@usace.army.mil for additional information.

Sincerely,

Brian A. Zettle,
Chief, Inland Environment Team

EA-27

DEPARTMENT OF THE ARMY
MOBILE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 2288
MOBILE, ALABAMA 36628-0001

June 18, 2015

REPLY TO
ATTENTION OF:

Inland Environment Team
Planning and Environmental Division

Mr. Dan Forster, Director
Georgia Department of Natural Resources
Wildlife Resources Division
2070 U.S. Highway 278, South East
Social Circle, Georgia 30025

Dear Mr. Forster:

The U.S. Army Corps of Engineers (USACE), Mobile District is proposing a Master Plan for the Carters Dam Project. The proposed actions are located in Gilmer, Murray, and Gordon Counties, Georgia, approximately 11 miles southeast and southwest of Chatsworth and Ellijay, Georgia; respectively, 60 miles north of Atlanta, Georgia; and 45 miles southeast of Chattanooga, Tennessee and are located on the Coosawattee River, where it emerges from a gorge near Carters, Georgia, approximately 26.8 miles above the river's mouth. We are requesting information on fish and wildlife that may occur in the proposed project area as well as your comments and/or recommendations on the proposed new actions for the Carters Dam Project Master Plan.

The Master Plan will serve as a planning document that anticipates what could and should happen at the Carters Dam Project, but it is flexible enough to address changing conditions which is prepared in accordance with Engineer Manual 1110-1-400, *Engineering and Design—Recreation Planning and Design Criteria*, November 01, 2004; Engineer Pamphlet 1130-2-550, *Project Operations—Recreation Operations and Maintenance Guidance and Procedures*, November 15, 1996, October 01, 1999 (change 1), March 01, 2002 (change 2), August 15, 2002 (change 3), August 30, 2008 (change 4); and Engineer Regulation 1130-2-550, *Project Operations – Recreation Operations and Maintenance Guidance and Procedures*, November 15, 1996, October 01, 1999, March 1, 2002, August 15, 2002, August 30, 2008, March 30, 2009. Master Plans are required for each civil works project and all fee-owned lands for which the USACE has administrative responsibility. The primary goals of this 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

EA-28

expressed public interests and desires consistent with authorized project purposes; (2) contribute toward providing a high degree of recreation diversity within the region; (3) emphasize the particular qualities, characteristics, and potentials of the project; and (4) exhibit consistency and compatibility with national objectives and other state and regional goals and programs.

The majority of the proposed Carters Dam Project Master Plan documents current improvements and stewardship of natural resources in the project area. The proposed Master Plan also includes the following new actions at the project:

- Approximate ½ mile expansion of Amadahy Trail. This will be a small loop that goes off of the main trail and returns to the main trail. Limited ground disturbance that will entail using a trenching machine in several places to level out the trail on a sloped hill. It is not anticipated that a quantifiable amount of trees will be required to be cleared. Several trees may have to be cut depending on the final trail route, but there will be the ability to adjust the route to avoid any clearing.

- Conversion of approximately 6-10 tent sites to developed RV sites in Doll Mountain Campground. Tent sites are currently used as overflow tent camping, and are lightly used. The number of developed sites will be less than the current number of tent sites due to topography and the developed sites require more area. A small amount of trees will be required to be cleared, probably 1/4 acre. Ground disturbance will occur to convert the sites to full hookup (trenching, installation of septic tanks, leveling of pad areas, etc.).

- Addition of approximately 20 boat parking spaces at Damsite Boat Ramp. This will be on a piece of land next to the boat ramp and will be a stand-alone parking area that will have a separate entry/exit from the main road. Ground disturbance will occur to level the area where the parking lot will go. It is estimated approximately 1500 +/- yards of material will be removed in order to level the site for the parking area. There are small regrowth pine trees in this area that are probably no older than 15 years old, and 6-10 feet tall, about one acre.

- Rehab of the Damsite day use/picnic area to include additional single vehicle parking and construction of concrete/hard surface walking trail to access picnic areas and shoreline. A small amount of ground disturbance will be required to install hard surface trail and add additional parking. It is not anticipated that a quantifiable amount of trees will be cleared.

- Addition of firearm shooting range at Ridgeway Day Use. This facility will be in a natural draw that utilizes existing topography as a safety feature. Construction of this facility will require a minor re-route of an existing trail in the area due to safety zones. The range will consist of three stations with 25 yard,

50 yard, and 100 yard shooting lanes. The range will be designed for typical rifle and pistol rounds. Proposed location is in a draw with positive slopes on three sides. The orientation of the range will be facing towards the closed Ridgeway Camping area. There is a trail that is located near this location, and the trail will be relocated during construction of the range. There will be limited ground disturbance, mainly to level the area for drainage and install the shooting shelters. Limited tree removal (mainly for access, the range will be build in an already cleared area). There is existing parking therefore no parking lots or roadways are required.

- Addition of 4-5 primitive blue trail campsites on the Coosawattee River/Ridgeway Mountain Bike Trail. These sites will be constructed landscape timber impact areas with regular primitive campsite amenities. Access will be canoe/kayak from the river and by foot on the trail. No ground disturbance or tree clearing is anticipated. The camp pads will be built on top of the ground and in areas that are open at the campsites.

- Proposed replacement of multiple buildings/structures over the next 25 years. All of these facilities will be within footprints of existing buildings though.

Best Management Practices will be implemented for all of the new actions to be included in the Carters Dam Project Master Plan.

We are requesting that your agency provide us the requested information on this subject by July 20, 2015. Please contact Ms. Velma Diaz at 251-690-2025 or by email at velma.f.diaz@usace.army.mil for additional information.

Sincerely,

Brian A. Zettle,
Chief, Inland Environment Team

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
WILDLIFE RESOURCES DIVISION

MARK WILLIAMS
COMMISSIONER

DAN FORSTER
DIRECTOR

July 20, 2015

Mr. Brian A. Zettle, Chief
Inland Environment Team
Planning and Environmental Division
U.S. Army Corps of Engineers, Mobile District
P.O. Box 2288
Mobile, AL 36628

SUBJECT: Proposed Master Plan for the Carters Dam Project

Dear Mr. Zettle:

Thank you for the opportunity to review the United States Army Corps of Engineers (COE) actions in the proposed Master Plan for the Carters Dam Project. The Georgia Wildlife Resources Division (WRD) offers the following comments for your consideration:

We support the development of the Master Plan and implementation of the proposed action items; which will serve to create and enhance recreational opportunities at the Carters Lake Project. In regards to the proposed firearms shooting range, we again support the addition of this action item. Recent surveys show that we have 660,000 target shooters in Georgia and we stand ready to provide technical guidance in the development of this facility, as requested. Our Division has construction specifications (e.g., rifle and pistol firing line covers) and other operational details that might be beneficial in the implementation of this action item going forward. Additionally, recommendations regarding best management practices for shooting ranges are provided by the United States Environmental Protection Agency [*Best Management Practices for Lead at Outdoor Shooting Ranges* (EPA-902-B-01-001, June 2005)].

Carters Lake provides considerable public boating and recreational fishing opportunities. We appreciate COE efforts over the last two decades to enhance fish habitat quality in partnership with WRD and the local community. This cooperative initiative has resulted in the creation of more than 50 public fish attractor sites and significantly enhanced angling opportunities in project waters. Given the project's proximity to Atlanta and Chattanooga, lake usage is expected to increase through time; and we appreciate the COE's proposed expansion of vehicle/boat parking at the Damsite Boat Ramp. We also request that consideration be given to new bank fishing opportunities at existing project facilities, similar to the fishing decks recently built at the Doll Mountain Day Use Area.

2070 U.S. HIGHWAY 278 S.E. | SOCIAL CIRCLE, GEORGIA 30025-4711
770.918.6400 | FAX 706.557.3030 | WWW.GEORGIAWILDLIFE.COM

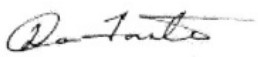
Brian A. Zettle, U.S. Army Corps of Engineers
[Page 2 of 2]

We support the development of a Master Plan to guide natural resource stewardship within the project's authorized purposes. As part of this process, there may also be opportunity for the COE to incorporate actions towards fulfilling mitigation requirements for the construction of the Carters Lake Project. A 1984 draft feasibility report indicated that wildlife mitigation could be accomplished through intensive management of existing project lands and the acquisition of additional lands totaling approximately 2,600 acres. We understand that the COE needs both the Congressional authority and funding to acquire new lands. However, we request that the Master Plan incorporate language establishing a framework for Carters Lake Project mitigation.

Potential mitigation opportunities exist in the project area. As you may know, the WRD currently manages portions of the Carters Lake Project as part of the Coosawattee Wildlife Management Area (WMA). We also lease and manage an additional 5,600 acres of nearby, privately-owned, lands as part of the WMA. Over the last decade, however, WRD has lost approximately half of Coosawattee WMA's leased lands to agricultural and residential development. The remaining leased lands fall largely within the Carters' Lake watershed and are available for purchase/protection. Long term conservation of the remaining leased tracts represents an excellent opportunity for Carters Lake Project mitigation. If the COE is able to purchase all, or a portion, of these leased lands as mitigation for the Carter's Lake Project at some point in the future, WRD is more than willing to continue management of the lands as part of the Coosawattee WMA.

We greatly appreciate the opportunity to provide comments during this important process. If we may be of further assistance, please contact Region Supervisor, Chuck Waters, at 706-295-6041 or via e-mail Chuck.Waters@dnr.ga.gov.

Sincerely,



Dan Forster

CC: Chuck Waters, Region Supervisor
Jeff Durniak, Region Supervisor

DEPARTMENT OF THE ARMY
MOBILE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 2288
MOBILE, ALABAMA 36628-0001

June 18, 2015

REPLY TO
ATTENTION OF:

Inland Environment Team
Planning and Environmental Division

U.S. Fish and Wildlife Service
105 Westpark Drive, Suite D
Athens, GA 30606
706-613-9493 Fax 706-613-6059

FWS Log No.
N6-16-30-GLM

Dr. Donald Imm
Field Supervisor
U.S. Fish and Wildlife Service
105 Westpark Drive, Suite D
Athens, Georgia 30606

Based on the information you provided, no further action is required under Section 7(a)(2) of the Endangered Species Act. However, if new information or changes in the project involve federally-listed species, further consultation with the Service will be required.

Donald W. Imm, Ph.D., Field Supervisor — Date 11/19/15

Dear Dr. Imm:

The U.S. Army Corps of Engineers (USACE), Mobile District is proposing a Master Plan for the Carters Dam Project. The proposed actions are located in Gilmer, Murray, and Gordon Counties, Georgia, approximately 11 miles southeast and southwest of Chatsworth and Ellijay, Georgia; respectively, 60 miles north of Atlanta, Georgia; and 45 miles southeast of Chattanooga, Tennessee and are located on the Coosawattee River, where it emerges from a gorge near Carters, Georgia, approximately 26.8 miles above the river's mouth.

The Master Plan will serve as a planning document that anticipates what could and should happen at the Carters Dam Project, but it is flexible enough to address changing conditions which is prepared in accordance with Engineer Manual 1110-1-400, *Engineering and Design—Recreation Planning and Design Criteria*, November 01, 2004; Engineer Pamphlet 1130-2-550, *Project Operations—Recreation Operations and Maintenance Guidance and Procedures*, November 15, 1996, October 01,1999 (change 1), March 01, 2002 (change 2), August 15, 2002 (change 3), August 30, 2008 (change 4); and Engineer Regulation 1130-2-550, *Project Operations – Recreation Operations and Maintenance Guidance and Procedures*, November 15, 1996, October 01, 1999, March 01, 2002, August 15, 2002, August 30, 2008, March 30, 2009. Master Plans are required for each civil works project and all fee-owned lands for which the USACE has administrative responsibility. The primary goals of this 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 toward providing a high degree of recreation diversity within the region; (3) emphasize the particular qualities, characteristics, and potentials of the project; and (4) exhibit consistency and compatibility with national objectives and other state and regional goals and programs.

Endangered and threatened species that may occur in the counties comprising the proposed project area are the Gray bat (*Myotis grisescens*), Indiana bat (*Myotis sodalis*), Northern Long-Eared bat (*Myotis septentrionalis*), blue shiner (*Cyprinella caerulea*), Goldline darter (*Percina aurolineata*), Cherokee darter (*Etheostoma scotti*), Amber darter (*Percina antesella*), Conasauga logperch (*Percina* jenkinsi), fine-lined pocketbook (*Lampsilis altilis*), southern acornshell (*Epioblasma othcaloogensis*), Coosa moccasinshell (*Medionidus parvulus*), southern pigtoe (*Pleurobema georgianum*), Alabama moccasinshell (*Medionidus acutissimus*), Georgia pigtoe (*Pleurobema hanleyianum*), southern clubshell (*Pleurobema decisum*), triangular kidneyshell (*Ptychobranchus greenii*), large-flowered skullcap (*Scutellaria montana*), Tennessee yellow-eyed grass (*Xyris tennesseensis*), small whorled pogonia (*Isotria medeoloides*), and green pitcher-plant (*Sarracenia oreophila*).

There are no proposed actions to be located in the aquatic environment, and for that reason there is no habitat located within the proposed project area for those Federally listed aquatic species in the counties. Of the remaining listed species, habitat requirements for the gray bat, Tennessee yellow-eyed grass, and Green pitcher-plant are not found throughout the project area. While most species of bats will roost during the summer months in forested habitat, Gray bats roost in caves year round. Tennessee yellow-eyed grass is usually found along riparian zones, seeps, or wet meadows. Green pitcher-plants occur within bogs or wetlands. For these species, the proposed Master Plan update would have no effect.

Listed species with potential to be affected from the proposed action include the Indiana bat, Northern Long-Eared bat, large-flowered skullcap, and small whorled pogonia. Each of these species has the potential to exist within the habitat surrounding Carters Dam. The large-flowered skullcap and the small whorled pogonia prefer moderately sloping hillsides with acidic soils and a layer of organic debris. The Indiana and Northern long-eared bats hibernate over winter in caves and emerge during summer months. Both the Indiana and the Northern Long Eared bat roost in under the bark or in the crevices of trees within forested habitat. However, no known populations of these listed species have been observed within the project area.

The USACE, Mobile District will provide information and instruction to the contractor regarding identification of the federally listed species and roost habitat potentially occurring within the project area prior to ground disturbing activities. The contractor will be directed to not harm or remove any specimens encountered. In the event tree removal is necessary an ecological approach intended to minimize impacting the Indiana bat and Northern Long-Eared bat would be implemented. This would involve a select tree removal - allowing at least seven snag trees per acre to remain standing - during the winter season when the bats have relocated to their hibernacula. If in the event the large-flowered skullcap and small whorled pogonia are identified, a 50-foot buffer would be clearly marked with flagging and/or paint to ensure that no ground disturbing activities occur at or near existing populations.

Due to the nature of the proposed action and the lack of known occurrences in or near the project area, we determined that the proposed action may affect, but is not likely to adversely affect the Indiana bat, Northern Long-Eared bat, large-flowered skullcap, and small whorled pogonia.

The majority of the proposed Carters Dam Project Master Plan documents current improvements and stewardship of natural resources in the project area. The proposed Master Plan also includes the following new actions at the project:

- Approximate ½ mile expansion of Amadahy Trail. This will be a small loop that goes off of the main trail and returns to the main trail. Limited ground disturbance that will entail using a trenching machine in several places to level out the trail on a sloped hill. It is not anticipated that a quantifiable amount of trees will be required to be cleared. Several trees may have to be cut depending on the final trail route, but there will be the ability to adjust the route to avoid any clearing.

- Conversion of approximately 6-10 tent sites to developed RV sites in Doll Mountain Campground. Tent sites are currently used as overflow tent camping, and are lightly used. The number of developed sites will be less than the current number of tent sites due to topography and the developed sites require more area. A small amount of trees will be required to be cleared, probably 1/4 acre. Ground disturbance will occur to convert the sites to full hookup (trenching, installation of septic tanks, leveling of pad areas, etc.).

- Addition of approximately 20 boat parking spaces at Damsite Boat Ramp. This will be on a piece of land next to the boat ramp and will be a stand-alone parking area that will have a separate entry/exit from the main road. Ground disturbance will occur to level the area where the parking lot will go. It is estimated approximately 1500 +/- yards of material will be removed in order to level the site for the parking area. There are small regrowth pine trees in this area that are probably no older than 15 years old, and 6-10 feet tall, about one acre.

- Rehab of the Damsite day use/picnic area to include additional single vehicle parking and construction of concrete/hard surface walking trail to access picnic areas and shoreline. A small amount of ground disturbance will be required to install hard surface trail and add additional parking. It is not anticipated that a quantifiable amount of trees will be cleared.

- Addition of firearm shooting range at Ridgeway Day Use. This facility will be in a natural draw that utilizes existing topography as a safety feature. Construction of this facility will require a minor re-route of an existing trail in the area due to safety zones. The range will consist of three stations with 25 yard, 50 yard, and 100 yard shooting lanes. The range will be designed for typical rifle and pistol rounds. Proposed location is in a draw with positive slopes on

three sides. The orientation of the range will be facing towards the closed Ridgeway Camping area. There is a trail that is located near this location, and the trail will be relocated during construction of the range. There will be limited ground disturbance, mainly to level the area for drainage and install the shooting shelters. Limited tree removal (mainly for access. the range will be build in an already cleared area). There is existing parking therefore no parking lots or roadways are required.

- Addition of 4-5 primitive blue trail campsites on the Coosawattee River/Ridgeway Mountain Bike Trail. These sites will be constructed landscape timber impact areas with regular primitive campsite amenities. Access will be canoe/kayak from the river and by foot on the trail. No ground disturbance or tree clearing is anticipated. The camp pads will be built on top of the ground and in areas that are open at the campsites.

- Proposed replacement of multiple buildings/structures over the next 25 years. All of these facilities will be within footprints of existing buildings though.

Best Management Practices will be implemented for all of the new actions to be included in the Carters Dam Project Master Plan.

We are requesting your input pursuant to the Endangered Species Act on this subject. Additionally, we request your concurrence with our determination that the proposed actions may affect, but are not likely to adversely affect the Indiana bat, Northern Long-Eared bat, large-flowered skullcap, and small whorled pogonia. Please contact Ms. Velma Diaz at 251-690-2025 or by email at velma.f.diaz@usace.army.mil for additional information.

Sincerely,

Brian A. Zettle,
Chief, Inland Environment Team

EA-36

[This page intentionally left blank]

APPENDIX D

CAPACITY STUDY

Carters Lake Recreation Carrying Capacity Study

Completed by USACE
30 September 2015

Contents

1.0 Purpose D-4
2.0 Regional Recreation Resources D-4
2.1 Area Recreation D-4
2.2 Other Corps Projects in the Area D-4
2.3 Project Description D-5
2.3.1 Recreation Areas D-5
2.4 Influence of Other Recreational Projects D-6
3.0 Visitation Profile D-6
3.1 Project Visitation D-6
3.2 Per Capita Visitation Rate D-7
3.3 Project Site Area Visitation D-9
3.3.1 Damsite D-9
3.3.2 Doll Mountain Day-Use D-10
3.3.3 Doll Mountain Campground D-10
3.3.4 North Bank D-11
3.3.5 Reregulation Dam D-11
3.3.6 Woodring Branch Day Use D-12
3.3.7 Woodring Branch Campground D-12
4.0 Recreation Carrying Capacity D-12
5.0 Boating Density Analysis D-14
5.1 Methodology D-14
5.2 Existing Facilities D-15
5.3 Proposed Facilities D-15
5.4 Analysis D-15
5.5 Boating Density Classification D-16

1.0 Purpose

The Recreation Carrying Capacity Study will evaluate the ability of the Project to accommodate existing and future recreation uses, and assess whether these uses are suitable given the potential effects on recreational, environmental, and social resources. Carrying capacity can be defined as the amount and type of use that an area can sustain over a given period of time. Carrying capacities can protect users' experiences by preventing overcrowding, which causes deterioration of the natural attribute and impedes each user's ability to move freely and to fully enjoy the natural setting without undue stress and distraction.

2.0 Regional Recreation Resources

2.1 Area Recreation

There is an abundance of recreation in the area including: Carter's Lake, the southern terminus of the Appalachian Trail, part of the Chattahoochee National Forest, as well as numerous parks, golf courses, and hiking trails.

2.2 Other Corps Projects in the Area

Within 50 miles of Carter's Lake are two other U.S. Army Corps of Engineers Projects: Lake Allatoona and Lake Lanier. Lake Allatoona is part of the Alabama Coosa Tallapoosa River System. Lake Lanier is the Northern most USACE reservoir on the Alabama Chattahoochee Flint River System. Both Lake Allatoona and Lake Lanier offer similar types of recreational activities that are found at Carter's Lake. Lake Allatoona and Lake Lanier however offer a different type of experience as both projects have highly developed shorelines and are considerably more urbanized. Figure 1 displays the area vicinity.

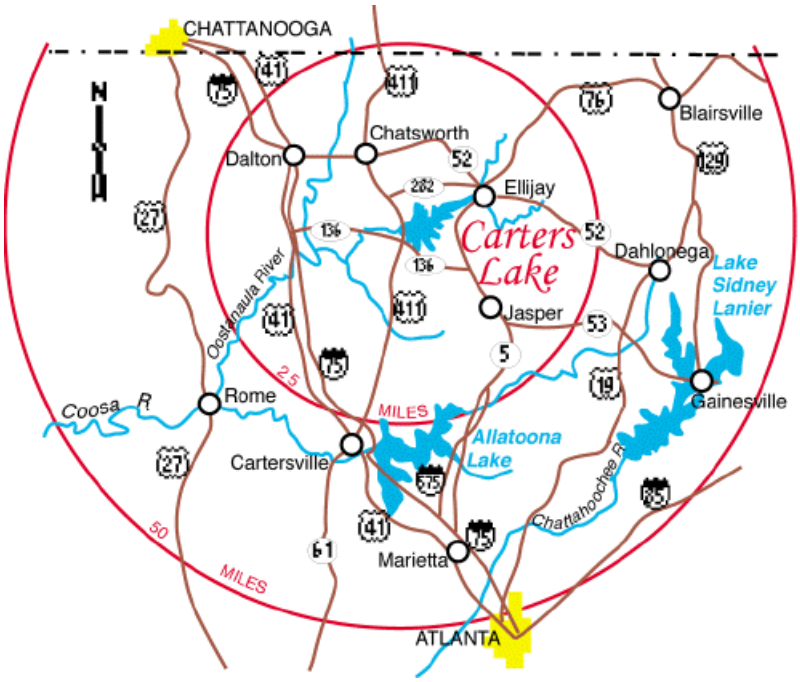


Figure 1. Region of Influence

2.3 Project Description

One interregional highway, US Route 411, passes about 1 mile west of the dam. Georgia State Route 282 runs east/west on the north side of the lake, Georgia State Route 382 runs north/south on the east side of the lake, and Georgia State Route 136 runs east/west on the south side of the lake.

2.3.1 Recreation Areas

Carters Lake has 2 developed campgrounds, totaling 110 campsites; 3 primitive campgrounds, totaling 40 campsites; a group camping area; 8 day-use areas; a public beach; numerous trails; and a public marina. While a small project, Carters Lake experiences a large number of different recreational activities. Some of the more popular activities include developed and primitive camping, boating, hiking, sightseeing, swimming, picnicking, mountain-biking, hunting, birding, and fishing. There are 8 main recreation areas at Carters Dam Project: Damsite, Doll Mountain, Harris Branch, North

Bank, Marina, Reregulation Dam, Ridgeway, and Woodring Branch. Below is a map of the project recreation areas.

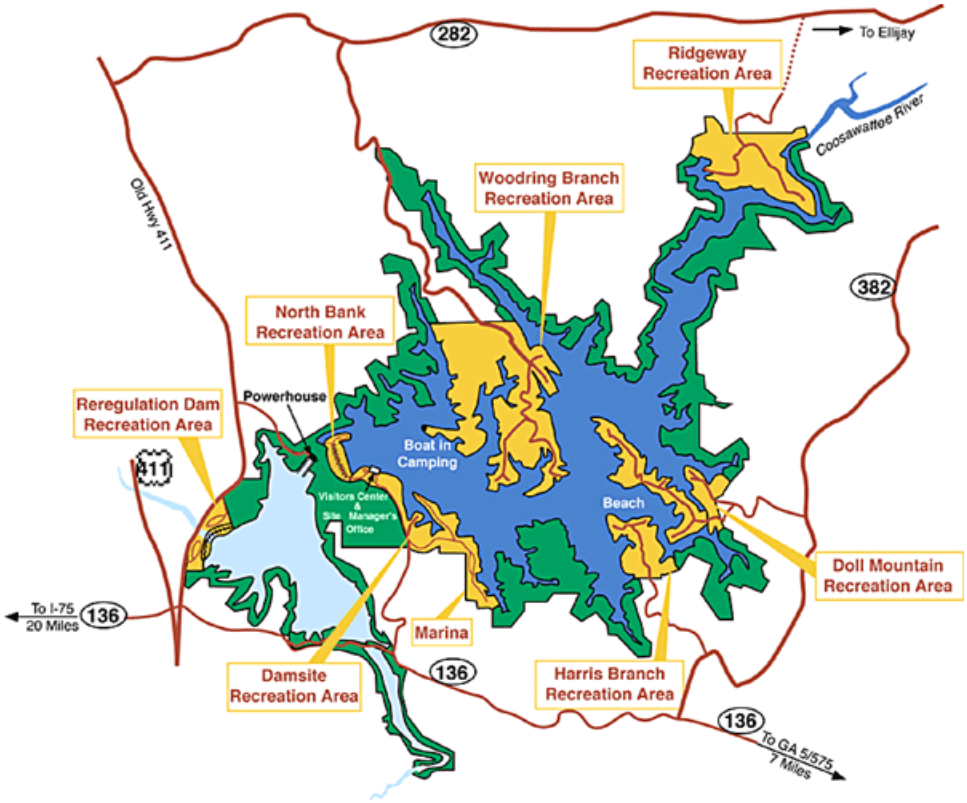


Figure 2: Carters Recreation Areas

The influence of competing projects was considered in developing the visitation estimates for Carters Lake. Per capita visitation assumptions were carefully considered for future visitation estimates.

3.0 Visitation Profile

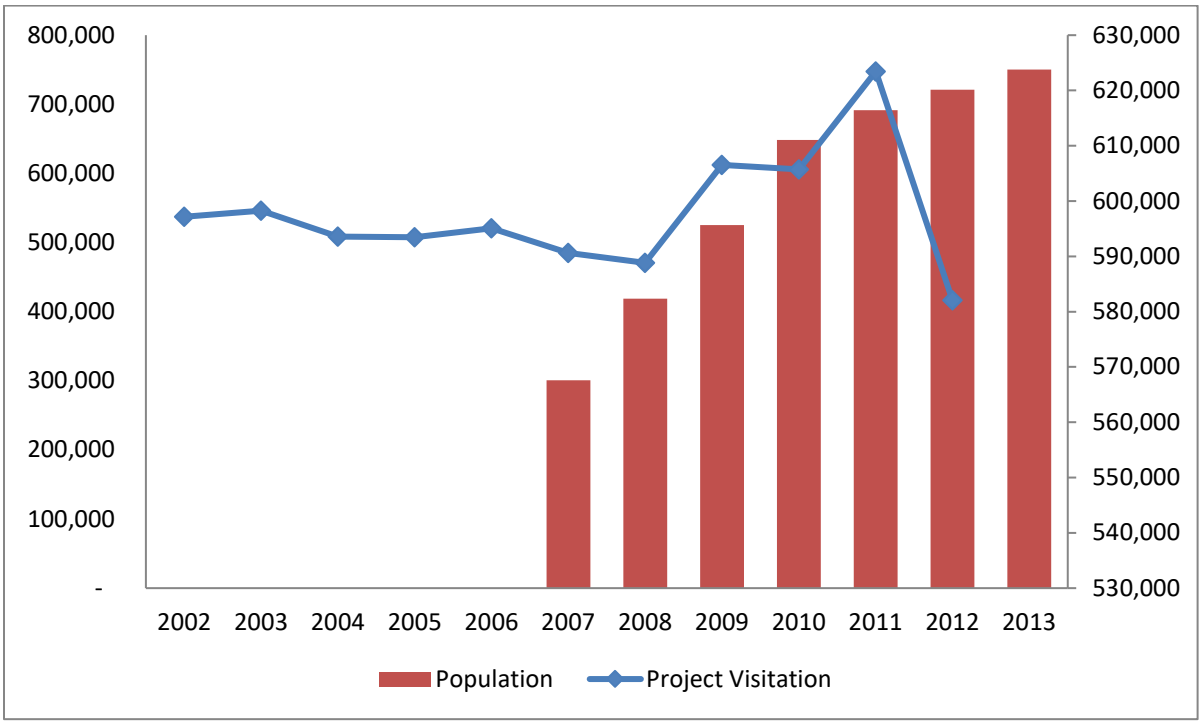
In general, Carters Lake is visited predominately by local residents. Peak recreation season is from May to September. Visitation is concentrated during the weekends in both peak and non-peak seasons. The Carrying Capacity Study discusses the Carters Lake visitation patterns in detail. Overall project visitation was examined from 2002 through 2012.

3.1 Project Visitation

Project visitation for 2002 through 2012 is displayed on the left axis and the area population is displayed on the right axis in Table 1 below. Population is displayed from 2007 through 2013. Population includes the following counties in Georgia: Bartow

County, Cherokee County, Dawson County, Fannin County, Gilmer County, Gordon County, Murray County, Pickens County, and Whitfield County.

Table 1. Project Visitation and Area Population



Source: USACE, 2015 and U.S. Census Bureau, 2015

3.2 Per Capita Visitation Rate

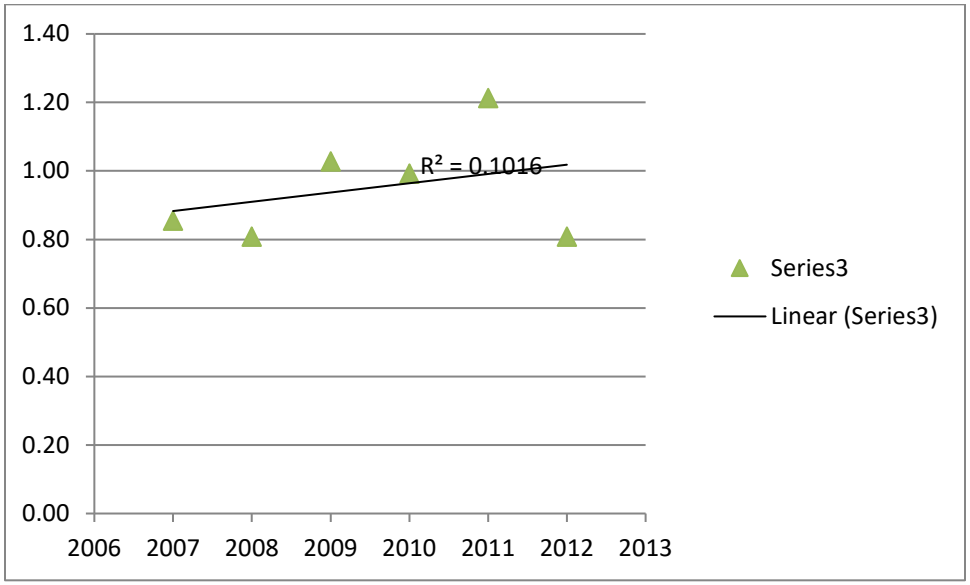
Visitation data and population data for the area were used for the years 2007 through 2012 to determine the current per capita visitation rate for the region of influence. The average per capita use rate is .95. However using the average use rate to project future demand is not a good method for Carters Project. The graph below shows the changes in per capita use rate over the 2007 through 2012 time period. This analysis yields an r-squared value of .1016. A low r-squared value indicates that there is not a strongly correlated relationship between population and project visits.

Table 2: 2007 -2012 Per Capita Use Rate

Year	Project Visits	Area Population	Per Capita Use Rate
2007	484,997	567,570	0.85
2008	470,587	582,356	0.81
2009	612,336	595,679	1.03
2010	606,034	611,055	0.99
2011	747,607	616,434	1.21
2012	501,285[1]	620,115	0.81

1 Actual visitation data for 2012 was available for January through September which totaled 416,285. This value was adjusted to 501,285 to account for October through December.

Graph 1: 2007 -2012 Per Capita Use Rate and Trendline



Population between 2015 and 2035 is displayed below in 5 year increments. An additional 188,000 people are expected to be added over the next 20 years.

Table 3: Area Population through 2035

Year	Projected Population
2015	647,183
2020	693,228
2025	740,446
2030	788,188
2035	835,764

Source: Georgia Office of Planning and Budget, 2015

Because there is a low correlation between project visitation and population growth, a range of future demand is projected using the minimum per capita use rate and the

average per capita use rate. Projected visitation through 2035 is between 676,969 and 768,903 visits.

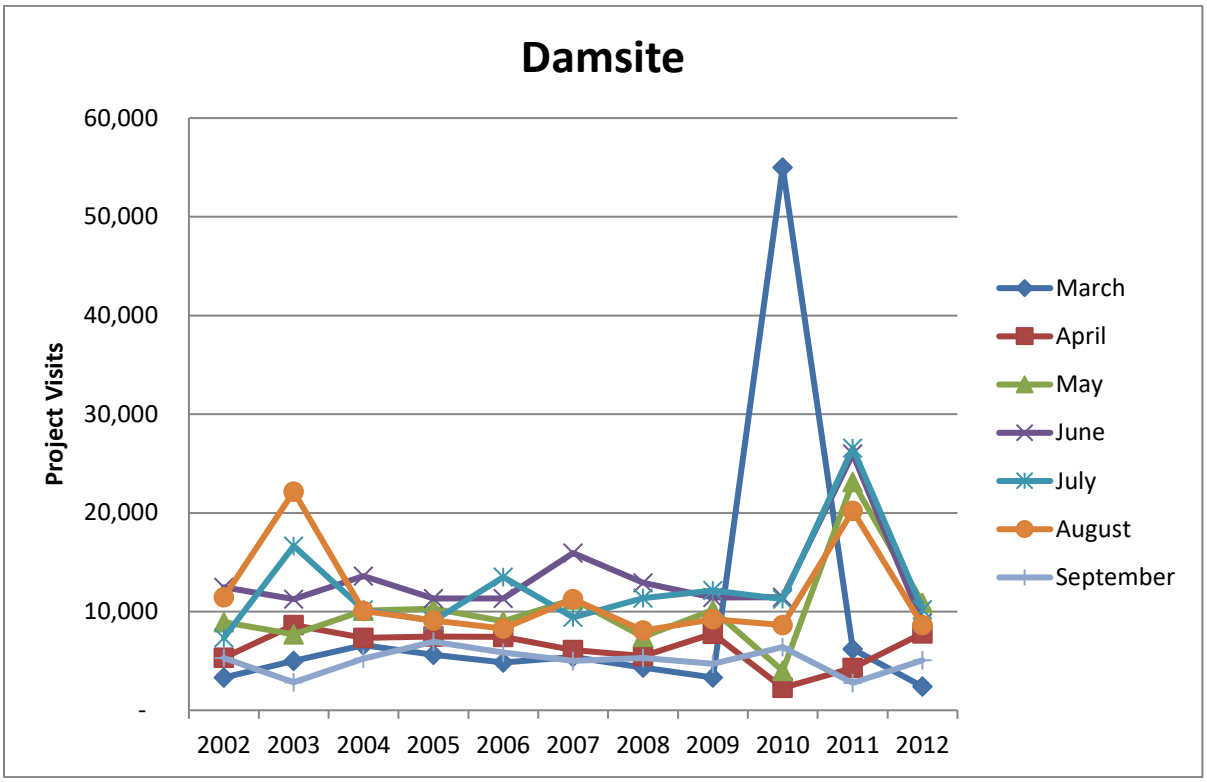
Table 4: Projected Project Visits

Year	Projected Population	Minimum Use Rate	Average Use Rate
2015	647,183	524,218	595,408
2020	693,228	561,515	637,770
2025	740,446	599,761	681,210
2030	788,188	638,432	725,133
2035	835,764	676,969	768,903

3.3 Project Site Area Visitation

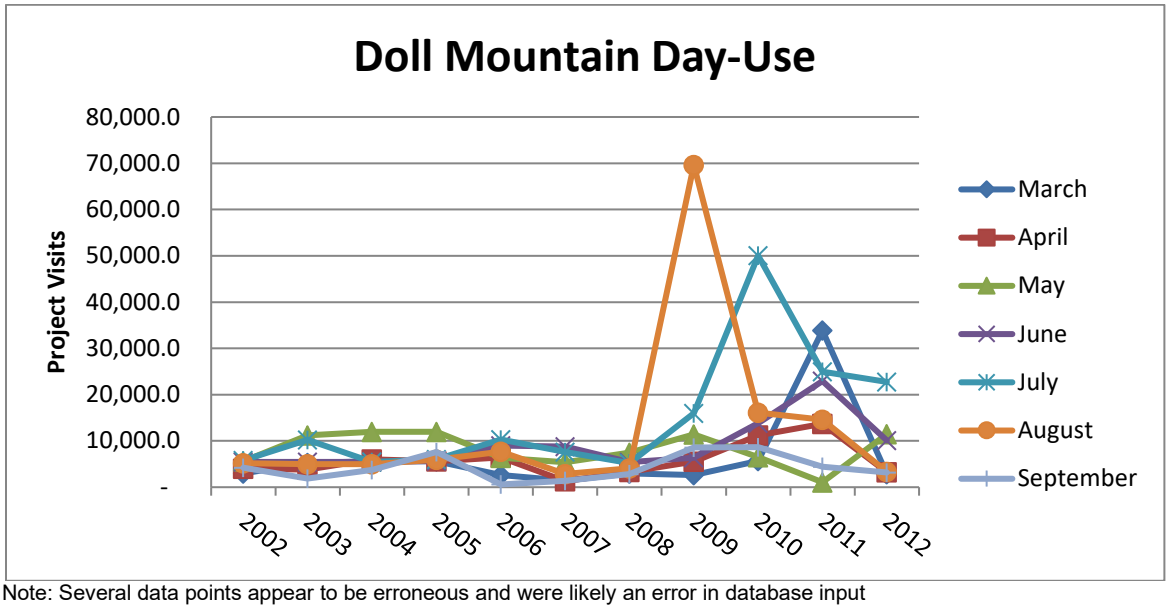
Below are historic visitation records from March through September for each PSA for which data was available. There was no visitation data available for Harris Branch Recreation Area or Ridgeway Recreation Area.

3.3.1 Damsite



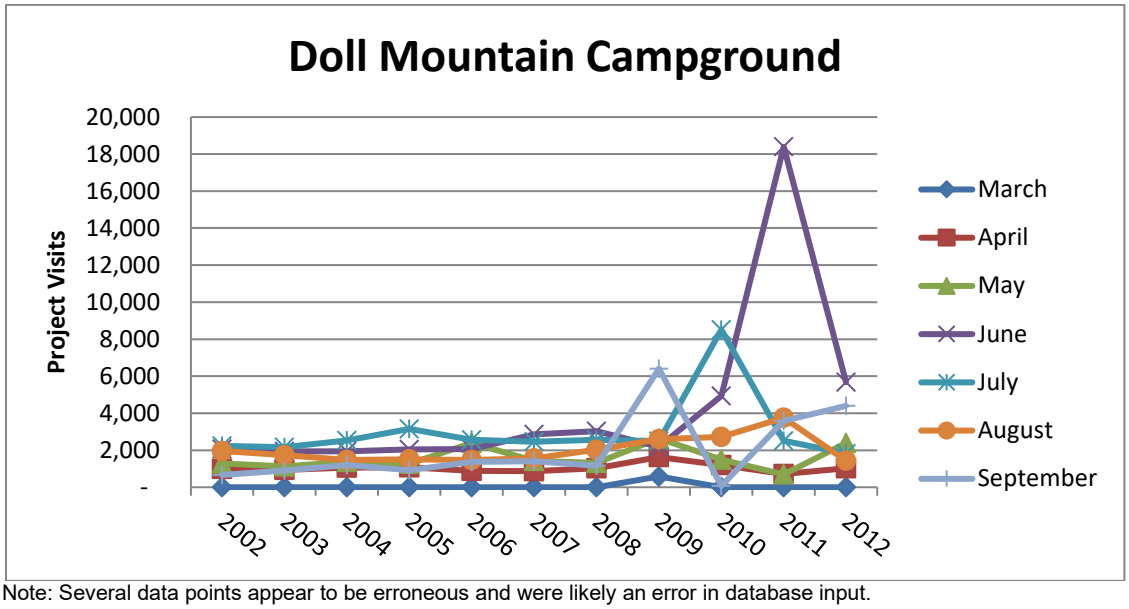
Note: Several data points appear to be erroneous and were likely an error in database input.

3.3.2 Doll Mountain Day-Use



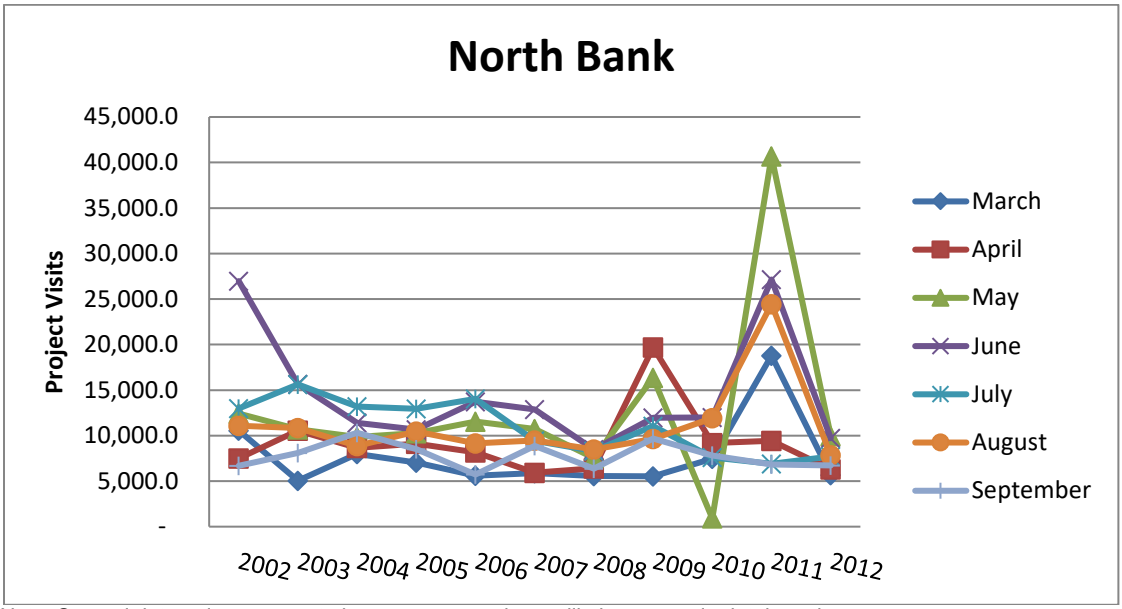
Note: Several data points appear to be erroneous and were likely an error in database input

3.3.3 Doll Mountain Campground



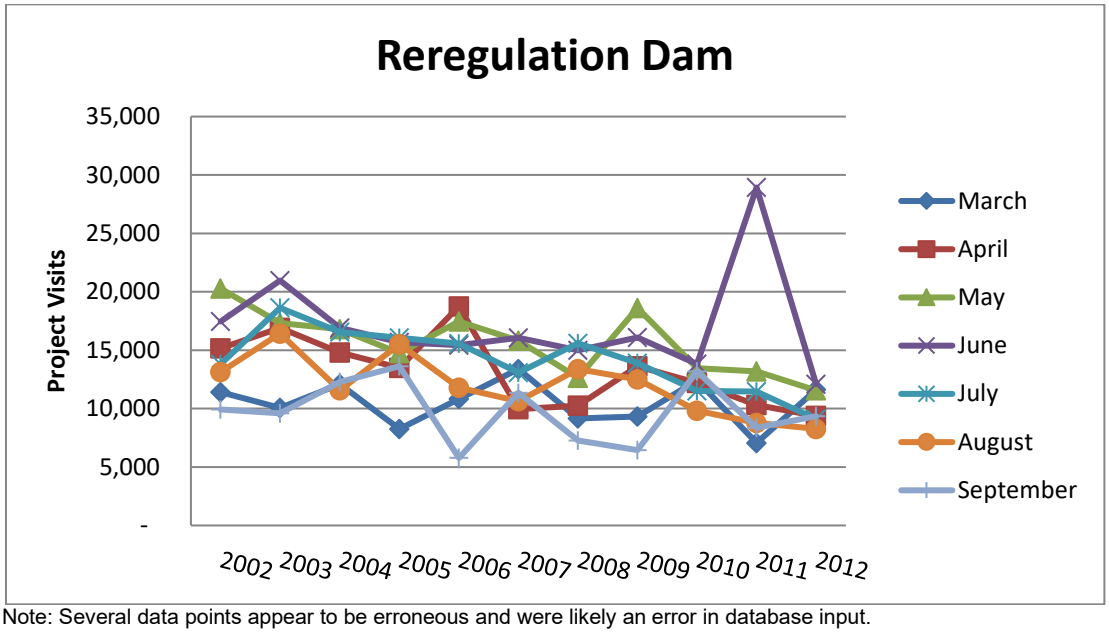
Note: Several data points appear to be erroneous and were likely an error in database input.

3.3.4 North Bank



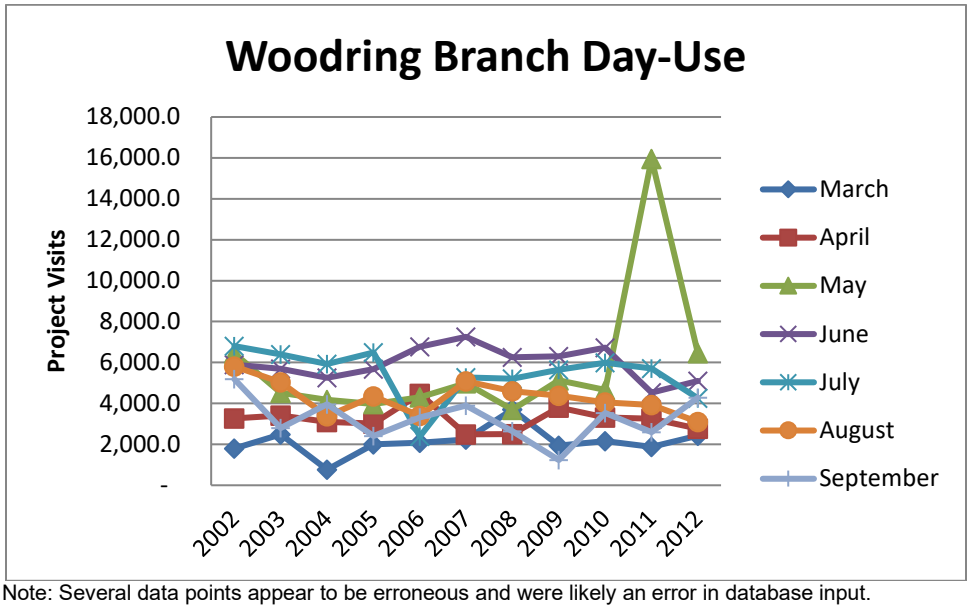
Note: Several data points appear to be erroneous and were likely an error in database input.

3.3.5 Reregulation Dam



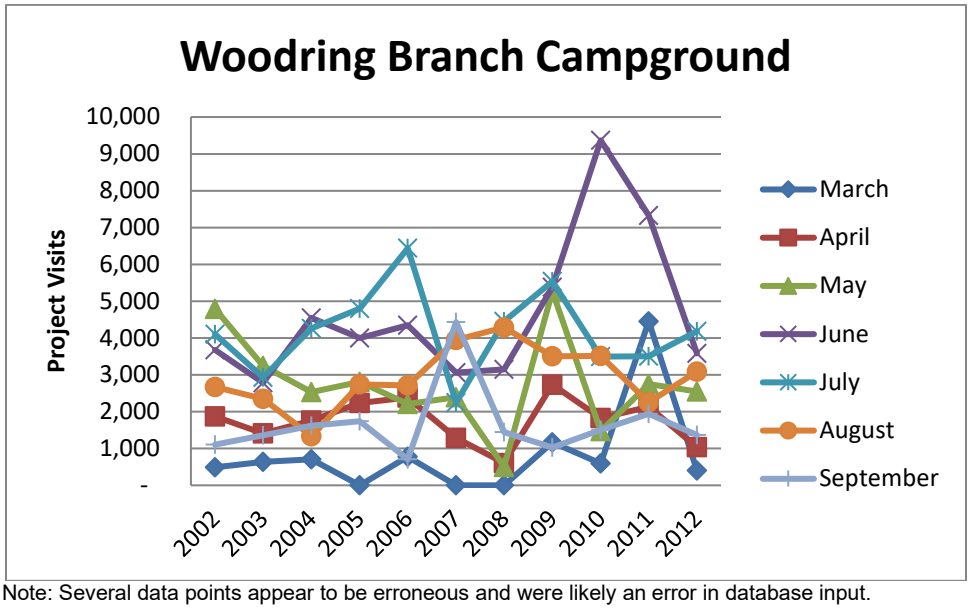
Note: Several data points appear to be erroneous and were likely an error in database input.

3.3.6 Woodring Branch Day Use



Note: Several data points appear to be erroneous and were likely an error in database input.

3.3.7 Woodring Branch Campground



Note: Several data points appear to be erroneous and were likely an error in database input.

4.0 Recreation Carrying Capacity

It is important to establish the carrying capacity of a project so that there are appropriate parking and facilities and the quality of the recreation experience is maintained. Recreation carrying capacity can be analyzed several ways. For this analysis the parking spaces and general visitation data were used to establish general recreation

carrying capacity. In order to determine peak season weekend day visitation, the visitation for June, July and August is summed. 2010 is used as the base year. Design load is calculated as the number of peak season visits multiplied by the percent of visitation occurring on weekends divided by the number of peak season weekend days. The table below shows the values used to establish the 2010 design load.

Table 5: Base Year Design Load

Year	Peak Season (June-August)	Annual Visits	Ratio of Peak Season to Annual Visits	Weekends in Peak Season	Percent of Visitation Occurring on Weekends	Number of Weekend Days	Design Load
2010	254,592	606,034	42.01%	13	75%	26	7,834

Using this method, the projected values are calculated for 2020, 2025, 2030, and 2035.

Table 6: Future Year Design Load

Year	Peak Season (June-August)	Annual Visits	Ratio of Peak Season to Annual Visits	Weekends in peak season	Percent of Visitation Occurring on Weekends	Number of Weekend Days	Design Load
2010	254,592	606,034	42.01%	13	75%	26	7,834
2020	235,890	561,515	42.01%	13	75%	26	7,258
2025	251,957	599,761	42.01%	13	75%	26	7,753
2030	268,202	638,432	42.01%	13	75%	26	8,252
2035	284,391	676,969	42.01%	13	75%	26	8,751

In order to determine the parking demand at the project, the design load is used with assumptions for turnover rate (calculated as hours the project is open divided by the average day use hours per person), persons per vehicle, and existing parking. The values for Day Use hours and Visitors per Vehicle were pulled from a 1993 VERS survey. For more informed calculations and survey would need to be conducted at the Project. Parking demand is displayed below.

Table 7: Existing and Future Parking Demand

Year	Design Load	Day-Use Hours per Visitor	Turnover (12/Day-Use Hours per Visitor)	Visitors per Vehicle	Parking Space Demand	Existing Parking Space Supply	Net Difference
2010	7,344	3.35	3.58	2.6	788.54	779	(9.54)
2020	6,805	3.35	3.58	2.6	730.61	779	48.39
2025	7,268	3.35	3.58	2.6	780.38	779	(1.38)
2030	7,737	3.35	3.58	2.6	830.69	779	(51.69)
2035	8,204	3.35	3.58	2.6	880.84	779	(101.84)

Source: USACE, 2015.

Note: Data was pulled from 1993 VERS Surveys

The analysis of parking demand and supply shows that there is likely adequate parking for the foreseeable future at the project.

5.0 Boating Density Analysis

A boating density analysis was undertaken to evaluate the action of adding additional slips at the Carters Lake Marina.

5.1 Methodology

The methods used to complete this study will draw, in part, on the information and data gathered from other sources. This will include utilization of established Recreation Opportunity Spectrum (ROS) classifications, utilization of current boater density safety standards, utilization of current optimum carrying capacities for outdoor recreation activities, best management practices (BMPs), environmental considerations for development, and other industry standards deemed appropriate by the Contractor. This information and data will be correlated to existing recreation facilities relative to current recreation use and anticipated future recreation use. The below standards are used to evaluate the boating density.

Table 8: Water Recreation Opportunity Spectrum Classification Summary and Associated Boating Density Standard

Setting (Classification)	Generalized Description Summary of the Recreation Experiences by WROS Class	Standard (Acres per Boat)
Urban	Limited opportunities to see, hear, or smell the natural resources exist due to the extensive level of development, human activity, and natural resource modification. Meeting other visitors is expected, and socializing with family and friends is important. There is probability for a diverse range of visitors and activities, including groups and special events. Convenience is central and dominant.	1-10
Suburban	Limited or rare opportunities to see, hear, or smell the natural resources exist due to the widespread and prevalent level of development, human activity, and natural resource modification. Meeting other visitors is expected, and socializing with family and friends is important. There is probability for a diverse range of visitors and activities. Convenience is central and dominant.	10-20
Rural Developed	Occasional or periodic opportunities to see, hear, or smell the natural resources exist due to the common and frequent level of development, human activity, and natural resource modification. Brief periods of solitude are likely, although the presence of other visitors is expected. There is probability for a diverse range of visitors and activities. Moderate levels of comfort and convenience are expected.	20-50
Rural Natural	Frequent opportunities exist to see, hear, or smell the natural resources due to an occasional or periodic level of development, human activity, and natural resource modification. Independence and freedom with a moderate level of management	50-110

	presence are important. There is probability for a diverse range of visitors and activities, although experiences tend to be more resource-dependent. Comfort and convenience are not important or expected.	
Semiprimitive	Widespread and prevalent opportunities exist to see, hear, or smell the natural resources due to a rare or minor level of development, human activity, and natural resource modification. Solitude through the lack of contact with other visitors and managers is important. Opportunities exist for more adventure-based enthusiasts and overnight visitors. Sensations of challenge, adventure, risk, and self-reliance are important.	110-480
Primitive	Extensive opportunities abound to see, hear, or smell the natural resources due to the rare and very minor level of development, human activity, and natural resource modification. Solitude and lack of the site, sound, and smells of others are important. Opportunities are plentiful for human-powered activities (e.g., canoeing, fly-fishing, backpacking, etc.). Sensations of solitude, peacefulness, tranquility, challenge, adventure, risk, testing skills, orienteering, and self-reliance are important.	480-3,200

Source: TVA, Accessed 2015

5.2 Existing Facilities

Currently there is 1 marina which has 144 wet slips. There are also a number of boat ramps located at several of the Corps operated recreation areas with a total of 140 spaces for boat trailer parking at these spaces.

5.3 Proposed Facilities

The only proposed changes are at Carters Lake Marina. No changes at Corps operated recreation areas are anticipated. The phases were proposed. Phase 2 would bring the total number of wet slips to 844 and Phase 3 would bring the total number of wet slips to 1432.

5.4 Analysis

To determine the appropriate classification for each condition, the usable surface area of Carter's Lake was calculated as well as the boating utilization assumptions. The tables below displays the inputs used for this analysis. The average summer weekend day was used as the decision criteria for the boating density classification. Operations determined that the usable boating surface area was approximately 3200 acres.

Table 9: Boating Facilities

	Existing	Maximum	Proposed Action
	Estimated Boating Units - Total		
Adjusted Private Access Boating Units	0	0	0
Commercial Wet Slips	144	1432	844
Commercial Dry Slips	0	0	0

Subtotal Boating Units	144	1432	844
	Parking Spaces for Boating Unit		
Public Ramp Parking	140	140	140
Private Community Ramp Parking	0	0	0
Subtotal Parking Spaces	140	140	140

Source: USACE, 2015

Table 10: Boating Utilization

	Estimated % Boating Units In Use		
	Ave. Summer Weekday%	Ave. Summer Weekend Day %	Peak Holiday Summer %
Commercial Wet & Dry Slips	15%	25%	35%
Public/Private Ramp Parking	20%	60%	75%

Source: USACE, 2015

5.5 Boating Density Classification

Based on the analysis the existing facilities assumptions, an average of 26.67 acres per boat in use would classify the setting as rural. Under the proposed action the classification shifts to suburban with approximately 10 acres per boat in use. Based on conversations with Carters project operations personnel this shift in recreation classification was considered acceptable and would not like change the quality of the user's experience.

Table 11: Boating Density Classification

	Ave. Summer Weekday			Ave. Summer Weekend Day			Peak Holiday Summer		
	Existing	Max	Proposed	Existing	Max	Proposed	Existing	Max	Proposed
Est Boating Units in Use	50	242.8	155	120	442	295	155	606.2	400
Surface Acres Per Boating Unit	**64.516**	**13.180**	**20.699**	**26.667**	**7.240**	**10.847**	**20.592**	**5.279**	**7.99**
Classification	Rural Natural	Suburban	Rural	Rural	Urban	Suburban	Rural	Urban	Urban

Source: USACE, 2015

APPENDIX E

INDEX OF PLATES

APPENDIX F

LAND CLASSIFICATION

APPENDIX G

RECREATION AREAS