US Army Corps
of Engineers ®
Wilmington District

ENVIRONMENTAL ASSESSMENT
SHORELINE MANAGEMENT PLAN
JOHN H. KERR RESERVOIR, BOYDTON, VA

US ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT

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TABLE OF CONTENTS

LIST OF TABLES

APPENDICES

1.0 INTRODUCTION

The John H. Kerr Dam and Reservoir (the Reservoir) is operated by the U.S. Army Corps of Engineers (USACE) and includes approximately 48,900 acres of water and an additional 55,000 acres of surrounding land, referred to as project lands, along the border of the Commonwealth of Virginia and the State of North Carolina. The USACE is the federal agency responsible for maintaining and operating the dam, as well as the surrounding lands and water that comprise the Reservoir. The Reservoir has a shoreline of approximately 800 miles and a water surface area of approximately 48,900 acres. The Reservoir extends approximately 39 miles upstream of the dam on the Roanoke River and approximately 19 miles upstream on the Dan River above its junction with the Roanoke River.

Engineer Regulation (ER) 1130-2-406, Project Operation – Shoreline Management at Civil Works Projects, requires that a Shoreline Management Plan (SMP) be prepared for each Corps project where private shoreline use is allowed. The current John H. Kerr SMP was approved in 1995. Further, the ER requires the SMP be reviewed at least every 5 years and revised as necessary. Shoreline Management Plan updates must be in compliance with the National Environmental Policy Act of 1969 (NEPA), as amended, and public participation is required to the maximum extent practicable during plan formulation, preparation and major revisions.

This document evaluates the impacts associated with implementation of the updated SMP for John H. Kerr Dam and Reservoir and addresses the environmental effects of the changes to the existing conditions as a result of the 2016 Shoreline Management Plan (SMP) (Appendix A). The potential impacts to the biological, physical, and human environments located within the United States Army Corps of Engineers (Corps) property are addressed in this document.

1.1 Background

Pursuant to ER 1130-2-406, it is the policy of the Corps of Engineers to protect and manage 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

John H. Kerr is located within the piedmont along the border of Virginia and North Carolina. In Virginia, the Reservoir is located within Mecklenburg, Charlotte, and Halifax Counties. In North Carolina, the Reservoir lies within parts of Warren, Vance, and Granville Counties. The Reservoir extends approximately 39 miles upstream of the dam on the Roanoke River and approximately 19 miles upstream on the Dan River above the junction with the Roanoke River. At normal pool the Reservoir contains 48,900 acres of water and approximately 800 miles of shoreline. (See Figure 1)

1.3 Shoreline Allocation

Land use allocations provide the basic framework for the development, management, and operation of all John H. Kerr resources and facilities.

A. Limited Development Shoreline. Limited Development Shoreline refers to areas where private floating and certain land-based facilities and activities are permitted provided all conditions outlined in the Shoreline Management Plan are met. All shorelines not designated as public recreation shorelines, prohibited access areas, or protected lakeshore areas are included in the Limited Development Allocation. (Limited Development Areas are shown in green on Map Figures within Appendix A).

B. Public Recreation Shoreline. Public Recreation Shoreline consists of lands set aside for recreational use. These lands include existing parks (federal, state and municipal), quasi-public lease areas (land leased to non-governmental organizations or public service organizations), recreational trails, wildlife management areas and other areas reserved for future recreational development. All legally authorized, existing private facilities currently within this shoreline allocation will continue to be "grandfathered" and permitted on an annual basis provided all conditions outlined in the SMP are met. (Public Recreation Areas are shown in red on Map Figures within Appendix A).

C. Protected Shoreline. Protected Shorelines are designated for the purpose of maintaining or restoring aesthetic quality, protecting and conserving natural and cultural resources, providing fish and wildlife habitat, and reducing conflicts between private and public activities. (Protected Development Areas are shown in yellow on Map Figures within Appendix A).

D. Prohibited Access Shoreline. Prohibited Access Shoreline is designated to ensure the safety of Reservoir visitors. These shoreline areas are located adjacent to lands utilized for industrial and reservoir operations and contain dangerous structures or maintenance facilities. Shoreline Use Permits/Licenses are not permitted within these areas. Additional areas may be allocated to this shoreline category as new structures and hazards are identified. (Prohibited Access Shoreline Areas are shown in black on Map Figures within Appendix A).

2.0 PURPOSE AND NEED FOR THE PROPOSED ACTION

The John H. Kerr Shoreline Management Plan was last updated in January 1995. Over the past 21 years, many 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 SMP is to maintain a balance between permitted private uses, long-term natural resource protection, and public recreation opportunities, thus meeting the requirements of the Corps of Engineers, as stewards of this public resource, and the needs of the general public. Specifically, ER 1130-2-406 states the intended purpose of the 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 preparation of the plan must provide for protection of public lands and private investments and honor any past commitment; public participation is also encouraged to the maximum practicable extent.

The SMP update meets the following goals:

- Updates policies and regulations pertaining to the shoreline of John H. Kerr Reservoir.
- Maintains aesthetic and environmental characteristics of the Reservoir 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.

3.0 ALTERNATIVES

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

3.1 Proposed Shoreline Management Plan (Preferred Alternative)

The SMP was revised in accordance with the criteria outlined within the Corps of Engineers' shoreline management regulation (ER 1130-2-406). The preferred alternative will meet John H. Kerr's shoreline management goals and responsibilities while protecting the natural environment. Some of the 1995 SMP provisions will remain unchanged in the revised SMP; Appendix A includes a complete list of the changes. The most significant changes to the SMP are listed in Table 1 below.

Impacts of the Proposed Plan to Existing Permits:

- For permits that were issued through a Deed of Easement (which is a legal document granting one person the use a portion of land that is owned by someone else) (476 permits impacted), the plan will allow the current permittee to maintain the permit but will not allow the permit to be transferred to a new owner.
- Existing permits and licenses issued must have a minimum of 20 feet common boundary with USACE fee or easement property to qualify for new land-based facilities. New utilities will not be approved if they create a crossover situation (that is, overlapping) with a facility or utility of a current permittee (unknown number of permits impacted).

Table 1: Comparison of 1995 SMP and 2016 SMP

SMP Section	1995 Plan	2016 Plan
Access for Floating Facility - 14(a)	Pin width along common boundary with government property or deed of easement.	Must own adjacent property, at least 50 feet of common boundary with government property. No deed of easement or subdivision access allowed for private floating facilities.
Multiple Permits - 15(e) and 17	Each lot/property having a dwelling.	Each lot with at least 50 feet of common government boundary qualifies for a Shoreline Use Permit, with the exception of Vegetation Modification.
Land Based Facilities - 12(b)3 and 14(b)	Qualified if you met access requirement of property width along boundary or deed of easement.	Each lot with at least 20 feet of common boundary qualifies for land based facilities. Existing permits issued through deed of easement or subdivision access do not qualify for the addition of new facilities.
Permit Location - 14(d)	Closest point to water within 500 ft L or R along shoreline, offsets and crossovers allowed.	Based on lot line projection, no crossovers or offsets allowed. (See Appendix A: Exhibit E, E-1)
Facility Placement - 15(h)13	6 months for completion of construction	12 months for completion of construction
Dock Plans - 15(h)(1)a	Plan must be approved by Corps	Plan submitted to the Operations Project Manager for approval must be certified and stamped by a professional engineer
Dock Size - 15(h)3	320 sq. ft. minimum, 750 sq. ft. max	320 sq. ft. minimum, 960 sq. ft. max
Walkway Width - 15(h)6	3 to 6 feet in width	4 to 6 feet in width. 3 feet in width will be allowed for non-floating walkways.
Dock Storage - 15(h)8	1 Box - Max 72 cubic feet	1 box - Max 96 cubic feet, Max 48" H
Power on Docks - 19(d)1-10	No Power - except hard wired boat lifts.	Power -- must be electrician certified.
Septic Systems on easement lands – 8.b.	Not permitted within flood pool	May be approved if it does not conflict with Corps easement; complies with all laws and regulations; is authorized by local Health Department permit; and owner accepts responsibility to meet water quality standards during operation.
Vegetation Modification - 17	Trees - 15 ft on center - maximum of 100' wide for clearing.	Trees - Planted or maintained at a spacing of approximately 25 ft on center (25' x 25') . A new underbrush permit is limited to the applicant's adjacent lot frontage, up to a maximum width of 100 feet, and cannot exceed 1 acre in total area. (See also Exhibit F in the SMP)
Dock/Roof color restrictions - 15(c)5	No Restrictions	Earth tone colors required from Corp approved selection
Utilities - 19(f)	Power, potable water, raw water	Power, potable water, raw water and electric pumps for rinsing off dock and watercraft, raw water for irrigation in accordance with Wilmington District and South Atlantic Division policy
Lighting - 19(d)	Lighting fixtures must be attached to utility poles, Electrical Utility Certification Statement required	Allowed on docks-Dark Sky Friendly lighting, solar lighting, Electrical Utility Certification Statement required (Exhibit H in SMP)
Gangwalk Anchor System - 15(j)1	Not addressed	Anchor pad allowed in conjunction with gangwalk hinge
Encroachments - 11(j) & 23	Addressed IAW Title 36 and real estate regulations.	Violations addressed IAW 36 CFR Part 327 -- Implementation of moratoriums on permits.
Vessel Size and MSDs at Private Individual Floating Facilities - 15	No restriction	Max length 40 ft and no vessel shall have a Marine Sanitation Device (MSD)
Permit Waiting List	Waiting list for available shoreline/ land use allocation request changes	Available shoreline is first come-first served/land use allocation request only accepted as part of update SMP process
Re-issuance of permits - 11(f) and 12(b)2	Previous owner relinquishment statement - Activities transferred to new owners.	Previous owner relinquishment statement - Deed of Easement permits to current permittee only.
Community Dock Spacing - 16(g)	10 Slip - 150 ft of shoreline/ 20 Slip - 300 ft of shoreline on each side of dock.	2-5 Slips -- 200 ft of shoreline / 6-10 Slips - 300 ft / 11-15 Slips – 400ft / 16-20 Slips - 500 ft on each side of dock.
Deed of Easement Permits - 12(b)2	Transferable to new owner	Non-transferable to new owner

Shorelines adjacent to the Reservoir have been broken into shoreline allocations in compliance with the Corps of Engineers' shoreline management regulation (ER 1130-2-406). Revisions to these allocations in the updated plan are shown below in Table 2.

Table 2: Summary of Shoreline Re-allocated

1995 SMP	Updated SMP	Miles Affected	% Total Shoreline
Limited Development	Recreation	0.09	0.01%
Limited Development	Protected	8.04	1.01%
Recreation	Protected	3.10	0.39%
Recreation	Limited Development	2.57	0.32%
Protected	Recreation	0.82	0.10%
Protected	Limited Development	2.18	0.27%

3.2 No Action

The No Action alternative is the continued use of the 1995 John H. Kerr Reservoir Shoreline Management Plan. This would not allow the Corps to update its SMP to balance between private use, long-term natural resource protection, and public recreation opportunities.

4.0 AFFECTED ENVIRONMENT AND IMPACTS

The following sections describe the environment of John H. Kerr Reservoir and will contrast and compare the impacts of the Proposed Plan to the No Action alternative.

4.1 Physical Environment

4.1.1 Geology, Topography and Soils

John H. Kerr Reservoir is located within the Piedmont region of Virginia and North Carolina. The Piedmont Physiographic Province is characterized by a variety of igneous and metamorphic rocks which have been heavily weathered due to relatively long exposure at the earth's surface. Due to continued chemical and physical weathering, the rocks in the Piedmont Province are now generally covered with a layer of soil that has layered in place from the parent bedrock.

Exposed geologic resources, or outcrops, exist on high slopes and along the shoreline of the Reservoir. Outcrops along high slopes have been a management concern since the development of the Reservoir (USACE 1980). Outcrops can make it difficult to develop recreational facilities, as they make the ground impenetrable. In some cases, exposed outcrops provide a unique opportunity for visitors to safely view geologic resources.

Project lands are characteristic of the Piedmont, consisting of rolling hills and relatively level valleys. The slopes extending to the south bank of the Reservoir are generally less steep than those on the north bank (USACE 1980). Erosion and changes in topography are most

severe where natural vegetation has been disturbed or where the banks are exposed to frequent wave action. The rate of erosion in a reservoir can be greater than in a natural lake, as the flood control operation requires more regular fluctuations in the water level. The changing water level can increase the rate of erosion along the shoreline.

The 2012 John H. Kerr Master Plan update listed all of the 50 soils occurring within the project boundary. Of the 50 soil types occurring within the project lands, less than half are suitable for some type of development. Soils along the project that do not support development may still be suitable for recreational development.

The Proposed Plan could potentially involve some land disturbance in the form of tree and vegetation clearing for walkways and dock access. Any land disturbance would be carried out within the constraints of vegetation modification as described in the updated SMP (width of common boundary or 100 feet, whichever is less).

The No Action alternative would continue to allow vegetation clearing for walkways and dock access up to 100 feet wide.

No significant adverse environmental effects are expected on the Reservoir's geology, topography or soils with the Proposed Plan or No Action alternative. The updated SMP may have less impact on soil resources (i.e., decreased erosion) due to the slightly stricter vegetation modification rule.

4.1.2 Floodplains

The Federal Emergency Management Agency (FEMA) mapped the footprint of Kerr Reservoir as Zone A. Zone A is a designated Flood hazard area identified on the Flood Insurance Rate Map as a Special Flood Hazard Area (SFHA). SFHA are defined as the area that will be inundated by the flood event having a 1-percent chance of being equaled or exceeded in any given year. The 1-percent annual chance flood is also referred to as the base flood or 100-year flood. Zone A identifies a studied SFHA for which no Base Flood Elevations (BFEs) have been provided. Although BFEs are not provided, the community is still responsible for ensuring that new development within Zone A areas are constructed using methods that will minimize flood damages.

The flood pool within the Reservoir is controlled between 300 and 320 ft msl. At 300 ft msl the water surface area is approximately 48,900 acres. At 320 ft msl the water surface area is approximately 83,200 acres. The maximum surcharge pool elevation is 326 ft msl, creating a surface area of approximately 95,500 acres.

In accordance with Executive Order 11988 Federal agencies must avoid to the extent possible the long and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. The elevation of the top of the flood control pool at John H. Kerr Reservoir is 320 ft msl.

While all actions would take place within the floodplain, both the Proposed Plan and the No Action alternative would result in negligible adverse impacts to the floodplain or the management of the floodplain.

4.1.3 Surface Hydrology

The Reservoir project area is located within the Roanoke River Basin which begins in the foothills of the Blue Ridge Mountains in Virginia and ends in the Albemarle Sound in North Carolina. The drainage area of the Roanoke River above the Kerr dam is approximately 7,800 square miles. At 300 ft msl, the Reservoir creates approximately 800 miles of shoreline and 48,900 acres of water surface area. The Reservoir extends 39 miles up the Roanoke River and 19 miles above the Dan River, upstream of its confluence with the Roanoke River.

Named tributaries that feed into the Reservoir include: the Dan River, Roanoke River, Anderson Swamp Creek, Nutbush Creek, Flat Creek, Beaver Pond Creek, Grassy Creek, Little Buffalo Creek, North Fork Aarons Creek, Indian Creek, Keats Branch, Hyco River, Grassy River, Butchers Creek, Sandy Creek, Little Bluestone Creek, and Difficult Creek.

The Proposed plan and the No Action alternative should have no significant adverse impacts to surface hydrology as all applicable sedimentation and erosion control requirements would be met during construction, operation, and maintenance of footpaths, docks, and marinas.

4.1.4 Water Quality

Water quality in John H. Kerr Reservoir is measured by Virginia and North Carolina state agencies and published in each state's 305(d)/303(d) Impaired Waters Assessment. The most recent 303(d) report available for Virginia was completed in 2014. The report identifies all of Kerr Reservoir as not meeting water quality standards established for safe fish consumption (VDEQ 2014). This finding is supported by North Carolina's 2014 303(d) report which reports Nutbush Creek (located on the North Carolina portion of the Reservoir) also as being impaired. The impairment is due to low dissolved oxygen (DO) levels and PCBs and mercury contamination in fish tissues (NCDWR 2014). The Virginia Department of Health has recommended that fish consumption from the Reservoir be restricted due to the mercury and PCB contamination in the fish (VDH 2013).

Impacts to water quality would not be significant for either the Proposed Plan or the No Action alternative as all construction, operation, and maintenance would follow applicable sedimentation and erosion control guidelines. However, it should be noted that the proposed plan would result in a net gain of protected shoreline. Based upon the revisions to the shoreline allocations in the updated plan (See Table 2), there are 8.04 miles of limited development shoreline being converted to protected shoreline, as well as 4.75 miles of protected and recreational shoreline being converted to limited development shoreline. This results in a net gain of 3.29 miles of protected shoreline under the proposed SMP. Even taking into account the previously authorized facilities in the newly allocated protected shoreline

areas that would be grandfathered, the proposed SMP decreases the length of shoreline that is subject to future development. Because future development is more limited, the revised SMP would result in fewer adverse impacts to water quality than the No Action alternative.

4.1.5 Air Quality

John H. Kerr Reservoir extends into several counties in Virginia and North Carolina. In Virginia, these counties are Charlotte, Halifax, and Mecklenburg. In North Carolina, these counties are Granville, Vance, and Warren. All of these counties are in attainment for all Federal air quality standards (EPA 2014). Despite being in compliance for these standards, portions of the area that contain the Reservoir are at times subjected to temporary impacts to air quality as a result of activities like large-scale construction projects.

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

Air quality is regulated by the Clean Air Act Section 176 (c) and implemented by the EPA, NCDENR and VA DEQ. Air quality standards are defined in the National Ambient Air Quality Standards. Actions which result in increased emissions may require a permit issued by VA DEQ or NCDENR.

The Proposed Plan and the No Action alternative would result in no significant adverse impacts to air quality within the project area.

4.1.6 Noise

Noise levels vary around John H. Kerr Reservoir and are usually limited to heavily trafficked roads or noises due to the close proximity to agricultural or industrial activities. Most of the areas around the Reservoir are rural areas with few prominent noise sources. Specifically within the area around the Reservoir, the primary noise sources are vehicles traveling on local or project roads and boat engines from various boat ramps, marinas or on the water. Occasionally public events occur that may include use of loud speakers or music. Sensitive noise receptors adjacent to and within the project area include camping areas, park visitors, and the wildlife communities throughout the project. Some private residences are located just beyond the project boundary, as well. Noise ordinances and regulations have been developed and are enforced by individual municipalities. These ordinances restrict the level of noise that can exist in certain areas and/or the time of day that they can exist.

The Proposed Plan and the No Action alternative would have no significant adverse impacts to noise within the Reservoir, and any noise would be short-term.

4.1.7 Cultural Resources

No cultural resources have been identified within the Reservoir. The proposed changes to the SMP are not anticipated to cause adverse impacts to cultural resources per Section 106 of the National Historic Preservation Act (NHPA). However, before the issuance of any future permits or licenses that would result in land-disturbing activities, review under NHPA would be completed. Based upon limited archaeological inspections of recreation areas and areas proposed for erosion abatement measures, cultural resources are possible (although not probable) in stable uplands or along the limited, well-drained margins of major streams.

4.1.8 Hazardous, Toxic, and Radioactive Waste

Review of the U.S. EPA Enviromapper for Envirofacts website indicates two facilities located on the Reservoir: Burlington Industries (operating status listed as temporarily closed) and the Mecklenburg Power Station (listed for fossil fuel electric power generation). Both are located along the western portion of the Reservoir in Clarksville, VA. Although the Virginia Department of Health has identified mercury and PCB contamination in fish as a problem, there are no known hazardous substances within the Reservoir that could be disturbed by the activities that may be authorized under the existing or proposed plan (e.g., vegetation management). However, specific activities that might disturb later-identified hazardous substances will not be permitted and/or licensed without a plan to address the identified HTRW that is coordinated with the appropriate regulatory agency.

The Proposed Plan and the No Action alternative would have no adverse impacts to hazardous substances.

4.1.9 Aesthetics

Aesthetic values at the Reservoir includes lake views of open water throughout the main channel of the lower reservoir near the dam and throughout the lower Nutbush Creek arm of the Reservoir. The scenic landscape of the upper reservoir takes on a more riverine character, influenced by the confluence of the Roanoke and Dan Rivers with more narrow channels and coves. The Reservoir contains many forested areas making landscape views of the reservoir limited to elevated locations, such as those found in the Bluestone Wildlife Management Area. For boaters, or visitors utilizing the lake shoreline, abundant vegetation and steep topography generally limit views to the water and the forested hills beyond.

The Proposed Plan and the No Action alternative would not result in permanent adverse impacts to aesthetics or any view of the watershed. One of the changes proposed with the SMP that was intended to increase the aesthetic quality of the view shed is the requirement of earth tone colored roofs on the docks, where the 1995 plan did not have a color restriction.

4.2 Natural Resources

4.2.1 Vegetation

John H. Kerr Reservoir is situated in the Piedmont Region of North Carolina and Virginia. According to *A Natural Heritage Inventory of John H. Kerr Reservoir, Virginia and North Carolina* published in 1999, the Reservoir contains vegetation typical of the southern Piedmont region with some areas of coastal plain vegetation present. Vegetation around of the Reservoir consists of canopy tree species such as: white oak (*Quercus alba*), willow oak (*Quercus phellos*), southern red oak (*Quercus falcata*), black oak (*Quercus velutina*), eastern red cedar (*Juniperus virginiana*), sweetgum (*Liquidambar styracifua*), red maple (*Acer rubrum*), American elm (*Ulmus americana*), tulip poplar (*Liriodendron tulipifera*), Virginia pine (*Pinus virginiana*) and hickory (*Carya* spp.). The subcanopy and shrub layer consists of: American holly (*Ilex opaca*), flowering dogwood (*Cornus florida),* ironwood (*Carpinus caroliniana*), azalea (*Rhododendron periclymenoides*), as well as, saplings of the various canopy tree species. Examples of common herbaceous understory species include: narrow-leaved bluestem (*Andropogon perangustatus*), needle-leaf panic grass (*Dichanthelium aciculare*), small cane (*Arundinaria gigantean* var. *tecta*) and slender aster (*Aster gracilis*). Invasive plants such as Chinese privet (*Ligustrum sinense*), multiflora rose (*Rosa multiflora*), Japanese honeysuckle (*Lonicerajaponica*), grass eulalia (*Microstegium vimineum*) and autumn olive (*Elaeagnus umbellate* var. *parvifolia*) are also present throughout the Reservoir, especially in disturbed areas such as fields, powerline corridors and road shoulders (Van Alstine, Fleming, & LeGrand Jr., 1999).

With regard to vegetation modification, both the 1995 SMP and the proposed SMP contain requirements related to the planting of new trees for the purpose of reforestation, as well as clearing of trees, both of which are subject to the approval of the Corps. The proposed SMP and the No Action alternative would not result in permanent adverse impacts to vegetation surrounding the Reservoir. Implementation of the Proposed SMP would require that native trees, seedlings, or saplings be planted or maintained at a spacing of approximately 25 feet on center (25' x 25'), regardless of tree diameter. This spacing distance allows trees to grow more like they do when growing in a natural forest environment. Trees grow with a more natural, upright form since they are not competing with adjacent trees for sunlight. With this spacing, trees are also less susceptible to wind damage. This 25 foot spacing is less stringent than the 1995 plan (No Action) that requires maintenance 15 feet off center of native trees, seedlings and saplings.

The proposed tree spacing guidelines were established based on forestry best management practices for urban and suburban environments developed by the University of Florida (http://hort.ifas.ufl.edu/woody/spacing.shtml). This standard was adopted because the industrial forestry spacing standards as well as the lesser spacing, such as that which was contained in the 1995 SMP, require mechanical thinning after several years of growth. The urban and suburban standards provide for healthy, wind-resistant tree stands that do not require mechanical thinning.

4.2.2 Fish and Wildlife

The Reservoir is populated by a variety of native species of freshwater fish, crustaceans and fresh water mussels, many endemic to the Roanoke River system. Popular game fish within

the reservoir are largemouth bass (*Micropterus salmoides*), striped bass (*Morone saxatilis*), black crappie (*Pomoxis nigromaculatus*), blue catfish (*Ictalurus furcatus*), and flathead catfish (*Pylodictis olivaris*) (DGIF 2014). Some of the game fish are stocked within the Reservoir in order to support recreational fishing; others naturally enter the system from the Reservoir's tributaries.

Wildlife species known to occur at John H. Kerr Reservoir includes 18 mammal species, 41 species of amphibians/reptiles, and 143 species of birds. Mammals most commonly seen around the project include: Eastern grey squirrel (*Sciurus carolinensis*), white-tailed deer (*Odocoileus virginianus*), North American river otter (*Lontra canadensis*) and North American beaver (*Castor canadensis*). Bird species that frequent the Reservoir include: American goldfinch (*Carduelis tristis*), Canada goose (*Branta canadensis*), great blue heron (*Ardea herodias*), wild turkey (*Meleagris galopavo*), osprey (*Pandion haliaetus*) cardinal (*Cardinalis cardinalis*) and many other songbirds common to the eastern US. A few examples of amphibians and reptiles common to the project are: Green frog (*Rana clamatans*), American toad (*Bufo americanus*), Copperhead (*Agkistrodon contortrix*), Black Racer (*Coluber constrictor*), Eastern box turtle (*Terrapene carolina*) and yellow-bellied slider (*Trachemys scripta scripta*) (Van Alstine, Fleming, & LeGrand Jr., 1999).

The Reservoir maintains Forest and Wildlife Management Plans which prescribe active management for maintenance of diverse habitats for game and non-game wildlife species. There are twenty-six designated wildlife management areas located around the Reservoir, totally over 10,000 acres.

Docks and footpaths would continue to be constructed under both the Proposed Alternative and No Action alternative resulting in temporary noise increases which may disturb wildlife in the immediate vicinity of the construction area. During construction of docks and footpaths, construction-related noise would be temporary and negligible. Existing sound conditions would resume following construction activities. New docks and footpaths would increase the frequency of use by adjacent landowners in some areas. The presence of humans can influence the number and variety of wildlife in these areas; however, given existing levels of land use along the footpath, it is expected that overall impacts on wildlife would be localized and minor.

The Proposed SMP would allow for power to be added on the docks, which the No Action (current SMP) did not allow, and increase the maximum dock size from 750 sq. ft. to 960 sq. ft. There are no foreseeable significant negative impacts associated with the changes addressed in the Proposed SMP to the fishery resource or local area wildlife.

The No Action alternative would not create any changes to the current SMP; therefore, there would not be any new adverse impacts to fish and wildlife resources.

4.2.3 Threatened and Endangered Species

The U.S. Fish and Wildlife Service (USFWS) Information, Planning and Conservation

System (http://ecos.fws.gov/ipac/) website provided a current inventory of Federally listed species within the John H. Kerr Reservoir area. The USFWS information along with the Virginia Natural Heritage Program website and the NC Wildlife Resources Commission document *Protected Wildlife Species of North Carolina* February 2014 were used to create Table 3 identifying state and federally listed species. The list also includes the bald eagle (*Haliaeetus leucocephalus*) which is protected under the Federal Bald and Gold Eagle Protection Act.

Table 3: Federal and State Listed Species

*E-Endangered, T-Threatened, SC- Federal Species of Concern or State Special Concern, BGPA-Bald and Gold Eagle Protection Act

Common Name	Scientific Name	Federal Status	State Status	
			NC	VA
Vascular Plant Species				
Carolina birdfood-trefoil	*Acmispon helleri*	SC	--	--
Prairie blue wild indigo	*Baptisia australis var. aberrans*	--	E	--
Wild Hyacinth	*Camassia scilloides*	--	T	--
Tall larkspur	*Delphinium exaltatum*	SC	E	--
Smooth coneflower	*Echinacea laevigata*	E	E	T
Pine Thoroughwort	*Fleischmannia incarnata*	--	T	--
Piedmont Quillwort	*Isoetes piedmontana*	--	E	--
Virginia quillwort	Isoetes virginica	SC	--	E
Oak Barrens Barbara's-buttons	Marshallia legrandii	SC	--	--
Nestronia	Nestronia umbellula	--	--	E
Wiry Panic Grass	*Panicum flexile*	--	T	--
Buttercup phacelia	*Phacelia covillei*	SC	--	--
Small's portulaca	*Portulaca smallii*	--	T	--
harperella	*Ptilimnium nodosum*	E	E	E
Low wild-petunia	*Ruellia humilis*	--	E	--
Shale-barren Skullcap	*Scutellaria leonardii*	--	E	--
Prairie goldenrod	*Solidago ptarmicoides*	--	E	--
Yadkin hedge-nettle	*Stachys matthewsii*	SC	--	--
Terrestrial Vertebrate Animal Species				
Bald Eagle	*Haliaeetus leucocephalus*	BGPA	T	T

Bachman's Sparrow	*Peucaea aestivalis*	SC	SC	--
Aquatic Vertebrate Animal Species				
Roanoke Bass	*Ambloplites cavifrons*	SC	--	--
Mole salamander	*Ambystoma talpoideum*	--	SC	--
Carolina Darter	*Etheostoma collis*	SC	SC	T
Least Brook Lamprey	*Lampetra aepyptera*	--	T	--
Pinewoods shiner	*Lythrurus matutinus*	SC	--	--
Neuse River Waterdog	*Necturus lewisi*	SC	SC	--
Carolina Madtom	*Noturus furiosus*	SC	T	--
Roanoke logperch	*Percina rex*	E	E	E
Aquatic Invertebrate Animal Species				
Dwarf wedge mussel	*Alasmidonta heterodon*	E	E	E
Brook floater	*Alasmidonta varicose*	SC	E	--
Triangle Floater	*Alasmidonta undulate*	--	T	--
Yellow Lance	*Elliptio lanceolata*	SC	E	--
Roanoke Slabshell	*Elliptio roanokensis*	--	T	--
Tar River spiny mussel	*Elliptio steinstansana*	E	E	--
Atlantic pigtoe	*Fusconaia masoni*	SC	E	T
Yellow lampmussel	*Lampsilis cariosa*	SC	E	--
Eastern Lampmussel	*Lampsilis radiata*	--	T	--
Green floater	*Lasmigona subviridis*	--	E	T
Chowanoke crayfish	*Orconectes virginiensis*	--	SC	--
Creeper	*Strophitus undulatus*	--	T	--
Notched Rainbow	*Villosa constricta*	--	SC	--

Vascular Plant Species

Harperella – Federally Listed Endangered This is an annual herb that grows to 6 to 39 inches (0.15 to 1.0 meter) in height. The plant produces small, white flowers that occur in heads or umbels. Flowering can begin from May through July and continue until the first frost. Harperella prefers a habitat of rocky or gravel shoals, fast-flowing stream buffers and pine-dominated ponds of the coastal plain.

Smooth coneflower – Federally Listed Endangered
Smooth coneflower is a perennial herb that generally grows up to five feet (1.5 meters) in height. The flowers are light pink to purplish, usually drooping, and two to three inches (five to eight centimeters) long. The plant flowers from May through July. The habitat of smooth coneflower is open woods, cedar barrens, roadsides, clear-cuts, dry limestone bluffs, and power line right-of-way, usually on magnesium- and calcium-rich soils. The preferred sites are characterized by abundant sunlight and little competition in the herbaceous layer.

Terrestrial Vertebrate Animal Species

Bald eagle – Bald and Golden Eagle Protection Act
The bald eagle is a large raptor with a wingspan of approximately seven feet (2 meters). Adult individuals of this species have a mainly dark brown plumage with a solid white head and tail. Primary habitat for the bald eagle is undisturbed riparian zones including coastal, river, and lakeshore areas. Bald eagle nest sites within the southeast are usually located in living pine or cypress trees. Nest sites are often located in the largest living trees within the area commanding an open view of the surrounding terrain. Nest sites are generally located within one-half mile of open water with a clear flight path leading to the water. There are known nesting locations of the bald eagle within John H. Kerr Reservoir.

Northern Long-Eared Bat – Proposed for Listing under the Endangered Species Act
The USFWS currently has proposed listing of the Northern Long-Eared Bat with a rule under Section 4(d) of the ESA. Although the USFWS has not yet made a final determination for the northern long-eared bat, the USFWS published the 4(d) proposal in the event that the final determination is to list the northern long-eared bat as a threatened species. A Conservation Measure included in the proposed 4(d) rule states that incidental take from forest clearing activities will not be prohibited if the activity is conducted in a manner that avoids cutting or destroying known, occupied maternity roost trees during the pup season (June 1-July 31). A final determination decision has not been made, and these dates may change due to public comments. During the summer, northern long-eared bats typically roosts singly or in colonies in a wide-variety of forested habitats, underneath bark or in cavities/crevices of both live trees and snags. Northern long-eared bats have also been documented roosting in man-made structures (i.e., buildings, barns, etc.) during

the summer. Northern long-eared bats predominately winter in hibernacula that include caves and abandoned mine portals, and potentially large boulder areas. It should be noted that the general habitat types described above may not be all-inclusive, and additional habitat types may be identified as new information is obtained. The Corps is aware of the potential presence of the Northern Long Eared Bat, and with future consultation, the Corps will adopt necessary measures to implement our ESA responsibilities, to the extent that they are within the Corps' legal authorities, consistent with the Corps' missions and responsibilities, and are feasible from both a technological and economic point of view.

Aquatic Vertebrate Animal Species

Roanoke logperch – Federally Listed Endangered

The Roanoke logperch is one of the largest species of darters, growing up to six inches (0.15 meters) in length with a dark olive to yellow-olive body with wavy dark blotches and 10 to 12 short black bars on the sides which do not join on the other side. There is a prominent dark bar beneath the eyes and a red-orange band present near the edge of the first dorsal fin. The snout is pointed and slightly upturned or pig-like. The preferred habitat of the Roanoke logperch is rocky runs and riffles of medium to large warm-water streams with relatively unsilted substrate. Its current distribution is primarily in the Roanoke and Chowan drainages in Virginia, though populations have recently been discovered in the Dan River system in North Carolina.

Aquatic Invertebrate Animal Species

Dwarf wedgemussel – Federally Listed Endangered

The dwarf wedgemussel is a small, freshwater mussel rarely exceeding 45 millimeters in length. Young shells are usually greenish-brown. As the animal ages, the shell color becomes obscured by mineral deposits and appears black or brown. The lateral teeth are the most distinctive shell characteristic of the dwarf wedgemussel. The species has a white foot.

Dwarf wedgemussels are found in large rivers and small streams. They are often burrowed into clay banks among the root systems of trees. Landscape in areas occupied by the mussel is largely wooded, with trees near the stream being relatively mature and tending to form a shaded area over smaller streams, creeks, and headwater river habitats. Water quality must be good to excellent.

Tar River spinymussel – Federally Listed Endangered

The Tar River spinymussel has a small, semi rhomboid shell which grows to a maximum length of 60 millimeters. The shell is generally smooth in texture with as many as 12 spines that project perpendicularly from the surface and curve slightly ventrally, though adult specimens often to lose their spines as they mature.

Currently this species occurs in North Carolina in relatively short stretches of the Tar River and three creeks (Shocco, Sandy/Swift and Fishing/Little Fishing) in the Tar River basin and one creek (Little River) in the Neuse River basin. The preferred habitat of the Tar River spinymussel is relatively fast flowing, well oxygenated, circumneutral pH water in sites prone to significant swings in water velocity, with a substrate comprised of relatively silt-free loose gravel and/or coarse sand.

The Natural Heritage Inventory of John H. Kerr Reservoir, North Carolina and Virginia June 1999 *Summary of Plant and Animal Element Occurrences* notes three state listed species; the shale-barren skullcap, bald eagle, and green floater found within the project. The draft EA, Shoreline Management Plan, John H. Kerr Reservoir, Boydton, Virginia was circulated to Federal and State resource agencies in May 2015. Comments and responses received on the draft EA are included in Attachment B and copies of correspondence received are in Attachment C. The U.S. Fish and Wildlife Service provided its Section 7(a)(1) of the Endangered Species Act (ESA) concurrence on June 12, 2015 (North Carolina Field Office) and May 24, 2016 (Virginia Field Office). The proposed action is not likely to adversely affect any Federally-listed endangered or threatened species, their formally designated critical habitat, or species currently proposed for listing under the Act at these sites. However, any proposed individual projects requiring land development will be evaluated for ESA impacts.

The Proposed Plan and the No Action alternative would have no significant adverse impacts to threatened and endangered species within the project area.

4.2.4 Wetlands

Wetlands are defined by the USACE (33 C.F.R. 328.3) and USEPA (40 C.F.R 230.3) as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Although the majority of the Reservoir is classified as upland, wetlands do occur; often along narrow tributaries and in protected coves (Van Alstine, Fleming, & LeGrand Jr., 1999).

Executive Order 11990 requires federal agencies to "minimize the destruction, loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands".

The Proposed Plan and the No Action alternative would have no significant adverse impacts to wetland features around the Reservoir. Any proposed pathway or dock construction affecting waters of the United States would be subject to the requirements of a Department of the Army Section 404 permit.

4.2.5 Migratory Birds

The Migratory Bird Treaty Act (16 U.S.C. 703 – 712) makes it illegal for anyone to take,

possess, import, export, transport, sell, purchase, barter, or offer for sale, purchase, or barter, any migratory bird, or the parts, nests, or eggs of such a bird except under the terms of a valid permit issued pursuant to Federal regulations. No taking of a migratory bird is anticipated due to the implementation of the No Action alternative or the Proposed Plan, and any potential adverse effects to migratory birds (e.g., during dock construction or repairs) would be minor and temporary. All proposed individual projects will be evaluated for compliance with the Migratory Bird Treaty Act prior to receiving a permit or license under the SMP.

4.3 Socioeconomic Resources

4.3.1 Land Use

Approximately 66,263 acres of project land surrounding John H. Kerr Reservoir is above the normal full pool of 300 feet msl and is classified for the following land uses based on the current project Master Plan updated in November 2012:

- Project Operations – 264 acres
- Recreation Facilities – 16,885 acres
- Natural Areas – 5 acres
- Wildlife Management/Forest Reserve – 38,600 acres
- Flowage Easements – 10,509 acres

Within the vicinity of the Reservoir, land use is primarily forest and agriculture. Industrial land uses are present within the town of Clarksville and the city of South Boston. Within areas adjacent to project land, residential development is primarily low density and scattered. Concentrated, higher density residential subdivisions are located along Nutbush Creek and between Clarksville and Grassy Creek along the southern shore and Cuscowilla Peninsula along the northern shore.

The Proposed Plan and the No Action alternative would have no adverse impacts to land use around the Reservoir.

4.3.2 Recreation

John H. Kerr Reservoir offers many opportunities for recreation, including fishing, boating, camping, hiking, and hunting, to more than two million visitors every year. Currently, the Reservoir provides 30 recreation areas with 1,322 campsites, 228 picnic sites, 38 boat ramps, three marinas and 15 quasi-public recreation areas that are currently leased universities, churches, civic groups, and scout organizations (USACE 2012).

The No Action alternative and the Proposed SMP allow for 38 percent of the shoreline to be allotted for public recreation resulting in no decrease to current recreation opportunities available at the Reservoir.

4.3.3 Water Supply

As described in the 2012 Master Plan for John H. Kerr Reservoir one of the purposes for the creation of the Project was water supply storage. The Reservoir provides the main water supply for the Town of Clarksville, Virginia; the Kerr Lake Regional Water System, which serves communities in Vance, Granville, Warren, and Franklin Counties in North Carolina; and the Dominion-Mecklenburg Power Station. Impacts to the water supply pool would be minimized under the No Action and Proposed SMP, through use of sustainable construction methods and maintenance, which would reduce or eliminate sedimentation and erosion.

Neither the No Action alternative or the Proposed Plan is expected to adversely affect water supply.

4.3.4 Safety

The objective of the safety program is to provide a safe environment for project personnel and the visiting public and to prevent damage from accidents or fires. It is the policy of the Chief of Engineers, as stated in ER 1130-2-406, to protect and manage shorelines of all Civil Works water resource development projects under Corps 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.

The revised SMP (Proposed Plan) would require additional safety checks for electrical power supplied to the docks (proof of installation and inspection by a licensed electrician) and require all plans for new docks and modifications to existing docks to be certified by a state licensed structural engineer. These additional checks will increase safety for permit holders around the Reservoir by ensuring structurally sound docks are built and electrical lines are not potential fire hazards.

The No Action alternative would fail to address current safety concerns associated with the placement of electrical systems on docks and structural integrity of the docks, increasing potential safety risks for the public and John H. Kerr Reservoir staff.

4.4 Environmental Impact Comparison of Alternatives

The table below provides a brief summary and comparison of impacts to the physical and natural environment for the alternatives considered.

Table 4: Environmental Impact Comparison of Alternatives

Resource	Alternatives	
	Proposed Revised SMP	*No Action*
Geology/Topography/Soil	No significant adverse impacts	No significant adverse impacts
Floodplains	Negligible adverse impacts	Negligible adverse impacts
Surface Hydrology	No significant adverse impacts	No significant adverse impacts
Water Quality	No significant adverse impacts	No significant adverse impacts
Air Quality	No significant adverse impacts	No significant adverse impacts
Noise	No significant adverse impacts; any noise would be short-term	No significant adverse impacts; any noise would be short-term
Cultural Resources	Not anticipated to cause adverse impacts; future permits or licenses that result in land-disturbing activities, review under NHPA	No significant adverse impacts
Hazardous & Toxic Waste	No adverse impacts to hazardous substances	No adverse impacts to hazardous substances
Aesthetics	No significant adverse impacts to aesthetics	No significant adverse impacts to aesthetics
Vegetation	Less stringent 25 foot on center spacing (25' x 25') for vegetation planting and clearing	Status Quo - 15 foot on center spacing for vegetation clearing
Fish & Wildlife	No foreseeable significant negative impacts	No new adverse impacts
Threatened & Endangered Species	No significant adverse impacts	No significant adverse impacts
Wetlands	No significant adverse impacts to wetland features around the reservoir. Any proposed pathway or dock construction allowed under the SMP would be subject to the requirements of a DA Section 404 permit.	No significant adverse impacts
Migratory Birds	No taking of a migratory bird is anticipated, and any potential adverse effects to migratory birds would be minor and temporary	No taking of a migratory bird is anticipated, and any potential adverse effects to migratory birds would be minor and temporary
Land Use	No significant adverse impacts	No significant adverse impacts
Recreation	38% of the shoreline is allotted for public recreation. No decrease to current recreation opportunities available at the Reservoir	38% of the shoreline is allotted for public recreation. No decrease to current recreation opportunities available at the Reservoir

Water Supply	No significant adverse impact on water supply	No significant adverse impact on water supply
Safety	Increased safety measures with dock plans being engineer certified and power on docks installed and inspected by licensed electrician	Does not address current safety concerns associated with the placement of electrical systems on docks and structural integrity of the docks, increasing potential safety risks for the public and John H. Kerr Reservoir staff

4.5 Unavoidable Adverse Impacts of the Proposed Action

Construction of docks and their associated footpaths in areas of Limited Development would result in unavoidable minor direct and secondary adverse impacts to vegetation immediately within and adjacent to the footpaths. Wildlife in the vicinity of the footpaths would experience an increase in frequency and level of human disturbance. Soils would be continually disturbed and/or compacted within the foot print of the paths. These impacts are considered minor and localized and would not have significant long term adverse impacts to soil, topography, water or air quality, cultural resources, nor vegetation and wildlife populations.

5.0 CUMULATIVE EFFECTS

The Council on Environmental Quality (CEQ) regulations that implement NEPA (40 C.F.R. 1508.7) define cumulative impact to mean "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 actions include the construction and operation of the Reservoir, the creation of recreation sites surrounding the reservoir, as well as construction of residential, commercial, and industrial facilities throughout the area. All of these developments have had varying levels of impacts on the physical and natural resources in the region. The SMP helps to ensure a balance between pubic uses and stewardship of the natural environment. The proposed updates to the SMP vegetation modification regulations will contain less stringent vegetation planting and clearing requirements (25 feet from tree center (25' x 25')) than the 1995 SMP,) which will minimize the need for future mechanized clearing of excess trees. Additionally, the proposed SMP requires earth tone colors to be used on roofs which will increase the natural aesthetics of the shoreline. Finally, the proposed plan would result in a net gain of protected shoreline. Based upon the revisions to the shoreline allocations in the updated plan (See Table 2), there are 8.04 miles of limited development shoreline being converted to protected shoreline, as well as 4.75 miles of protected and recreational shoreline being converted to limited development shoreline. This results in a net gain of 3.29 miles of protected shoreline under the proposed SMP. Even taking into account the previously authorized facilities in the newly allocated protected shoreline areas that would be grandfathered, the proposed SMP

decreases the length of shoreline that is subject to future development, thereby reducing the potential impacts from construction activities. Individual future construction projects will be remain subject to review and permitting.

6.0 PUBLIC INVOLVEMENT

6.1 Public Information Sessions

Early in 2014, the Corps hosted three public informational sessions located at different towns around the Reservoir. Meetings were held on February 4, 2014 in South Hill, VA; on February 6, 2014 in Clarksville, VA; and on February 11, 2014 in Henderson, NC. During these public information sessions, participants were provided information detailing the current John H. Kerr shoreline management allocations (i.e., Public Recreation, Protected Shoreline, and Limited Development) and the activities allowed within these areas. Participants were given the opportunity to provide written comments about changes they wanted the Corps to include in an updated Shoreline Management Plan.

Additionally, three more public information sessions were held by the Corps inviting the public to review the draft John H. Kerr Reservoir SMP and provide written comments. These meeting dates and locations were: November 13, 2014 in South Hill, VA; November 18, 2014 in Henderson, NC; and November 20, 2014 in Clarksville, VA.

Following public review of the EA, revisions to the Draft SMP were made to comply with the Corps' South Atlantic Division (SAD) Regulation No. 1130-15-1, *Programs Directorate SHORELINE MANAGEMENT AT SOUTH ATLANTIC DIVISION CIVIL WORKS PROJECTS*, which became effective on 1 December 2015. A Public Notice that addressed these revisions was circulated for a 15-day public review in January 2016. The Public Notice and comments received are included in Attachment E. Further changes were made to comply with SAD's minor water withdrawal policy (as revised on July 1, 2016), which suspended implementation of the portion of the SAD Regulation No. 1130-15-1 regarding minor water withdrawals and allowed for permits for existing non-potable water lines associated with minor water withdrawals to be transferred to new property owners but noted that minor water withdrawals for use beyond the dock area are under further review and may ultimately not be allowed.

All comments received during public participation were considered in developing the revised John H. Kerr SMP.

6.2 Recipients of the Environmental Assessment

This EA and related public notices were circulated for review and comment to the following concerned agencies and individuals.

Federal Agencies

- Advisory Council on Historic Preservation
- Federal Highway Administration
- National Center for Environmental Health
- National Marine Fisheries Service - Southeast Regional Office
- U.S. Department of Agriculture (USDA)
- USDA, Natural Resources Conservation Service
- U.S. Department of Energy
- U.S. Department of the Interior - Office of Environmental Policy & Compliance
- U.S. Department of Housing & Urban Development
- U.S. Environmental Protection Agency (EPA)
- U.S. Fish and Wildlife Service
- U.S. Forest Service - Southern Region

State Agencies

North Carolina

- NC Commission of Indian Affairs
- NC Department of Administration/State Clearinghouse
- NC Department of Cultural Resources - Division of Archives & History
- NC Department of Transportation
- NC Division of Environment and Natural Resources - Division of Water Resources (now called the NC Department of Environmental Quality)
- NC Division of Parks and Recreation
- NC Natural Heritage Program

Virginia

- VA Council on Indians
- VA Department of Environmental Quality - Department of Water Quality
- VA Department of Environmental Quality – Environmental Impact Review
- VA Department of Historic Resources
- VA Division of Game and Inland Fisheries (DGIF)

Local Agencies

- Clarksville Chamber of Commerce
- Director of Economic Development – Mecklenburg County
- Director of Public Works – South Boston, VA
- Mecklenburg County Administrators Office – Boydton, VA
- Southside Planning District Commission – South Hill, VA

Elected Officials

- All North Carolina & Virginia US Senators and Local District Congressmen
- All Local State Senators and Representatives
- County Manager – Halifax County, NC
- County Manager – Vance County, NC

- Mayor - Town of Boydton, VA
- Mayor - Town of Clarksville, VA
- Mayor - Town of South Hill, VA
- Town Manager - South Boston, VA

Conservation Groups

- Conservation Trust for North Carolina
- Environmental Defense Fund of NC
- Izaak Walton League of America, Roanoke Valley Chapter
- National Wildlife Federation
- North Carolina Coastal Federation
- Roanoke River Basin Association
- Sierra Club, NC & VA Chapters
- The National Audubon Society
- The Nature Conservancy
- The Wilderness Society
- Trust for Public Land
- Virginia Conservation Network
- Virginia Foundation for Humanities – Virginia Indians Programs

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