



DEPARTMENT OF THE ARMY  
U.S. ARMY CORPS OF ENGINEERS  
SAVANNAH DISTRICT  
100 W. OGLETHORPE AVENUE  
SAVANNAH, GEORGIA 31401-3604

## DRAFT FINDING OF NO SIGNIFICANT IMPACT (FONSI)

### Shoreline Management Plan for Hartwell Lake Georgia and South Carolina

The U.S. Army Corps of Engineers, Savannah District, has conducted an environmental analysis in accordance with the National Environmental Policy Act of 1969, as amended. USACE has assessed the effects of the following actions of the Shoreline Management Plan (SMP), dated May 2019, for Hartwell Lake. The recommended plan consisted of the following:

The proposed action consists of an updated SMP for Hartwell Lake. The updated SMP was developed in accordance with the criteria outlined within the USACE shoreline management regulation (ER 1130-2-406) to meet Hartwell's shoreline management goals and responsibilities while protecting the natural environment. A majority of the 2007 SMP will remain unchanged with the proposed SMP.

USACE has assessed the impacts of the proposed action on important resources, and the following resources would not be adversely affected by the selected plan: Geology; Topography and Soils; Floodplains; Surface Hydrology; Water Quality; Air Quality; Noise; Hazardous and Toxic Wastes Sites; Fish and Wildlife; Wetlands; Environmental Justice; Protection of Children; Recreation, and Threatened and Endangered Species.

The proposed action will be coordinated with the appropriate federal, state, and local agencies and businesses, organizations, and individuals through distribution of a draft Environmental Assessment for their review and comment. Copies of the Draft EA and Finding of No Significant Impact (FONSI) are being distributed in March 2019 to all appropriate parties that may have an interest in the project. In addition, the availability of these documents was posted on the Savannah District website. All comments will be considered in the final determination of impacts.

All applicable laws, executive orders, regulations, and local government plans were considered in the evaluation of the alternatives. It is my determination that the recommended plan does not constitute a major federal action that would significantly affect the human environment; therefore, preparation of an Environmental Impact Statement is not required.

*Draft*

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Date

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Daniel H. Hibner, PMP  
Colonel, U.S. Army  
Commanding



**US Army Corps  
of Engineers®**

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**ENVIRONMENTAL ASSESSMENT  
SHORELINE MANAGEMENT PLAN  
HARTWELL LAKE**

**US ARMY CORPS OF ENGINEERS  
SAVANNAH DISTRICT**

**April 2019**

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# **TABLE OF CONTENTS**

1.0 INTRODUCTION .....	1
1.1 Background.....	1
1.2 Description of the Project Area.....	1
1.3 Shoreline Allocation .....	1
1.4 Purpose and Need for the Proposed Action.....	3
2.0 ALTERNATIVES .....	4
2.1 No Action.....	4
2.2 Proposed Shoreline Management Plan (Preferred Alternative).....	4
3.0 AFFECTED ENVIRONMENT AND IMPACTS .....	7
3.1 General.....	7
3.2 Relevant Resources.....	7
3.2.1 Aesthetics .....	7
3.2.2 Vegetation .....	7
3.2.3 Land Use .....	8
3.2.4 Safety.....	8
3.2.5 Threatened and Endangered Species.....	8
3.2.6 Cultural Resources.....	10
4.0 ENVIRONMENTAL CONSEQUENCES .....	11
4.1 Aesthetics.....	11
4.2 Vegetation.....	12
4.3 Land Use .....	12
4.4 Safety .....	12
4.5 Threatened and Endangered Species.....	13
4.6 Cultural Resources .....	13
4.7 Cumulative Impacts.....	15
5.0 PUBLIC INVOLVEMENT .....	16
5.1 Public Information Sessions.....	16
5.2 Recipients of the Environmental Assessment .....	16
6.0 COMPLIANCE WITH ENVIRONMENTAL LAWS AND REGULATIONS .....	17
7.0 CONCLUSION .....	18
8.0 PREPARERS .....	18

9.0 REFERENCES .....18

**LIST OF TABLES**

Table 1: Changes to Shoreline Management Plan ..... 5  
Table 2: Threatened and Endangered Species .....10  
Table 3: Environmental Impact Comparison of Alternatives .....15  
Table 4: Compliance of the Proposed Action with Executive Orders .....17

**APPENDICES**

- Appendix A: Commonly Occurring Terrestrial and Aquatic Plants, Mammals, Reptiles, Amphibians, Birds, and Fish of Hartwell
- Appendix B: Eight Step Process for Floodplain Management
- Appendix C: Comments for Hartwell SMP Environmental Assessment

## **1.0 INTRODUCTION**

The Hartwell Lake and Dam Project is operated by the U.S. Army Corps of Engineers (USACE) and includes approximately 56,000 acres of water surface area, 23,563 acres of land, and 962 miles of shoreline. USACE is the federal agency responsible for maintaining and operating the dam, as well as the lands and water that comprises and surrounds the lake.

Title 36 Code of Federal Regulations (CFR) Part 327.30 Shoreline Management on Civil Works Projects and Engineering Regulation (ER) 1130-2-406 Project Operation – Shoreline Management at Civil Works Projects require that a Shoreline Management Plan (SMP) be prepared for each USACE project where private shoreline use is allowed. The current Hartwell SMP was approved in 2007. The ER also requires that the SMP be reviewed at least every 5 years and revised as necessary. SMP updates must comply with the National Environmental Policy Act of 1969 (NEPA), as amended and include public participation to the maximum extent practicable.

This document evaluates the impacts associated with implementation of the proposed SMP for the Hartwell Project. This Environmental Assessment (EA) addresses the environmental effects of the changes to the existing conditions as a result of the proposed 2019 update to the SMP (Draft SMP being circulated with this EA).

### **1.1 Background**

Pursuant to Title 36 CFR Part 327.30 and ER 1130-2-406, it is the policy of the USACE to protect and manage shorelines of all Civil Works water resources development projects in a manner that promotes the safe and healthful use of the shorelines by the public while maintaining environmental safeguards to ensure a quality resource for use by the public. The objectives include maintenance of the aesthetic and environmental characteristics of the Reservoir for the full benefit of the general public.

### **1.2 Description of the Project Area**

Hartwell Lake is a man-made lake bordering Georgia and South Carolina on the Savannah, Tugaloo, and Seneca Rivers. The lake is created by Hartwell Dam located on the Savannah River seven miles below the point at which the Tugaloo and Seneca Rivers join to form the Savannah River, extending 49 miles up the Tugaloo and 45 miles up the Seneca at normal pool elevation. Interstate 85 bisects Hartwell Lake and makes the area easily accessible to visitors.

### **1.3 Shoreline Allocation**

Shoreline allocations provide the basic framework for the development, management, and operation of all Hartwell facilities and resources. To meet the objectives of the SMP, it is essential to manage (by permit or license), the type, number, and location of private facilities and activities on public land and water. To administer the shoreline

program and ensure a proper balance between authorized purposes, the Hartwell Lake shoreline was allocated into four categories defined in 1 - 4. A master map depicting shoreline allocations is available for viewing at the Operations Project Manager's Office and on-line at [www.sas.usace.army.mil/lakes/hartwell](http://www.sas.usace.army.mil/lakes/hartwell). With 76 percent of the shoreline available for various types of private use permits/licenses, Hartwell Lake has one of the most liberal shoreline allocation plans of any USACE Water Resources Development Lake nationwide.

1. Limited Development Shoreline Areas. Limited Development Shoreline Areas (LDA) refers to areas where certain specific private uses may be authorized if a permit/license is obtained. Approximately 50 percent of the shoreline is allocated under this category. Private docks and certain land-based activities may be authorized in these areas, provided other conditions outlined in the SMP are met.
2. Protected Shoreline Areas. Protected Shoreline Areas are designated to maintain or restore aesthetic values; to protect fish and wildlife habitat and other environmental values; to protect cultural, historical, and archaeological resources; to protect channels for navigation; to restrict structures from water too shallow for navigation; and to protect areas that are subject to excessive siltation, erosion, rapid dewatering, or exposure to high wind, wave, or currents. Approximately 26 percent of the shoreline is allocated under this category.

Protected Shoreline Areas reduce conflicts between public and private use and maintain aesthetics, fish and wildlife habitat, cultural, or other environmental values. Additionally, shorelines subject to extensive public use are in this category. Docks, improved walkways, and utility rights of way are prohibited in protected areas. A limited amount of underbrushing and bank stabilization efforts can be considered in protected shoreline areas provided such uses do not adversely impact the purposes for which the area was originally designated protected. Walkways and utilities licensed and installed in Protected Shoreline areas prior to January 1, 2008 will be honored to current and future owners provided the facilities are maintained in compliance with the license conditions.

3. Public Recreation Shoreline Areas. Public Recreation Shoreline Areas consist of lands designated in the Project's Master Plan for present or future intensive recreational development. Approximately 24 percent of the shoreline is allocated under this category. These areas are designated for federal, state, and other public use, including commercial concessions. No private use facilities or activities will be permitted within a designated developed or undeveloped Public Recreation Area.
4. Prohibited Access Shoreline Areas. Prohibited Access Shoreline Areas are reserved for project operation and include lands located in proximity to the hydropower structure, operational areas, and water intake structures. Less than 1 percent of the shoreline is allocated under this category. Prohibited Access Shoreline Areas are those in which public boating and pedestrian access is not

allowed, or is restricted, for safety and/or security reasons. Private use facilities and activities are not permitted within these areas.

The allocations outlined above have been established and firmly adhered to for many years. Public Recreation and Protected Access Shoreline allocations must be preserved to maintain balance between public and private use and to adequately manage for all authorized purposes. As demand for recreation areas increase, the undeveloped Public Recreation Areas will be available for future recreation development; however, some of these undeveloped recreation areas may remain undeveloped. These undeveloped recreation areas provide considerable value to Hartwell Lake to include timber, wildlife, aesthetics, and natural areas for general public uses such as hiking or picnicking.

The need or demand for changes to be made to existing allocations has not been demonstrated or documented. USACE received only 6.5 percent of total comments in support of shoreline allocation changes on Hartwell Lake during the public comment period for this SMP Update. Of these comments received, 45 percent were related solely to the reallocation of one specific parcel and were not seeking a comprehensive reallocation.

Maintaining a balance between private and public use of the resource is constrained since a significant amount of the undeveloped shoreline is already allocated LDA. In order to make any changes to allocations lake-wide, a comprehensive review of the SMP and Shoreline Allocation Process would be necessary. It has been determined the time and cost estimates for a comprehensive review far exceed the budget of the current SMP update. After considering the relatively small interest in a lake-wide reallocation, the significant constraints of such a reallocation given the existing allocation, as well as the lack of resources available to conduct studies necessary for a reallocation, it was determined the current update will not include a lake-wide reallocation review.

#### **1.4 Purpose and Need for the Proposed Action**

The Hartwell SMP was last updated in 2007 (<https://www.sas.usace.army.mil/Portals/61/docs/lakes/hartwell/shoreline.pdf>). Over the past 12 years, changes have occurred that warrant an update to the SMP. These include changes in policy, regulations, surrounding community growth, and recreational use. Pursuant to Title 36 CFR Part 327.30 and ER 1130-2-406, the objective of the updated SMP (being circulated with this EA) is to maintain a balance between permitted private uses, long-term natural resource protection, and public recreation opportunities. Specifically, the intended purpose of a SMP is to protect desirable environmental characteristics of Civil Works lake projects and restore shorelines where degradation has occurred through private exclusive use. The SMP must protect public lands and honor any past commitment. Public participation is also encouraged to the fullest extent.

The proposed SMP update meets the following goals:

- Incorporates updates to policies and regulations pertaining to the shoreline of Hartwell Lake.
- Maintains aesthetic and environmental characteristics of the lake for the full benefit of the general public.
- Addresses shoreline allocations, rules, regulations, and other information relative to the Shoreline Management Program.
- Ensures that program management actions are based on current information and regulations through collaboration with the public, stakeholders, and subject matter experts.

## **2.0 ALTERNATIVES**

Alternatives that meet the objectives and goals described above were considered during development of the proposed SMP. These alternatives are described below.

### **2.1 No Action**

The No Action Alternative involves the continued use of the 2007 Hartwell SMP. This would not allow the Hartwell Project to operate under an up-to-date SMP, in accordance with Title 36 CFR Part 327.30 and ER 1130-2-406.

### **2.2 Proposed Shoreline Management Plan (Preferred Alternative)**

The Proposed SMP was developed in accordance with the criteria outlined within the USACE shoreline management regulation (ER 1130-2-406) and Title 36 CFR Part 327.30. The preferred alternative will meet Hartwell shoreline management goals and responsibilities while protecting the natural environment. The majority of the 2007 SMP will remain unchanged with the proposed SMP. The proposed changes to the SMP are shown in Table 1.



<b>Table 1: Changes to Shoreline Management Plan</b>			
<b>Topic (SMP)</b>	<b>Section in EA</b>	<b>2007 SMP Plan</b>	<b>Proposed SMP</b>
10. Private Docks, (b) Access Requirements	4.3 Land Use	Fee simple ownership of adjacent private land w/ a minimum width requirement of 75 feet. Minimum 20 feet wide required for all permits except a dock.	Minimum requirement of 75 feet of shared boundary line for all permitted facilities/activities.
10. Private Docks, (c, d) Location and Spacing	4.4 Safety	Not addressed in SMP.	Mooring of vessels, or other floating structures (inflatables, trampolines, etc.) at a dock cannot impede ingress/egress or navigation.
10. Private Docks, (e) Water Depth	4.4 Safety	Not addressed in SMP.	Dependent upon site conditions, a determination to issue/modify a dock permit may be deferred if the lake level is < 656' AMSL or > 660' AMSL.
10. Private Docks, (f) Standards for docks (2) Color Restrictions	4.1 Aesthetics	Not addressed in SMP.	Any existing dock, if repainted or roof replaced, must comply with current color requirements.
10 Private Docks, (f) Standards, (3) Time Limits	4.4 Safety	Not addressed in SMP.	A new dock cannot be installed until the previously permitted dock has been removed.
10 Private Docks, (k) Storage Compartments/Attachments	4.4 Safety	Prohibited in SMP.	Security cameras are authorized to be installed on docks.
10. Private Docks, (j) Dock Roofs and Sundecks	4.4 Safety	Not addressed in SMP.	No jump gates are permitted on second level.
11. Community Docks, (a) Eligibility Req. (4)	4.3 Land Use	No limits were defined.	Underbrushing areas will be designated adjacent to limited development shoreline only and may be up to 50% of the shared boundary line, not to exceed 400 feet.
13. Underbrushing	4.3 Land Use	Minimum 20 feet shared boundary required within an LDA to qualify for underbrushing.	Minimum requirement of 75 feet of shared boundary line is required to qualify for underbrushing.
13. Underbrushing, (a) (2)	4.3 Land Use	Not addressed in SMP.	Invisible dog fences are added as a personal item prohibited on public land.

14. Rights of Way	4.3 Land Use	In Limited Development areas, improved walkways and utility rights of way could be issued if property shared minimum 75 feet boundary line without a dock.	Rights of Way and improved walkways are considered supporting facilities for a dock, therefore can only be permitted if a dock is authorized. *Properties with less than 75 feet of shared boundary line within a Limited Development Area (LDA) with an existing dock may still be authorized for supporting facilities (utilities and improved walkway). Property adjacent to LDAs with > 20 feet of shared boundary line that are non-dockable; have until the implementation date of the new SMP to be approved for supporting facilities with installation due by expiration of the SUP.
14. Rights of Way, (a) Electrical Service	4.4 Safety	All electrical services had to be certified by a state licensed electrician upon initial permit/license issuance, modification of electrical service, or upon change of ownership.	All electrical services must be certified by a state licensed electrician prior to renewal or change of ownership.  Verbiage that all lighting is downshielded is incorporated into certification statement on electrical form.
14. Rights of Way, (a)	4.4 Safety	Not addressed in SMP.	Allow solar panels on dock and/or power pole for electrical services on public land only.
14. Rights of Way, (a) Electrical Service, (2)	4.4 Safety	Landscaping lighting was prohibited.	Solar lighting along an improved walkway can be authorized. Solar lights are limited to 10 inches in height and must be spaced a minimum of 10 feet between lights. If solar lighting is installed, property would not qualify for a second light pole.
14. Rights of Way, (c) Improved Walkways	4.3 Land Use	Not addressed in SMP	Walkways and Rights of Way are considered supporting facilities for a dock, therefore can only be permitted if a dock is authorized.
14. Rights of Way, (c) Improved Walkways, (3)	4.1 Aesthetics	Not addressed in SMP	Pressure washing concrete walkway is prohibited unless cleaning is necessary prior to application of stain.

### **3.0 AFFECTED ENVIRONMENT AND IMPACTS**

The following sections describe the environment of Hartwell Lake and will contrast and compare the impacts of the Proposed Plan to the No Action Alternative.

#### **3.1 General**

The environmental impacts associated with private exclusive facilities and activities on public lands/water authorized under previous SMPs were considered and factored into the initial shoreline zoning allocations determinations as originally established in 1972. Since no changes to the zoning allocations are proposed and there are no changes to the types of facilities/activities authorized, there will be no adverse environmental impacts to the resources associated with the proposed SMP.

#### **3.2 Relevant Resources**

This section contains a description of relevant resources that could be impacted by the project. The important resources described in this section are those recognized by laws, executive orders, regulations, and other standards of National, state, or regional agencies and organizations; technical or scientific agencies, groups, or individuals; and the general public.

The following resources have been considered and found to not be affected by the alternative under consideration, therefore will not be discussed further: Geology, Topography and Soils; Floodplains; Surface Hydrology; Water Quality; Air Quality; Noise; Hazardous and Toxic Waste Sites; Wetlands; Environmental Justice; Protection of Children; and Recreation.

##### **3.2.1 Aesthetics**

###### Existing Conditions

The natural beauty of Hartwell Lake is an aesthetic asset which offers unlimited opportunities for outdoor activities such as sightseeing and hiking for campers, mountain bikers, hunters, and fishermen.

##### **3.2.2 Vegetation**

###### Existing Conditions

Due to the limited amount of public land surrounding Hartwell Lake and considerable private development immediately adjacent to public lands, extensive forest management activities are limited. The goals of the Hartwell Project forest management program is to proactively manage timber resources, where feasible on larger tracts of public land, to promote the health, vigor, and diversity of project forests to support recreation and wildlife management programs, protect and improve water

quality, improve public use and enjoyment of public lands, and provide a sustained yield of forestry products.

In areas where narrow shoreline buffer strips exist between adjacent private development and the lake, it is neither wise nor practicable to intensively manage forest resources. In these areas, USACE works closely with adjacent landowners to facilitate safe shoreline access by adjacent residents while minimizing impacts to the resource. Through permits, adjacent landowners may be authorized to conduct limited underbrushing on public land and cut dead/diseased trees that threaten private structures. In addition, open areas can be planted with USACE approved mixture of trees or let natural regeneration occur to re-establish beneficial vegetation. The ultimate goal is to provide safe access to the shoreline while maintaining a healthy stand of natural vegetation, which is critical to the health and beauty of the Hartwell Project.

### **3.2.3 Land Use**

#### Existing Conditions

The current SMP requires a minimum of 20 feet of shared boundary in a LDA to qualify for all facilities/activities except a boat dock.

The current SMP does not address solar panels as a source of electrical service.

The current SMP does not specifically address invisible dog fencing however it plainly states any activity/facility not authorized by a permit/license is considered an encroachment or degradation of public property and a violation of Title 36 CFR, Part 327.

### **3.2.4 Safety**

#### Existing Conditions

The objective of the USACE safety program is to provide a safe environment for project personnel and the visiting public. As stated in ER 1130-2-406 and Title 36 CFR, Part 327.30, it is the policy of USACE to protect and manage shorelines of all civil works water resource development projects under USACE jurisdiction in a manner which would promote the safe and healthful use of these shorelines by the public while maintaining environmental safeguards to ensure a quality resource for use by the public. The objectives of all management actions would be to achieve a balance between permitted private uses and resource protection for general public use.

### **3.2.5 Threatened and Endangered Species**

#### Existing Conditions

A copy of the Memorandum of Agreement between the U.S. Army Corps of Engineers, Savannah District, and the U.S. Fish and Wildlife Service Concerning Protected Species Surveys at J. Strom Thurmond, Richard B. Russell, and Hartwell Lakes is on file at the Hartwell Operations Project Manager's Office. In accordance with this agreement, endangered species surveys are performed by qualified USACE team members prior to the initiation of any "action" to determine if endangered species or habitat is present in the affected area. This includes prescribed burns, thinning, regeneration cuts, and developing food plots and openings, and activities that area authorized under USACE's Regulatory Jurisdiction including rip-rap or headwall placement. Furthermore, special efforts will be made to avoid critical habitats adjoining affected areas. Though not specifically protected by law, rare and infrequently occurring plants are also protected from disturbance. Locations for known rare, threatened, and endangered plant species as well as critical habitats are noted in the individual compartment descriptions.

The U.S. Fish and Wildlife Service (USFWS) Information, Planning and Conservation System (<http://ecos.fws.gov/ipac/>) website provides a current inventory of federally listed threatened and endangered species. There are no identified endangered species within the Hartwell Project area.

Those species federally-protected by other laws include bald eagle, golden eagle, osprey, and peregrine falcon which may be transient visitors during migration. Habitat may exist for the federally-listed northern long-eared bat, however, there are no known occurrences, maternity sites, or hibernacula on the project. The bald eagle (*Haliaeetus leucocephalus*) is protected under the Federal Bald and Gold Eagle Protection Act, and species listed under the Migratory Bird Treaty Act.

Federally-listed threatened and endangered species having potential habitat at Hartwell Lake fee lands, as identified by the USFWS, can be found in Table 2.

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\*"Action" is defined by the USFWS as an activity or program of any kind authorized, funded, or carried out, in whole or in part, by a federal agency in the United States or upon the high seas, such as: (a) an action intended to conserve listed species or their habitat; (b) the promulgation of a regulation; (c) the granting of a license, contract, lease, easement, right-of-way, permit, or grant-in-aid; and (d) an action directly or indirectly causing modification to the land, water, or air.

**Table 2: Threatened and Endangered Species**

	<b>Status</b>	<b>Has Critical Habitat</b>
<b>Flowering Plants</b>		
Dwarf-flowered Heartleaf	T	No
Mountain Sweet Pitcherplant	E	No
Michaux's Sumac	E	No
White Fringeless Orchid	T	No
Small-whorled Pogonia	T	No
Persistent Trillium	E	No
Smooth Coneflower	E	No
<b>Mammals</b>		
Northern Long-eared Bat	T	No
Indiana Bat	T	Yes

### **3.2.6 Cultural Resources**

#### Existing Conditions

The archaeological record details a long and continuous occupation of the Savannah River Valley extending from the Paleoindian period (ca 14,000 to 8,000 BC) through the Historic period (post-1930 AD).

Construction of the Hartwell dam prompted the first archaeological investigations of the area by Joseph Caldwell in 1952. The reconnaissance-level survey examined the uppermost eight miles of the Savannah River, approximately 40 miles of the Tugaloo River, and 32 miles of the Seneca-Keowee Rivers (Caldwell 1953). Caldwell recorded 54 archaeological sites and provided management recommendations based on a flood pool level of 665 feet above mean sea level (AMSL) for the proposed lake. Six of the sites were recommended for additional excavations and one site was recommended for additional testing. Among the sites excavated were three mound sites, Chauga, Estatoe, and Tugaloo. A recent review of the Caldwell survey indicated that several of the sites had been incorrectly plotted and steps have been taken to provide suggestions on the true locations of the sites (Sweeney and Whitley 2011). Rectification of the data suggests that at least four of the sites noted as inundated are actually outside of the flood pool (i.e., above 665 feet AMSL).

Cultural resources investigations of upland areas at the Hartwell Project were conducted in the late 1970s and early 1980s to comply with Section 106 of the NHPA, resulting in the identification of 92 archaeological sites. A large-scale, approximately 3,727 acre Section 110 of the NHPA survey was conducted in 2010 (Sweeney and Whitley 2011). Water levels during the field survey ranged from 660.58 - 661.19 feet AMSL which prohibited investigation of shoreline areas. The survey resulted in the recordation of 47 previously unrecorded archaeological sites, none of which were recommended eligible for the National Register of Historic Places (NRHP). No cultural resources investigations of the shoreline have been conducted to date.

The Hartwell Project currently manages six archaeological sites that have been determined eligible for the NRHP. Five of the sites are prehistoric sites, one of which is a petroglyph. One site is a historic farmstead. None of the sites are located along the shoreline.

Activities that could potentially impact archaeological and historic resources due to the associated ground disturbance are improved walkway construction, trenching for underground utility lines, and underbrushing. Restrictions and processes in the SMP for conducting these activities, however, minimize the potential impacts to intact cultural deposits and historic resources substantially. Permitted walkways must be installed on grade, and restricts excavation tools to shovels, picks or rakes. Underbrushing is also restricted to the use of hand tools (weed eaters, chainsaws) on vegetation with a base diameter less than 3 inches. Stump removal is prohibited. Utility trenching has the greatest potential to impact intact cultural deposits and the SMP authorizes installation with a walk behind trencher only to minimize ground disturbance.

A site review process is conducted prior to the issuance of all initial shoreline use permits (i.e., properties that have never had a permit) that could identify unknown sites, and known sites would be evaluated for their significance and eligibility for the National Register pursuant to 36 CFR Part 800, Protection of Historic Properties. If significant or eligible cultural resources were to be effected, avoidance would be the recommended action.

## **4.0 ENVIRONMENTAL CONSEQUENCES**

### **4.1 Aesthetics**

#### Future Conditions with No Action

Without implementation of the proposed action, the No Action Alternative would have the current conditions continuing to exist.

#### Future Conditions with the Proposed Action

In an effort to minimize the visual distraction the docks and walkways have on the natural setting of the lake, the proposed SMP would require all paint or finishes on docks and walkways to be a natural earth tone as defined in 2019 SMP section 10. Private Docks, f (2) Standards for Docks, Color Restrictions. Any existing dock, if repainted or roof replaced, would have to comply with current color requirements. Also, pressure washing would be prohibited so concrete walkways would be allowed to stain and darken naturally.

With implementation of the proposed action, there would be a beneficial result with minor improvements to aesthetics or any view of the watershed.

## **4.2 Vegetation**

### Future Conditions with No Action

Without implementation of the proposed action, the No Action Alternative will not create a change in the current vegetation.

### Future Conditions with the Proposed Action

With implementation of the proposed action, the Proposed SMP would result in minor improvements to vegetation surrounding the Reservoir by: limiting underbrushing for community docks to 50 percent of the dockable frontage, not to exceed 400 feet; and by requiring a minimum shared common boundary of 75 feet within an LDA to qualify for limited underbrushing.

## **4.3 Land Use**

### Future Conditions with No Action

Without implementation of the proposed action, there would be more development possible with the No Action Alternative.

### Future Conditions with the Proposed Action

The proposed SMP would eliminate reference to 20 feet minimum shared boundary, as it would now require 75 feet of shared boundary to qualify for all facilities/activities. Improved walkways and rights of way are considered supporting facilities for a dock, therefore can only be permitted if a dock is authorized.

The proposed SMP would allow solar panels on dock and/or power pole for electrical services on public land only.

The proposed SMP specifically addresses that invisible dog fencing would not be authorized.

With implementation of the proposed action, there would be less adverse impacts to land uses around the Reservoir due to there being less development by not allowing development in LDAs on any lots with less than 75 feet of shared boundary line.

## **4.4 Safety**

### Future Conditions with No Action

Without implementation of the proposed action, the No Action Alternative will not create a change in the current public safety policies and conditions.



#### Future Conditions with the Proposed Action

The proposed updates to the SMP under utility rights-of-way would require electrical services to be certified by a state licensed electrician upon renewal or change of ownership. Recertification is currently only required upon change of ownership or initial permit.

A statement has been added to the proposed SMP that vessels (to include trampolines, floats, etc.) moored at docks would not impede ingress/egress, navigation or encroach into spacing requirements. Also, security cameras would be authorized.

Under the Dock Heights Section, it states no jump gates would be allowed on the second story of a dock.

Solar lighting along an improved walkway would be authorized. Solar lights would be limited to 10 inches in height and must be spaced a minimum of 10 feet between lights. If solar lighting is installed, property would not qualify for a second light pole every 100 feet.

With implementation of the proposed action, the proposed changes would increase public safety, therefore, the Proposed Action would have a beneficial impact on public safety within the Reservoir.

### **4.5 Threatened and Endangered Species**

#### Future Conditions with No Action

Without implementation of the proposed action, there would be no adverse impacts to threatened and endangered species.

#### Future Conditions with the Proposed Action

With implementation of the proposed action, there would be no adverse impacts to threatened and endangered species within the project area.

### **4.6 Cultural Resources**

#### Future Conditions with No Action

Under the current SMP and the No Action Alternative there are no known significant impacts to cultural resources. Compliance with the SMP limits ground disturbance and the site review process would identify any potentially significant resources.

Activities that could potentially impact archaeological and historic resources due to the associated ground disturbance are improved walkway construction, trenching for underground utility lines, and underbrushing. Restrictions and processes in the SMP for conducting these activities, however, minimize the potential impacts to intact cultural

deposits and historic resources substantially. Permitted walkways must be installed on grade, and restricts excavation tools to shovels, picks or rakes. Underbrushing is also restricted to the use of hand tools (weed eaters, chainsaws) on vegetation with a base diameter less than 3 inches. Stump removal is prohibited. Utility trenching has the greatest potential to impact intact cultural deposits and the SMP authorizes installation with a walk behind trencher only to minimize ground disturbance.

A site review process is conducted prior to the issuance of all initial shoreline use permits (i.e., properties that have never had a permit) that could identify unknown sites, and known sites would be evaluated for their significance and eligibility for the National Register pursuant to 36 CFR Part 800, Protection of Historic Properties. If significant or eligible cultural resources were to be affected, avoidance would be the recommended action.

#### Future Conditions with the Proposed Action

Under the proposed action, there is a decrease in land use through the prohibition of development in LDAs on lots with less than 75 feet of shared boundary line; therefore less potential would exist for impact to cultural resources and historic properties. Changes to the underbrushing limits for community docks to 50 percent of the dockable frontage not to exceed 400 feet would also lessen the potential to impact cultural resources and historic properties. Activities that could potentially impact archaeological and historic resources due to the associated ground disturbance would be the same as for no action. If significant or eligible cultural resources were to be affected, avoidance would be the recommended action.

<b>Table 3: Environmental Impact Comparison of Alternatives</b>		
<b>Resources</b>	<b><u>No Action Alternative</u></b>	<b><u>Proposed New SMP Alternative</u></b>
Geology/Topography/Soil	No Impact	No Impact
Floodplains	No Impact	No Impact
Surface Hydrology	No Impact	No Impact
Water Quality	No Impact	No Impact
Air Quality	No Impact	No Impact
Noise	No Impact	No Impact
Cultural Resources	No Impact	No Impact
Hazardous & Toxic Waste	No Impact	No Impact
Aesthetics	No Impact	Improvement to Aesthetics
Vegetation	No Impact	Underbrushing permit changes would be an improvement to Vegetation
Fish & Wildlife	No Impact	No Impact
Threatened & Endangered Species	No Impact	No Impact
Wetlands	No Impact	No Impact
Land Use	No Impact	Would provide improvements to Land Use
Environmental Justice	No impact	No Impact
Protection of Children	No Impact	No Impact
Recreation	No Impact	No Impact
Safety	No Impact	Improvements would increase and protect Public Health

#### **4.7 Cumulative Impacts**

The Council on Environmental Quality (CEQ) regulations that implement NEPA (40 CFR 1508.7) require assessment of cumulative impacts in the decision-making process for federal projects. Cumulative impacts are defined 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 actions.”

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impacts of activities in and around the Reservoir. Past actions include the construction and operation of the Reservoir, the recreation sites surrounding the Reservoir, as well as residential, commercial, and industrial facilities throughout the region. All of these developments have had varying levels of impacts on the physical and natural resources in the region. Implementing management plans like

the SMP help to ensure a balance between public uses and stewardship of the natural environment and private shoreline uses.

## **5.0 PUBLIC INVOLVEMENT**

### **5.1 Public Information Sessions**

The Hartwell Project began their review process of the 2007 SMP in March 2017. The Hartwell staff hosted three public workshops to take comments and address questions at various locations around the lake: March 21, 2017 – Anderson Civic Center in Anderson, SC; March 22, 2017 – Hart County Adult Learning Center in Hartwell, GA; and March 23, 2017 – Gignilliat Community Center in Seneca, SC. A total of 67 comments were received at these three meetings. An additional 436 comments were emailed or mailed into the Hartwell Office during the 10-week comment period, for a total of 503 public comments. Information provided during these scoping meetings and the following comment period was used to develop the Hartwell SMP.

### **5.2 Recipients of the Environmental Assessment**

This EA will be circulated for a 30-day review and comment period to the following concerned agencies, groups, and the public. Appendix D will have a copy of all the comments received and a chart of the comments and responses.

#### **Federal Agencies**

- US Department of the Interior - Office of Environmental Policy & Compliance
- US Fish and Wildlife Service

#### **State Agencies**

##### **South Carolina**

- SC State Historic Preservation Office
- SC Department of Health and Environmental Control
- SC Department of Natural Resources

##### **Georgia**

- GA Department of Natural Resources, Environmental Protection Division
- GA State Historic Preservation Office
- GA Department of Natural Resources, Wildlife Resources Division

#### **Conservation Groups**

- The Nature Conservancy
- The Georgia Conservancy

## 6.0 COMPLIANCE WITH ENVIRONMENTAL LAWS AND REGULATIONS

Environmental compliance for the proposed action would be achieved upon: coordination of this EA and draft Finding of No Significant Impact (FONSI) with appropriate agencies, organizations, and individuals for their review and comments; U.S. Fish and Wildlife Service (USFWS) confirmation that the proposed action would not likely adversely affect any endangered or threatened species; and concurrence from the State Historic Preservation Officer in the USACE Determination of No Effect on cultural resources. The draft FONSI will not be signed until the proposed action achieves environmental compliance with applicable laws and regulations, as described.

<b>Table 4: Compliance of the Proposed Action with Executive Orders</b>		
Executive Orders	Number	Compliance Status
Invasive Species	13112	In Compliance
Equal Opportunity	11246	In Compliance
Protection and Enhancement of Environmental Quality	11514/11991	In Compliance
Protection and Enhancement of the Cultural Environment	11593	In Compliance
Convict Labor	11755	In Compliance
Floodplain Management (Appendix B)	11988	In Compliance
Protection of Wetlands	11990	In Compliance
Federal Compliance with Pollution Control Standards	12088	In Compliance
Environmental Effects Abroad of Major Federal Actions	12114	In Compliance
Federal Compliance with Right-To-Know Laws and Pollution Prevention	12856	In Compliance
Federal Actions to Address Environmental Justice and Minority and Low-Income Populations	12898	In Compliance
Implementation of the North American Free Trade Agreement	12889	In Compliance
Energy Efficiency and Water Conservation at Federal Facilities	12902	In Compliance
Federal Acquisition and Community Right-To-Know	12969	In Compliance
Protection Of Children from Environmental Health Risks and Safety Risks	13045	In Compliance

<b>Table 4: Compliance of the Proposed Action with Executive Orders</b>		
Executive Orders	Number	Compliance Status
Environmental Justice	12898	In Compliance
National Invasive Species Council	13112	In Compliance
Responsibilities of Federal Agencies to Protect Migratory Birds	13186	In Compliance

## **7.0 CONCLUSION**

The Savannah District has assessed the environmental impacts of the proposed action and concludes that the proposed action would have no significant adverse or beneficial impact upon environmental resources. There are no cumulative adverse impacts associated with the proposed action. The Proposed Plan is not expected to significantly adversely affect the quality of the environment, therefore an Environmental Impact Statement would not be required.

## **8.0 PREPARERS**

This EA and the associated FONSI were prepared by Cynthia Gose, Environmental Engineer, and Nathan Dayan, Biologist. The address of the preparers is: U.S. Army Corps of Engineers, Savannah District – Project Management - Planning, 100 West Oglethorpe Avenue, Savannah, GA 31401.

## **9.0 REFERENCES**

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Code of Federal Regulations. Title 36 Section 327.30 Shoreline Management on Civil Works Projects

Sweeney, Alex and Thomas G. Whitley. (2011). *American Recovery and Reinvestment Act 2009 Section 110 Compliance Report for the U.S. Army Corps of Engineers, Savannah District NHPA, Cultural Resources Investigations Technical Report No. 22 Section 110 Survey of 3,727 acres at Lake Hartwell, Hart County, Georgia, and Oconee and Anderson Counties, South Carolina, and 2,465 acres at Richard B. Russell Reservoir, Elbert County, Georgia, and Abbeville County, South Carolina.* Prepared by Brockington and Associates, Stone Mountain, Georgia. Submitted to US Army Corps of Engineers, St. Louis District.

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## **Appendix A**

# **Commonly Occurring Terrestrial and Aquatic Plants, Mammals, Reptiles, Amphibians, Birds, and Fish of Hartwell Project**





## Commonly Occurring Plant Species

### Overstory

Common Name	Scientific Name
Southern Sugar Maple	<i>Acer baratum</i>
Red Maple	<i>Acer rubrum</i>
Silver Maple	<i>Acer saccharium</i>
River Birch	<i>Betula nigra</i>
Bitternut Hickory	<i>Carya cordiformis</i>
Pignut Hickory	<i>Carya glabra</i>
Shagbark Hickory	<i>Carya ovata</i>
Mockernut Hickory	<i>Carya tomentosa</i>
White Ash	<i>Faxinus americana</i>
Sweetgum	<i>Liquidamber styraciflua</i>
Yellow Poplar	<i>Liriodendron tulipifera</i>
Southern Magnolia	<i>Magnolia grandiflora</i>
Blackgum	<i>Nyssa sylvatica</i>
Shortleaf Pine	<i>Pinus echinata</i>
Slash Pine	<i>Pinus elliottii</i>
Longleaf Pine	<i>Pinus pulustris</i>
Loblolly Pine	<i>Pinus taeda</i>
Sycamore	<i>Plantanus occidentallis</i>
Eastern Cottonwood	<i>Populus deltoides</i>
White Oak	<i>Quercus alba</i>
Scarlet Oak	<i>Quercus coccinea</i>
Southern Red Oak	<i>Quercus falcata</i>
Turkey Oak	<i>Quercus laevis</i>
Laurel Oak	<i>Quercus laurifolia</i>
Blackjack Oak	<i>Quercus marilandica</i>
Water Oak	<i>Quercus nigra</i>
Pin Oak	<i>Quercus palustris</i>
Willow Oak	<i>Quercus phellos</i>
Swamp Chestnut Oak	<i>Quercus prinus</i>
Northern Red Oak	<i>Quercus rubra</i>
Post Oak	<i>Quercus stellata</i>
Black Oak	<i>Quercus velutina</i>
Winged elm	<i>Ulmus alata</i>
American elm	<i>Ulmus americana</i>

## Midstory

Common Name	Scientific Name
Boxelder	<i>Acer negundo</i>
Beauty-berry	<i>Callicarpa americana</i>
American Hornbeam, Musclewood	<i>Carpinus caroliniana</i>
Hackberry	<i>Celtis occidentalis</i>
Redbud	<i>Cercis canadensis</i>
Fringetree	<i>Chionanthus virginicus</i>
Dogwood	<i>Cornus florida</i>
Hawthorn	<i>Crataegus sp.</i>
Persimmon	<i>Diospyros virginiana</i>
Honeylocust	<i>Gleditsia triacanthos</i>
American Holly	<i>Ilex opaca</i>
Black Walnut	<i>Juglans nigra</i>
Eastern Red Cedar	<i>Juniperus virginiana</i>
Red Mulberry	<i>Morus rubra</i>
Waxmyrtle	<i>Myrica cerifera</i>
Eastern Hop Hornbeam, Ironwood	<i>Ostrya virginiana</i>
Sourwood	<i>Osydendron arboreum</i>
Black Cherry	<i>Prunus serotina</i>
Wild Plum	<i>Prunus sp.</i>
Winged Sumac	<i>Rhus copallia</i>
Blacklocust	<i>Robinia pseudoacacia</i>
Palmetto	<i>Sabal minor</i>
Black Willow	<i>Salix nigra</i>
Sassafras	<i>Sassafras albidum</i>
Sparkleberry	<i>Vaccinium sp.</i>
Blueberry	<i>Vacinium corymbosum</i>

## Ground Covers

Common Name	Scientific Name
Trumpet Creeper	<i>Campis radicans</i>
Yellow jessamine	<i>Gelsemium sempervirens</i>
Virginia Creeper	<i>Parthenocissus quinquefolia</i>
Ferns	<i>Polystichum sp.</i>
Poison Oak	<i>Rhus quercifolia</i>
Poison Ivy	<i>Rhus radicans</i>
Poison Sumac	<i>Rhus vernix</i>
Black Berry	<i>Rubus sp.</i>
Greenbrier, Smilax	<i>Smilax sp.</i>
Wood grass	<i>Uniola sessiliflora</i>
Periwinkle	<i>Vinca minor</i>
Muscadine	<i>Vitis rotundifloia</i>

## Aquatic Plants

Common Name	Scientific Name
Brazilian elodea, egeria	<i>Egeria densa</i>
Waterhyacinth	<i>Eichhornia crassipes</i>
Hydrilla	<i>Hydrilla verticillata</i>
Water primrose	<i>Ludwigia hexapetala</i>
Parrotfeather	<i>Myriophyllum aquaticum</i>
Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
American lotus, lotus lily	<i>Nelumbo lutea</i>
Alligatorweed	<i>Alternanthera philoxeroides</i>
Fanwort	<i>Cabomba caroliniana</i>
Coontail, hornwort	<i>Ceratophyllum demersum</i>
Chara, musk grass	<i>Chara sp.</i>
Elodea	<i>Elodea canadensis</i>
Marsh Hibiscus	<i>Hibiscus moscheutos</i>
Southern watergrass	<i>Hydrochloa caroliniensis</i>
Water pennywort	<i>Hyrocotyle umbellata</i>
Waterwillow	<i>Justicis americana</i>
Southern naiad	<i>Najas guadalupensis</i>
Slender naiad, spiny-leaf naiad	<i>Najas minor</i>
Fragrant waterlily	<i>Nymphaea odorata</i>
Water paspalum	<i>Paspalum fluitans</i>
Pickereelweed	<i>Pontederia cordata</i>
Pondweed	<i>Potamogeton sp.</i>
Arrowheads	<i>Sagittaria sp.</i>
Cattail	<i>Typha sp.</i>
Bladderwort	<i>Utricularia sp.</i>

## Exotics

Common Name	Scientific Name
Japanese honeysuckle	<i>Lonicera japonica</i>
China-berry	<i>Melia azedarach</i>
Kudzu	<i>Pueraria lobata</i>
Wisteria	<i>Wisteria frutesus</i>
Chinese Tallow	<i>Sapium sebiferum</i>

Giant Reed	<i>Arundo donax</i>
Chinese Privet	<i>Ligustrum sinense</i>
Old World Climbing Fern	<i>Lygodium microphyllum</i>
Johnson Grass	<i>Sorghum halepense</i>
Autumn Olive or Eleagnus	<i>Eleagnus umbellata</i>
Bamboo	<i>Phyllosachys sp</i>
Hydrilla	<i>Hydrilla verticillata</i>
Alligator Weed	<i>Alternanthera philoxeroides</i>
Parrot Feather	<i>Myriophyllum aquaticum</i>

## Commonly Occurring Bird Species

Common Name	Scientific Name	
Wood Duck	<i>Aix sponsa</i>	Summer
Mallard	<i>Anas platyrhynchos</i>	Summer
Canada Goose	<i>Branta canadensis</i>	Summer
Hooded Merganser	<i>Lophodytes cucullatus</i>	Summer
Blue-winged Teal	<i>Anas discors</i>	Winter
Green-winged Teal	<i>Podilymbus podiceps</i>	Winter
Northern Shovelers	<i>Anas clypeata</i>	Winter
Canvasback	<i>Aythya valisineria</i>	Winter
Redhead	<i>Aythya americana</i>	Winter
Ring-necked Duck	<i>Aythya collaris</i>	Winter
Greater Scaup	<i>Aythya marila</i>	Winter
Lesser Scaup	<i>Aythya affinis</i>	Winter
Long-tailed Duck	<i>Clangula hyemalis</i>	Winter
Bufflehead	<i>Bucephala albeola</i>	Winter
Common Golden eye	<i>Bucephala clangula</i>	Winter
Common Merganser	<i>Mergus merganser</i>	Winter
Red Breasted Merganser	<i>Mergus serrator</i>	Winter
Ruddy Duck	<i>Oxyura jamaicensis</i>	Summer
Pacific Loon	<i>Gavia Pacifica</i>	Winter
Common Loon	<i>Gavia immer</i>	Winter
Red Throated Loon	<i>Gavia stellata</i>	Winter
Pied Billed Grebe	<i>Podilymbus podiceps</i>	Summer/Winter
Horned Grebe	<i>Podiceps auritus</i>	Winter
Eared Grebe	<i>Podiceps nigricollis</i>	Winter
American Coot	<i>Fulica americana</i>	Winter
Double-crested Cormorant	<i>Phalacrocorax auritus</i>	Summer/Winter
Anhinga	<i>Anhinga anhinga</i>	Summer
Belted Kingfisher	<i>Megaceryle alcyon</i>	Summer
Great Egret	<i>Ardea alba</i>	Summer
Great Blue Heron	<i>Ardea herodias</i>	Summer
Green Heron	<i>Butorides virescens</i>	Summer
White Ibis	<i>Eudocimus albus</i>	Summer
Least Bittern	<i>Ixobryhus exilis</i>	Summer
Wood Stork	<i>Mycteria americana</i>	Late summer
Brown Pelican	<i>Pelecanus occidentalis</i>	Winter
White Pelican	<i>Pelecanus erythrorhynchos</i>	Winter
Chimney Swift	<i>Chaetura pelagica</i>	Summer
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	Summer
Chuck-will's-widow	<i>Caprimulgus carolinensis</i>	Summer
Whip-poor-will	<i>Caprimulgus vociferus</i>	Summer
Common Nighthawk	<i>Chordeiles minor</i>	Summer

<b>Continued</b>		
Killdeer	<i>Charadrius vociferus</i>	Summer
Cooper's Hawk	<i>Accipiter cooperii</i>	Summer
Sharp-shinned Hawk	<i>Accipiter striatus</i>	Summer
Red-tailed Hawk	<i>Buteo jamaicensis</i>	Summer
Broad-winged Hawk	<i>Buteo playtypterus</i>	Summer
Red-shouldered Hawk	<i>Buteo lineatus</i>	Summer
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Summer/Winter
Osprey	<i>Pandion haliaetus</i>	Summer/Winter
Turkey Vulture	<i>Cathartes aura</i>	Summer/Winter
Black Vulture	<i>Coragyps atratus</i>	Summer/Winter
Peregrine Falcon	<i>Falco peregrinus</i>	Winter
American Kestrel	<i>Falco sparverius</i>	Winter
Mourning Dove	<i>Zenaida macroura</i>	Summer/Winter
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	Summer
Northern Bobwhite	<i>Colinus virginianus</i>	Summer/Winter
Wild Turkey	<i>Meleagris gallopavo</i>	Summer/Winter
Cedar Waxwing	<i>Bombycilla cedrorum</i>	Winter
Northern Cardinal	<i>Cardinalis cardinalis</i>	Summer/Winter
American Crow	<i>Corvus brachyrhynchos</i>	Summer/Winter
Fish Crow	<i>Corvus ossifragus</i>	Summer/Winter
Blue Jay	<i>Cyanocitta cristata</i>	Summer/Winter
Eastern Towhee	<i>Pipilo erythrophthalmus</i>	Summer/Winter
American Goldfinch	<i>Carduelis tristis</i>	Summer/Winter
House Finch	<i>Carpodacus mexicanus</i>	Summer/Winter
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	Summer
Orchard Oriole	<i>Icterus spurius</i>	Summer
Brown-headed Cowbird	<i>Molothrus ater</i>	Summer
Common Grackle	<i>Quiscalus quiscula</i>	Summer
Eastern Meadowlark	<i>Sturnella magna</i>	Summer
Loggerhead Shrike	<i>Lanius ludovicianus</i>	Summer
Northern Mockingbird	<i>Mimus polyglottos</i>	Summer/Winter
Brown Thrasher	<i>Toxostoma rufum</i>	Summer/Winter
Tufted Titmouse	<i>Baeolophus bicolor</i>	Summer/Winter
Carolina Chickadee	<i>Poecile carolinensis</i>	Summer/Winter
Pine Warbler	<i>Dendroica pinus</i>	Summer/Winter
Yellow-breasted Chat	<i>Icteria virens</i>	Summer
Prothonotary Warbler	<i>Protonotaria citrea</i>	Summer
American Redstart	<i>Setophaga ruticilla</i>	Summer
Hooded Warbler	<i>Wilsonia citrina</i>	Summer
Ovenbird	<i>Seiurus aurocapilla</i>	Summer
Louisiana Waterthrush	<i>Seiurus motacilla</i>	Summer
Black-and-White Warbler	<i>Mniotilta varia</i>	Summer
Kentucky Warbler	<i>Oporornis formosus</i>	Summer
Common Yellowthroat	<i>Geothlypis trihas</i>	Summer

<b>Continued</b>		
Hooded Warbler	<i>Wilsonia citrina</i>	Summer
Northern Parula	<i>Parula Americana</i>	Summer
Pine Warbler	<i>Dendroica pinus</i>	Summer
Yellow-throated Warbler	<i>Dendroica dominica</i>	Summer
Prairie Warbler	<i>Dendroica discolor</i>	Summer
Yellow-Breasted Chat	<i>Icteria virens</i>	Summer
Bachman's Sparrow	<i>Aimophila aestivalis</i>	Summer/Winter
Chipping Sparrow	<i>Spizella passerine</i>	Summer/Winter
Field Sparrow	<i>Spizella pusilla</i>	Summer/Winter
Grasshopper Sparrow	<i>Ammodramus savannarum</i>	Summer/Winter
Song Sparrow	<i>Melospiza melodia</i>	Summer/Winter
White-throated Sparrow	<i>Zonotrichia albicollis</i>	Winter
Summer Tanager	<i>Piranga rubra</i>	Summer
Northern Cardinal	<i>Cardinalis cardinalis</i>	Summer/Winter
Blue Grosbeak	<i>Passerina caerulea</i>	Summer/Winter
Indigo Bunting	<i>Passerina cyanea</i>	Summer
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	Summer/Winter
Eastern Meadowlark	<i>Sturnella magna</i>	Summer
House Finch	<i>Carpodacus mexicanus</i>	Summer/Winter
American Goldfinch	<i>Carduelis tristis</i>	Summer/Winter
Ruby-crowned Kinglet	<i>Regulus calendula</i>	Winter
Brown-headed Nuthatch	<i>Sitta pusilla</i>	Summer/Winter
European Starling	<i>Sturnus vulgaris</i>	Summer/Winter
Blue-gray Gnatcatcher	<i>Poliophtila caerulea</i>	Summer
Summer Tanager	<i>Piranga rubra</i>	Summer
Carolina Wren	<i>Thryothorus ludovicianus</i>	Summer/Winter
Wood Thrush	<i>Hylocichla mustelina</i>	Summer
Eastern Bluebird	<i>Sialia sialis</i>	Summer/Winter
American Robin	<i>Turdus migratorius</i>	Summer/Winter
Great Crested Flycatcher	<i>Myiarchus crinitus</i>	Summer
Eastern Phoebe	<i>Sayornis phoebe</i>	Summer
Eastern Kingbird	<i>Tyrannus tyrannus</i>	Summer
Red-eyed Vireo	<i>Vireo olivaceus</i>	Summer
White-eyed Vireo	<i>Vireo Grievus</i>	Summer
Pileated Woodpecker	<i>Dryocopus pileatus</i>	Summer/Winter
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>	Summer/Winter
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	Summer/Winter
Downy Woodpecker	<i>Picoides pubescens</i>	Summer/Winter
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	Winter
Great Horned Owl	<i>Bubo virginianus</i>	Summer/Winter
Eastern Screech-Owl	<i>Megascops asio</i>	Summer/Winter
Barred Owl	<i>Strix varia</i>	Summer/Winter

\*\*compiled from "Georgia Breeding Bird Atlas", Georgia Ornithological Society Records,



UGA Museum of Natural History Records, and field observations.

<b>Mammals</b>	
<b>Common Name</b>	<b>Scientific Name</b>
Hispid Cotton Rat	<i>Sigmodon hispidus</i>
Golden Mouse	<i>Ochrotomys nuttalli</i>
Eastern Harvest Mouse	<i>Reithrodontomys humulis</i>
White-footed Mouse	<i>Peromyscus leucopus</i>
Cotton Mouse	<i>Peromyscus gossypinus</i>
Common Muskrat	<i>Ondatra zibethicus</i>
Oldfield Mouse	<i>Peromyscus polionotus</i>
Southern Flying Squirrel	<i>Glaucomys volans</i>
Eastern Gray Squirrel	<i>Sciurus carolinensis</i>
Eastern Fox Squirrel	<i>Sciurus niger</i>
Eastern Chipmunk	<i>Tamias striatus</i>
Southern Short-tailed Shrew	<i>Blarina carolinensis</i>
Least Shrew	<i>Cryptotis parva</i>
Eastern Mole	<i>Scalopus aquaticus</i>
Eastern Cottontail	<i>Sylvilagus aquaticus</i>
Swamp Rabbit	<i>Sylvilagus floridanus</i>
Eastern Pipistrelle	<i>Pipistrellus subflavus</i>
Rafineques Big Eared bat	<i>Corynorhinus rafinesquii</i>
Southeastern Myotis	<i>Myotis austroriparius</i>
Big Brown Bat	<i>Eptesicus fuscus</i>
Little Brown Bat	<i>Myotis lucifugus</i>
Silver-haired Bat	<i>Lasionycteris noctivagans</i>
Eastern Red Bat	<i>Lasiurus borealis</i>
Hoary Bat	<i>Lasiurus cinereus</i>
Seminole Bat	<i>Lasiurus seminolus</i>
Evening Bat	<i>Pipistrellus subflavus</i>
Coyote	<i>Canis latrans</i>
Gray Fox	<i>Urocyon cinereoargenteus</i>
Red Fox	<i>Vulpes vulpes</i>
Bobcat	<i>Lynx rufus</i>
Striped Skunk	<i>Mephitis mephitis</i>
Spotted Skunk	<i>Spilogale putorius</i>
Long-tailed Weasel	<i>Mustela frenata</i>
Mink	<i>Mustela vison</i>
Northern Raccoon	<i>Procyon lotor</i>
Northern River Otter	<i>Lontra canadensis</i>
Virginia Opossum	<i>Didelphis virginiana</i>
American Beaver	<i>Castor canadensis</i>
Nine-banded Armadillo	<i>Dasyus novemcinctus</i>
White-tailed Deer	<i>Odocoileus virginianus</i>

<b>Reptiles</b>	
<b>Common Name</b>	<b>Scientific Name</b>
<b>Snakes</b>	
Eastern Black Racer	<i>Coluber constrictor</i>
Corn Snake	<i>Elaphe guttata</i>
Rat Snake	<i>Elaphe obsoleta</i>
Eastern Hognose Snake	<i>Heterodon platirhinos</i>
Southern Hognose	<i>Heterodon simus</i>
Mole Snake	<i>Lampropeltis calligaster</i>
Eastern King Snake	<i>Lampropeltis getula</i>
Scarlet King	<i>Lampropeltis triangulum elapsoides</i>
Coachwhip	<i>Masticophis flagellum</i>
Plain-bellied Watersnake	<i>Nerodia erythrogaster</i>
Northern Watersnake	<i>Nerodia sipedon</i>
Brown Watersnake	<i>Nerodia taxispilota</i>
Rough Green Snake	<i>Opeodryas aestivalis</i>
Queen Snake	<i>Regina septemvittata</i>
Brown Snake	<i>Storeria dekayi</i>
Red-bellied Snake	<i>Storeria occipitomaculata</i>
Southeastern Crowned Snake	<i>Tantila coronata</i>
Eastern Ribbon Snake	<i>Thamnophis suaritus</i>
Common Garter Snake	<i>Thamnophis sirtalis</i>
Rough Earth Snake	<i>Virginia striatula</i>
Smooth Earth Snake	<i>Virginia valeriae</i>
Copperhead	<i>Agkistrodon contortrix</i>
Cottonmouth	<i>Agkistrodon piscivorus</i>
Timber Rattlesnake	<i>Crotalus horridus</i>
Pygmy Rattlesnake	<i>Sistrurus miliarius</i>
<b>Lizards</b>	
<b>Common Name</b>	<b>Scientific Name</b>
Eastern Fence Lizard	<i>Sceloporus undulatus</i>
Green Anole	<i>Anolis carolinensis</i>
Five-lined Skink	<i>Eumeces fasciatus</i>
Southeastern Five-lined Skink	<i>Eumeces inexpectatus</i>
Six-lined Racerunner	<i>Cnemidophorus sexlineatus</i>
Slender Glass Lizard	<i>Ophisaurus attenuatus</i>
Eastern Glass Lizard	<i>Ophisaurus ventralis</i>
Broadhead Skink	<i>Eumeces laticeps</i>
Ground Skink	<i>Scincella lateralis</i>
American Alligator	<i>Alligator mississippiensis</i>
<b>Turtles</b>	
<b>Common Name</b>	<b>Scientific Name</b>

Common Snapping Turtle	<i>Chelydra serpentina</i>
Eastern Box Turtle	<i>Terrapene carolina</i>
Pond Slider	<i>Trachemys scripta</i>
Painted Turtle	<i>Chrysemys picta</i>
River Cooter	<i>Pseudemys coninna</i>
Eastern Musk Turtle	<i>Kinosternon subrubrum</i>
Common Musk Turtle	<i>Sternotherus odoratus</i>
Spiny Softshell	<i>Apalone spinifera</i>

<b>Amphibians</b>	
<b>Common Name</b>	<b>Scientific Name</b>
<b>Frogs and Toads</b>	
American Toad	<i>Bufo americanus</i>
Fowler's Toad	<i>Bufo fowleri</i>
Northern Cricket Frog	<i>Acris crepitans</i>
Bird-voiced Treefrog	<i>Hyla avivoca</i>
Cope's Gray Treefrog	<i>Hyla chrysoscelis</i>
Green Treefrog	<i>Hyla cinerea</i>
Barking Treefrog	<i>Hyla gratiosa</i>
Squirrel Treefrog	<i>Hyla squirella</i>
Spring Peeper	<i>Pseudacris crucifer</i>
Upland Chorus Frog	<i>Pseudacris feriarum</i>
Southern Chorus Frog	<i>Pseudacris nigrita</i>
Eastern Narrowmouth Toad	<i>Gastrophryne carolinensis</i>
Eastern Spadefoot Toad	<i>Scaphiopus holbrookii</i>
Bullfrog	<i>Rana catesbeiana</i>
Green Frog / Bronze Frog	<i>Rana clamitans</i>
Pickerel Frog	<i>Rana palustris</i>
Southern Leopard Frog	<i>Rana sphenoccephala</i>
<b>Salamanders</b>	
Spotted Salamander	<i>Ambystoma maculatum</i>
Marbled Salamander	<i>Ambystoma opacum</i>
Mole Salamander	<i>Ambystoma talpoideum</i>
Two-toed Amphiuma	<i>Amphiuma means</i>
Spotted Dusky Salamander	<i>Desmognathus conanti</i>
Two-lined Salamander	<i>Eueycea bislineata complex</i>
Three-lined Salamander	<i>Eueycea guttolineata</i>
Atlantic Coast Slimy Salamander	<i>Plethodon chlorobryonis</i>
Savannah Slimy Salamander	<i>Plethodon savannah</i>
Mud Salamander	<i>Pseudotriton montanus</i>
Red Salamander	<i>Pseudotriton ruber</i>

\*\*Compiled utilizing “Amphibians and Reptiles of Georgia”  
and the UGA Museum of Natural History Records website

**Commonly Occurring Fish Species**

<b>Common Name</b>	<b>Scientific Name</b>
<b>Game Fish</b>	
<b>Bass</b>	<b><i>Serranidae</i></b>
Striped bass*	<i>Morone saxatilis</i>
White bass	<i>Morone chrysops</i>
Hybrid bass*	<i>Morone saxatilis x Morone chrysops</i>
White perch	<i>Morone americana</i>
<b>Sunfish</b>	<b><i>Centrarchidae</i></b>
Largemouth bass	<i>Micropterus salmoides</i>
Black crappie	<i>Pomoxis nigromaculatus</i>
White crappie	<i>Pomoxis annularis</i>
Bluegill	<i>Lepomis macrochirus</i>
Redbreast	<i>Lepomis auritus</i>
Green sunfish	<i>Lepomis cyanellus</i>
Pumpkinseed	<i>Lepomis gibbosus</i>
Flier	<i>Centrarchus macropterus</i>
Warmouth	<i>Chaenobryttus coronaris</i>
Redear	<i>Lepomis microlophus</i>
<b>Perch</b>	<b><i>Percidae</i></b>
Yellow perch	<i>Perca flavescens</i>
<b>Rough Fish</b>	
<b>Catfish</b>	<b><i>Lepisosteidae</i></b>
Channel catfish	<i>Ictalurus punctatus</i>
White catfish	<i>Ictalurus catus</i>
Flat bullhead	<i>Ictalurus platycephalus</i>
Brown bullhead	<i>Ictalurus nebulosus</i>
Flathead catfish	<i>Pylodictis olivaris</i>
<b>Other</b>	
Longnose gar	<i>Lepospsteus osseus</i>
Chain pickerel (jack)	<i>Esox niger</i>
Redhorse sucker	<i>Maxostoma spp.</i>
Northern hogsucker	<i>Hypentelium nigricans</i>
Spotted sucker	<i>Minytrema melanops</i>
Carp	<i>Cyprinus carpio</i>

\* Stocked Species

Commonly Occurring Fish Species  
(Con't)

<b>Forage Species</b>	
<b>Shad and herring</b>	<i>Clupeidae</i>
Gizzard shad	<i>Dorosoma cepedianum</i>
Threadfin shad	<i>Dorosoma petenense</i>
Blueback herring	<i>Alosa aestivalis</i>
<b>Minnows</b>	<i>Cyprinidae</i>
Spottail shiner	<i>Notropis hudsonius</i>
Golden shiner	<i>Notemigonus chrysoleucas</i>
<b>Livebearers</b>	<i>Poeciliidae</i>
Mosquito fish	<i>Gambusia affinis</i>

## **APPENDIX B**

### **8-Step Process for EO11988: Floodplain Management**



## **8-Step Process for EO 11988: Floodplain Management**

### **Hartwell Lake Shoreline Management Plan**

- ER 1130-2-406

--Decision Process for E.O. 11988 as Provided by 24 CFR §55.20

#### ***Step 1: Determine whether the action is located in a 100-year flood plain (or a 500-year flood plain for critical actions).***

Part of this action is located in a 100-year flood plain. Based on FEMA Flood maps the elevation of the 100 year flood plains is 660 msl. Hartwell Lake will be above and below this flood plain. The Preferred alternative is the update of the Shoreline Management Plan. Therefore, E.O. 11988 applies and an evaluation of direct and indirect impacts associated with construction, occupancy, and modification of the flood plain is required.

#### ***Step 2: Notify the public for early review of the proposal and involve the affected and interested public in the decision making process.***

The Hartwell SMP was last updated in 2007 (Appendix A). Over the past 12 years, changes have occurred that warrant an update to the SMP. These include: changes in policy, changes in regulations, increases in economic growth, increase in surrounding community growth and increases in recreational use. Pursuant to ER 1130-2-406, the objective of the updated SMP is to maintain a balance between permitted private uses, long-term natural resource protection, and public recreation opportunities. Specifically, ER 1130-2-406 states the intended purpose of an SMP is to provide protection of desirable environmental characteristics of Civil Works lake projects and restoration of shorelines where degradation has occurred through private exclusive use. The ER states that the plan must provide for protection of public lands and private investments and honor any past commitment. Public participation is also encouraged to the fullest extent.

The proposed SMP update meets the following goals:

- Updates policies and regulations pertaining to the shoreline of Hartwell Lake.
- Maintains aesthetic and environmental characteristics of the lake for the full benefit of the general public.
- Addresses shoreline allocations (zoning), rules, regulations, and other information relative to the Shoreline Management Program.
- Ensures that program management actions are based on current information and regulations through collaboration with the public, stakeholders, and subject matter experts.



### **Step 3: *Identify and evaluate practicable alternatives.***

#### A. Locate the Project Within the Floodplain

The Proposed SMP was developed in accordance with the criteria outlined within the USACE shoreline management regulation (ER 1130-2-406). The preferred alternative will meet Hartwell Lake shoreline management goals and responsibilities while protecting the natural environment. Some of the 2007 SMP will remain unchanged with the proposed SMP.

#### A. No Action or Alternative Actions that Serve the Same Purpose

The Hartwell Lake Environmental Assessment also considered a No Action Alternative which involves the continued use of the 2007 Hartwell SMP. This would not allow the Hartwell Project to operate under an up-to-date Shoreline Master Plan, in accordance with ER 1130-2-406.

### **Step 4: *Identify Potential Direct and Indirect Impacts of Associated with Floodplain Development.***

Section 4.1.2 of the Environmental Assessment for this project describes the impacts to the flood plain that would be expected under each alternative. With implementation of the either Alternative, the existing flood plain would not have adverse impacts.

### **Step 5: *Where practicable, design or modify the proposed action to minimize the potential adverse impacts to lives, property, and natural values within the flood plain and to restore, and preserve the values of the flood plain.***

Hartwell Lake's normal full pool elevation is 660 feet msl. The guide curve for Hartwell Lake targets the 660 feet msl elevation from April to mid-October each year. The lake covers approximately 56,000 acres of water surface area at the normal summer pool elevation of 660 feet msl. The Proposed Plan and the No Action alternative would result in no adverse impacts to the floodplain or management of the floodplain.

### **Step 6: *Reevaluate the Alternatives.***

Although the SMP is in a flood plain, the project has been designed in order to minimize effects on flood plain values.

### **Step 7: *Determination of No Practicable Alternative***

It is our determination that there is no practicable alternative for locating the project out of the flood zone. This is due to the need to mitigate and minimize impacts on human health, public property, and flood plain values.

A final notice will be published during the public review of these documents.

**Step 8: *Implement the Proposed Action***

USACE will assure that this plan, as modified and described above, is executed and necessary language will be included in all agreements with participating parties. USACE will also take an active role in monitoring the process to ensure no unnecessary impacts occur nor unnecessary risks are taken.

# **APPENDIX C**

## **Comments for Hartwell SMP EA**