

108 FERC ¶ 61,040  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Pat Wood, III, Chairman;  
Nora Mead Brownell, Joseph T. Kelliher,  
and Suedeem G. Kelly.

South Carolina Electric & Gas Company

Project No. 516-379

ORDER APPROVING NON-PROJECT USE  
OF PROJECT LANDS AND WATERS

(Issued July 12, 2004)

1. On August 27, 2003, South Carolina Electric & Gas Company (SCE&G), licensee of the Saluda Project No. 516, filed an application requesting Commission approval to permit Boulevard Partners, Inc. (Boulevard) to construct a concrete boat ramp and a docking facility for 32 boats, to be located on Lake Murray, the project's reservoir, in Richland County, South Carolina. The boat ramp and dock would be used by nearby homeowners. As discussed below, we are granting the application.

**Background**

2. The 206-megawatt Saluda Project, located 10 miles west of Columbia, South Carolina, created Lake Murray.<sup>1</sup> Lake Murray extends approximately 41 miles upstream of the Saluda Project dam and is roughly 14 miles across at the widest point. The reservoir full pool elevation is 360 feet mean sea level (msl). It has a surface area of 50,000 acres and about 650 miles of shoreline.

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<sup>1</sup> The project was originally licensed in 1927 and was relicensed in 1984; See 27 FERC ¶ 61,332 (1984).

3. Deep coves and prominent peninsulas characterize the lake's 650 miles of irregular shoreline. Currently, the project boundary includes 17,100 acres of land between the reservoir's edge and the project boundary.<sup>2</sup> Lake Murray is a major recreational resource for the region. The lake is used for boating, water skiing, fishing, swimming, picnicking, and camping.

4. SCE&G has a shoreline management plan for Lake Murray that is updated every five years and ensures protection of the project's environmental, recreational, aesthetic, and other public interest purposes.<sup>3</sup> The plan has five classifications of land uses within the project boundary: (1) easement, (2) recreation, (3) project operation, (4) forest and game management, and (5) future private development. SCE&G defines environmentally sensitive areas as a sub-classification of lands identified for future private development.<sup>4</sup> Each classification in the plan is subject to specified land use controls, such as minimum construction setbacks, buffer zones,<sup>5</sup> restrictions on clearing, and maintenance of wildlife habitat.

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<sup>2</sup> In 2002, SCE&G submitted a Global Positioning System database showing 17,152 acres between the reservoir's edge and the project's boundary. *See* South Carolina Electric & Gas Co., 106 FERC ¶ 61,086 at P 8 (2004) (January 2004 Order). In the January 2004 Order, the Commission approved the removal of 52 acres from the project boundary, leaving approximately 17,100 acres.

<sup>3</sup> The plan was first approved in 1981. *See* South Carolina Electric and Gas Co., 16 FERC ¶ 62,479 (1981). Commission staff recently approved SCE&G's update to the plan. *See* South Carolina Electric and Gas Co., 107 FERC ¶ 62,273 (2004).

<sup>4</sup> SCE&G uses four designations for an environmentally sensitive area: (1) shallow cove with stream confluence; (2) vegetated shoreline (buttonbush, willows, etc.); (3) bottomland hardwood forest and wet flats; and (4) purple martin roost. *See* the January 2004 Order, 106 FERC ¶ 61,086 at 61,290 n. 23. Generally, the environmentally sensitive areas are located along the reservoir shoreline up to the 360-foot contour.

<sup>5</sup> Where applicable, the buffer zone is a 75-foot setback from the 360-foot contour.

**Proposed Facilities**

5. Boulevard proposes to construct two 63-foot-long by 46-foot-wide floating docks with six finger docks each,<sup>6</sup> and one 34-foot-long by 46-foot-wide floating dock with four finger docks. The docks, which would be used by residents of a 180-unit residential subdivision,<sup>7</sup> would be constructed perpendicular to the shoreline and be connected by a 200-foot-long permanent dock built parallel to the shoreline. The docking facilities would accommodate 32 boats. A 14-foot-wide by 50-foot-long concrete boat ramp is also proposed. About 78 cubic yards of clean fill would be required during the construction of the boat ramp to provide a suitable grade.

6. The facilities would be located in the eastern portion of Lake Murray in a small cove about 3,800 feet long. The cove narrows in width from about 700 feet wide at its mouth to less than 500 feet in its upper reaches. The proposed facility would be located two thirds of the way up the cove in an area that is more than 500 feet wide. The longest dock would extend about 170 feet into the cove, leaving at least 350 feet from its end to the opposite shore.<sup>8</sup>

7. The Commission issued public notice of the application. The South Carolina Department of Parks, Recreation, and Tourism (SC Parks and Rec) filed comments that do not oppose the proposal, but express concern that continued shoreline development will have cumulative impacts on recreational use, water quality, fish and wildlife habitat, and scenic resources. The U. S. Department of the Interior, Bureau of Indian Affairs (BIA), filed comments that do not oppose the proposal, but request that, if any artifacts or remains are discovered during construction, Boulevard stop construction and consult with the State Historic Preservation Office (SHPO) and applicable federally-recognized Indian tribes.

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<sup>6</sup> A finger dock is the boat-mooring area (tie-up area). Boulevard's finger docks will each moor two boats.

<sup>7</sup> The residential development is located outside of the project boundary. SCE&G's Exhibit K Project Boundary maps show the project boundary in this area as above the 360-foot contour. However, the licensee's interests in these lands are limited to flowage easements.

<sup>8</sup> See Setback Plan in COE Permit in Exhibit 1 of the application.

8. Lake Watch on Lake Murray (a local citizens group) and a number of local residents who either have homes on Lake Murray or live nearby and use the lake for recreation,<sup>9</sup> including Murray Point Homeowners Association, filed motions to intervene and/or comments in opposition to the proposal. Dr. H. Wayne Beam filed comments in support of the proposed project. Generally, those opposing Boulevard's proposal argue that the proposed docks are too close to another marina and would adversely affect the cove's water quality, nearby fish and wildlife habitats, recreational uses, the quality of life of adjacent residents, and property values. They also contend that the proposed docks would create more boat traffic, restrict access to the rear of the cove by blocking the main channel, and contribute to lake-wide cumulative impacts.

9. On February 29, 2004, Commission staff conducted a site visit and, on May 13, 2004, issued a draft Environmental Assessment (EA), which recommended approval of the proposal. Congressman Joe Wilson and Dr. Beam filed comments in support of the draft EA's conclusions, and Murray Point Homeowners and Lake Watch filed comments reiterating their earlier concerns. The final EA, which addresses these comments, is being issued with this order.

### **Discussion**

10. We have reviewed SCE&G's application in this proceeding pursuant to the Federal Power Act's (FPA) comprehensive development/public interest standard, as informed by relevant license terms (including the approved shoreline plan), public and agency comments on the proposed non-project use, and the EA.

11. As discussed below, the record indicates that there would be no significant adverse impacts on water quality, fish and wildlife, recreational uses, boat traffic, access to the cove, the quality of life of adjacent residents, and property values. As proposed, the construction of the docks would have only a minimal environmental impact and will not interfere with project purposes.

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<sup>9</sup> The attached Environmental Assessment lists all the filings. Janis C. Mack's, Michael Mayfield's, and Jim Fors' motions to intervene were untimely. We will grant these late motions to intervene, as we find that to do so will not delay, disrupt, or otherwise prejudice this proceeding or the parties to this proceeding.

**A. Development Guidelines**

12. Intervenors argue that SCE&G should not allow Boulevard to construct its docking facilities at this site because they would be located within a 0.5-mile radius (2,640 feet) of an existing commercial marina, contrary to the licensee's permitting regulations.<sup>10</sup> Intervenors state that a land survey shows that the proposed facilities would lie 153 feet within the 0.5-mile radius of Agnew's Marina, located to the east of Boulevard's proposed site.

13. SCE&G explains that the distance between two marinas is not a hard and fast requirement that must be applied with the precision of a surveyor.<sup>11</sup> Rather, it is one of several guidelines SCE&G uses in examining such proposals. Agnew's Marina is located in the same cove but separated from the proposed facility by a peninsula, and there are a limited number of boat docks in between the two facilities. SCE&G's review of Boulevard's proposal concluded that under these circumstances, "even if the spacing is slightly less than 0.5 mile, the proposed marina, based on its size and location, meets the intent and purposes of the guidelines and will not cause the area of Lake Murray to become overly congested."<sup>12</sup> In any event, where, as here, the licensee lacks the delegated authority to approve the proposed non-project facilities,<sup>13</sup> such that the Commission must act on the proposal, we may consider a proposal's consistency with the licensee's regulations for facilities under its purview, but we are not bound by them, nor did we adopt them as license conditions.<sup>14</sup>

**B. Water Quality**

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<sup>10</sup> See section III.A.2 of SCE&G's Commercial Multi-Use Dock Application Procedures, which is attached as Exhibit 5 to SCE&G's August 27, 2003 application.

<sup>11</sup> See August 27, 2003 Application at 5-6.

<sup>12</sup> *Id.* at 6.

<sup>13</sup> SCE&G's license gives it authority to approve only marinas that can accommodate no more than 10 watercraft at a time. See 27 FERC ¶ 61,332 at 61,636-37(Article 30(d)).

<sup>14</sup> See Grand River Dam Authority, 105 FERC ¶ 61,100 at 61,507 (2003).

14. SC Parks and Rec express general concern that the proposed boat ramp and docking facilities, as part of increasing development around Lake Murray, would affect water quality. As discussed in the EA, the water quality data from the nearest water quality monitoring station indicates that the water is generally good. The construction of the new boat ramp, docks, and slips could have a localized short-term impact on water quality due to increased sedimentation and turbidity. However, these impacts would be minimized if construction activities are limited to periods of low lake levels. Accordingly, we will require that Boulevard construct the docks when lake levels are low.<sup>15</sup>

15. As discussed in the EA, long-term impacts on the water quality in the cove could occur from the added boat-related activities including leaking engines, oil spills, and overboard refuse. However, SCE&G requires that Boulevard monitor baseline water quality and aquatic biology data in the vicinity of the proposed boat docking facility prior to construction, on a weekly basis in August, and annually for a minimum of five years after construction is completed and all the boat slips are occupied.<sup>16</sup>

16. With respect to possible impacts from the 180-home development which will be built on non-project lands outside the project boundary, the Commission has no authority to prevent or place conditions on such development.<sup>17</sup> We may require, however, SCE&G to mitigate any resulting adverse impacts to project lands or waters.<sup>18</sup>

### C. Fish and Wildlife Habitat

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<sup>15</sup> Winter low-water levels average around 350 feet msl.

<sup>16</sup> See section III.A.11 of SCE&G's Commercial Multi-Use Dock Application Procedures, Exhibit 5 to SCE&G's August 27, 2003 application.

<sup>17</sup> See, e.g., Wisconsin Public Service Corp., 104 FERC ¶ 61,295 at P 19 (2003).

<sup>18</sup> During Commission staff's site visit on February 29, 2004, there was no evidence of erosion or soil run-off from the housing development.

17. SC Parks and Rec and several intervenors express general concerns that the proposal would have negative impacts on nearby fish and wildlife habitats. The intervenors also contend that the shoreline adjacent to the proposed docks is an environmentally sensitive area.<sup>19</sup>

18. The licensee's shoreline management plan does not identify environmentally sensitive areas or other wetland habitat in this area. While a few small, scattered individual clumps of button bush may be present in the area, their numbers and distribution are not sufficient to warrant such a designation.<sup>20</sup>

19. As discussed in the EA, short-term disturbance to the local fish populations would be minimal if construction of the boat ramp and docks were to occur while the lake level is lowered for the ongoing construction at Saluda dam. Even if construction were to occur during times of higher lake levels, the area's fish populations would likely only be temporarily displaced due to disturbance from construction. However, requiring construction of the docks during low lake levels will minimize impacts to fish.

#### **D. Navigation and Recreation**

20. Several intervenors state that the proposed facility will severely restrict access to the back of the cove during fall and winter drawdowns. They contend that the proposed facility's location over an existing creek channel will block normal deep-water access. They argue that it is not reasonable for the public to be required to navigate shallow waters so that a private development can offer slips to some of its residents. The intervenors also maintain that the proposed facility will have a negative impact on water skiers and other recreational boaters, because its protrusion into a skiing area will create a bottleneck.

21. There are some 40 single-boat docks in the cove, ten of which are located upstream of the proposed facility. All of these docks are located on the eastern side of the cove. The cove is generally shallow, but there is a narrow channel running parallel to the shoreline on the western side of the cove in the vicinity of the proposed docks. The channel, which was formed by a small tributary that drains into the cove, is deeper than the rest of the cove by about 1.5 to 3 feet.

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<sup>19</sup> See n. 3, *supra*.

<sup>20</sup> Button bush is a flood-tolerant wetland shrub that provides protective cover and a source of food for wildlife.

22. Generally, the lake is at its lowest levels during the winter months, when boat traffic is minimal. Winter low-water levels average around 350 feet msl. At this level, water in front of the proposed docks would be least 2.5 feet deep, sufficient for boats to navigate from the upper cove into the main lake.<sup>21</sup> At lower lake levels, like those resulting from the recent drawdown for dam remediation activities, there is no water in the cove except for the water in the narrow channel.<sup>22</sup> In these circumstances, there is no way for the boats moored at the existing docks, located on the eastern shore of the cove, to navigate across the cove to the channel. For these reasons, the location of the proposed docks would have minimal or no impact on the ability of boats to navigate out of the cove.<sup>23</sup>

23. Moreover, we conclude that the proposed facility will not significantly affect recreation in the area. The facilities would be located in the upper third of the cove, near where the cove begins to narrow and water skiing would therefore be minimal. Nor would the proposed facility significantly increase traffic congestion in the cove. Additional traffic generated by the proposed ramp and dock facility will be dispersed temporally throughout the day and geographically throughout the lake. For these reasons, we find that the proposed facility would have only a minimal impact on recreation and safety in the cove.

#### **E. Scenic and Aesthetic Values**

24. The intervenors state that the proposed facilities will result in adverse impacts to the scenic and aesthetic values of the cove. They contend that the back cove area is one of a few pristine areas left on the lake for the public to enjoy. They also contend that the proposed facilities will have adverse impacts on the quality of life for adjacent property owners. While the facilities will essentially double the available boat slips in the cove, we do not believe they will adversely impact the scenic and aesthetic views. The cove

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<sup>21</sup> See permit of the South Carolina Department of Health and Environmental Control, Exhibit 2 of the August 27, 2003 application, at 8.

<sup>22</sup> Since the fall of 2002, the lake levels has been approximately 347 feet msl (13 feet below full pool elevation).

<sup>23</sup> We decline as unnecessary the intervenors' request that we delay our decision until lake levels are returned to normal at the conclusion of the work on Lake Murray dam. Existing information is sufficient for our consideration of this application.

generally consists of undeveloped and developed residential parcels. Therefore, the proposed facilities are consistent with the current use of the cove.

25. We also find that the proposed facilities will have only minimum impacts on current noise levels. The cove is currently used for water skiing and other recreational activities by boaters coming from other areas around the lake, all of which currently contribute to the noise level in the cove. Further, boat leaving the dock will more likely disperse to other areas of the lake. Thus, while there may be intermittent increases in the ambient noise levels, we find the type and level of potential noise is consistent with the existing noise and will have only a minimum impact in that area.<sup>24</sup>

#### **F. Historic Preservation**

26. According to the National Register of Historic Places, no significant historic or archaeological resources are known to exist within the project boundary at the proposed boat ramp and docking facility site. The BIA states that the Saluda Project is within an area that members of the Catawba Indian Tribe, and possibly other tribes, identify as part of their territories and to which they attach religious and cultural significance. BIA therefore requests that, if any artifacts or remains are discovered during construction, all work will cease, and the SHPO and applicable federally-recognized Indian tribes will be consulted.

27. SCE&G must condition its authorization such that Boulevard must immediately notify SCE&G if any potential archaeological or historically significant artifacts are discovered and cease construction activity while SCE&G conducts the necessary

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<sup>24</sup> The intervenors maintain that the noise pollution and boating congestion will have an adverse impact on property values. However, waterfront property tends to appreciate in value, and the intervenors provide no information to support their claim.

consultations.<sup>25</sup>

### **Conclusion**

28. We conclude that construction and operation of the proposed facilities will not constitute a major federal action significantly affecting the quality of the human environment, will not interfere with the licensed project purposes, and will be consistent with the statutory standards by which we regulate hydropower projects. Accordingly, we approve SCE&G's application to permit the proposed use of project lands and waters.

#### **The Commission orders:**

(A) South Carolina Electric and Gas Company's application for non-project use of project lands and waters of the Saluda Project No. 516, filed on August 27, 2003, is approved as conditioned in Ordering Paragraph (B) below.

(B) The permit issued to Boulevard Partners, Inc. to construct a concrete boat ramp and a multi-boat docking facility, as authorized in Ordering Paragraph (A) above, shall include the following conditions:

(1) Boulevard shall construct the proposed facilities when lake levels are at or lower than 350 feet mean sea level; and

(2) If Boulevard discovers previously unidentified archaeological or historic sites during construction of the proposed facilities, it shall cease construction activities and notify the licensee.

(C) The late motions to intervene filed in this proceeding by Janis C. Mack, Michael Mayfield, and Jim Fors are granted.

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<sup>25</sup> Article 24 of SCE&G's license requires, among other things, that if previously unidentified archaeological or historical sites are discovered during the course of construction or development of project works or other features, construction activity in the vicinity shall be halted, a qualified archaeologist shall be consulted to determine the significance of the sites, and the licensee shall consult with the SHPO to develop a mitigation plan for the protection of significant archaeological or historic resources. Pursuant to 36 Code of Federal Regulations Part 800.3, this coordination with the SHPO includes identifying any Indian tribes that might attach religious and cultural significance to historic properties in the potentially affected area.

(D) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 C.F.R. § 385.713 (2004).

By the Commission.

( S E A L )

Linda Mitry,  
Acting Secretary.

**ENVIRONMENTAL ASSESSMENT**

**APPLICATION FOR NON-PROJECT USE  
OF PROJECT LANDS AND WATERS**

**Saluda Project**  
**FERC No. 516-379**  
**South Carolina**



**Federal Energy Regulatory Commission  
Office of Energy Projects  
Division of Hydropower Administration and Compliance**

**888 First Street, NE  
Washington, DC 20426**

**June 2004**

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## **1.0 APPLICATION**

Application Type: Non-Project Use of Project Lands and Waters  
Date Filed: August 27, 2003  
Applicant: South Carolina Electric & Gas Company  
Water Body: Lake Murray  
Nearest Town: Ballentine, SC  
County & State: Richland County, SC

## **2.0 PURPOSE AND NEED FOR ACTION**

On August 27, 2003, the South Carolina Electric & Gas Company (SCE&G or licensee), licensee for the Saluda Project, Federal Energy Regulatory Commission (FERC or Commission) Project No. 516, filed an application for non-project use of project lands and waters. Specifically, the licensee requests Commission approval to permit Boulevard Partners, Inc. (Boulevard or permittee) to install and operate within the boundaries of the Saluda Project a concrete boat ramp and a multi-boat docking facility designed to berth 32 boats. All proposed work would take place within the boundary of the Saluda Project in association with the development of a residential community to be known as Lakeside at Ballentine located on Lake Murray, the project's reservoir, east of Richard Franklin Road, near Ballentine, Richland County, South Carolina (see figure 1) (SCE&G, 2003a).

## **3.0 PROPOSED ACTION AND ALTERNATIVES**

### **3.1 PROPOSED ACTION - PROPOSED BOAT DOCKING FACILITY**

The licensee is requesting Commission approval to permit Boulevard to install and operate, within the project boundary, a 32-slip boat docking facility and a concrete boat ramp to provide boating access to Lake Murray for residents of the adjacent development (Lakeside at Ballentine). The proposed docking facility would consist of two, 63-foot by 46-foot wide floating docks with six finger docks each and one, 34-foot by 46-foot floating dock with four finger docks. Each dock unit would be connected to fixed piers and a fixed dock by 30-foot-long ramps. Also proposed is a 6-inch-deep by 14-foot-wide by 50-foot-long concrete boat ramp. The proposed docks would be constructed perpendicular to the shoreline and attached to a 200-foot-long permanent dock within a cove located in the northeastern portion of Lake Murray near Ballentine, South Carolina (see figure 2). Approximately 78 cubic yards of clean fill would be required during construction of the boat ramp to provide a suitable grade. Approximately 0.02 acre of benthic community would be permanently lost due to the construction of the boat ramp. The project site is zoned as residential and consists of two parcels. Boulevard purchased the undeveloped parcels for the purpose of constructing a 180-unit residential subdivision with a docking facility.



**Figure 1. Location of Proposed Boat Ramp and Docking Facility and Existing Marinas**

Source: USGS Chapin Quadrangle (1:24,000). Not to Scale.

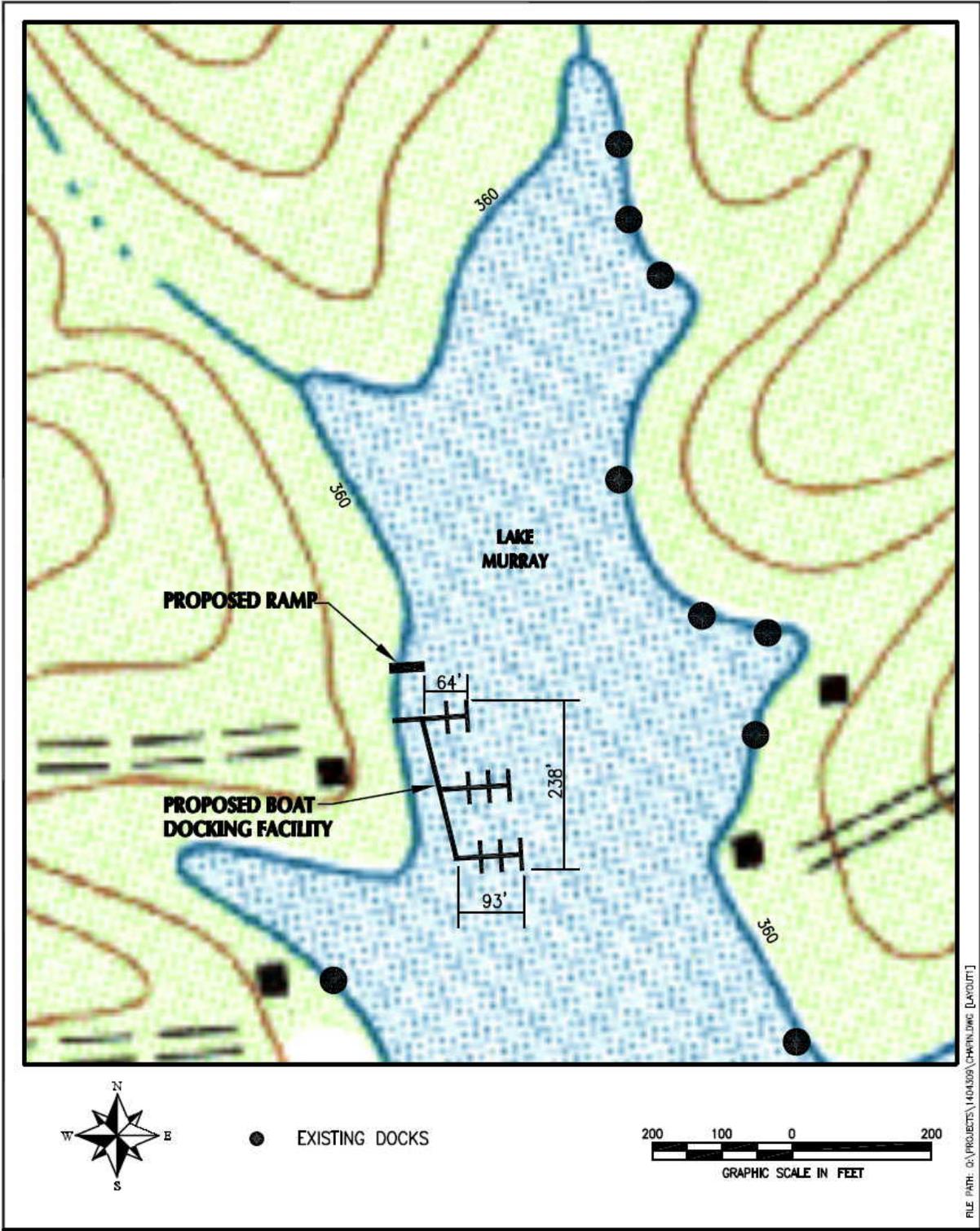


Figure 2. Site Plans For Lakeside at Ballentine's Proposed Boat Ramp And Docking Facility

## **3.2 ACTION ALTERNATIVES**

One commenter recommended that the proposed facility be kept at a maximum of 10 slips and extend no further from the shore than existing docks. One other recommendation was the proposed docks extend no further than 75 feet into the cove. It is Commission staff's determination that these alternatives do not warrant review because the differences in the impacts of these proposals in relation to the proposed action would not be significant. Therefore, no other alternatives have been considered for the proposed boat ramp and docking facility.

## **3.3 NO-ACTION ALTERNATIVE**

Under the no-action alternative, the Commission would deny the application for the proposed facilities. The permittee would be precluded from constructing the proposed boat ramp and docking facilities.

## **4.0 AGENCY CONSULTATION AND PUBLIC INVOLVEMENT**

The permittee consulted with various federal and state resource agencies to elicit comments on the proposal and stated it will adhere to the requirements of any permits issued by those agencies and local governments. The permittee consulted with the South Carolina Department of Health and Environmental Control (SCDHEC); South Carolina Department of Natural Resources (SCDNR); South Carolina Department of Parks, Recreation and Tourism (SCDPRT); U.S. Fish and Wildlife Service (FWS); the U.S. Army Corps of Engineers (USACE); and local governments. Two permits have already been obtained: the USACE Permit issued August 2, 2002, and the SCDHEC permit issued April 26, 2002. During the SCDHEC's permitting process, two public hearings were held on May 9, 2001, and June 14, 2001, to address numerous concerns expressed by local residents living near the proposed activity.

The Commission issued a Notice of Application for Amendment of License and Soliciting Comments, Motions to Intervene, and Protests on September 25, 2003. A 30-day period for interested parties to file comments was provided. This final environmental assessment (EA) addresses the comments received by the Commission during the comment period. Agency comments on the proposal were received from SCDPRT and the Bureau of Indian Affairs during the 30-day comment period.

The Bureau of Indian Affairs filed a letter on October 21, 2003, requesting that the Commission ensure that the licensee takes the proper steps to coordinate with the State Historic Preservation Officer (SHPO) and local tribes if any artifacts or remains are discovered during the construction of the proposed boat ramp and docking facility.

SCDPRT filed a letter on October 27, 2003, stating its concerns with the increase in development on Lake Murray affecting recreational use and safety, water quality, fish

and wildlife habitat, scenic integrity, and suburban sprawl. SCDPRT also stated that it was difficult to determine specific impacts to be expected because no maps or drawings were provided to SCDPRT with the application notice.

Table 1 presents the comments, interventions, and protests received by the Commission in response to Boulevard’s proposed boat docking facility during the comment period for its application notice. Several intervenors/commenters opposed the proposed action stating it would negatively affect fish and wildlife habitat, water quality, and recreational use of the cove; restrict access to the cove; and effect scenic and aesthetic values and quality of life for adjacent residents.

Table 1. Comments, Interventions, and Protests Filed in Response to Boulevard’s Boat Docking Facility Proposal.

<b>Entity</b>	<b>Filing Date</b>	<b>Type of Filing</b>
Jim Fors	(Letter dated) October 17, 2003	Intervention/ Opposition
Russell Jacobus	(Letter dated) October 20, 2003	Objection
Hamilton Duncan	October 22, 2003	Comments
Milton & Barbara Hahn	October 24, 2003	Intervention/ Opposition
Lake Watch on Lake Murray	October 24, 2003	Intervention/ Opposition
Bureau of Indian Affairs	October 27, 2003	Comments
Alva O. Humphries	October 27, 2003	Intervention/ Opposition
Deborah K. Humphries	October 27, 2003	Intervention/ Opposition
Tom & Cheryl Shofner	October 27, 2003	Intervention/ Opposition
Elin Bowers	October 27, 2003	Intervention/ Opposition
William E. Yaun	October 27, 2003	Intervention/ Opposition
Donna A. Yaun	October 27, 2003	Intervention/

<b>Entity</b>	<b>Filing Date</b>	<b>Type of Filing</b>
		Opposition
Stephanie Y. Taylor	October 27, 2003	Intervention/ Opposition
George & Joanie Staples	October 27, 2003	Intervention/ Opposition
Edgar S. Kneece	October 27, 2003	Intervention/ Opposition
Kenneth J. Tallman	October 27, 2003	Intervention/ Opposition
Lisa Cain Borden	October 27, 2003	Intervention/ Opposition
Samuel T. Delaney	October 27, 2003	Intervention/ Opposition
SC Dept of Parks, Recreation and Tourism	October 27, 2003	Comments
Murray Point Homeowners	October 27, 2003	Intervention/ Opposition
Michael Mayfield	October 27, 2003	Intervention/ Opposition
Fran & Terence Mullaney	October 31, 2003	Opposition
Janis C. Mack	November 19, 2003	Intervention/ Opposition
H. Wayne Beam (Beam, Shannon & Associates)	November 24, 2003	Comments in Support

The above filings raise a number of environmental issues that are relevant to the proposed action. Section 5, *Environmental Analysis*, of this EA considers resource-related concerns in these filings related to potential effects on:

- Shoreline stability and soil erosion
- Wildlife and riparian habitat
- Water quality
- Fisheries
- Submerged aquatic vegetation

- Wetlands
- Rare, threatened, and endangered species
- Boating use and navigational safety
- Shoreline access
- Cultural resources
- Visual character and scenic quality of the landscape
- Ambient noise levels
- Regional economics
- Property values
- Shoreline management policies

The Commission issued a Notice of Availability (NOA) of the draft EA on May 13, 2004. During the 30-day comment period following the NOA, five letters concerning the draft EA were received. Two of the parties who filed comments, Mr. H. Wayne Beam and Congressman Joe Wilson, concurred with the findings of the draft EA. Appendix A summarizes the comments that were filed and our responses to the comments. We modified this final EA in response to these comments as noted.

## **5.0 ENVIRONMENTAL ANALYSIS**

### **5.1 GENERAL SETTING<sup>26</sup>**

Lake Murray is an artificial lake located on the Saluda River in central South Carolina, 10 miles west of the city of Columbia, South Carolina. The lake was formed in 1930 when the Saluda Hydroelectric Project was created by damming the Saluda River (The Lake Murray Home Page, 2004, <http://www.lakemurray.com/history.htm>, accessed on February 27, 2004). The Saluda River, a major tributary of the Santee River Basin, lies in the Lower Piedmont physiographic region of South Carolina. The Saluda Hydroelectric Project consists of a dam, reservoir, and powerhouse containing four generating units and has a rated, dependable capacity of 206 megawatts. The resulting reservoir known as Lake Murray is approximately 40 miles long, has a maximum width of 14 miles, and a maximum depth of about 200 feet near the intake towers. The surface area of the lake is 50,000 acres, and its full pool elevation is 360 feet National Geodetic Vertical Datum (NGVD), though the normal high water level is 358 feet NGVD. The project contains about 17,100 acres of land surrounding 650 miles of shoreline.

Approximately 60 percent of the surrounding shoreline is privately owned. Today the reservoir is used primarily for aesthetic enjoyment and recreational activities such as fishing, boating, water-skiing, jet-skiing, picnicking, and camping. The project produces

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<sup>26</sup> Unless otherwise referenced, material in the environmental analysis was excerpted from the EA for the land use and shoreline management plan (LUSMP) update (FERC, 2003) for Lake Murray.

hydroelectric power and also provides for drinking water and agricultural irrigation. It also serves as a receiving body for cooling water effluent from the adjacent McMeekin Station, a coal-fired power plant also operated by the licensee. The facilities proposed by the permittee would be located within the Saluda Project boundary.

## **5.2 PROPOSED ACTION**

This section of the EA analyzes the impacts of the proposed boat ramp and docking facility on the project's environmental resources. The direct and indirect effects of the proposed boat docking facility are analyzed first under each resource section. These effects are then analyzed within each section, from a cumulative effects standpoint. The geographic and temporal scope of these analyses varies with each resource and issue under consideration.

### **5.2.1 Aquatic Resources**

#### **Affected Environment**

Lake Murray varies substantially in habitat from shallow coves and wetlands to vast open water with an abundance of diverse structure. This varied habitat within the project boundary supports a diverse fish population and a valuable sport fishery. The lake has a maximum depth of approximately 200 feet, but also has extensive shallow waters associated with the 650 miles of shoreline. Lake Murray is the main water-based recreational resource in the region drawing millions of visitors annually to its numerous parks, recreational areas, public marinas, and access points. Eutrophic assessments indicate that, overall, Lake Murray is among the least eutrophic large lakes in South Carolina (SCDHEC, 1998).

#### *Water Quality*

SCDHEC classifies all waters within the project boundary upstream of the dam as "fresh waters"<sup>27</sup> (Class FW). Waters within this classification are defined as fresh waters suitable for primary and secondary contact recreation and as a source of drinking water supply after conventional treatment in accordance with SCDHEC requirements, suitable for fishing and survival and propagation of a balanced indigenous aquatic community of fauna and flora, and suitable also for industrial and agricultural use. Additionally, the

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<sup>27</sup> The minimum and daily average dissolved oxygen (DO) standards for Class FW waters are 4.0 milligrams per liter (mg/l) and 5.0 mg/l, respectively. *E. coli* measurements shall not exceed a geometric mean of 200/100 ml, based on five consecutive samples during any 30-day period; nor shall more than 10 percent of the total samples during any 30-day period exceed 400/100 ml. The water temperature of all FW waters, which are free flowing, shall not be increased more than 2.8 degrees Celsius (°C) above natural temperature conditions.

Saluda River from the dam downstream to the confluence with the Broad River is classified as trout put, grow, and take.

SCDHEC implemented the Watershed Water Quality Management Strategy in 1991 to protect and improve the quality of surface waters in South Carolina. To implement the program, South Carolina has been divided into eight major drainage basins. For the Saluda watershed, where Lake Murray is located, water quality monitoring was completed in fiscal year (FY) 2001. Water quality monitoring at Lake Murray measured water quality parameters at eight stations in the lake; however, no water quality stations were established to measure the water quality in the shallow water coves and inlets along the shoreline. Station S-274, located approximately 1.5 miles from the proposed boat ramp and docking facility, is the only water quality station in the general vicinity of the proposed facility. Table 2 contains a subset of the water quality parameters measured for Station S-274 in 2001.

The average DO concentration at Station S-274 was 9.15 mg/l, with a minimum concentration of 7.65 mg/l and a maximum DO concentration of 11.90 mg/l. Based on the water quality samples analyzed, DO did not fall below the water quality criteria of 4.0 mg/l at Station-274 during 2001.

In surface water samples, *Escherichia coli* (*E. coli*) bacteria per 100 milliliters (ml) of water shall not exceed 200 *E. coli* bacteria based on five consecutive samples during a 5-day period. The water quality data indicate that Station S-274 falls under the maximum water quality criteria for *E. coli* bacteria, fully supporting recreational uses of Lake Murray.

The U.S. Environmental Protection Agency (EPA) has officially declared Lake Murray a “no discharge” zone, preventing boaters from discharging boat sewage into the lake (SCDHEC, 2000, [http://www.scdhec.net/co/media\\_relations/releases/2000/html/nr5dis00.00.htm](http://www.scdhec.net/co/media_relations/releases/2000/html/nr5dis00.00.htm), accessed on March 1, 2004).

Table 2. Water Quality Data for Lake Murray at Station S-274, 2001.

<b>Sample Date (2001)<sup>a</sup></b>	<b>Temperature (°C)</b>	<b>Total Ammonia (mg/l)</b>	<b>Total Nitrite and Nitrate (mg/l)</b>	<b>Dissolved Oxygen (mg/l)</b>	<b><i>E. coli</i> (#/100 ml)</b>
January	7.50	--	0.06	11.90	1.00
February	9.60	--	0.06	11.70	0.00
March	12.50	--	0.06	10.90	1.00
April	--	0.00	0.00	--	2.00
May	24.50	--	0.00	8.85	2.00

Sample Date (2001) <sup>a</sup>	Temperature (°C)	Total Ammonia (mg/l)	Total Nitrite and Nitrate (mg/l)	Dissolved Oxygen (mg/l)	<i>E. coli</i> (#/100 ml)
June	27.50	0.00	0.00	8.00	2.00
July	29.50		0.00	7.95	5.00
August	28.00	0.06	0.00	7.65	110.00
September	23.60	--	0.00	--	1.00
October	20.00	0.06	0.00	9.06	0.00
November	18.40	--	0.00	7.71	1.00
December	16.50	0.00	0.03	7.79	1.00
Min.	7.50	0.00	0.00	7.65	0.00
Max.	29.50	0.06	0.06	11.9	110
Average	19.78	0.02	0.02	9.15	10.50

<sup>a</sup> Water quality data was measured at a depth of 0.3 meters.

### *Fisheries*

More than 40 species of fish occur within Lake Murray. Many of these species provide important recreational benefits, including largemouth bass (*Micropterus salmoides*), bluegill (*Lepomis macrochirus*), redear sunfish (*Lepomis microlophus*), and striped bass (*Morone saxatilis*). Predator fish populations are supported by high numbers of prey species including bluegill, threadfin shad (*Dorosoma petenense*), gizzard shad (*Dorosoma cepedianum*), and blueback herring (*Alosa aestivalis*). Fish growth in Lake Murray is generally considered excellent, and the fishery has produced several current state record fish.

Striped bass were initially stocked in Lake Murray in 1960, and the current stocking program has been in place since the early 1970s. At present, the stocking goal is 1,000,000 fingerlings per year, although the goal is not always met and occasionally is surpassed. Since the early 1970s, striped bass have become the dominant pelagic predator fish species benefiting from the lake's diverse forage species. In addition to striped bass, Lake Murray has an exceptional population of other gamefish and panfish, including largemouth bass, black crappie (*Pomoxis nigromaculatus*) and white crappie (*P. annularis*). These species typically spawn in shallow, nearshore areas over sand or other fine-grained substrate.

## *Submerged Aquatic Vegetation*

Rooted submerged aquatic vegetation (SAV) is found along the shoreline of Lake Murray. SAV beds are used by many species of forage and game fish as nursery habitat for fry and juveniles because of the protection they provide from predators. The predominant species, hydrilla (*Hydrilla verticillata*), covers about 2,800 acres of lake bottom and is concentrated between the 335- and the 355-foot elevation. Hydrilla is a non-native species introduced from Southeast Asia and is considered a nuisance species, because of its prolific growth creating dense mats that impede boat traffic and out-competing native aquatic plant species. Illinois pondweed (*Potamogeton illinoensis*), a native aquatic plant species, covers approximately 500 acres of the lake, mostly between the 352- and 360-foot elevations. Dense colonies of Illinois pondweed may also impede boat traffic.

Management efforts to control hydrilla and Illinois pondweed in Lake Murray currently depend on extended drawdown periods (including the current drawdown due to construction), stocking of sterile grass carp (*Ctenopharyngodon idella*), and mechanical harvesting (SCDNR, 2004b). A total of 64,000 grass carp have been stocked in Lake Murray as of June 2003 (SCDNR, 2004c, <http://www.dnr.state.sc.us/water/envaff/aquatic/draftmurray.html>, accessed on February 27, 2004). Reservoir drawdowns to elevation 345 feet NGVD occurred in 1990 and 1996 and have been effective for hydrilla; however, Illinois pondweed cannot be controlled by drawdowns. Other species of SAV known to occur in Lake Murray include slender pondweed (*Potamogeton pusillus*), spotted pondweed (*Potamogeton pulcher*), slender naiad (*Najas minor*), southern naiad (*Najas quadalupensis*), and Brazilian elodea (*Egeria densa*). Brazilian elodea and slender naiad are also non-native aquatic plant species. None of these species is considered a nuisance at this time.

## **Environmental Effects**

### *Water Quality*

SCDPRT, in a letter dated October 27, 2003, expressed concern that the proposed boat ramp and docking facility, as part of increasing development around Lake Murray, would affect water quality and fish and wildlife habitat. It further noted that no maps or drawings were supplied with the notice of application, and it feels it is difficult to determine all the specific impacts that would be expected from the proposal.

SCDNR in a letter to SCDHEC stated no objection to the proposed boat ramp and docking facility provided the licensee adheres to certain standard conditions pertaining to the maintenance of water quality standards and designated uses.

Lake Watch on Lake Murray and several intervenors/commenters wrote in opposition to the proposed marina, and take issue with SCDHEC's statement that water

quality in the area is good and that a nearby monitoring station supports this. Lake Watch responded that the nearest monitoring station is approximately 2 miles away and data from the station does not reflect conditions in shallow embayments. It stated that there is no monitoring station in the area of the proposed boat ramp and docking facility and that it does not know the water quality of the cove. It stated that the 180-unit housing development going in adjacent to the proposed marina and related storm water runoff could have severe impacts on this ecosystem, and the marina would add further damage. It further noted that SCDHEC's approval of the marina is inconsistent with a letter to FERC that stated, "In consideration of current water quality trends, SCDHEC believes that minimization of future urban development along Lake Murray's shoreline is necessary to maintain long term water quality." Lake Watch on Lake Murray and the intervenors/commenters maintain that the marina would contribute to the further degradation of water quality in this area and contribute to negative cumulative impacts lake-wide.

The construction of the new boat ramp, docks, and slips could have a localized short-term impact on water quality due to increased sedimentation and turbidity. If construction would occur at low lake levels, impacts on water quality would be minimized. Long-term impacts on the water quality in the cove could occur from the added boat-related activities including leaking engines, oil spills, and overboard refuse. These impacts would add to existing impacts from existing docks and boat use in the cove and could act in concert as a cumulative adverse impact on the cove's water quality.

Implementing the terms and conditions found in the commercial multi-use dock application would require the permittee to conduct baseline water quality and aquatic biology data in the vicinity of the proposed boat docking facility. Baseline sampling of DO, water temperature, conductivity, fecal coliform, pH, and benthic macroinvertebrates must be conducted on a weekly basis during the month of August prior to any construction. Sampling sites are site specific and would be determined by the appropriate agencies in consultation with the licensee. Annual monitoring of water quality and benthic macroinvertebrates would continue annually for a minimum of 5 years after construction is completed and 100 percent of the slip occupancy has occurred. Continuation of monitoring after the 5-year time period would be determined by the permittee and the appropriate agencies. Additional terms and conditions are contained within the permit issued by SCDHEC and would reduce impacts on water quality. These terms and conditions include a prohibition against the mooring of boats having marine sanitation devices and a commitment to pursue measures preventing pollutants such as oil, tar, trash, and debris from entering the adjacent waters. Any painting, major engine repair, or other maintenance that may result in a discharge to the water must be performed in a designated upland site. In addition, signs must be posted on all docks, piers, and areas adjacent to the facility stating: "It is against both federal and state laws to discharge raw, untreated sewage from any description of watercraft into the waters of South Carolina." The proposal does not include provision for any fuel services.

SCDNR in a letter to SCDHEC and SCDHEC have raised no objection to the proposed boat ramp and docking facility provided that terms and conditions contained within the multi-dock application and the State permit are adhered to. The water quality monitoring required in the multi-use dock application would provide baseline data prior to construction and indicate any changes to water quality after construction that would be subjected to licensee and regulatory agency review. We agree that the boat ramp and docking facility as proposed and regulated through the terms and conditions of the permits and application could be accommodated at the proposed location without major impacts on the water quality within the cove.

### *Fisheries*

Several intervenors/commenters expressed concern that the proposed action would have negative impacts on nearby fish and wildlife habitats and that most of the shoreline adjacent to the proposed facility is considered to be an environmentally sensitive area (ESA). They also expressed concern that poor engine maintenance and careless refueling would result in leaks and spills that could affect the ESA.

Disturbance to the local fish populations would be minimized if construction of the boat ramp and docks occurred at low lake levels. If construction were to occur at normal levels, the area's fish populations would likely be temporarily displaced due to disturbance from construction. The terms and conditions for the certificate/permit issued by SCDHEC include a limitation on construction activities during the months of March, April, May, and June because of potential impacts on fish spawning. Following construction and a return of lake levels, the floating dock structures would provide limited protective cover for fish. Approximately 0.02 acre of benthic community would be permanently lost due to construction of the boat ramp.

As pointed out by SCDHEC, construction activities during high lake levels and within the months of March, April, May, and June has the potential to impact fish and their spawning activities. FERC staff concurs with SCDHEC that construction activities completed when the lake is at low water levels and limited during the months of March, April, May and June would adequately minimize the potential impacts to fish displacement and spawning.

As pointed out by SCDHEC, the impact would be minimal since the benthic area affected is relatively small, and some recolonization on the boat ramp structure may occur. Monitoring of the benthic community pre-construction and post-construction for a 5-year period required as a condition of the application for multi-use boat docks would provide a database and potentially indicate if impacts from the proposed facility were occurring. FERC staff concurs with SCDHEC that minimal impacts would occur to the benthic community in the vicinity of the boat ramp and docks, and that, with terms and conditions in place, the proposed boat ramp and docks would be adequately monitored during operation of the facility.

### *Submerged Aquatic Vegetation*

A small amount of SAV habitat would be permanently lost due to the placement and construction of the boat ramp and docks. SAV habitat would return along the shoreline post-construction except where the boat ramp and docking structures are permanently located. Control measures that remove SAV that is a nuisance to boating in Lake Murray would continue to minimize SAV in the cove area. FERC staff finds that the loss of a small area of SAV in the vicinity of the boat ramp and docking facility would not constitute a substantial impact.

## **5.2.2 Terrestrial Resources**

### **Affected Environment**

Lake Murray lies within the Lower Piedmont physiographic province of South Carolina. Elevations in the Piedmont generally range from 300 to 1,000 feet above mean sea level. The area is characterized by irregular plains and open hills with occasional tablelands. The upland vegetation of Lake Murray shoreline and fringe property canopy consists of mixed hardwoods and pines. Hardwoods are predominantly sweet gum (*Liquidambar styraciflua*), white oak (*Quercus alba*), winged elm (*Ulmus alata*), red maple (*Acer rubrum*), black cherry (*Prunus serotina*), southern red oak (*Quercus falcata*), and yellow poplar (*Liriodendron tulipifera*). The dominant pine species include loblolly (*Pinus taeda*) and eastern red cedar (*Juniperus virginiana*). As observed during the site visit by Commission staff on February 29, 2004, the terrestrial upland along the shoreline of the proposed boat ramp and docking facility has not been altered or stabilized and consists of a small wooded area containing many of the species mentioned above as well as post oak (*Quercus stellata*), blackjack oak (*Quercus marilandica*), and long-leaf pine (*Pinus palustris*).

### *Shoreline Stability and Soil Erosion*

Soils within the Lake Murray area belong to the Georgeville-Herndon-Almance association and are derived from argillite. These soils are characterized as clayey. These reddish or yellowish soils are gently sloping, deep, well- to moderately drained and have silt-loam top soils over silty clay subsoils. The soils in the region are generally low in fertility and are best suited for forest or pasture use. While the soils are generally not susceptible to creep or slumping, soil limitations for development tend to occur along drainageways or other areas where bedrock is very close to the surface. Soil erosion is a problem in some lakeshore areas, particularly along exposed shorelines.

The proposed boat ramp and docking facility is located in the upper one-third of a cove well protected from wind- and wave-driven erosion. No evidence of erosion or lack of stability at the site was noted during the site visit on February 29, 2004, by Commission staff even though clearing activities outside of the project boundary (home

construction) had been conducted. Silt fencing was observed in place around several residential lots near the proposed boat ramp and docking facility.

### *Wildlife and Riparian Habitat*

Wildlife within the Lake Murray project area include white-tailed deer (*Odocoileus virginianus*), eastern cottontail (*Sylvilagus floridanus*), gray squirrel (*Sciurus carolinensis*), red fox (*Vulpes vulpes*), raccoon (*Procyon lotor*), beaver (*Castor canadensis*), red-tailed hawk (*Buteo jamaicensis*), osprey (*Pandion haliaetus*), and other birds such as wading birds, gulls, terns, ducks, and Canada geese (*Branta canadensis*). Migratory birds such as waterfowl, geese, and some passerines (warblers, sparrows) are present in the appropriate seasons (Birds of Dreher Island State Park, 2004). Reptiles and amphibians are also found in the available habitats at Lake Murray. Several species of birds were observed during the site visit on February 29, 2004, but no other wildlife species were observed. Much of the natural habitat along the cove shoreline has been developed as a residential area. Small stands of woods separated a few residential parcels from each other, and in the area of the proposed boat ramp and docking facility in the upland portion of the site, a small patch of woods was still in existence.

According to the draft EA for the Lake Murray LUSMP (FERC, 2003), SCE&G mapped ESAs along the shoreline of Lake Murray with special emphasis on “buttonbush and willow flats” because these areas represent the majority of suitable spawning and nesting habitat for most resident fish and wildlife. Although, Commission staff observed a few small individual clumps of buttonbush, no large stands or “flats” of buttonbush or willows were observed in the vicinity of the proposed boat ramp and docking facility during the site visit on February 29, 2004.<sup>28</sup> The geographical information system (GIS) data collected for the draft EA for the Lake Murray LUSMP (FERC, 2003) determined that there were no ESAs located in the area of the proposed boat ramp and docking facility (see figure 3).

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<sup>28</sup> Buttonbush is a rounded, open branched wetland shrub that is normally 6 to 8 feet tall, with distinctive white flowers clustered in a ball that bloom during the summer. Buttonbush is one of the most flood-tolerant shrubs, thriving in soils that are temporarily saturated (streambanks, shorelines, or flood-prone areas), or fully-saturated wetlands and shallow water. Buttonbush shrubs provide excellent protective cover and a source of food for wildlife.

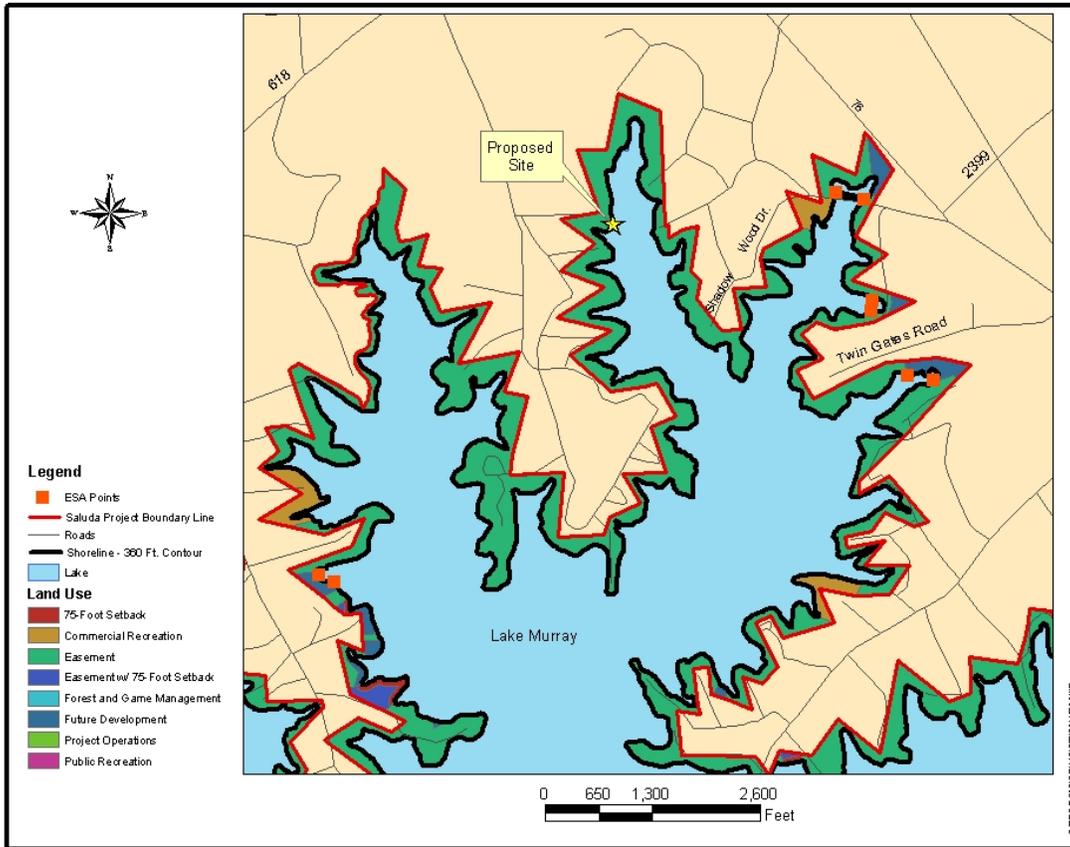


Figure 3. Fringeland Land Use Classifications and Environmentally Sensitive Areas (ESAs) in the Vicinity of the Proposed Boat Ramp and Docking Facility.

## **Environmental Effects**

### *Terrestrial Resources*

In a letter dated January 29, 2001, filed in the SCDHEC permit proceeding, SCDNR recommended shifting the proposed boat ramp and docking facility 150 feet to the north to protect existing shoreline vegetation and shallow shoreline habitat. However, in another letter dated April 4, 2001, SCDNR deemed its earlier recommendation to shift the proposed boat ramp and docking facility 150 feet to the north not feasible due to navigational constraints and water depth issues and stated it did not object to the original placement of the ramp and docks provided that disturbance to woody shoreline vegetation within the project is avoided to the greatest extent possible.

Several intervenors/commenters opposed the proposed action stating that approximately 75 percent of the shoreline in the project area has been identified as ESAs, most of the shoreline adjacent to the proposed marina is considered aesthetic and environmentally sensitive, and human presence near these ESAs would affect the scenic and environmental values of the nesting and spawning areas.

Disturbance to upland vegetation above the 360-foot contour would occur during construction of access to the boat ramp and docking facility and parking area for vehicles and trailers. As noted above, habitat at the site of the proposed boat ramp and docking facility below the 360-foot contour is not designated as an ESA in the LUSMP EA (FERC, 2003). Some loss of habitat would be permanent where there is access and parking for the boat ramp and docking facility as well as where the permanent dock would be located. Short-term loss and/or disturbance of other vegetation in the vicinity during construction would also occur. Implementation of terms and conditions of the SCDHEC's permit such as the permittee's use of best management practices (BMPs) and all efforts made to reduce the disturbance to woody shoreline vegetation within the construction area for the boat ramp and docking facility would minimize impacts during construction. A further condition of the SCDHEC permit requires that, upon completion of construction activities, all disturbed upland areas must be stabilized with a vegetative cover and/or riprap as appropriate.

FERC staff finds that the construction of the boat ramp and docking facility would cause some loss and disturbance of upland vegetation. Compliance with the terms and conditions of the SCDHEC permit including those mentioned above would provide for minimization and/or mitigation of any impacts related to the construction of the boat ramp and docking facility.

### *Shoreline Stability and Soil Erosion*

Installation of the piers and anchoring points for the docking facility and construction of the boat ramp could cause short-term disturbance to the lake bottom and a

resulting increase in sedimentation turbidity and suspended solids in the immediate area during times of normal lake levels. If approved, and construction of the facility was conducted at low lake levels, the short-term impacts on water quality could be avoided. Terms and conditions of the certificate/permit issued by SCDHEC include an obligation to implement BMPs to minimize erosion and mitigation of sediments offsite and a duty to provide for post-construction stabilization of the upland areas either through the sowing of vegetation or the placement of riprap. SCDHEC further defined these BMPs as including the use of mulches, hay bales, silt fences, or other devices capable of preventing erosion and migration of sediments from the construction site into the cove that could occur particularly during rain events.

FERC staff concludes that, because SCDHEC has provided terms and conditions that include an obligation to implement BMPs for the minimization of erosion and migration of sediments as well as post-construction stabilization of the disturbed areas, the construction of the boat ramp and docking facility would have minimal short-term impacts on the shoreline and adequate BMPs in place to mitigate for any impacts.

#### *Wildlife and Riparian Habitat*

Many of those opposed to this proposed action note a concern for the loss of wildlife habitat and disturbance.

The current conditions in the vicinity of the proposed boat ramp and dock include existing residences, construction of new homes, the presence of existing docks and associated water-based activities. These conditions are not conducive to extensive use of the shoreline by wildlife including waterfowl. Wintering and migrating waterfowl would use the cove as resting and feeding habitat in the fall, winter, and spring months when boat traffic is less. Wildlife would avoid the area during the times of day and seasonally when activity is the greatest. Nevertheless, the proposed construction of the boat ramp and docking facility and the resultant increase in boat traffic and human disturbance would further discourage wildlife use. During construction, impacts on wildlife habitat along the shoreline as proposed would be short-term and minimal. Terms and conditions of the certificate/permit issued by SCDHEC include an obligation to stabilize all disturbed upland habitat and to protect native riparian vegetation in and along the shoreline; both are conditions that would minimize impacts on potential wildlife habitat at the site.

Current activity in the cove coupled with the seasonal increase in water-based recreation in the cove does not provide conditions beneficial to wildlife and waterfowl use. The construction of the boat ramp and docking facility would add further disturbance during construction. FERC staff concludes that additional recreational disturbance to the cove area resulting from boat traffic originating at the proposed ramp and docking facility would not significantly add to the disturbance to wildlife and waterfowl. Terms and conditions in the permits and applications provide for adequate

protection and stabilization of habitat at the site. We find that the proposed boat ramp and docking facility would not have an appreciable impact on wildlife use in the cove.

### 5.2.3 Wetlands

#### Affected Environment

Wetlands dominated by emergent aquatic vegetation occur in the shallows along the shoreline of Lake Murray. Two of the most common species of emergent aquatic vegetation at Lake Murray are alligatorweed (*Alternanthera philoxeroides*) and water primrose (*Ludwigia hexapetala*). Both alligatorweed and water primrose are non-native species in South Carolina, and SCDNR's Illegal Aquatic Plant List states that it is illegal to possess, import, or distribute them (SCDNR, 2004c). These emergent species are likely to occur from about the 355-foot elevation to the shoreline.

Other emergent wetland species occupy a narrow band of lacustrine fringe habitat along the shoreline of Lake Murray. Emergent species are likely to occur up to about the 362-foot elevation along the reservoir. Common species include smartweeds (*Polygonum* spp.), soft rush (*Juncus effusus*), sedges (*Carex* spp.), eclipta (*Eclipta alba*), spikerush (*Eleocharis* spp.), bulrush (*Scirpus* spp.), flatsedges (*Cyperus* spp.), red-top panic grass (*Panicum rigidulum*), and barnyard grass (*Echinochloa crusgalli*).

Palustrine scrub-shrub wetlands occupy the lacustrine fringe and shallow coves. Shrub species are likely to occur from about the 356-foot elevation up to about the 362-foot elevation. The predominant shrub community consists of buttonbush (*Cephalanthus occidentalis*) and black willow (*Salix nigra*). Persimmon (*Diospyrus virginiana*) and water willow (*Justica americana*) may also occur in these communities.

A few species of wetland plants (rush, sedges, and buttonbush) were identified during the site investigation conducted on February 29, 2004, by Commission staff; however, the cove was empty of water due to the drawdown associated with ongoing construction at the Saluda dam, and the time of year eliminated the possibility of identification of dormant vegetation. Rushes and sedges were growing in the cove basin where water would normally cover the area under normal full pool conditions. Several small individual clumps of buttonbush were observed in the area of the proposed boat ramp and docking facility, but no button bush/willow flats or other indicators of the presence of an ESA were observed.

## **Environmental Effects**

### *Wetlands*

No comments specific to wetlands were received from agencies or private individuals during the comment period for the proposed boat ramp and docking facility. Based on the site visit by Commission staff, construction of the proposed boat ramp and docking facility could eliminate some of the buttonbush as already discussed under riparian habitat.

Because there are no ESA or other wetland habitats identified at the site of the proposed boat ramp and docking facility, FERC staff concludes that the proposed action would have no impact on wetland or ESA habitat. Terms and conditions of the SDHEC permit require the protection of native riparian vegetation in and along the shoreline area within the site of the proposed action.

## **5.2.4 Threatened and Endangered Species**

### **Affected Environment**

FWS responded to the opportunity to comment on the project by declining to take a position on the project. Bald eagle (*Haliaeetus leucocephalus*) and wood stork (*Mycteria americana*) have been observed on Lake Murray. Wood storks were recently found using an area of the western portion of the lake approximately 15 miles from the Saluda dam. It is believed that area is used for roosting and foraging and as a possible stopover site in migration. The site is not in the immediate vicinity of the proposed boat ramp and docking facility, and it is probable that wood storks would not use the area of the project. Bald eagles, however, are currently known to have five active nests at Lake Murray and may spend the winter at the lake. Bald eagles may range widely in their opportunistic feeding and cannot be discounted from using the proposed boat ramp and docking facility vicinity for feeding or roosting. The lack of water in the cove will reduce the opportunity for bald eagle feeding in the area until after the water level has risen; however, they could roost or nest in tall pines in the cove. Table 3 presents a list of legally protected rare, threatened, or endangered (RTE) species in Richland County (SCDNR, 2004a, [http://www.dnr.state.sc.us/pls/heritage/county\\_species.list?pcounty=Richland](http://www.dnr.state.sc.us/pls/heritage/county_species.list?pcounty=Richland), accessed on February 24, 2004). Habitat information provided for the Richland County species indicates that, other than bald eagle, none of the listed species are likely to occur in the area of the proposed boat ramp and docking facility. No RTE species were observed during the site visit by Commission staff on February 29, 2004.

## Environmental Effects

Currently, no bald eagles, wood stork, or other RTE species are known to utilize the habitats in the cove and the specific area of the proposed boat ramp and docking facility site. Therefore, FERC staff expects no impacts on these species.

Table 3. Rare Threatened, and Endangered Species Known to Occur in Richland County, South Carolina. (Source: SCDNR, 2004a, [http://www.dnr.state.sc.us/pls/heritage/county\\_species.list?pcounty=Richland](http://www.dnr.state.sc.us/pls/heritage/county_species.list?pcounty=Richland), accessed on February 24, 2004; Ashepoo-Combahee-Edisto [ACE] Basin Species Gallery, 2004, <http://www.csc.noaa.gov/acebasin/specgal/birds.htm>, accessed on March 9, 2004)

Common Name	Scientific Name	Legal Status <sup>a</sup>	Habitat Requirements
Rough-leaved Loosestrife	<i>Lysimachia asperulifolia</i>	FE/SE	Sandhills and coastal plain, wet peaty poorly drained soil
Canby's Dropwort	<i>Oxypolis canbyi</i>	FE/SE	Coastal plain, pine pond sloughs, wet pine savannahs
Smooth Coneflower	<i>Echinacea laevigata</i>	FE/SE	Open woodlands, meadows, requires abundant sunlight
Pine Barrens Treefrog	<i>Hyla andersonii</i>	ST	Sandhills, seep springs, brushy areas
Bald Eagle	<i>Haliaeetus leucocephalus</i>	FT/SE	Nest in tall live pine trees within 1 mile of large bodies of water
Red-cockaded Woodpecker	<i>Picoides borealis</i>	FE/SE	Sandhills, coastal plain mature pine forests with trees greater than 60 years of age
Rafinesque's Big-eared Bat	<i>Corynorhinus rafinesquii</i>	SE	Coastal plain, roost in dilapidated buildings and tree cavities near water

<sup>a</sup> FE = Federally Endangered; SE = State Endangered; ST = State Threatened.

## 5.2.5 Recreation and Other Land and Water Uses

### Affected Environment

Lake Murray is a popular tourist destination and offers boating (motor boating, sailing, jet skiing, and water skiing), fishing, swimming, and a variety of day-use activities. Lake Murray has a total of 40 public recreational sites, including 12 SCE&G park sites, 2 boat ramps, and 24 informal access areas. In addition to the 12 developed public parks, there are 65 islands in Lake Murray consisting of 220 acres that are available for public recreation. SCE&G has set aside 10 additional park sites, and when public demand justifies the need for additional parks, these sites would be developed.

Based on the 2003 Licensed Hydropower Development Recreation Report (Form 80 Report), the public and private recreation areas include, among other facilities, approximately 51 boat ramps (with a total of 82 boat launching lanes), 38 picnic areas, 2 swimming areas, 16 campground areas, and 6 fishing piers. Lake Murray is divided into three lake zones: the upper, middle, and lower lake zones, from west to east. Billy Dreher Island State Park, a 348-acre island with 12 miles of shoreline located between the middle and lower lake zones, is a significant public recreation area. The state park includes a public marina, boat ramps, trails, day-use facilities, and camping facilities leased to SCDPRT by SCE&G.

Public access also is provided at privately owned facilities where boat launching, rentals, and other recreational activities and supplies are available, including 32 public marinas and landings and 57 private marinas, landings, clubs, and common access areas. SCE&G reports that there are approximately 2,133 rental slips at local marinas (FERC, 2002a). There are an estimated 8,550 private boat docks and 8,196 residential structures located along the shoreline of the lake. In general, private docks found on the lake are permanent, floating, or a combination thereof. The majority of these docks are not enclosed, and according to SCE&G personnel, extend 75 feet or less from the edge of the shoreline.

In 2001, in response to a Commission additional information request (AIR) for the EA/LUSMP Update (FERC, 2003), SCE&G conducted an aerial survey of boating use on Lake Murray for the spring, summer, and fall seasons. Aerial photographs were taken on May 5, 19, and 26; June 17, 24, and 30; July 4 and 15; August 11; September 22; and October 13 and 27, 2001. The selected dates were considered to be peak-use days as well as normal weekends during the year (no aerial photographs were taken on Labor Day weekend due to inclement weather). Using these photographs, SCE&G divided the lake into six areas and counted the number of boats (motorboats, sailboats, and jet skis) located within each area on each date. SCE&G results indicate that the lowest use occurred in September and October (65 to 281 boats); moderate use occurred in May and on June 24, July 15, and August 11 (480 to 677 boats); and the highest use occurred on June 30 and July 4 (917 and 914 boats, respectively). Overall, the area of the reservoir

that received the greatest usage during these dates was the lower lake zone, which averaged 313 boats per study day.

The project's latest Form 80 Report indicates that, during the 1996 calendar year, Lake Murray received 1,440,000 recreation days and had a peak weekend average of 57,000 recreation days.<sup>29</sup> SCE&G estimates that 260,000 boats are launched at its recreation sites each year. Based on a creel survey conducted in 1990 and 1991, the South Carolina Wildlife and Marine Resources Department estimated an annual angling effort of 1,380,405 angler-hours per year with 77 percent of this effort from boats. SCDNR reports that public bank fishing opportunities on the lake are limited and represent only 7 percent of the total angling that occurs on the reservoir (letter from Robert E. Duncan, SCDNR, to FERC, dated June 17, 2002).

Programs related to the recreational resources at Lake Murray include fish stocking, boating regulations, and designated wildlife areas for hunting. SCDNR maintains an annual fish-stocking program during the months of April, May, and June. SCDNR plans to manage the fisheries of the lake with annual stockings of predator (striped bass) fish to keep populations in check. SCDNR enforces the state fishing, safety, and boating laws of South Carolina on Lake Murray. Approximately 6,225 acres of land within and adjacent to the project boundary are leased to SCDNR as part of the statewide Game Management Program and used for recreational hunting. This land is located adjacent to the upper lake zone of Lake Murray and, in many cases, adjacent to other privately held lands.

The proposed boat ramp and docking facility is located within Watershed 03050109-190 along the Saluda River. The land use/land cover in this watershed includes the following: 2.89 percent urban land, 12.88 percent agricultural land, 1.82 percent scrub/shrub land, 0.08 percent barren land, 53.04 percent forested land, 0.72 percent forested wetland, and 28.57 percent water (SCDHEC, 1998).

In 1994, SCE&G conducted a shoreline inventory to identify the major land uses around the lake and update SCE&G's land use classifications of fringeland (land owned by SCE&G located between the 360-foot contour and the project boundary line). Within the lower lake zone, which is where the proposed action would be located, approximately 2.5 percent of the shoreline is classified as Forest and Game Management, and 61 percent is classified as Easement, Easement with a 75-foot vegetated buffer zone, or just a 75-foot buffer. Future development areas are designated on about 4 percent of the shoreline. Approximately 4 percent is designated for Public Recreation, and 2 percent for Commercial Recreation within the lower lake zone. According to SCE&G's shoreline

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<sup>29</sup> [A recreation day is each visit by a person to a development for recreational purposes during any portion of a 24-hour period. A peak use weekend is a weekend when recreational use is at its peak for the season \(July 4<sup>th</sup> weekend or other holiday weekend\).](#)

inventory, the fringeland land use classification for the entire cove where the proposed boat ramp and docking facility would be located is Easement. No vegetative buffer zones (75-foot setbacks) have been designated in the vicinity of the proposed action (see figure 3).

#### *Boating Use and Navigational Safety*

A commercial marina, Agnew's Marina, is located in a straight line distance of approximately 0.5 miles due east of the site of the proposed boat ramp and docking facility. The distance by boat from the proposed dock site to Agnew's Marina is a distance of approximately 1.2 miles and a linear shoreline distance of approximately 1.6 miles. The width of the cove at the entrance to Lake Murray is approximately 0.12 miles (see figure 1). Single-family homes with private docks are located within the cove to the north, east (Shadowood development), and south of the site. The closest public boat ramps are located approximately 3 miles or more from the site: Hilton to the southwest and Ramp #16 to the southeast (SCE&G, 2003b, <http://www.scana.com/SCEG/For+Living/Lake+Murray/default.htm>, accessed on March 25, 2004). According to residents in the area, recreational boaters for water skiing heavily use the cove where the proposed action would be located. Other recreational uses of the cove include fishing, jet skiing, and pleasure boating. Currently, Lake Murray is drawn down for the Saluda dam remediation project. Under normal conditions, the lake operates at 358 feet during the summer months.

#### *Shoreline Access*

Public access to the waters of Lake Murray from the land is limited. The 2003 EA/LUSMP Update (FERC, 2003) states that 2.2 percent of the shoreline of Lake Murray is classified as Public Recreation, and 0.7 percent of the shoreline is classified as Commercial Recreation. The majority of the recreational users of Lake Murray are private landowners with residences around the lake. Most of the cove's shoreline is fronted with private residences and is inaccessible to the public from the land.

### **Environmental Effects**

#### *Boating Use and Navigational Safety*

The boat docking facility, as proposed, includes the placement of three floating docks attached to one fixed dock, with a total of 32 slips. The proposed facilities would contribute to boating activity in the immediate area. There would be a strong demand for boating access and use of Lake Murray from new residents at Lakeside at Ballentine, and the proposed facilities would help to meet that need. As proposed, the docking facility would be used exclusively by owners of the residences within the Lakeside at Ballentine subdivision, and the boat ramp would be used by both Lakeside at Ballentine and Shadowood Cove subdivisions. This additional boat activity would fluctuate depending on the season, day of week, or time of day.

Many of the residents familiar with the area and the proposed facility have offered the following comments on the proposed development: the proposed ramp and boat docking facility would create more boat traffic, add to the existing watercraft congestion in the cove and other areas of Lake Murray, impact recreational uses such as water skiers, jet-skis, and anglers, who heavily use the cove for these activities, and restrict access by closing off the main channel.

The number of boats using this portion of Lake Murray would increase as a result of the proposed boat ramp and docking facility. The number of boat docks within the cove is approximately 40, with approximately one slip per dock. The traffic generated by the proposed boat dock would be dispersed geographically throughout Lake Murray and temporally throughout the day. In general, early morning activity would primarily be from anglers; recreational use for water skiing, jet-skiing, and general boating would likely occur later in the day. Additionally, the boaters leaving the dock would disperse out into the cove and lake not only temporally but also in a geographic sense as each individual boat or jet-ski traveled to its preferred destination for the day. Boats would return back into the cove in an equally diffuse manner. We conclude that the proposed 32-slip boat docking facility would have a minor adverse impact on boat congestion and public safety in the immediate area, but would not create adverse impacts on navigational safety and boating use overall on the Lake Murray reservoir.

The placement of the boat docking facility, as proposed, would not change the navigational open waters within the cove. According to the site plans, the dock is proposed to extend approximately 170 feet, at its maximum length, beyond the 360-foot contour, which would abut the old existing stream channel that is approximately 200 feet from the shoreline (SCE&G, 2003a). The proposed boat ramp and docking facility site does not appear to be in a high traffic area since there are less than 10 docks situated north of the site before the northern end of the cove. The water levels are high enough for most of the year to safely navigate through this area of the cove.

The configuration of the cove at the site and the proposed layout of the boat docking facility would not create major navigational difficulties. The width of the cove at the site of this proposal is more than 500 feet, the docks are within the one-third limit of encroachment generally required for structures extending into state navigable waters, and there are no obstructions to the line of sight for boaters (see figure 2). Considering the depth of water at the locations of the three proposed docks in relation to the various stages of lake drawdown throughout the year, it is apparent that navigation is not an issue during the majority of the year. Hydrographic data show a narrow channel, 1.5 to 3.0 feet deeper than the surrounding areas running parallel with the shoreline in the vicinity of this proposed facility. The southern and middle dock would be placed across this channel, and the northern dock would extend to the edge of the channel. As pointed out by SCDHEC, although the proposed docks would deny boating through this narrow channel, use of this channel is not mandatory to maintain navigation in the area. SCDHEC further states that, during the short duration of time when the lake level is at it

lowest, there is sufficient depth in front of the proposed docks to support the minimal navigation that this cove allows. SCDHEC states the cove above the proposed facility is shallow and supports minimal navigation during the lower lake levels (winter) when lake use is at its lowest.

We agree with SCDHEC's conclusion that navigation would not be affected in the cove because the existing narrow channel would only be used by smaller boats during low water levels. Two thirds of the cove's width would be open to navigation during times of normal lake levels; therefore, we agree that navigation would not be an issue.

The placement of the proposed boat ramp and docking facility would slightly reduce the current use capacity of the affected portion of the cove by pleasure boaters, jet skiers, and water skiers; however, we conclude that the overall impacts on recreation would be minimal based on the following clarifications. Currently, there are no general no-wake rules near structures; no plans to establish a no-wake zone in the area of the proposed boat ramp and docking facility. During normal operating lake levels (358 feet), the cove south of the proposed docking facility is and will continue to be suitable for water skiing. The cove north of the proposed docking facility narrows which provides a geographic barrier and disrupts the flow of the lake more than the proposed boat docking facility would. Boats navigating out of the proposed docking facility toward the main body of the lake may encounter skiers. Congestion would not be significantly increased since only a few of the 32 boats moored at the marina would likely be leaving the area at one time. Also, any boats already in the cove can be readily from the proposed docking facilities.

### *Shoreline Access*

FERC staff concludes that public access to the shoreline from the water would be reduced due to the construction of the boat ramp and docking facility. Given the presence of the existing marina facilities, public boat access, and private boat access near the site, the development of docking facilities would be consistent with existing uses in the area.

## **5.2.6 Cultural Resources**

### **Affected Environment**

Commission staff identified the area of potential effect (APE) as the construction area within the project boundary where the new docks and boat ramp will be located. According to the National Register of Historic Places, no significant historic or archaeological resources are known to exist within the project boundary at the proposed boat ramp and docking facility site. The Bureau of Indian Affairs filed a letter on October 27, 2003, stating that the Saluda Hydroelectric Project is within an area that

members of the Catawba Indian Tribe, and possibly other tribes, identify as part of their territories and to which they attach religious and cultural significance.

### **Environmental Effects**

As a condition of SCE&G's approval for the work, the permittee would be required to notify SCE&G should any potential archaeological or historically significant artifacts be discovered. In such event, all work in the vicinity of the discovered property would be stopped, and the licensee would notify the SHPO at the South Carolina Department of Archives and History (SCDAH). An evaluation would be made of the newly discovered site, and the permittee would be notified when and if construction could resume. In addition, the permit issued by USACE requires the permittee notify the USACE if any previously unknown historic or archeological remains are discovered so it can initiate with the federal and state coordination to determine whether the newly discovered site is eligible for listing, whether there will be an effect on the newly discovered site and whether recovery efforts are warranted. Pursuant to 36 Code of Federal Regulations Part 800.3, this coordination includes identifying any Indian tribes that might attach religious and cultural significance to historic properties in the APE.

### **5.2.7 Landscape Aesthetics**

#### **Affected Environment**

Lake Murray is located in an area of low, rolling hills between 300 and 1,000 feet above sea level and has a local topographical relief of approximately 100 feet. The 650 miles of shoreline is irregular and has steep slopes in some places due to the many creek beds and drainageways that cut through the area's rolling terrain. The lake contains numerous inlets and islands, most of which are heavily forested, and exposed bars. Billy Dreher Island State Park is a large, 340-acre island located in the eastern portion of the lake.

Lake Murray is divided into three lake zones: the upper, middle, and lower lake zones, from west to east. The proposed action would be located in the lower lake zone, which has the widest (both north-south and east-west) expanse of water. This zone is bordered on the east by the dam and associated project facilities and on the west by Billy Dreher Island State Park. This lake zone is considered the main body of the reservoir and has an expansive viewshed over several miles of open water and a few large inlets. The majority of the shoreline in this area is interspersed with extensive shoreline development, ranging from individual private boat docks and large houses to marinas, landings, and park sites. A few large, forested islands are located within the main body of the reservoir. The lightly to moderately tree-covered shoreline and the lake's forested islands dominate most distant views across the open water and soften the visual contrast of development along the shoreline. Within the inlet areas and closer to the shoreline, shoreline development becomes a more prominent feature of the viewshed and contrasts

with the surrounding tree-covered lands. The Saluda dam and five large intake towers are clearly visible from the main body of the reservoir. Given the extended viewshed of the main body of the reservoir and shoreline, these structures do not detract significantly from the overall visual character of the reservoir.

In 1984, as directed by the Commission, SCE&G established a 75-foot vegetative buffer zone above the 360-foot contour on all lands classified as future development by SCE&G. The buffer zone was required to create a vegetated, aesthetically appealing buffer between back property development and the Lake Murray shoreline. During SCE&G's shoreline inventory and classification update conducted in 1994, the buffer zone was expanded to include ESAs below the 360-foot contour. The transition zone at Lake Murray is defined as the combined area including the 75-foot vegetative buffer zone above the 360-foot contour and the ESAs below the 360-foot contour. As stated previously, no vegetative buffer zones or ESAs are located within the cove (see figure 3).

### *Visual Character and Scenic Quality*

The area surrounding the proposed boat ramp and docking facility contains both undeveloped and developed residential parcels, and most of the lakefront residential properties have docks on the water. Approximately 0.5 mile from the proposed boat ramp and docking facility, there is another multi-use docking facility called Agnew's Marina, located in the cove to the east; however, this marina is not visible from the proposed site. Lake Murray Marina is located south of the cove, and is visible from certain parts of the cove (see figure 1).

### *Ambient Noise Levels*

Motorboats frequently use the cove for recreational purposes. Residents living in the cove contribute to the ambient noise levels with normal daily activities and boating.

## **Environmental Effects**

### *Visual Character and Scenic Quality*

Several intervenors/commenters commented that the proposed boat ramp and docking facility would affect the scenic and aesthetic values of the cove.

FERC staff concludes that the proposed facility would have a minor impact on the visual character and scenic quality of the cove. It would affect the overall scenic beauty of the cove by reducing the amount of vegetated, natural shoreline along the western portion of the cove, and would have a negative effect on the viewshed of the residents along the eastern shoreline directly across from the proposed boat ramp and docking facility.

### *Ambient Noise Levels*

During construction of the proposed boat ramp and docking facility, machinery and equipment operation and other construction-related activities would cause minor temporary noise-producing disturbances.

Lake Watch on Lake Murray and Kenneth J. Tallman stated that the addition of a 32-slip marina would cause noise pollution in the quiet cove. FERC staff concludes that the additional boats that would result from the boat docking facility would cause intermittent increases of the area's ambient noise levels, and would be slightly more noticeable during the busy recreational seasons.

## **5.2.8 Socioeconomics**

### **Affected Environment**

#### *Regional Economics*

The Saluda Project, including Lake Murray, is approximately 10 miles east of the capital city of Columbia, South Carolina, in Richland County. Columbia is the primary urban center in the region. Population figures from the 2000 U.S. Census indicate that the total population of Richland County was approximately 320,677 in 1999, which was a 12 percent increase in population since 1990. Smaller cities located near the proposed boat ramp and docking facility include Chapin, Irmo, and Ballentine. Chapin is the fastest growing city on Lake Murray with a population that is expected to almost double in the next 10 years (Central Carolina Economic Development Alliance [CCEDA], 2004, <http://www.cceda.org/housing.htm>, accessed on March 4, 2004). The proposed boat ramp and docking facility is within Census Tract 103.06 in Richland County, which has a population of 4,666. Within Tract 103.06, approximately 2.7 percent of the population is minority, and 1.8 percent of the population is living below poverty levels. The median household income within this tract is \$68,872 (U.S. Census Bureau, 2000, <http://factfinder.census.gov>, accessed on March 2, 2004). The proposed development would be located within the eastern end of Lake Murray, which is heavily developed compared to the western region of the lake.

Approximately 60 percent of Lake Murray's shoreline is private development. The Richland County portion of Lake Murray is well developed and rapidly growing (SCDHEC, 1998). There are a variety of residential and commercial properties along Lake Murray in the eastern portion, and several points of public access near the Saluda dam. The properties adjacent to the Lakeside at Ballentine site mainly consist of single-family homes. Across from the new development, on the east side of the cove, is a subdivision called Shadowood Cove subdivision.

### *Property Values*

The current property values of the homes in the cove may be potentially higher than averages in Richland County based on the aesthetic and scenic qualities of the location. The cove is encompassed by zip codes 29036 and 29063. According to the 2000 U.S. Census, the surrounding areas have a median housing value of \$187,300 in zip code 29036 and \$102,600 in zip code 29063 (U.S. Census Bureau, 2000). However, lakefront properties along Lake Murray range from \$110,000 up to \$4,000,000 (CCEDA, 2002, <http://www.cceda.org/richlandexec.pdf>, accessed on March 4, 2004).

### **Environmental Effects**

#### *Regional Economics*

Construction of the proposed boat ramp and docking facility would result in increased tax revenue to the region. One of the conditions of receiving SCDHEC's permit is that the Lakeside at Ballentine development must allow the Shadowood Cove subdivision residents to access the lake via the proposed boat ramp. This provides additional socioeconomic benefits for residents within these two neighborhoods. We conclude that the future residents of Lakeside at Ballentine subdivision would increase revenue for the boat and watercraft industry around Lake Murray through purchases, maintenance, and operation of watercraft. Temporary employment opportunities would be created as a result of constructing the proposed boat ramp and docking facility.

#### *Property Values*

Several intervenors/commenters stated that the addition of 32 slips to this quiet cove would have a negative impact on the quality of life for adjacent residents, including noise pollution and boating congestion, which would certainly affect property values.

Water front property tends to appreciate in value and there is no evidence that the proposed facilities would have a negative impact on future values. FERC staff concludes that the proposed facilities would have no impact on property values for the residents in the cove.

## **5.2.9 Compliance With Shoreline Management Policies**

### **Affected Environment**

#### *Shoreline Management Policies*

The current SCE&G Shoreline Management Policies are listed in the "Commercial Multi-Use Dock Application Procedure, Lake Murray FERC Project No. 516." All proposed multi-use dock facilities are to follow the requirements stated

in section III.A of this document, which defines a multi-use dock as a dock that will “accommodate five or more watercraft simultaneously and for which a user fee or maintenance fee is charged for the use or upkeep of the facility. Multi-use docks are classified as commercial facilities.” There are currently no multi-use docking facilities within the cove. The closest multi-use docking facility is Agnew’s Marina, approximately 0.5 mile east of the proposed site, on the opposite side of the peninsula (see figure 1). During the site visit on February 29, 2004, it was noted that Lake Murray Marina is visible from parts of the cove, which is located approximately 0.9 mile south of the cove.

## **Environmental Effects**

### *Shoreline Management Policies*

Several of the intervenors/commenters expressed concern that the proposed boat ramp and docking facility would be too close to other existing marinas, and that building the boat facility would violate a requirement in SCE&G’s Shoreline Management Policies. SCE&G’s Shoreline Management Policy is summarized in the Commercial Multi-Use Dock Application Procedure, where general requirements are listed. The requirement that numerous citizens and groups are concerned with states the following: “No multi-use docking facility accommodating more than 10 watercraft at a time, will be permitted any closer than a ½ mile radius to an existing multi-use facility.”

Citizens for Responsible Development (CRD) sent two letters, dated April 8 and May 8, 2002, before the Application for Boulevard Partners’ permit was filed. The letters stated that a property owner associated with CRD hired a land surveyor to take a global position system (GPS) measurement of the distance between the proposed boat ramp and docking facility and the existing marina east of the proposed site, called Agnew’s Marina. The survey resulted in a measurement that was 153 feet short of the 0.5-mile (2,640-foot) requirement (SCE&G, 2003a). SCE&G responded to CRD on April 19, 2002, by stating that it would not reject the permit request for Boulevard Partners, Inc. based on the non-compliance with the half-mile distance requirement. The local residents and organizations, particularly CRD, believe that disregarding this requirement allows uncontrolled growth and development along the lakeshore, which leads to cumulative impacts on water quality, navigational safety, and recreational activities on the lake.

Hamilton Duncan stated that construction of the proposed marina would send the message that water quality and shoreline plans are not emphasized by SCE&G and the Commission. He also stated in his letter that if this marina were approved, it would set a precedent for future developers to imitate this type of development.

Referring to the CRD correspondence, SCE&G states in the Application that the requirements were proposed in 1989, and since that time SCE&G does not apply the

spacing restrictions with the precision of a surveyor. SCE&G considers the requirement a guideline and has “never considered its guidelines as constituting regulations that must be observed to the micron.” According to SCE&G, even if the spacing is less than 0.5 mile, the proposed boat ramp and docking facility, based on its size and location, meets the intent and purposes of the guidelines and would not cause that area of Lake Murray to become overly congested (SCE&G, 2003a).

Although the GPS survey demonstrates that the two boat docking facilities would be approximately 153 feet closer together than the 0.5-mile limit, the proposed boat ramp and docking facility would be separated from the existing marina, Agnew’s Marina, by a peninsula and would not cause a substantial increase in development or water quality impacts. SCE&G has looked at the distance and found the proposal would not have significant impacts on shoreline management and development within the vicinity of the proposed marina.

As explained by SCE&G’s, the proposed boat ramp and docking facility is consistent with the purpose and intent of the Shoreline Management Policy, and that the proposed action would not have any effects on overall shoreline management and development in the surrounding area.

Cumulative impacts on shoreline development would have the potential to occur in the future if the guidelines were loosely adhered to on numerous occasions; however, the Commission has used careful consideration to determine whether the proposed action would cumulatively affect resources within the project boundary, and the same consideration will be taken for future proposed actions. No cumulative or indirect impacts would occur from implementing the proposed boat ramp and docking facility.

### **5.3 ACTION ALTERNATIVES**

No other alternatives have been considered for the proposed boat ramp and docking facility.

### **5.4 NO-ACTION ALTERNATIVE**

Under the no-action alternative, the permittee would be precluded from constructing the proposed facilities, and the environmental effects associated with the facilities would be avoided. Further, the recreational and socioeconomic benefits directly related to increased boat access to Lake Murray associated with the proposed facilities would not occur.

## **6.0 CONCLUSIONS AND RECOMMENDATIONS**

### **6.1 SUMMARY OF THE PROPOSED ACTION'S ENVIRONMENTAL EFFECTS**

Table 4 summarizes the probable environmental effects of Boulevard's proposed boat ramp and docking facility, as described in detail in section 5.2 of this EA. The table uses the issues identified in section 4.0, *Agency Consultation and Public Involvement*, as a checklist for the impact summary.

### **6.2 FINDINGS**

Based on the information, analyses, and evaluations contained in this EA, we find that the proposed boat ramp and docking facility would not constitute a major federal action significantly affecting the quality of the human environment.

Table 4. Environmental Effects of Proposed Action

IMPACT ISSUE	IMPACT RATING		
	1 – Minor 2 – Moderate 3 – Major N/A – Not Applicable	A - Adverse B - Beneficial NI - No Impact	S - Short Term L - Long Term R – Recurrent N/A – Not Applicable
<b>Terrestrial Resources</b>			
Shoreline Stability and Soil Erosion	1	A	S <sup>a</sup>
Wildlife Habitat	1	A	L
<b>Aquatic Resources</b>			
29. Water Quality	1	A	R
30. Fisheries	1	A	S <sup>a</sup>
<b>Wetlands/SAV</b>	N/A	NI	N/A
<b>Threatened and Endangered Species</b>	N/A	NI	N/A
<b>Recreation</b>			
31. Boating Use and Navigational Safety	1	B/A	L/R
32. Shoreline Access	N/A	NI	N/A
<b>Cultural Resources</b>	N/A	NI	N/A
<b>Landscape Aesthetics</b>			
33. Visual Character and Scenic Quality	1	A	L/R
34. Ambient Noise Levels	1	A	L/R
<b>Socioeconomic Considerations</b>			
Regional Economics	1	B	L/R
Property Values	N/A	NI	N/A
<b>Compliance With Shoreline Management Policies</b>	N/A	NI	N/A

<sup>a</sup> Construction-related effects.

## 7.0 LITERATURE CITED

- ACE (Ashepoo-Combahee-Edisto). 2004. Basin of South Carolina Species Gallery. <http://www.csc.noaa.gov/acebasin/specgal/birds.htm>, accessed on March 9, 2004.
- Birds of Dreher Island State Park, Newberry County, South Carolina. 2004. <http://www.midnet.sc.edu/audubon/dreherislandweb.htm>, accessed on February 25, 2004.
- CCEDA (Central Carolina Economic Development Alliance). 2002. Richland County Executive Summary. <http://www.cceda.org/richlandexec.pdf>, dated August 2002, accessed on March 4, 2004.

CCEDA. 2004. South Carolina Housing Information. <http://www.cceda.org/housing.htm>, accessed on March 4, 2004.

FERC (Federal Energy Regulatory Commission). 2003. Environmental assessment (EA) and land use and shoreline management plan (LUSMP) update. FERC Project No. 516-318. Washington, DC. October 31, 2003. 53 pp.

FERC. 2002a. Final Environmental Assessment, Saluda Dam Seismic Remediation. Washington, DC. July 22, 2002.

FERC. 2002b. Saluda Dam Remediation Updated Frequently Asked Questions and Answers. June 3, 2002. 8 pages.

[http://www.ferc.gov/industries/hydropower/safety/saluda/saluda\\_qa.pdf](http://www.ferc.gov/industries/hydropower/safety/saluda/saluda_qa.pdf).

The Lake Murray Home Page. 2004. <http://www.lakemurray.com/history.htm>, accessed on February 27, 2004.

SCDHEC (South Carolina Department of Health and Environmental Control). 2000. *Boat Toilet Discharges Banned*. News release. [http://www.scdhec.net/co/media\\_relations/releases/2000/html/nr5dis00.00.htm](http://www.scdhec.net/co/media_relations/releases/2000/html/nr5dis00.00.htm), accessed on March 1, 2004.

SCDHEC. 1998. Watershed water quality assessment, Saluda River basin. Technical Report No. 005-98. Columbia, South Carolina. December 1998.

SCDNR (South Carolina Department of Natural Resources). 2004a. South Carolina Rare, Threatened and Endangered Species Inventory, Species found in Richland County, [http://www.dnr.state.sc.us/pls/heritage/county\\_species.list?pcounty=Richland](http://www.dnr.state.sc.us/pls/heritage/county_species.list?pcounty=Richland), updated June 9, 2003, accessed on February 24, 2004.

SCDNR. 2004b. Draft 2004 Lake Murray aquatic plant management plan. 4 pp.

SCDNR. 2004c. Aquatic Nuisance Species Program. <http://www.dnr.state.sc.us/water/envaff/aquatic/draftmurray.html>, accessed on February 27, 2004.

SCE&G (South Carolina Electric and Gas Company). 2003a. Application for Non-Project Use of Project Lands and Waters. Saluda Hydroelectric Project No. 516-379. August 27, 2003.

SCE&G. 2003b. Lake Murray, South Carolina – Low Water Map.  
<http://www.scana.com/SCEG/For+Living/Lake+Murray/default.htm>, accessed on March 25, 2004.

U.S. Census Bureau. 2000. American FactFinder, Census 2000 Summary File 3.  
<http://factfinder.census.gov>, accessed on March 2, 2004.

## **8.0 LIST OF PREPARERS**

*Federal Energy Regulatory Commission*

Jean Potvin-FERC Task Monitor (Environmental Protection Specialist; B.S. Recreation and Parks Management)

*EA Engineering, Science, and Technology*

Danielle Bower, Environmental Planner

Mary Alice Koenke, Ecologist

Suzanne Boltz, Fisheries Biologist

## APPENDIX A

### COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT Project No. 516-379

The Commission issued a Notice of Availability (NOA) of the draft environmental assessment (DEA) on May 13, 2004. During the 30-day comment period following the NOA, five letters concerning the DEA were received, which have been addressed, when appropriate, in the final EA (FEA). Two of the parties who filed comments, Mr. H. Wayne Beam and Congressman Joe Wilson, concurred with the findings of the DEA.

Murray Point Homeowners (Robert and Joanne Burgess, Francis and Terry Mullaney, et al.) – two letters filed June 9, 2004

**Comment:** Murray Point consists of 14 waterfront homes on the small cove that is the proposed site for the new docking facility. It appears to Murray Point Homeowners that someone only has to physically view the cove on a typical weekend to recognize the inherent dangers and disruption of boating that would be created by the facility.

The cove is a popular skiing place but is narrow and boats turn with their skiers just in front of the proposed docking. Any traffic in and out of the proposed facility would endanger skiers, boaters, and others using various boating devices such as tubes. There is no room in the cove for traffic from that direction, and current recreational value in the cove would almost be eliminated.

Response: **The staff addresses these concerns in section 5.2.5 of the FEA.**

**Comment:** The proposed docking facility is to be located in shallow water with natural grasses, the breeding place of many of our fish and a feeding place for ducks and geese. Since the lake is so shallow at the site, it appears that the proposed facilities would not even be satisfactory to the users since it could be used for only a small portion of the year and be an eye sore the remainder.

Response: **The proposed docking facility would not be located in an Environmentally Sensitive Area, therefore impacts on terrestrial and aquatic habitat would be minimal. At times of low water levels, it is likely that existing private boat docks, as well as the proposed boat dock and ramp, would be inaccessible. The staff addresses aquatic resources issues in section 5.2.1, and recreational issues in section 5.2.5 of the FEA.**

**Comment:** The cove does not flush well, and during the hot summer months we are afflicted with floating algae and the water temperature is almost too hot for swimming. The cove can endure no additional pollution that the proposed facility would certainly create. We must save the water quality of this small cove.

**Response:** The proposed boat docking facility may have a slight adverse effect on water quality or water temperature in the cove. Upon approval of the licensee's application, the permittee would be expected to implement the terms and conditions of the application and water quality permit, such as water quality monitoring and pollution prevention methods, to reduce water quality impacts, which would be determined by SCDHEC. The staff further addresses water quality issues in section 5.2.1 of the FEA.

#### **Lake Watch on Lake Murray – letter filed June 14, 2004**

**Comment:** Lake Watch agrees that the permit does provide some provisions to help protect water quality. However, it would do so only if those provisions are enforced. The DEA fails to analyze the ability of SCDHEC to monitor and enforce these provisions. The SCDHEC permit does not prevent personal gas dispensing at this proposed facility. The DEA does not address the fact that portable "potties" are allowed and most likely will be used at this facility. We recommend that the EA include an assessment of SCE&G's marina water quality monitoring program to determine how existing marinas are affecting water quality lakewide, and if approved, we recommend this facility be required to perform monthly water quality monitoring under the supervision of SCDHEC.

**Response:** The staff addresses the party's concerns in section 5.2.1 of the FEA. SCDHEC is the agency responsible for issuing and enforcing permits and water quality monitoring programs. The Commission has no oversight role over SCDHEC's responsibilities. In addition, the concern regarding portable toilets would not be an issue because, if these facilities were installed, they would be above the 360-foot contour line.

**Comment:** The DEA fails to properly assess existing conditions in this cove area. The assessment should include the number of recreational boaters using the cove during summer recreational period, the types of water uses occurring during peak summer times, and the degree of congestion during peak times. We recommend that FERC delay any decision until the proper assessment can be done. This would require interviewing locals, meeting with SCDNR officials familiar with this cove area (we have been told that this is the most congested area on the lake), and visiting the site during peak recreational times. The assessment would have to take place in the summer of 2005. A proper assessment cannot be done until lake levels return to normal.

**Response:** No site-specific recreational data are available; however, the existing data available for Lake Murray are adequate to make an assessment of impacts. The staff addresses these recreational concerns further in section 5.2.5 of the FEA.

**Comment:** It is obvious the Commission is not sure of the extent of impacts on water skiing in this area. This indicates a need to conduct a thorough assessment during the peak usage in the summer of 2005. It is our position that the public should not be forced to leave a popular skiing area so a developer can provide private docking facilities to accommodate a commercial endeavor.

**Response:** The proposed facility would reduce the turning area available to water skiers; however, other obstructions in the lake, such as sand bars, islands, and bends in the natural shoreline create a greater barrier and disrupt the flow of the lake more than a proposed boat docking facility in the upper end of a small cove would. Existing recreational use of the cove would only be slightly affected. The staff addresses these concerns in section 5.2.5 of the FEA.

**Comment:** Shoreline management guidelines approved in 1991 as part of the Land Use and Shoreline Management Plan 5-year update were established in response to resource agency concerns about adverse impacts associated with the continued private development of the Lake Murray shoreline. It was agreed that, to minimize cumulative adverse impacts, a spacing restriction of 0.5 mile between multi-slip docking facilities would be incorporated in the plan.

The Commission suggests that cumulative impacts would have the potential to occur only if the guidelines are loosely adhered to on numerous occasions. Apparently the Commission can see into the future and has determined that there will not be numerous occasions, therefore this project can go forward. The Commission's rationale is flawed and contributes to the continued piece-meal development of the lake's shoreline. If guidelines are ignored in this case, they can certainly be ignored in future requests. The benefits of a shoreline plan become greatly diminished if guidelines are not strictly adhered to. We recommend that Commission staff contact the U.S. Fish and Wildlife Service and the SCDNR to discuss agency concerns regarding cumulative impacts if this application is approved.

**Response:** The proposed boat docking facility has been determined to be consistent with the intent and purpose of the Shoreline Management guidelines. The staff addresses the party's concerns regarding the 0.5-mile proximity limit between two marinas in section 5.2.9 of the FEA.

**Comment:** We recommend that the Commission review the alternative offered in Lake Watch's previous comments. We recommend that the facility be down sized to accommodate 10 slips, which would extend no further than 75 feet into the cove. This would be consistent with the shoreline plan, it would not interfere with existing recreational uses, and it would better blend in with the character of the neighborhood.

**Response:** Reducing the number of boat slips would not greatly change the impacts of the overall proposed boat dock. The only feasible alternative considered was that which was proposed in the licensee's application.

**Comment:** We strongly disagree with most of these findings but will limit this discussion to our major concern - boating use and public safety. The Commission visited the site in February 2004. Normally there is very little boat traffic this time of the year. Because of the dam remediation, the lake was drawn down to the 347-foot contour. At the time of the visit, there was no water thus no boating activity in this cove area. Therefore, the Commission could not determine the extent of boating activity and potential impacts on existing uses and public safety concerns.

**Response:** Adding 32 boats to the cove would not be a significant amount of additional boating activity, because activity generated from the Lakeside at Ballentine development would be dispersed geographically, in the larger area of Lake Murray, and temporally, because the boats would not all leave and return to the dock at the same time of day. Other recreational users, such as fishermen, would use the cove at times when boating activity would be minimal (i.e., early morning). The staff addresses these concerns in section 5.2.5 of the FEA.