

**MEETING NOTES**

**SOUTH CAROLINA ELECTRIC & GAS COMPANY  
SALUDA HYDRO PROJECT RELICENSING  
LAKE AND LAND MANAGEMENT TWC**

**SCE&G Training Center  
March 16, 2006**

Final ACG 3-29-06

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**ATTENDEES:**

Alan Stuart, Kleinschmidt Associates  
Alison Guth, Kleinschmidt Associates  
Tommy Boozer, SCE&G  
David Hancock, SCE&G  
Ron Ahle, SCDNR  
Dick Christie, SCDNR  
Tom Ruple, LMA  
Bill Cutler - LW  
Steve Bell, LW

Amanda Hill, USFWS  
Bill Argentieri, SCE&G  
Tony Beber, SCPRT  
Rhett Bickley – Lexington County  
Van Hoffman – SCE&G  
Mike Summer – SCE&G  
Randy Mahan – SCANA Services

**DATE:** March 16, 2006

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**HOMEWORK ITEMS:**

- SCE&G/KA to revise Buffer Zone and Riparian Management Plan per TWC comments

**AGENDA TOPICS FOR NEXT MEETING:**

- Picture Presentation on ESA's – Ron Ahle
- Discussion of ESA Management
- Discussion on Woody Debris Plan
- Discussion on Areas Below the 360'

**DATE OF NEXT MEETING:** **March 28, 2006 at 9:30 a.m.**  
**Located at the Lake Murray Training Center**

**INTRODUCTIONS AND DISCUSSION**

Alan opened the meeting and noted that before the group began discussions on the Buffer Zone and Riparian Management Plan that Bill Cutler has asked to present a few items to the group. Bill Cutler noted that he has developed a Structured Work Process for the TWCs that he would like to

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present to this group for consideration, as well as the other TWCs if time was available. Bill C. distributed an explanation of the process (attached below) and noted that in his experience a framework helps to smooth the progression through the issues. He continued to explain the benefits of a structured process and noted that it would help to improve the quality of the final product and consensus can be built incrementally. He noted that it would also provide an audit trail which makes it possible to see how a particular decision came about.

Bill C. continued to go through the bulleted items on the handout with the group. Alan expressed concern with too rigid a framework because not every issue falls under a structured framework in terms of resolution. Bill C. agreed and noted that sometimes when an issue is small it is easy to work with and a rigid framework is not needed, however a framework serves to resolve the larger issues in a more efficient manner. Bill C. also noted that he believes that this process will provide a degree of bullet proofing against challenges at the end and provides a structure that assists the group in what needs to be covered, as well as helping as well as helping smoke out the stakeholders who are unaware or not able to attend. On the subject of compiling stakeholder interests, Dick Christie noted that he believes that it is the role of SCE&G and KA through the FERC process to identify the interested parties; he added that that particular step has already been taken in this process. Ron Ahle added that the members of the TWC have many stakeholders depending on the resource agencies to express their interests. Bill C. concluded by noting that he was offering this process as a proposal to the group and is willing to present this to the other groups as well if they are interested. Randy Mahan noted that this information could be distributed to the other TWCs and they can decide where to go from there.

The group then began an interactive review session of the Buffer Zone and Riparian Management Plan. The Plan, with group consensus comments is attached at the end of the document in Adobe format (double click on the front page to open Adobe).

The group discussed the term "Riparian" as it is used in the document and noted it is generally associated with riverine areas. Alan explained that in this plan the term is defined as the area below the 360' elevation. The group decided that for clarification purposes, the term Riparian would need to be further defined or another word needed to be substituted.

Tommy Boozer explained to the group that there is currently 22.9 miles of buffer zone on the lake, which equals about 206 acres. He noted that in the new plan, they were proposing a 75' non-disturbance zone. Dick Christie asked how many miles the new buffer zone would address. Tommy replied that it would apply to the Future Development lands and what is determined under reclassification.

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The group continued to go over the Plan and it was pointed out that it may be good to include a section on education. This would address a volunteer program that encouraged individuals to revegetate areas below the 360', such as areas that were destroyed by pine beetles. Tommy noted that many of the buffer zones issued under the old permits had allowable limited brushing. Tom Ruple pointed out that many individuals are not aware of where the 360' is located. David Hancock explained that they have placed irons, painted trees, and put up signs on the majority of fringelands. Dick Christie asked if SCE&G would mark an unmarked area if a landowner requested it. Tommy noted that they could do that.

The group began to discuss the various definitions for land classifications. Randy suggested that Future Development lands could be better defined as lands that are available for sale and/or use up to and including development. Dick Christie noted that the FERC 18 CFR Sec. 4.41 had a good definition for buffer zones, and the group decided that it would be used in the plan.

After lunch the group began to discuss the section on Management Actions. Ron Ahle made a few suggestions on amending this section and noted that it may be beneficial to have a brief statement on Forest and Game Management areas included. The group decided to split this section into two paragraphs, one describing management actions from 1984-2005 and one paragraph describing management actions from 2005 onward (SCE&G to develop paragraph strawman).

The next section the group discussed was Monitoring and Compliance. Ron Ahle noted that documentation of planting successes and failures can be beneficial in the improvement of survivorship over time. Ron continued to note that it would consist of a structured procedure in which growth would be monitored. It was suggested that this plan could be implemented when a violation has taken place and could require a land owner to provide pictures and measurements of newly planted species for a certain period of time. The group concluded that this would be addressed further under the revegetation plan.

In discussions on the Buffer Zone and Revegetation plan, the group concluded that only Zone 2 (buffer zone) should be included in the new plan. Zone I (below elevation 360') will be covered under the ESA topic. Several individuals expressed concern that Zone 3 may unintentionally invite landowners to privatize the buffer zone with non-native grasses.

The group briefly discussed violations and how the plan would be implemented. In such cases of natural occurrences (e.g. lightning, pine beetles), Steve Bell suggested that SCE&G first encourage the individual to use the revegetation plan, or otherwise let it grow back naturally. The group agreed that it may be beneficial to consider that option.

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Ron Ahle noted that he believed the 25' spacing of trees in the 75' buffer may not be adequate. He explained that if the spacing was shortened to 24' then there would be 2x the amount of trees. Through some discussion it was decided that a 15' requirement would be placed in the plan with a maximum of 24' that could be implemented at the discretion of SCE&G. The group also decided that Sweetgum would be taken off the list of recommended species for planting in the buffer and all recommended grasses would be limited to those native species.

The group concluded the meeting and noted that it would be beneficial to include Norman Boatwright in the next meeting. Ron Ahle would also give a picture presentation on ESAs.

Meeting Adjourned

Attached below is the agenda, the TWC Work Processes Handout proposed by Bill Cutler, and the edited version of the Buffer Zone and Riparian Management Plan (double-click on the page and Adobe should open).

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**Saluda Hydro Relicensing  
Lake and Land Management Technical Working Committee**

**Meeting Agenda**

**March 16, 2006**

**9:30 AM**

**Lake Murray Training Center**

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- Interactive Review of Buffer Zone Management Plans
- Discussion on Additional Criteria for Future Buffer Zone Enhancements and Potential Restoration



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LAKE AND LAND MANAGEMENT TWC**

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**A Structured Work Process for the TWCs**

**Benefits of a structured process**

- Complete and thorough consideration of all factors
- Everyone on the same page
- Consensus is built incrementally
- Enables work to be done via the internet
- Builds an audit trail to support reviews and respond to challenges
- Uniformity of products across the project

**TWC Issue Resolution Report Template**

1. Definition of the Issue
2. Stakeholder Audit
3. Compilation of Stakeholder Interests
4. Definition of Success
5. Solution Options
6. Methods of Evaluation
7. Selected Solution .

These process steps cover all the needed elements of a successful issue resolution, and contain nothing extraneous. If a successful issue resolution is desired, nothing can be left out, and nothing needs to be added.

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**SOUTH CAROLINA ELECTRIC & GAS COMPANY  
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March 16, 2006**

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**A Structured Work Process for the TWCs  
William H. Cutler  
February 10, 2006**

A structured work process can enhance the efficiency and quality of the work done by the TWCs under the various RCGs

Benefits of a structured process.

- Complete and thorough consideration of all factors bearing on issue resolution
- Everyone on the same page on each issue
- Consensus is built incrementally toward a final agreement that is acceptable to all stakeholders
- Enables work to be done via the internet, speeding up the process and minimizing the need for meetings
- Builds an audit trail to support reviews and respond to challenges
- Uniformity of products across the project

A structured process implements the measures of the Operating Procedures document that governs the activities of the RCGs.

Paragraph 2.6 says, in part:

“Identify all stakeholders, their interests and issues...”

Paragraph 2.7 says, in part:

- 1. Encourage dialog which (1) gets at the deeper interests, values and priorities of the stakeholders, and (2) is structured to provide the inputs needed by subsequent stages in the solution-discovery process.”
- 2. Document stakeholder interests...”
- 3. At every step along the solution-discovery pathway, validation of every decision is established...”

A standardized structured work process can be implemented by adopting a template for the reports prepared by the TWCs that describe their proposed resolution for each of the issues they address. This report template would consist of the following sections.

**TWC Issue Resolution Report Template**

1. A Definition of the Issue, describing scope, content, and related factors as known at the outset. This definition may be revised as information is developed in the course of the issue resolution process.
2. A Stakeholder Audit, enumerating all the stakeholders, as individuals or classes, that have an interest in the issue. This audit would include measures taken to ensure that each stakeholder is engaged in the process, either by actual participation or by representation by a surrogate. The following definition of stakeholder is proposed: “Stakeholders are any with an interest in the outcome of the issue, whether they know it or not, and any who believe they have an interest, whether they do or not.” This broad and inclusive definition of stakeholder is of benefit because it ensures that all relevant stakeholders are included, thereby strengthening the solution, and that any significant challenges are anticipated and dealt with in advance.
3. A Compilation of Stakeholder Interests that expresses, to the satisfaction of each stakeholder, the concerns, interests, values and priorities held by each stakeholder regarding the issue in question.

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4. A Definition of Success which describes the qualities of an outcome (independent of specific features of any particular solution to be selected later) that would be acceptable to all stakeholders, along with whatever Measures of Effectiveness are appropriate to quantify realization of the desired qualities. This represents an idealized "wish list" and may contain conflicts to be resolved at later stages in the process. In general, the Definition of Success is more than a mere reiteration of stakeholder interests. Rather, it is a translation of those interests into a description of the outcome which is used as the standard for selecting the final solution.

5. A description of the Solution Options that were considered, as well as those rejected for consideration, with justification for these decisions. Include also a description of the strategy used to generate solution options, and how conflicts within the Definition of Success are resolved in design of a solution, by compromise, tradeoff, or discovery of a creative solution which erases the conflict.

6. A description of the Methods of Evaluation that are used to determine which solution option best satisfies the Definition of Success. This would include data, models, methods of analysis, etc. as appropriate to the issue. Studies necessary to support issue resolution are identified here.

7. A description of the Selected Solution that results from application of all the previous steps, with justification. Include analysis of considerations unique to the selected solution that may not have been addressed in previous steps.

These process steps cover all the needed elements of a successful issue resolution, and contain nothing extraneous. If a successful issue resolution is desired, nothing can be left out, and nothing needs to be added.

This structured process enables working via the internet. A section editor is assigned to each of the sections of the report. The members of the TWC e-mail suggestions to the section editor who uses them to prepare a working draft of the section. The working draft is e-mailed to TWC members, who then review and make additional suggestions. Face-to-face meetings may be held as necessary to iron out differences. When all TWC members are satisfied, the report is ready for submittal to the RCG members for familiarization prior to a RCG meeting where the report is reviewed.

# **SOUTH CAROLINA ELECTRIC & GAS COMPANY**

*COLUMBIA, SOUTH CAROLINA*

## **SALUDA HYDROELECTRIC PROJECT**

*FERC PROJECT NO. 516*

### **BUFFER ZONE AND RIPARIAN MANAGEMENT PLAN**

*JANUARY 2006*

*Prepared by:*

***Kleinschmidt***  
*Energy & Water Resource Consultants*

SOUTH CAROLINA ELECTRIC & GAS COMPANY  
COLUMBIA, SOUTH CAROLINA

SALUDA HYDROELECTRIC PROJECT  
FERC PROJECT NO. 516

BUFFER ZONE AND RIPARIAN MANAGEMENT PLAN

JANUARY 2006

Prepared by:

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*Energy & Water Resource Consultants*

**SOUTH CAROLINA ELECTRIC & GAS COMPANY  
SALUDA HYDROELECTRIC PROJECT  
(FERC PROJECT NO. 516)**

**FERC COMPLIANCE ARTICLES**

**BUFFER ZONE AND RIPARIAN MANAGEMENT PLAN**

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**LIST OF APPENDICES**

Appendix A: 75 Foot Buffer Zone Goals and Criteria for Re-vegetation of Disturbed Areas

**SOUTH CAROLINA ELECTRIC & GAS COMPANY  
SALUDA HYDROELECTRIC PROJECT  
(FERC PROJECT NO. 516)**

**FERC COMPLIANCE ARTICLES**

**BUFFER ZONE AND RIPARIAN MANAGEMENT PLAN**

**Comment:** Address riparian zone in a different plan or section of the SMP.



This plan was prepared in compliance with the requirements of the Federal Energy Regulatory Commission's (FERC or Commission) Order Approving Land Use and Shoreline Management Plan for FERC Project No. 516, issued and effective June 23, 2004 and subsequent Order Clarifying and Modifying the June Order, issued and effective October 28, 2004 (together referred to hereafter as the "Order"). Paragraph G of the June 23 Order and Paragraph E of the October 28 Order require South Carolina Electric & Gas (SCE&G) to develop and file a plan, by June 23, 2005, for addressing buffer zone management and the re-vegetation of improperly cleared buffer zones on Lake Murray. On May 31, 2005, SCE&G requested a time extension until January 31, 2006.

**Comment:** Delete this paragraph

Define Riparian in final plan. This term will be used to address area below 360' elevation along the lake.

Add a short paragraph of how LSR buffer zone is handled.

SCE&G will mark the 75-foot set back property line

This plan addresses management and re-vegetation of areas within the 75' foot buffer zone above the 360' foot contour (Plant Datum) ("the 360," or "El. 360") adjacent to lands sold after 1984. This document applies to all lands around the lake except those sold prior to 1984 or to those properties below El. 360 over which SCE&G has no management authority. Buffer zones exist for only a very few parcels of shoreline property sold prior to 1984.

**Deleted:** riparian

**Deleted:** between

**Deleted:** and 2000 where vegetation has been disturbed

**Deleted:** does not

**Deleted:** y

**Deleted:** any

**Comment:** Delete from this section and use later in plan.



<sup>11</sup> Though submitted and approved in 1980, Licensee's original SMP contained a fifty foot (50') buffer requirement. However, only a couple of parcels were sold under the original SMP.

## 1.0 DEFINITIONS

Buffer Zone – SCE&G provide strawman for this definition and send to other members of TWC for their review and comment. Use 18 CFR 4.41(f) (7) (iii) as the definition.

Future Development Lands are Licensee-owned properties within the project boundary that have been identified as lands available for possible sale and/or development. These lands are available for sale and/or use up to and including development.

Deleted: ¶

Fringeland is Licensee-owned property which lies between the Project Boundary Line (PBL) and the 360. SCE&G is to define what happens when Fringeland is sold under this definition. It turns into Easement Property.

Add definition of Easement Property – SCE&G to provide a definition

Environmentally Sensitive Areas (ESAs) are generally located below the 360-foot contour. ESAs include areas of wetlands and shallow coves, typically occupied by willow trees and buttonbushes, which are the “target vegetation” for defining which shoreline areas are to be considered ESAs by virtue of vegetative cover; and other areas determined to be critical to the continued existence of indigenous or threatened species, such as spawning and nesting habitat. ESAs have a 50-foot natural buffer zone designated around them. Clearing is prohibited within the ESAs and the associated 50-foot buffer zone. They are sub-classified as follows:

Deleted: are properties adjacent to shoreline classified “Future Development.” ESAs

Deleted: and not available for sale

Deleted: non-endangered

Comment: Remove from this section and use in a future section of the SMP.

- *Shallow Coves with Stream Confluence* – Areas where streams enter the lake to form coves where water elevations in areas outside the historical stream channel are predominately above the 355 foot contour line. The up gradient portion of shallow coves is typically vegetated with buttonbush and willow.
- *Continuous Vegetated Shoreline* – Continuous vegetated linear shoreline at least 66 feet in length, with vegetation greater than 5 feet deep (horizontal depth of vegetative strip not vertical depth of water), measured perpendicular to the shoreline.
- *Intermittent Vegetated Shoreline* – Linear shoreline coverage of vegetation at least 66 feet in length. This class can have gaps. (Gap is defined as 8 to 20 feet in length)

Deleted: an area at least

where there is little or no vegetation below the normal high water mark.) Areas with gaps more than 20 feet in length are termed “breaks” and are not to be considered vegetated shoreline.

Deleted: within which

- *Bottomland Hardwood and Wet Flats* – Continuous linear shoreline coverage of bottomland hardwood (excluding sweetgum) and wet flats at least 66 feet in length.

2.0 **INTRODUCTION – [MOVE THIS SECTION TO BEFORE THE DEFINITIONS. MAKE IT SECTION 1.0]**

Deleted: BACKGROUND

Shoreline vegetation along Lake Murray primarily consists of buttonbush, alder, willow, river birch, green ash, and loblolly pine with limited occurrence of oaks and other hardwood trees. Forested, riparian buffers along reservoir shorelines are generally acknowledged to provide a variety of environmental functions and ecological values. These environmental functions include trapping and/or filtering sediment runoff, reducing bank erosion, removing phosphorous and other nutrients and sequestering contaminants such as pesticides. Ecological values include contribution of leaves and other nutrient sources to the lake, maintenance of habitat for fish and aquatic organisms by moderating near shore water temperature, providing woody debris and providing habitat for amphibians and other terrestrial organisms. Buffers also provide societal values such as maintaining a more “natural” aesthetic appearance of shoreline.

Deleted: Riparian b

The license issued to SCE&G by the FERC in 1984 for the Saluda Hydroelectric Project required SCE&G to establish and maintain a 75-foot vegetative buffer zone on all Fringeland conveyed after the issuance of the 1984 license. The buffer zone, which extends inland from the 360 foot (Plant Datum) contour, creates an expanded vegetated, aesthetic buffer between back property development and the Lake Murray shoreline that protects and enhances the Project’s scenic, recreational and environmental values. The 75-foot vegetative buffer zone represents the normal limit to which SCE&G may sell land between the PBL and the lake. SCE&G retains ownership of the 75-foot buffer area. It comes into existence “in front of” (between the PBL and the 360’ contour) all Fringeland sold. In addition, buffer zones exist along all perennial and intermittent streams in both Future Development and Forest and Game Management land as a result of the June and October 2004 FERC Orders.

In addition to the 75-foot zone for Future Development properties sold, and thereafter classified as “Easement Properties,” SCE&G manages (and in most locations, owns) lands below the 360-foot contour, adjacent to Future Development lands and Easement Properties. Management prescriptions for these lands, which are separate from the 75-foot vegetative buffer zone, are also provided here.

Comment: Remove from this section and save for a future section



Insert section for Goals and Objectives after the Introduction Section – [SCE&G will develop a strawman to address this section]

### 3.0 MANAGEMENT ACTIONS

**Shoreline Property:** Generally speaking, prior to 2004, SCE&G managed its properties within and adjacent to the PBL, including Future Development Lands, according to its Forest Management Plan. However, there are some areas where active management is problematic, and sometimes not possible, due to the lack of land-side vehicular access, small and isolated parcels, or land that is adjacent to highly developed residential areas, or for other reasons. Where applied, the Forest Management Plan provided for the protection of the watershed and its wildlife and fishery habitat and reduced insect- and disease-related tree mortality. In turn, the plan provided for a variety of forest products while promoting a healthy forest and managed conservation of natural resources. Among other things, this program employs selective harvesting to maintain optimum stocking by removing suppressed, intermediate and diseased trees while favoring dominant and co-dominant pine trees and mass-producing hardwood. Forestry management practices affecting property that became the 75-foot buffer zone upon sale of the Fringeland include the following:

**Comment:** Condense this paragraph into two sentences and move to Introduction Section.

1. Maintenance of a 100-foot wide forested buffer strip adjacent to the shoreline where timber is only selectively harvested to ensure the health of the forest. SCE&G harvests trees within 100 feet of the open shoreline where stocking conditions make thinning appropriate.
2. SCE&G adheres to, and sometimes exceeds where necessary, the South Carolina Forestry Commission's Best Management Practices.
3. Healthy mass-producing hardwood trees within 100 feet of the shoreline are maintained.
4. Selective thinning that always leaves a minimum stem basal area of 60 square feet for over story trees where stocking density is adequate.
5. Forest stands on unique sites such as cliffs, steep slopes, or atypical groups of trees receive special protection.
6. No trees are cut within the 25-foot area (measured horizontally) immediately adjacent to the Lake's shoreline beginning at that point where merchantable tree growth begins

to ensure that habitat and aesthetic values are protected. Only weak and hazardous trees are removed when deemed necessary to protect public safety and the health of the forest. Special attention always is given to aesthetics in areas of shoreline highly visible to the public from the lake.

7. To promote the existence of a healthy forest understory, SCE&G's goal is to attempt to schedule selective thinnings so that they don't coincide with the sale of Future Development lands, but rather provide adequate time intervals for the healing and/or development of a vigorous vegetative understory so as to provide desirable levels of forest stratification within the transition zone.
8. Prohibits tree cutting within the 25-foot area (measured horizontally) immediately adjacent to the lake's shoreline on all Future Development lands, while maintaining all healthy mast-producing hardwood trees within 100 feet of the shoreline.

**Comment:** Remove these bullets

Since 2004, SCE&G forestry practices prohibit selective thinning or timber management within 100 feet of the 360-foot contour on Future Development Lands.

**Buffer Zone (1984-2005)<sup>2</sup>:** [Add footnote – Discuss history of SMP, initial shoreline management plan was approved in 1981.] Buffer zones did not exist prior to 1984. As part of the sale of Future Development property, the 75-foot buffer zone was delineated and documented. It became the lake-ward property boundary with the new Fringeland owner. SCE&G maintains GIS based maps of each established 75-foot vegetative buffer zone. Where available, aerial photography may have been used for site documentation. This provided a baseline to assist in future monitoring.

**Deleted:** Pre

**Comment:** Revise term to Easement Property owner

SCE&G maintained special use restrictions within the  75-foot vegetative buffer zone. The use of SCE&G's 75-foot vegetative buffer zone was entirely permissive and at the discretion of SCE&G as landowner. Owners of adjoining lands (back property owners) were given the right of access by foot to and from the lake over the buffer zone, but were not permitted to encroach with improvements, cut any significant trees or shrubs, place any water-oriented encroachments (docks, ramps, etc.), change the contour of the land, or post the property, without

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<sup>2</sup> In 2005, Licensee adopted and is operating according to more stringent and protective criteria. These criteria will be the subject of study and discussion during the currently ongoing Project 516 relicensing process, and included, as they may be amended, as part of the SMP five-year review process integrated into the relicensing process as directed by the FERC in the Order.

written consent from SCE&G. Any modification to the lands within the buffer zone approved by SCE&G had to comply with all applicable requirements of SCE&G's Shoreline Management Program.

Special use restrictions within the 75-foot vegetative buffer zone included the following:

1. Upon the sale of any Fringeland, a purchaser was allowed to perform limited brushing so long as the purchaser adhered to SCE&G's established guidelines as described below. Once a purchaser had completed the permissible limited brushing, a subsequent property owner only could maintain the work that had been completed. No further brushing or clearing was allowed, whether by permit or otherwise.
2. Trimming or limbing of trees higher than ten feet above the ground was prohibited without prior approval and permits.
3. "Privatization" and structural encroachments were prohibited.
4. After 1994, individual boat ramps were prohibited. However, community boat ramps were encouraged and approved, provided existing guidelines were met.
5. Removal of vegetation greater than 3 inches in diameter measured at breast high (4') was prohibited without a permit.
6. Boat docks were allowed provided they complied with SCE&G's standard boat dock guidelines and appropriate permits were obtained.

Additional restrictions may have applied if the property was adjacent to ESAs.

[Buffer Zones \(2005 - ???\) SCE&G should develop a strawman to describe this section and send to TWC for review and comment.](#)

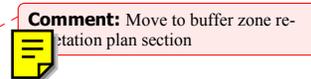
**Lands below El. 360.** SCE&G maintains a policy of no disturbance for any and all ESA target vegetation below El. 360 unless its removal is necessary for reasons of health and human safety or in compliance with the Woody Debris Management Plan. Furthermore, SCE&G maintains a policy of no disturbance for any vegetation below El. 360 without approval from SCE&G. With few exceptions, lands below El. 360 are owned and managed by SCE&G.



**Comment:** Move to another section pertaining to riparian section of SMP.

#### 4.0 MONITORING & COMPLIANCE

Buffer zones are inspected annually by SCE&G staff for compliance with approved management practices. Boundaries have been painted and signs have been posted to identify these areas. On approximately a five-year rotation, a physical inspection of the buffer zones to monitor for violations and replace damaged or worn signs is conducted. At all times, upon observation or notification that a property owner may be in violation of these management criteria, SCE&G field checks the property and, in cases of confirmed violations, provides written notification of the violations and requests for corrective actions to the land owners. Buffer zones that have been restored are inspected annually to check survival of planted species and compliance with the re-vegetation plan.



## 5.0 BUFFER ZONE RE-VEGETATION PLAN

Occasionally, vegetation in buffer zones is disturbed beyond what is permitted in the guidelines. Regardless of whether a disturbance was man-made or natural, intentional or unintentional, it is the intent of the Licensee to implement this re-vegetation plan. The principle of the plan is to stabilize disturbed areas by planting forbs, grasses, shrubs and trees as needed, and to allow natural succession to continue.

SCE&G has worked closely with the National Resource Conservation Service (NRCS) to develop guidelines for establishing and/or restoring effective vegetative buffer zones. The NRCS is a federal agency whose mission is to work with landowners assessing and treating natural resource concerns including establishing protective buffer zones on lands which border water bodies. According to the management protocol recommended by NRCS, riparian buffers occur in three distinct zones for management purposes. Zone II begins at the edge of Zone I and extends upland a minimum distance of 20 feet measured horizontally. This zone, which can be increased up to 120 feet in high sediment or nutrient producing areas, can include faster growing softwood trees, but should include at least 20% deciduous hardwoods or shrubs. Zone III would apply upland of Zone II and consists of filter strips comprised of grasses, legumes and/or other forbs. This zone may be a component of a buffer zone where protection from excessive sediment or nutrients is needed.

**Comment:** Remove since we are changing the NRCS guidelines for the new BZ Plan.

**Deleted:** Zone I begins at the normal water line and extends upland a minimum distance of 15 feet measured horizontally, and vegetation should favor hardwood trees and shrubs.

**Comment:** Reword this paragraph to remove Zone I and Zone III

The NRCS has prepared “minimum guidelines” for re-vegetation of these Zones, and the Licensee intends to require landowners to conduct re-vegetation under these Guidelines, which appear as Attachment A.

**Comment:** Remove since we are not using the NRCS guidelines.

- Zone I (Riparian) – Lands below El 360
- Zone II (Filter Zone) – Lands above El 360, beginning at the 360 and extending 75 feet inland, measured horizontally
- Zone III (Buffer Zone) – Lands above EL 360 beginning at a line 25 feet inland from the 360, measured horizontally, and extending to a line 75 feet inland measured horizontally at all points above the 360.



## CORRECTIVE ACTIONS AND PENALTIES

### Corrective Actions

Landowners found to have violated the buffer zone requirements or landowners adjacent to buffers that have been significantly affected by natural conditions (storm, pestilence, fire, etc.) must submit a re-vegetation plan to SCE&G within 30 days of being notified by SCE&G of the violation or “natural” conditions warranting mitigation. If the buffer has been significantly affected by natural conditions, then SCE&G will work with the landowner to restore vegetation in the buffer zone. SCE&G’s Lake and Land Management Department will review the final plan for adequacy and completeness and provide the landowner with a request for modifications and/or approval within 30 days of receipt of the plan. If the plan requires modification, the landowner may be given no more than fifteen business days following SCE&G’s modification request to make the modifications and re-submit a conforming plan. Under no circumstances may more than a total of 50 days for violations or 90 days for natural condition mitigation from the date of SCE&G’s notification to the landowner pass until an approved plan must be received by SCE&G. SCE&G reserves the right to require more than the minimum re-vegetation requirements should it determine that additional vegetation is needed, based on site characteristics or extenuating circumstances. The nature of the violation or the response of the landowner are two such extenuating circumstances that will be considered. The landowner must comply with these changes or risk penalties.

Comment: Reword this section into bullet items and add d and e from Penalty section.

Once a re-vegetation plan has been approved, the landowner must implement the plan during the next planting season. SCE&G defines the planting season to be from November to February. Should the landowner not implement the plan within the specified time frame, the plan will become null and void and the landowner will be found in violation and subject to penalties.

This plan will be used to encourage all landowners to develop a buffer zone or correct any violations of existing buffer zones.

SCE&G will perform a follow-up inspection after the 5 year improvement period.

**6.0 PENALTIES MAKE INTO SUBSECTION OF CORRECTIVE ACTIONS AND PENALTIES**

In most cases, SCE&G is able to work with the landowner to resolve areas of nonconformance, particularly if the buffer zone modification is a result of natural causes. SCE&G reserves the right to require additional plantings that go beyond the guidelines in Attachment A.

Landowners found in violation of the 75-foot buffer zone management restrictions or management restrictions below El. 360, as a result of the removal of vegetation, encroachment into the buffer zone, or un-permitted changes to property contours, may be subject to any or all of the following:

- a) Repeat violations by landowners may result in the permanent cancellation of their dock permit and loss of lake access.
- b) Revocation of existing shoreline dock and/or ramp permits for a period of no less than five years.
- c) Denial of any future permits and denial of access across SCE&G's property to the lake, perhaps even in the form of positive barriers.
- d) Requirements that the landowner submits a re-vegetation plan for approval to SCE&G and complete replanting during the next growing season. A re-vegetation plan must, at a minimum, comply with guidelines set forth in Attachment A. add note – individual will provide photo documentation for a period of 5 years
- e) SCE&G reserves the right to take legal action to require re-vegetation of the affected areas, seek damages, and seek its administrative and legal costs for doing so. add note – individual will provide photo documentation for a period of 5 years
- f) Removal of marketable timber within the buffer zone by the landowner will require, at a minimum, payment equal to triple stumpage, subject to valuation by SCE&G's Land Department.
- g) Reimbursement of costs, in cases where SCE&G finds it necessary, to actively restore affected buffer zones because landowners either have not timely submitted a re-vegetation plan, or the conditions are such as in the opinion of SCE&G to require immediate attention to prevent serious shoreline problems.

**Comment:** Move to previous section of re-vegetation

**Comment:** Move to previous section of re-vegetation.

ATTACHMENT A  
75-FOOT BUFFER ZONE GOALS AND CRITERIA FOR  
RE-VEGETATION OF DISTURBED AREAS

**BUFFER ZONE GOALS AND MINIMUM CRITERIA  
FOR RE-VEGETATION OF DISTURBED AREAS**

**FERC PROJECT NO. 516**

**LAKE MURRAY – SCE&G**

**MINIMUM BUFFER ZONE AND SHORELINE VEGETATION**

1. Improvement Goals and Recommendations

Implementation of the management goals below is recommended to enhance vegetated buffers, thereby improving biodiversity, providing erosion protection, adding or maintaining filtering capacity, and protecting the aesthetics of a “natural” shoreline.

The vegetated buffer will be managed as three zones with the desired vegetative mix for each zone based on the inherent properties of the zone and the ecological function of that zone and of the buffer in total. These zones include Zone I (vegetated perimeter below the 360 elevation), Zone II (0 feet to 25 feet beginning at the 360 elevation inland), and Zone III (>25 feet to 75 feet). The table in Section 3 provides recommendations for adapted species for each zone.

- a) Zone I: If the slope is as flat as 2 to 1 or flatter, an understory cover consisting of grasses, forbs, and shrubs with a height of at least 6 inches or duff or natural mulch at least 4 inches thick will be established or encouraged to develop over at least 75% of this zone for the stability of the shoreline. All shrubs, grasses and forbs used to meet the understory requirement shall be native species. Absolutely no removal of trees and shrubs other than dead specimens is permitted in this zone. Unless an exception is granted by SCE&G, any tree removed in this zone must be replaced. Replacement trees shall be at least 6 feet in height (measured from the first sign of bark exiting the

soil to the top of the tree). If the slope of this zone is steeper than 2 to 1 and the shoreline is unstable, South Carolina Electric & Gas will provide guidance on acceptable measures that may be used to stabilize the shoreline.

**Comment:** This zone will be used as part of the riparian description.

- b) Zone II: At least 50% of Zone II shall have an understory cover consisting of grasses, forbs, and shrubs with a height of at least 6 inches or a layer of duff or mulch of natural materials at least 4 inches in thickness. All shrubs, grasses and forbs used to meet the understory requirement shall be native species. Absolutely no removal of trees other than dead or diseased specimens is permitted in this zone should occur in this Zone. Removed trees should be replaced as needed to meet the spacing limitation. Replacement trees should be at least 6 feet in height above the ground.

**Comment:** SCE&G will develop spacing criteria instead of 50% understory cover.

- c) Zone III: An understory primarily consisting of herbaceous species is suggested for this zone to provide for immediate filtering of sediment, nutrients, and other potential pollutants from developed upland areas above lake. Traditional lawn species, vines and shrubs are accepted and permitted in the upper 25 ft. of this zone, i.e. >50 ft to 75 ft. can be planted with grass but will be managed naturally without application of nutrients or pesticides, and except as specified below, it may not be cleared or “improved” to create conditions favorable for such traditional lawn species. Selective thinning may be allowed in this zone to remove undesirable or dead trees and shrubs. Dead or undesirable trees, which are removed, shall be replanted. Replacement trees should be at least 6 feet in height above the ground.

**Comment:** Remove this zone

## 2. Minimum Criteria for Re-vegetation of Disturbed Areas

The following guidelines shall be adhered to as minimum criteria for application in the restoration of disturbed buffers along the shoreline perimeter of Lake Murray:

The area beginning at the 360 feet elevation (the “360”) and continuing inland to the limits of the 75 ft shoreline buffer zone shall be maintained as a vegetated buffer. No removal of ESA targeted vegetation (willow, buttonbush etc.) whatsoever may occur. This entire area shall be inclusive of buffer vegetative management Zone II and Zone III.

- a) In addition to the requirements for zones II and III, if the slope of Zone I is as flat as 2 to 1 or flatter, the guidelines in Section 2 will be applied to facilitate the establishment/development of satisfactory vegetative cover.
- b) The spacing between any two trees shall not exceed 25 feet. In addition, the spacing between the 360 feet elevation and a tree shall not exceed 25 ft.
- c) If the spacing does not meet the minimum requirements cited above, specimens of approved tree species shall be planted as needed for compliance. Dead trees or trees weakened by disease, insects, natural events, etc. may be selectively cut. However, cut trees must be replaced, regardless of their spacing, to meet these spacing requirements. Existing pines may be credited towards meeting the spacing requirements. However, pines are not included in the list of acceptable replacements because of the frequency of mortality due to pest and climatic problems.
- d) If a significant understory was present prior to disturbance in Zone 1 re-vegetation shall be planted to have an understory cover consisting of grasses, forbs, and shrubs with a height of at least 6 inches covering no less than 75 % area in Zone 1.
- e) If a significant understory was present prior to disturbance in Zone 2 re-vegetation shall be planted to have an understory cover consisting of grasses, forbs, and shrubs with a height of at least 6 inches covering no

**Comment:** Change to something less than 25 feet (any number between 15 and 24 feet can be included in this plan)

less than 50 % area in Zone 2 and a layer of duff or mulch of natural materials at least 4 inches thick.

- f) In addition, in order to meet this requirement, the understory cover in both Zones 1 and Zone 2 shall be in a mosaic or linear arrangement that extends across at least 80% of the length of the buffer.
- g) The impacted area shall be replaced with a layer of duff or mulch of natural materials at least 4 inches thick. The leaves from the leaf drop of the trees must be left on the surface to provide ground cover and filtering. Dead limbs on the surface in the buffer zone may be removed.
- h) All replanted trees must be of a height between 6 to 8 feet above the ground (measure from the first sign of exposed bark exiting the soil to the top of the tree).
- i) No pesticides or nutrients are to be applied within the buffer without written approval from SCE&G.

3. Recommended Species for Planting in the Vegetated Buffer

ZONE	RECOMMENDED SPECIES		
	Trees	Shrubs	Grass & Forbs
Zone I  (Perimeter below 360 feet elevation)	Black Willow* Cottonwood* Cypress, Bald* Cypress, Pond Green Ash* River Birch* Swamp Tupelo Willow Oak* Water Oak*	Buttonbush* Silky Dogwood* Swamp Azalea Wax Myrtle* Alder	Maidencane Switchgrass (Alamo)* Bushy Bluestem Switchcane Hibiscus Water willow

ZONE	RECOMMENDED SPECIES		
	Trees	Shrubs	Grass & Forbs
Zone II (0 to 25 feet in perimeter above the 360 feet elevation)	American Elm* Bitter-nut Hickory Crabapple* Dogwood* Eastern Redbud* Eastern Redcedar* Green Ash* Hackberry/Sugarberry Laurel Oak* Paw Paw Persimmon* Red Maple* Red Mulberry Sweetgum*  Sycamore* Water Oak* White Ash* Willow Oak* Yellow Poplar*	American Strawberry Bush American Beautyberry* American Holly* Carolina Rose Native Azaleas Wax Myrtle*	Big Bluestem* Broomsedge Eastern Gamagrass* Little Bluestem* Indiangrass* Purpletop Switchgrass* Illinois Bundleflower* Partridge Pea* Purple Coneflower*
Zone III (>25 to 75 feet in perimeter above the 360 feet elevation)	American Elm* Bitter-nut Hickory Crabapple* Dogwood* Eastern Redbud* Eastern Red Cedar* Green Ash* Hackberry/Sugarberry Laurel Oak* Paw Paw Persimmon* Red Maple* Red Mulberry Sweetgum* Sycamore* Water Oak* White Ash* Willow Oak* Yellow Poplar*	American Strawberry Bush American Beautyberry* American Holly* Carolina Rose Native Azaleas Wax Myrtle*	Big Bluestem* Broomsedge Eastern Gamagrass* Little Bluestem* Indiangrass* Purpletop Switchgrass* Illinois Bundleflower* Partridge Pea* Purple Coneflower*

**Comment:** REMOVE FROM LIST

**Comment:** Remove from list



The tree, shrub and herbaceous plants listed include only native species which are adapted for the location and use and which are commercially available. Species which typically are the most readily available are indicated by an “\*”. Note that the native botanical community may include other acceptable species that typically are not commercially available.