

To: Alan Stuart

CC: Randy Mahan, Bill Argentieri

10/21/05

**Comments on “Operating Procedures for the Relicensing of the Saluda
Hydroelectric Project FERC Projects 516”**

The following comments on the Operating Procedures for the Relicensing of the Saluda Hydroelectric Project FERC Projects 516 are offered with the goal of insuring that the atmosphere of collaboration initiated by SCE&G effectively continues throughout the process. Pursuant to our belief that the formation of ground rules governing the actions of stakeholders is a critical step that affects the substantive rights of all parties, we respectfully offer the following comments:

General Comments:

We appreciate the opportunity to comment on the protocol document. In fact, it is a document with relatively few substantive issues. Much of the confusion arises from the absence of a definition section and lack of clarity in drafting the initial protocol. When the request to comment on the protocol was made, the response from Kleinshmidt & Associates was positive. However, the lack of a framework to handle the comments, the refusal to form a group to handle procedural concerns, and the lack of stakeholder involvement in the initial drafting of the protocol raises concerns that collaborative drafting was abandoned for the sake of convenience. More meetings are not ideal but

may be necessary to do what it takes to do the job correctly, regardless of time or energy expenditure. We are recommending a Procedural Resource Conservation Group aimed at handling procedural concerns with a representative from each Resource Conservation Group (RCG), resource agency, and SCE&G. While this is another meeting, the Procedural RCG will only meet as necessary, most likely a few times toward the beginning of the process to address items such as the communications protocol. This structure would actually be more efficient because each representative could report on process developments to the individual RCG groups; enabling the groups to be proactive instead of reactive to protocol document drafting.

The introduction to the protocol states “These procedures provide a framework, which can be amended as the process evolves, when there is consensus among the team to make changes”. It can sometimes be difficult to ascertain what effects certain protocol provisions will have on the process in the future and the protocol explicitly recognizes the need for the flexibility to amend. A Procedural RCG will be the forum for establishing consensus among all RCGs as called for in the protocol. This forum currently does not exist. The stakeholders were told at the September 22, 2005 meeting that these concerns would be handled informally between some stakeholders, possibly over the phone. Any process concerns arising in the RCGs will undoubtedly involve discussions that are currently underway and issues in need of quick resolution. The notion that informal consultation between dozens of stakeholders is less burdensome than a small group of people regularly in contact seems counterintuitive.

Section 1:

Fundamentally, the mission statement should not be unilaterally created as it is the guiding document of all the parties. Other relicensings involving the traditional licensing process have taken months to formulate the initial protocol and mission statement. While no one is suggesting this sort of delay (or any delay at all), Saluda stakeholders were offered no chance to input until they requested it. This demonstrates the need for a dependable way of addressing procedural questions to avoid confusion.

Section 1.1:

The mission statement should reflect the collaborative intent of the parties to reach a settlement and refer to a balanced result for the utility and the resource, much like the RCG mission statement does. This is possible with only minor modifications and serves the stated goal of the mission statement being a “guidepost” for everyone:

SCE&G will manage the process through collaboration with state and federal resource agencies, non-governmental organizations, special interest groups, and other interested stakeholders. This collaborative consultation process will be used to gather as well as disseminate information. The objective will be to learn from, as well as educate, stakeholders on the issues and come to a balanced settlement of those issues that accounts for the reasonable needs of SCE&G, maintains and enhances the quality of the resource, and accounts for the reasonable needs of the stakeholders.

Section 2.6:

This section should make clear that the knowledge requirement to serve on the Technical Working Committee (TWC) is not limited to formal training in respective areas of expertise but also considers practical knowledge and experience and the insights that informed lay people can make to analysis and decision making. The protocol should establish how the members of the TWC are selected in a manner that all stakeholders have a reasonable opportunity to participate in or be represented on the TWC.

Section 2.8:

This section should say that the communications protocol will contain specifics on when contact with the press is allowed. What appears to be a total prohibition on press releases in section 5.0 should be addressed in these communication protocols. In other proceedings there is a confidentiality agreement between stakeholders regarding settlement discussions or certain proprietary information that may come out in the operations RCG. The protocol should make clear that no confidentiality agreements will be required that attempt to (1) protect information that is accessible to the public, whether as public documents or through any applicable legal process or (2) that are designed to withhold information from certain stakeholders.

Section 4.3:

#4- Who has to agree to the inclusion/exclusion of a parking lot item should be specifically identified.

#5- “SCE&G invites and encourages, at anytime during this process, all interested parties to participate on any level of the relicensing of the Saluda Hydro Project.” The stakeholders appreciate SCE&G’s acknowledgement of the stakeholders’ rights to participate in the relicensing process that will ultimately control many aspects of SCE&G’s use of the water and other resources in the project boundary that belong to the public. We believe the current meeting schedule is insufficient in that all meetings are scheduled Monday through Friday during business hours. Many stakeholders are taking personal and vacation leave to participate in this process. We recognize the important role that agencies play, how hard they work, and how thinly their efforts are often stretched. Their absence at an occasional evening meeting does not mean no progress can be made without them. An added benefit to occasional evening and weekend meetings is increased public involvement, something SCE&G has strived for from the beginning.

Section 5.0:

“All news releases to the media will be coordinated through the SHRG and RCG.” As discussed above, this topic should be covered in detail in the communications protocol. The protocol must be clear that stakeholders may communicate with their constituencies, individually and through the press, without restriction or any sort of preclearance, provided that the communications are not covered by any applicable confidentiality agreements and do not purport to speak for the Saluda Hydro Relicensing Group. Stakeholders, including SCE&G, have constituencies to which they are

committed to updating, occasionally, the most effective way of doing this could be through use of the press.

Conclusion

As you can see our substantive concerns are few. Before the last public meeting, the document distributed with the notation of “final protocol” and the 10 days of ensuing confusion clearly demonstrate the need for a more effective way of identifying and handling procedural concerns. When the first rounds of RCG meetings were scheduled without any agency or stakeholder consultation, it became immediately apparent that many of the dates would not work. As a result, the entire process has been delayed while everyone’s schedule is coordinated. This is another example of the inherent problems of unilateral action in a public process and the need for a procedural group. The undersigned stakeholders respectfully request a Procedural RCG:

- 1) American Rivers
- 2) Coastal Conservation League
- 3) Columbia Audubon Society
- 4) Lake Murray Association- *See Attached*
- 5) Lake Murray Homeowner’s Coalition
- 6) Lake Watch
- 7) Midlands Striper Club
- 8) South Carolina League of Women Voters
- 9) South Carolina Wildlife Federation
- 10) Trout Unlimited- Saluda Chapter

Signatories reserve may submit individual comments as they see fit



The Lake Murray Association, Inc

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Ballentine,

October 20, 2005

Memo : Alan Stuart, Kleinschmidt

Randy Mahan and Bill Argentieri, SCE&G

The Lake Murray Association sees a need to clarify the protocol document in several areas before the RCG meetings can become productive. We are not suggesting that a protocol RCG be established to function indefinitely as we think one more committee may be counterproductive. We do however believe that a committee appointed from the various stakeholders to work with SCE&G to clarify various items in the current protocol before the work begins is appropriate.

The introduction to the protocol states “These procedures provide a framework, which can be amended as the process evolves, when there is consensus among the team to make changes”. The stakeholders were told at the September 22, 2005 meeting that these concerns would be handled informally between some stakeholders, possibly over the phone. There needs to be a method to amend the protocol process when the need arises. We believe decision should be made in the RCG’s only and no decision should be made between stakeholders in a parking lot or over the phone. There needs to be a method established from the beginning to make these adjustments. This needs to be made clear in the current document.

Consensus needs to be defined and a percentage attached to it and clearly written in the protocol document.

Section 1:

Fundamentally, the mission statement should not be unilaterally created as it is the guiding document of all the parties. We agree with other stakeholders that the mission statement needs to be amended as follows:

The mission statement should reflect the collaborative intent of the parties to reach a settlement and refer to a balanced result for the utility and the resource, much like the RCG mission statement does:

SCE&G will manage the process through collaboration with state and federal resource agencies, non-governmental organizations, special interest groups, and other interested stakeholders. This collaborative consultation process will be used to gather as well as disseminate information. The objective will be to learn from, as well as educate, stakeholders on the issues and come to a balanced settlement of those issues that accounts for the needs of SCE&G and the quality of the resource.

Section 2.6:

This section should make clear that the TWC committee requirement of knowledge also includes practical knowledge, to what extent practical knowledge is sufficient, and who ultimately makes that decision.

LMA believes the protocol document should indicate the RCG's with the help of recognized experts should decide if the person in question has enough experience to be useful. The **consensus rule** whatever it turns out to be should prevail.

The last paragraph in 2.1 is convoluted and gives the impression that RCG's work for TWC's . This is not the case according to SCE&G. It is our understanding that the RCG's will actually decide the issues and the TWC's will conduct the test and suggest alternatives. The language, perform necessary studies under the direction of TWC's should be pointed out and eliminated. The relationship between the two committees needs to be clearly defined.

This section also states each group/organization should select a primary spokesperson or rep and alternate that is authorized to speak for the group/organization . This appears to limit an organization with more than 1 person on the committee from more than one member expressing an opinion. We do not agree this should be the case and needs clarification and modification.

Section 2.8:

The following paragraph is the coalition stakeholders interpretation on communications protocol and Lake Murray Association agrees wholeheartedly:

This section should say that the communications protocol will contain specifics on when contact with the press is allowed. What appears to be a total prohibition on press releases in section 5.0 should be addressed in these communication protocols. In other proceedings there is a confidentiality agreement between stakeholders regarding settlement discussions or certain proprietary information that may come out in the operations RCG.

Section 4.3:

#4- Who has to agree to the inclusion/exclusion of a parking lot item should be specifically identified in the protocol document. This again needs to be clarified from the beginning. .

#5- The paragraph below is the consensus of the stakeholder coalition and we agree there should be some evening meetings to benefit the general public LMA can be available for all meetings but strongly suggest some evening meetings be planned. .

SCE&G invites and encourages, at anytime during this process, all interested parties to participate on any level of the relicensing of the Saluda Hydro Project.” The stakeholders appreciate the invitation to weigh in on the management of the public’s water. We believe the current meeting schedule is insufficient in that all meetings are scheduled Monday through Friday during business hours. Many stakeholders are taking personal and vacation leave to participate in this process. We recognize the important role that agencies play, how hard they work, and how thinly their efforts are often stretched. Their absence at an occasional evening meeting does not mean no progress can be made without them. An added benefit to occasional evening meetings is increased public involvement, something SCE&G has strived for from the beginning.

Section 5.0:

“All news releases to the media will be coordinated through the SHRG and RCG.” As discussed above, this topic should be covered in detail in the communications protocol. It is unclear if stakeholders need only coordinate with the SHRGs and RCGs if the press release is from the entire group or if this is a more general prohibition All situations where stakeholders right to communicate with the press will be limited should be clarified.

The Lake Murray Association would like to be a member of the committee on protocol items and feels the work can be done with one or two meetings.

Thank you very much for your consideration.

Lee Barber, President

Comments on “Operating Procedures for the Relicensing of the Saluda Hydroelectric Project FERC Project 516”

William H. Cutler
November 3, 2005

C1.0 Summary

A review of the “Operating Procedures for the Relicensing of the Saluda Hydroelectric Project FERC Project 516” (subsequently called Op Proc) reveals opportunity for improvement in three areas.

- Clarity of the Mission statement for Op Proc
- Clarity on procedures for effective stakeholder engagement defined within Op Proc
- Clarity regarding the solution-discovery process and organization that will produce the Relicensing Agreement, through development of a Project Plan that lays out tasks and schedule for producing the Relicensing Agreement

Comments are organized in the following topics.

1. Explanation of how to improve the Mission Statement governing Op Proc, and an alternative Mission Statement which embodies the suggested improvements
2. Explanation of what improvements are needed in articulating the stakeholder engagement process, and a brief overview of recommendations
3. Explanation of what improvements are needed in articulating the solution-discovery process and organization, and a brief overview of recommendations
4. Recommendation that a Project Plan be produced and maintained as a tool for collaboration among all project participants, with a brief description of its scope
5. Specific suggestions for amending the Op Proc document that incorporate the above

C2.0 Mission Statement

C2.1 Deriving the Mission Statement

A Mission Statement should consist of two components: (1) a statement of the goal or objective, and (2) a statement of the approach, all expressed in 25 to 50 words (if possible).

The Mission Statement governing the Op Proc should be drafted in the context of the larger mission of the relicensing process. Starting from where we are right now, to reach a state of acceptable stewardship of Lake Murray and the downstream reaches of the Saluda River, the relicensing process must pass through three distinct Phases. Each of these Phases has its own Mission Statement. The three Phases are:

1. Establish a solution-discovery process and organization. This has been done, and presumably will be continually improved throughout the relicensing process.
2. Apply the solution-discovery process and organization to create a Relicensing Agreement and get it approved
3. Operate under the provisions of the Licensing Agreement

Each earlier phase in this sequence is the parent of the one that follows. Each earlier phase must be done well and completely as foundation for the ones that follow. Since our ultimate interest is in the outcome of Phase 3, Operation under the Relicensing Agreement, we may start with a presumed Mission Statement for Phase 3 and then craft the preceding Mission Statements accordingly.

C2.2 Mission Statement for Operation under the Relicensing Agreement.

As a starting point for deriving the Mission Statement that governs the Op Proc, we may presume the following Mission Statement for Operation under the Relicensing Agreement.

“In order to equitably satisfy the interests of all stakeholders, SCE&G will create, maintain and dispose of physical features, and conduct activities, pertinent to Lake Murray and the downstream reaches of Saluda River, under provisions of the Relicensing Agreement.”

This statement is brief, but it implies much. First of all, the goal is “to equitably satisfy the interests of all stakeholders.” That word “equitable” implies that there must have been a preceding process in drafting the Relicensing Agreement that either defines “equitable” in particular situations to the satisfaction of all stakeholders, or sets up a process under the Relicensing Agreement by which “equitable” is defined for situations not already covered. The statement defines the approach, which is to “create, maintain and dispose of physical features, and conduct activities, under provisions of the Relicensing Agreement.” The statement says that SCE&G will do it. The statement defines the scope of the Mission as “Lake Murray and the downstream reaches of Saluda River.”

Therefore the mission of the relicensing process must be to produce a Relicensing Agreement that defines the scope of physical features and activities, tells what SCE&G must do about them, and in particular defines “equitable.”

C2.3 Mission Statement for the Relicensing Process.

The Mission Statement for the Relicensing Process must address the goals of both Phase 1 (set up and maintain process) and Phase 2 (develop the Relicensing Agreement) as described in C2.1. Consequently, the Mission Statement offered to govern the Op Proc document (as well as all other Phase 1 and Phase 2 activity) is as follows.

“SCE&G will manage the Relicensing Process through collaboration with state and federal resource agencies, non-governmental organizations, special interest groups and other interested stakeholders. This collaborative consultation process will be used to gather as well as disseminate information. The objective will be to learn from, as well as educate, stakeholders on the issues and come to a balanced settlement of those issues that accounts for the needs of SCE&G and the quality of the resource. To accomplish this, SCE&G will (1) establish, maintain and

improve a solution-discovery process and organization, charged with creating a Relicensing Agreement, and (2) apply the solution-discovery process and organization to create a Relicensing Agreement and get it approved.”

This Mission statement defines the scope, which is the Relicensing Process. It defines the goal, which is two-fold; (1) set up the process, and (2) employ the process to create and gain approval of the Relicensing Agreement. It defines the approach, which is collaboration among all stakeholders. This concept of collaboration should be spelled out and expanded in sections of the Op Proc dealing with the solution-discovery process/organization and stakeholder engagement.

C3.0 Stakeholder Engagement

The Op Proc document spells out meeting ground rules which are certainly necessary for a collaborative project. However, it is silent on the deeper aspects of effective stakeholder engagement that will lead to a quality product that enjoys consensus support. Suggestions for correcting this are offered.

C3.1 Benefits of Good Stakeholder Engagement

A thoroughly thought out and well-facilitated stakeholder engagement program is of benefit to SCE&G for the following reasons.

- It builds a better quality output. It taps into the resource of situation knowledge, technical expertise, and creativity that is embodied in the stakeholders.
- It results in a more flexible and adaptable, hence more robust Relicensing Agreement, since the Relicensing Agreement is not based on rigid forced compromises or authoritarian dictates. All stakeholders are willing to give when modifications to the Relicensing Agreement become necessary.
- It establishes a basis for automatic buy-in. It eliminates or marginalizes adamant opposition.

C3.2 Qualities of a Good Stakeholder Engagement Program

- It is inclusive. All viewpoints are represented and honored, no matter how seemingly insignificant, far-fetched, or inconvenient.
- It gets at root concerns where agreement is more likely and satisfaction greater. It avoids fixation on superficial positions, looking for the concerns behind the position whenever such a position is taken.
- The product is (1) a complete and concise understanding of stakeholder interests, and (2) validation of every decision made along the path to the final result.

C3.3 Elements of a Good Stakeholder Engagement Program

It is suggested that the Op Proc incorporate the following elements of good stakeholder engagement.

1. Identify all stakeholders, either as general types needing representation, or as specific instances to be included.
2. Recruit them into the process.
3. Empower them through (1) education about the issues and process, and (2) assistance

with organization so each stakeholder type is fully represented and linked into two-way communication with the project for inclusion in all stages of the solution-discovery process.

4. Facilitate 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.
5. Document stakeholder interests in the form of statements which clearly and concisely encapsulate the collective interests of like stakeholders. These interests statements are reworked until all stakeholders are satisfied that the statements effectively articulate their views. They serve as a sound starting point along a clear path to a good solution.
6. At every step along the solution-discovery pathway, validation of every decision is established by feedback with the stakeholders, iterating until stakeholder satisfaction with the product is achieved. Note, satisfaction means “I can live with it if I don’t have to die for it.”

C4.0 Solution-Discovery Process and Organization

C4.1 Principles of Solution-Discovery

The work of developing a Relicensing Agreement involves creation of products that satisfy the two-fold goal of the Mission Statement, above. These products are, in general, quite complex, both within themselves and in the relationships among them. Further, they involve issues which may be contentious. This being the case, a competent solution-discovery procedure is needed. A well-established and proven general solution-discovery procedure is available to do this kind of job. It is based on two very general and universal principles.

C4.1.1 First Principle: the Logical Sequence of Decisions

The first of these principles is that any process for reaching consensus on complex, technical issues must address decisions of certain types that are inherent in the process leading to consensus. These decision types are not optional. The logical sequence of decisions leading to consensus about resolution of an issue may be expressed as a series of questions.

- What is the issue?
- Who are the stakeholders in this issue?
- What are the interests of those stakeholders?
- What is the Definition of Success that depicts the qualities of a good solution?
- How are solution options generated?
- How are solution options evaluated?
- What is the preferred solution?
- Is that selection valid, and why?

To test the validity of this stepwise logical approach, ask the following questions.

- Can any of the questions in the sequence be omitted?
- What if they were addressed in a different order?

C4.1.2 Second Principle: Form Follows Function

The Form Follows Function principle states, “First determine the Functions that a solution must perform, then select a Form which will perform those and only those functions.” The rationale for this principle is discovered by considering the consequences if it is not followed. The functions of a form are inextricably associated with the form. When a form has been selected, all the associated functions, and none other, come with it. If a form is improperly selected, it may not deliver all the necessary functions. Worse, it may deliver undesired functions which cannot be avoided. Therefore it is better to first describe the solution in terms of all its desired functions it must deliver, and all the undesired functions it must avoid. Then select a form (or combination of forms) that does just that.

C4.2 Stages of the Solution-Discovery Process

The stages of the solution-discovery process define a rather formal approach, starting with stakeholder input and concluding with a solution that enjoys consensus support of all stakeholders. In this relicensing project, such formality is necessary, first to help us keep our heads straight as we navigate the thicket of complexity, and second as a tool for supporting the collaborative spirit among the large community of stakeholders with contending interests.

To be done well, solution-discovery proceeds through stages as described briefly below. These stages are inherent in the general flow of solution discovery for any complex problem, and are not a matter of choice. Ignoring or giving mere lip service to any of them imperils the outcome.

In reading this description of the solution-discovery procedure, consider how these stages apply to (1) development of process and organization used to develop the Relicensing Agreement, and (2) development of the Relicensing Agreement itself through use of such procedures. In other words, the solution-discovery procedure is a general tool, used in both to create process, and then as a part of that process, to create the Relicensing Agreement.

Of course, these stages of solution-discovery are not intended to be carried out unthinkingly by rote. They are laid out here in a general and fairly complete form as a template which may be modified, using good judgment, to fit particular situations. In some cases, the fully formal approach is best. In other cases, these stages may be applied informally, but with due consideration that nothing of importance is overlooked.

The general stages of the solution-discover procedure, as applicable to a particular issue, are described below. The implement the general questions in C4.1.1 and the Form Follows Function principle in C4.1.2.

1. Determine the interests, values and priorities of the stakeholders (for more on this see Stakeholder Engagement). Document this information. Working with the stakeholders, continue revising this document until all stakeholders are satisfied that their views are adequately articulated. This activity of revision continues throughout the process as later stages expose additional concerns of stakeholders. Note: it is not yet the time to resolve

conflicts among stakeholders, but such conflicts should be clearly articulated for resolution at later stages.

2. Convert this document of stakeholder interests into a Definition of Success in terms of the Qualities of a successful outcome, with measures that define satisfaction. Avoid declaring any solution features which might be intended to deliver the desired outcome Qualities. Validate this with the stakeholders, revisiting as later stages may indicate appropriate.

3. Identify the Output Functions which the solution must perform to deliver the Definition of Success. Avoid declaring any solution features which might be intended to deliver the Outcome Functions. This is an important step in establishing the foundation for a good solution, in accordance with the Form Follows Function principle, and should be done prior to the design of a solution. Validate with stakeholders and revisit as necessary.

4. Set up the process for searching for solution options. This process should be reasonably exhaustive, so that good solutions are not missed, and expeditious so it arrives quickly at a short list of options for serious evaluation. Validate with stakeholders and revisit as necessary.

5. Set up the evaluation process, including screening criteria and methods of analysis for scoring options against the criteria, that will be used to make the selection of the preferred solution. Validate with stakeholders and revisit as necessary.

6. Design and select the Solution. Use the search process (stage 4) to generate solution options. Use the evaluation process (stage 5) to make the selection. Revisit the entire process to be sure the result is sound, and validate with stakeholders.

Throughout this process, give particular attention to interdependencies. Seek to maximize synergy and minimize conflict. Carry out tradeoffs and compromises to resolve remaining conflicts. More comments on this issue are provided in section C4.3 below.

C4.3 Solution-Discovery Methods and Tools

There are well established and proven methods and tools for doing solution-discovery for complex and contentious problems (such as this relicensing project). They exist in many versions, associated with professions such as systems engineering and architecture, to mention just two. Their purpose is to

- Structure the path that the project will find through the thicket of complexity
- Keep track of, integrate and render useful the vast amount of information that is pertinent
- Support the technical tasks involved in characterizing the problem, devising and assessing solutions

To be consistent with the spirit of stakeholder engagement, the project should consult

with stakeholders on the selection and implementation of a set of such tools to support the project. Dr. Cutler would be more than happy to assist in the selection of this toolset.

C4.4 The Solution-Discovery Organization

The Op Proc tells us that the solution-discovery process will be implemented through an organization consisting of the SHRG, RGCs and TWCs. Because of interdependencies among the issues (as defined by stakeholder interests plus professional expertise), interdependencies within the solution as defined in the Relicensing Agreement, and a complex mapping between issues and solution-elements (each issue may require contributions from several solution elements, each solution element may contribute to several issues), an integrated approach to developing the Relicensing Agreement is necessary. However, the structure and functions of the SHRG, RGCs and TWCs presents the risk that the approach will be fragmented along lines defined by the various RGC issues, and the integrated approach will be lost. This can be fixed.

Amend the Op Proc document to charge the SHRG with responsibility for attending to interdependencies. This means specifically:

- The SHRG shall develop (1) an integrated problem definition which combines all the issues pertinent to the relicensing with interdependencies described, (2) an integrated architecture for the system of physical features and activities that will operate under provisions of the Relicensing Agreement to address the issues, and (3) a mapping between problem and solution architecture. These shall be used to support the following task.
- In allocating issues to the RGCs and TWCs, the SHRG shall ensure that the integrity of the collective issues does not become fragmented, that problem definitions and solutions developed by the RGCs and TWCs are coordinated, compatible, and when assembled into the overall system architecture, constitute an integrated whole.

Methods and tools as mentioned in C4.2 are available to support the SHRG in these responsibilities.

C5.0 Project Plan

Presumably the Mission Statement would spawn a Project Plan. The Project Plan in initial version should be produced as quickly as possible as a tool for collaboration among stakeholders. The Op Proc document would be subordinate to the Project Plan.

The Project Plan might be divided broadly into Phase 1 and Phase 2. Phase 1 would operate in solo until the process and organization for Phase 2 are set up and launched. At that point the emphasis shifts to Phase 2, leading to production and approval of the Relicensing Agreement. Phase 1 would continue in parallel, at a lower level, performing process maintenance and improvement in support of Phase 2. The elements of the Project Plan might be:

- Project Organization, in terms of organizational elements, roles and responsibilities of each element, relationships among elements, and identification of who should be assigned to each element

- Project Task Network, consisting of all Tasks necessary to do the job, expressed in input-process-output format, linked together in a network. The network must be complete so that all necessary Final Products are delivered, all Tasks are linked by Internal Products (outputs of earlier tasks providing all needed inputs to later tasks), and all initial Inputs are identified
- Definition of the Information Structure that supports the project, consisting of all Inputs, significant Internal Products and Final Products, in terms of content and quality
- Allocation of Tasks to Organization Elements
- Timeline

Note that the Project Plan is a living, evolving document. At the beginning and throughout, the explicit nature of future Plan elements cannot always be known, but the existence of these unknowns can be anticipated. Consequently, a part of the Plan will be continual looking ahead to identify and define such elements as they emerge.

C6.0 Recommendations for Amending the Op Proc Document

In the following, paragraph numbers starting with “P” (as P1.1) refer to the Op Proc, and those starting with “C” (as C2.2) refer to this comments document.

In P1.1, substitute the Mission Statement from C2.3.

In P2.2 and P2.3, reference the solution-discovery process in C4.2 as the method to be used to develop recommendations for resolving issues and to develop the package for SCE&G management. Also reference the use of appropriate tools as described in C4.3.

In P2.3, add the bulleted items from the end of C4.4.

Add a new section P2.7 Stakeholder Engagement after P2.6 Team and Group Composition... The new P2.7 includes the bulleted items from C3.2 as the goal, and items 1 through 3 from C3.3 as the method. Consider allocating this responsibility to appropriate groups within the stakeholders, i. e., the stakeholders can assist the project by recruiting additional stakeholders and preparing them to participate constructively.

Renumber P2.7 and P2.8 as P2.8 and P2.9.

In P2.8 (renumbered):

- Add material from C3.2 as a statement of goals of facilitation.
- Add items 4 through 6 from C3.3 to the responsibilities of the facilitator.

In P2.9, define provisions for conducting the work of the SHRG, RCGs and TWCs on-line, thereby avoiding meetings and accelerating the pace. Numerous tools are available to support this, which automate the process of disseminating information, conducting discussions, reaching decisions, and documenting results.

Finally, it is strongly recommend that SCE&G/Klienschmidt prepare a Project Plan with

concurrence of the stakeholders as soon as possible, as described in C5.0. The Op Proc document should be included as subordinate to the Project Plan.

COASTAL CONSERVATION LEAGUE AND AMERICAN RIVERS

August 10, 2005

Mr. James M. Landreth
Fossil and Hydro Operations
South Carolina Electric and Gas Company
111 Research Drive
Columbia, South Carolina 29203

Subject: Comments on Initial Consultation Document for Saluda Hydroelectric Project,
FERC Project No. 516

Dear Mr. Landreth,

The Coastal Conservation League and American Rivers (the Conservation Groups) have reviewed the *Initial Consultation Document* (ICD) as prepared by South Carolina Electric and Gas Company (SCE&G) for the relicensing of the Saluda Hydroelectric Project, FERC No. 516, and we offer the following comments and recommendations. Although a traditional licensing process will be utilized, we are encouraged by the collaborative process SCE&G has indicated it will use throughout the relicensing process. We appreciate the efforts of SCE&G to create an atmosphere of cooperation and constructive communication.

The Coastal Conservation League and American Rivers have taken an active role in relicensing the Saluda Hydro Project since the beginning of the process. Both organizations sponsored a workshop for interested parties and citizens to learn more about the relicensing process and have attended the relicensing scoping workshops and public meetings. The Conservation Groups have entered a cooperative agreement to participate in hydroelectric and river conservation activities affecting South Carolina, North Carolina and Georgia. These efforts stem from the recognition that hydropower operations have a significant impact on riverine ecosystems and that responsible operation of these facilities can greatly enhance water quality while increasing wildlife abundance and enhancing recreational opportunities.

The Conservation League is a non-profit conservation organization with offices in Charleston, Georgetown, Beaufort and Columbia. Our mission is to protect South Carolina's threatened resources - its natural landscapes, abundant wildlife, clean water, and traditional communities. We have approximately 4,000 members, many of whom live in the affected project area. American Rivers is a non-profit conservation organization with offices in Washington, D.C., Columbia, South Carolina and throughout the nation.

We are dedicated to the protection and restoration of the nation's streams. With over 35,000 members across the country, including those that live in the project vicinity, American Rivers is one of the nation's leading river conservation groups.

The Conservation Groups would like to take this opportunity to communicate clearly to SCE&G what we hope to achieve in this relicensing proceeding. Our resource objectives will guide our participation in this proceeding, including development of the comprehensive study plan. The resource objectives of primary concern include:

- Improvement to the stream flow regimen necessary for natural flow values and ecological processes essential to river health, including riparian, wetland and floodplain functions,
- protection and restoration of fish and wildlife habitat and mitigation for project-related habitat losses,
- analysis of diadromous fish, existing and potential, in the project area – upstream and downstream of the Saluda Dam,
- protection and enhancement of water quality standards including existing and classified uses,
- protection and enhancement of rare, threatened and endangered plant and animal species,
- prudent management of the project for the Lake Murray reservoir, the Lower Saluda River, portions of the Broad and Congaree rivers, and Congaree National Park which are affected by project operations,
- enhancement of recreational opportunities including identifying future recreation areas and access points,
- coordination of water releases in a manner that fully protects the human health and safety of all resource users.

It is with a view toward these objectives that we offer comments on the ICD.

I. The Legal and Regulatory Context

Under the Federal Power Act (FPA), the Federal Energy Regulatory Commission (FERC) may issue a new license for an existing hydroelectric project only if to do so would be in the public interest. 16 U.S.C. § 803(a). In making its public interest inquiry, FERC is required to provide “equal consideration” to a range of public purposes, including the protection of fish, wildlife, recreation, and environmental quality. The FPA makes clear that relicensing is not a continuation of the status quo, but a reconsideration of the past commitment of the river resource based on present day values and “then existing laws and regulations.” 16 U.S.C. § 808(a).

The Federal Power Act further requires that any new license contain conditions that adequately and equitably protect, mitigate, and enhance fish and wildlife resources. 16 U.S.C. § 803(j). Thus, FERC is required to assure that during any new license term fish and wildlife and their habitats are protected and restored, and that unavoidable, ongoing project impacts are mitigated.

Independent of the FPA, the National Environmental Policy Act (NEPA), 42 U.S.C. § 4321 *et seq.*, requires that FERC assess the past, present, and reasonably foreseeable environmental impacts of the hydroelectric project licensing and evaluate alternatives that would avoid these impacts. This requirement applies to applications for new licenses for existing projects because relicensing constitutes a new, irreversible, and irretrievable commitment of a public resource.¹

Today, the protection and restoration of the ecosystem integrity of our rivers and public recreation opportunities is widely recognized by citizens of South Carolina as one of the highest public priorities. Accordingly, substantial emphasis should be placed on opportunities to further these priorities during the relicensing process. While we understand SCE&G's interest in maintaining the Saluda Hydroelectric Project as a power producing operation, it is critical that the company develop a complete factual record on which the Commission can give equal consideration to power and non power values, including restoration and enhancement of the downstream river ecosystem and its recreational values. Also, there must be biologically and scientifically sound information upon which agencies can base their terms, conditions, and recommendations. This requires that SCE&G evaluate a range of protection, mitigation, and enhancement (PM&E) measures and operational alternatives to current operations, including removal of parts of or all of the Project, and run-of-river operations.

Santee River Basin Model

We are developing a hydrologic/operations model for the Santee River basin which includes the Saluda River and the Saluda Project. The model includes inflow, lake levels, project operation and downstream flow information. The first two phases of the model, (1) the Santee and Cooper rivers and (2) the Catawba and Wateree rivers are complete. The final phase, which is nearing completion, is for the Congaree River basin and includes operations of the Saluda Project and hydrologic considerations for the Congaree National Park. The model is able to evaluate flows, lake levels and operations under baseline conditions and operational alternatives. We developed the model to be an effective, transparent tool to assess how alternatives can balance public benefits of FERC projects, including Saluda, during the new license terms. The model and related documentation are available at www.n-h-i.org/srm.html. We offer the Santee River Basin Model at no charge to SCE&G and other stakeholders as a tool for the Saluda relicensing.

Recommendations for Studies to Address Information Needs

7.3.4 Maintenance/Emergency Protocol Study

STUDY REQUEST: We recommend a study to develop a protocol for handling standard maintenance and emergencies on the project site that will meet the needs of SCE&G and protect public values to maximum extent possible. The study should explore how to

minimize impacts to water quality and recreation when performing routine maintenance and dealing with emergency conditions such as floods or inclement weather.

PUBLIC INTEREST: Handling routine maintenance and emergency conditions in a prompt and reliable manner furthers the goals of downstream safety and water quality and is in the public interest.

NEXUS TO PROJECT: This study relates to the project in that it deals with maintenance and equipment replacement within the dam itself and in other areas of the project. Emergency conditions refer to instances in which outside factors require that the dam be operated in a way that is out of the ordinary.

AVAILABLE INFO: To our knowledge there is little information available about maintenance and emergency protocols outside of the USGS gauge records reflecting flows in high water storm events.

BASIC METHODOLOGY: The study should identify the types of regular maintenance that occur at the Saluda project and how the performance of that maintenance has affected operations in the past. The resulting protocol should reflect SCE&G's best judgment on how to perform regular maintenance without sacrificing water quality, safety, or recreation. The emergency protocol should involve a similar analysis of past emergencies, how they affected operations and specific conclusions about how to operate during those events to protect water quality, safety, and recreation.

7.4.3 SAFETY AND WARNING SYSTEM STUDY

STUDY REQUEST: We recommend a study on the Lower Saluda River to assess and improve the rising water alert system and to implement other safety measures to account for hazardous conditions created by project operations.

PUBLIC INTEREST: It is in the public interest to be able to safely and reliably recreate upon waters of the state to the maximum extent possible. A study of existing and possible safety measures will reveal the most effective way to protect the public from the safety hazards on the Lower Saluda that have been created by the Saluda Hydro project.

NEXUS TO PROJECT: There have been numerous drownings on the Lower Saluda River associated with project operations. The proximity of the Saluda Dam to heavily used recreation areas means that project releases quickly and drastically alter the river, bringing it to unsafe recreation levels in a dangerously short period of time. The public using the Saluda River is unable to safely and quickly react to these releases without an effective warning system in place. The current warning lights and sirens have been noted as ineffective in most reaches of the river.

AVAILABLE INFORMATION: The comments of several stakeholders have demonstrated that fishermen, boaters and other river users have repeatedly been subject to sudden water level changes without warning. These instances have caused loss of property and threatened serious physical harm. SCE&G has stated that the warning system was in working order during these times, demonstrating that the current system is ineffective in at least those stretches of river.

BASIC METHODOLOGY: As a practical matter, the study should examine various types of warning systems at all sites used by the public for recreation. River reaches popular for fishing, swimming and boating - including the river immediately below the dam, Saluda Shoals Park, the shoals below I-26 and millrace rapids - should be included. The study should include the amount of time required for various volumes of release to reach the recreation sites to give an idea of exactly how much time river users have to react. The study should also examine signs, lights and other visual warnings as well as horns or sirens to meet the needs of river users of all abilities.

7.4.5 RIVER INFORMATION SYSTEM STUDY

STUDY REQUEST: We recommend a study of how to develop a public information system to communicate river conditions and project operations to river users. Potential media include signs and kiosks, the internet, and dedicated, toll-free telephone lines. Information to be communicated should include required flow releases, weekly forecasts of project operations, real-time reporting of conditions and other information useful to the public using the Saluda River.

PUBLIC INTEREST: Availability of river condition and project operation information is in the public interest because it would allow for safe and effective planning by river users. For example, whitewater boaters could plan trips for periods of high flow, while less experienced boaters and anglers could avoid the river at those times as a safety precaution. A well functioning public information system will provide safety, economic, and convenience benefits.

NEXUS TO PROJECT: The Saluda hydro project has a pervasive effect on river at all times. The way the project is operated dictates what uses the river can or cannot support at any given time and affects thousands of people every year. Taken together, these facts demonstrate a sufficient nexus between project operations and the need for an effective means of disseminating information to river users.

AVAILABLE INFORMATION: To our knowledge there is no public information system for the lower Saluda River. The existing warning system (see Section 7.4.3), while important for warning users of dam releases or other life threatening conditions, does not provide the public with information for planning. Likewise the color-coded river level poles are important for those actively using the river, but do not provide information on future river conditions.

BASIC METHODOLOGY: The study should explore the most effective means of posting the information whether by phone, internet or signage or a combination of those to reach the greatest number of river users possible. The information should include an annual schedule of minimum flow requirements, recent rainfall, weekly forecasts of expected operations, real-time operations and flow information, and other useful information. The information should include what rapids require what levels of paddling expertise at different water levels and include warnings about dangers present in varying flow scenarios. The study should examine in what languages other than English the information should be published, such as Spanish.

9.0 Water Quality Studies

STUDY REQUEST:

We recommend studies that objectively evaluate the effects of project operations (e.g. impoundment of the river and tributary streams, reservoir stratification, hypolimnetic discharges, project equipment and flow alterations, etc.) on water quality and how that affects habitat requirements of aquatic biota in the reservoir and river segments. Project operations and enhancements that would result in water quality that fully supports all aquatic life uses in the reservoir and river segments affected by the Project should be evaluated.

PUBLIC INTEREST: Good water quality and the maintenance/enhancement of aquatic habitats is an issue clearly in the public interest and is reflected in state and federal laws, as well as in the policies and guidance of state and federal agencies charged with protecting these resources for the public good.

NEXUS TO PROJECT: Project operations directly affect water quality and subsequently aquatic habitat by impounding streams, altering flows and releasing poor quality water.

AVAILABLE INFORMATION: Numerous watershed and water quality publications are available from SC DHEC. This agency also has guidance on the different assimilative capacities of free-flowing versus impounded waters. Effects of water quality alterations on aquatic biota are well documented in the scientific literature. Specific to the Saluda Project are effects of low oxygen on native fishes and trout populations, of temperature/dissolved oxygen “squeeze” on reservoir populations of striped bass, and of altered temperature regimens on spawning success of diadromous and riverine fishes. Effects of Saluda operations on Congaree River temperatures and striped bass spawning success are discussed in *Factors affecting recruitment of striped bass, Morone saxatilis, in the Santee-Cooper system, South Carolina* (Bulak 1994).

SCE&G has conducted extensive studies on reservoir water quality and project discharges. This information will serve as an important basis for developing new study plans.

BASIC METHODOLOGY:

- SCE&G should work with interested stakeholders to develop detailed study plans. Study methods should be tailored to meet issues specific to the reservoir, tailwater and river segments.
- The effectiveness of newly installed hub baffles and venting equipment should be assessed to determine if water quality standards can be fully met for the Saluda River or if additional enhancements are needed. If the latter is the case, then the study should be expanded to evaluate other methods for meeting water quality standards.
- The effects of project operations on summer habitat for striped bass in the reservoir forebay should be studied. Periodic fish kills have occurred in the forebay as a result of the temperature/dissolved oxygen squeeze phenomena. Striped bass are native to the Saluda River and have been stocked in the reservoir for decades. The study should also determine mitigative measures (e.g. forebay oxygenation) to reduce or avoid future striped bass fish kills.
- The effects of Project Operations on water temperature, and spawning and recruitment of diadromous and riverine fish in the Saluda and Congaree rivers should be studied. Of primary interest is if rapid temperature changes associated with project operations have an effect on spawning behavior, incubation success, fry survival and recruitment. If project effects are documented then mitigative measures (e.g. alternative flow regimens) should be evaluated so that all classified and existing uses of the Saluda and Congaree rivers can be met.
- The effects of Project Operations on water temperature and dissolved oxygen, and freshwater mussel populations in the Saluda and Congaree rivers downstream of the project. Of primary interest is if water quality changes associated with project operations have an effect on recruitment and survival of mussels. If effects are documented then mitigative measures should be evaluated so that all classified and existing uses of the Saluda and Congaree rivers can be met.

9.2.3 SEDIMENT REGIMEN AND SEDIMENT TRANSPORT STUDIES

STUDY REQUEST:

We recommend a study of the current sediment regimen throughout the Project area and of Project effects on sediment regimen of the lower Saluda River. The study should focus on sediment composition, bedload movement, gravel deposition, sediment storage behind dams, and bedload changes below the dam; and project effects on downstream geomorphometry, sediment availability and streambank erosion. This study should also evaluate and develop appropriate PM&E measures to assure sediments downstream of the project fully support all lifestages of aquatic biota including habitat for fish spawning and macroinvertebrates. Alternatives should be developed to mitigate for project impacts to the sediment regimen including the addition of gravel to enhance spawning substrates.

PUBLIC INTEREST: Appropriate sediment regimens and necessary flows for geomorphological processes are recognized as essential components of a healthy river ecosystem, and for the needs of species-specific lifecycle and habitat requirements.

NEXUS TO PROJECT: Project facilities and operations directly alter the sediment regimen and sediment transport in the Saluda and Congaree rivers.

AVAILABLE INFORMATION: Numerous scientific papers have been published on the effects of hydropower operations on sediment regimens including downstream erosion and geomorphological effects. A review of study methods can be found in *Instream Flows for Riverine Resource Stewardship* (2002).

We know of no site-specific information on the river's sediment regimen or the effects of project operations thereon.

BASIC METHODOLOGY:

- SCE&G should work with interested stakeholders to develop detailed study plans.
- A comprehensive study is needed since there appears to be no information related to the sediment regimen, river geomorphology and any effects the Project may be having on such. (The ICD contains no information.)
- Identify geomorphological factors that control channel features and biological processes in the river.
- Of particular interest are Project effects on habitat requirements for spawning fishes, including shortnose sturgeon (a federally endangered species) found downstream of the Project, native fishes of the Saluda River, and trout populations.
- Mitigative measures should be evaluated as part of the study including changes in operations, supplementing gravel budgets in key reaches, protecting riparian buffers to reduce streambank erosion potential, etc.

Study Locations: The sediment regimen should be studied throughout the entire Project area.

9.2.2.7 RESERVOIR LEVEL STUDY

STUDY REQUEST: We recommend a study to objectively look at the effects of alternative reservoir operations on (1) recreational boating in reservoir headwaters and the main reservoir body, (2) near-shore aquatic habitat within the reservoir, and (3) the ability to release downstream flows to meet recreational and ecological needs of the Saluda and Congaree rivers. The study should also evaluate how current operations with fall draw downs and spring filling affect recreational and ecological values in the Saluda and Congaree rivers and the Congaree National Park.

PUBLIC INTEREST: This reservoir level study is in the public interest because public uses of the reservoir and the river are directly affected by this component of project operations.

NEXUS TO PROJECT: Water levels affect the navigability of the reservoir, especially in headwater areas and are under the direct control of SCE&G. If the reservoir is not kept at a certain level the ability to release downstream flows can be limited. The dependence of downstream flow and habitat on project operations creates a sufficient nexus to merit a study. The fall drawdown and the spring filling cycle is controlled exclusively by project

operations and have extensive effects on reservoir and river habitat (Saluda and Congaree) as well as headwater and downstream recreation/navigability.

AVAILABLE INFORMATION: It is our understanding that there have been studies conducted, including the comprehensive water quality report referenced in the ICD at page 71, by SCE&G with State resource agencies contributing data. These studies have identified the types of habitat on most of the lake and more detailed information is available for areas deemed “environmentally sensitive area”. This information will be useful background for a reservoir fluctuation study. We are not aware of studies specific to lake level fluctuation as it pertains to aquatic habitat, downstream flows, and recreation.

BASIC METHODOLOGY:

(1) Effects of drawdown on recreational boating: The surface area of Project headwaters and the main reservoir meeting navigation criteria should be evaluated at one foot intervals of drawdown. Separate criteria should be evaluated for motorized and non-motorized boating to establish the feasibility of navigation and recreation at different levels.

(2) Ability to release downstream flows: A hydrologic/operations a model, such as the Santee River Basin Model, should be used to determine what effect reservoir levels and the existing drawdown cycle have on the ability to release water to meet seasonal downstream flow needs for recreational and ecological values of the Saluda and Congaree rivers. This analysis needs to include effects on inundation patterns in the Congaree National Park.

(3) Reservoir near-shore aquatic habitat: Evaluate the effects of alternative water levels on near-shore fish and wildlife habitats. Existing maps and data on near-shore habitats should be evaluated to insure accuracy and reliability. Aerial photography and GIS mapping should be used to determine the total area of near-shore habitat affected by incremental levels of draw down.

Where no reliable data exists, habitat maps should be developed for the reservoir and the Saluda River headwaters. Representative transects perpendicular to the shoreline should be selected and evaluated. The number of transects selected and their distribution within the reservoir should be determined from the total length of shoreline comprising each habitat type and its distribution throughout the reservoir. The vertical distributions of habitats from the resulting transects should be summarized by one foot depth contours from full pool. The information should then be incorporated into a GIS database that also includes bathymetric data. This data should be used to calculate changes in the surface area of near-shore of habitat at one foot increments throughout the existing drawdown zone.

10.2 INSTREAM FLOW STUDIES FOR THE AQUATIC ECOSYSTEM

STUDY REQUEST:

We recommend a study of how project operations affect stream flows and what flow regimen(s) would best meet the requirements of the aquatic ecosystem. Flow regimens

should be assessed for the Saluda River and the confluence area. Flow regimens should be identified that fully support all lifestages of aquatic biota including spawning, juvenile and adult habitat requirements, and flows for upstream and downstream fish migrations. Flows that attain aquatic habitat values over inter-annual and intra-annual periods that approximate those which would occur under the natural hydrograph should be determined.

PUBLIC INTEREST: Sufficient instream flow below project dams for aquatic biota is clearly in the public interest and is reflected in the state and federal laws, and in policies and guidance of state and federal agencies charged with protecting these resources for the public good.

NEXUS TO PROJECT: Project operations alter the hydrograph; the timing, duration, magnitude, frequency and rate of change of stream flows in the segments listed above; and thereby directly affect habitat and migration needs of aquatic biota. Project operations affect virtually all stream flow in the Saluda River and approximately one-third of the stream flow of the Congaree River.

AVAILABLE INFORMATION: An instream flow study (Isely, J.J., G. Jöbsis and S. Gilbert. 1995. *Instream flow requirements for fishes of the lower Saluda River*) was conducted at the Saluda by SCDNR and should serve as a basis from which to develop a study plan. There is also substantial information on the need for instream flows in scientific literature, state and federal agency policies, and in Comprehensive Plans filed with the FERC by the SCDNR including: Instream Flow Study, Phase I (1986), Instream Flow Study, Phase II (1988), South Carolina Instream Flow Studies: A Status Report (1989) and State Water Plan (1998).

Instream flow studies are anticipated for recreational boating, fishing and swimming, and for water quality and water supply needs. It is possible that portions of those studies could be combined with this study.

BASIC METHODOLOGY:

- SCE&G should work with interested stakeholders to develop detailed a study plan. Study methods should be tailored to meet issues specific to individual stream segments. Multiple metrics will likely be needed at each study segment. Suitable study methods may include – Tennant Method, Instream Flow Incremental Methodology (IFIM), Indicators of Hydrologic Alteration (IHA), Range of Variability Approach (RVA), MesoHABSIM, wetted perimeter, dual flow analysis, etc.
- Sufficient number of transects will be needed for IFIM studies if used. Biota that needs to be addressed includes riverine and diadromous fish, macroinvertebrates, rocky shoals spider lilies, etc.
- Assessment should include seasonal base-flow needs, flows for fish passage, and high flows needed for channel maintenance and morphometry. Flows for floodplain inundation needs will be addressed below.
- Assessment of the interaction between water quality parameters (e.g. temperature and dissolved oxygen) and instream habitat quality for target species should be addressed.

- Assessment of hourly and daily flow variations resulting from project operations (i.e. peaking) and their effect on instream habitat quality for various lifestages should also be addressed.

10.2 FLOODPLAIN FLOW EVALUATIONS

STUDY REQUEST:

We recommend a study to assess stream flows needed for incremental levels of floodplain inundation for the Congaree River including the Congaree National Park. Inventory of floodplain vegetation sufficient to represent the plant community along the affected river reaches is a central component of this study. The study should identify flow regimens and project operations that fully support the needs of floodplains, and their flora and fauna. Flow regimens that attain floodplain inundation and habitat values approximating those that would occur under the natural hydrograph over inter-annual and intra-annual periods should be determined.

PUBLIC INTEREST: Sufficient inundation of floodplains and enhancement of their bottomland habitats for botanical resources, and for aquatic and terrestrial fauna are clearly in the public interest; and are reflected in the policies and guidance of state and federal agencies charged with protecting these resources for the public good. The Congaree National Park is so designated because it contains North American's largest stands of virgin floodplain forest and its protection was determined to be in the public interest by Congress.

NEXUS TO PROJECT: Project operations alter the hydrograph; the timing, duration, magnitude, frequency and rate of change of stream flows and thereby the flooding regimen of bottomland habitats. Project operations affect virtually all stream flow in the Saluda River and approximately one-third of the stream flow of the Congaree River.

AVAILABLE INFORMATION: Numerous scientific and guidance publications are available regarding the effects of flow alterations on floodplains and their plant communities. Specific studies that are relevant to the Saluda Project include:

- Rikard, M. 1988. *Hydrologic and vegetative relationships of the Congaree National Swamp Monument*. Clemson University.
- Duke Power Company's Wateree River floodplain and water routing studies being conducted as part of the Catawba-Wateree relicensing.
- Rice, S.K. and Peet, R.K., 1997. *Vegetation of the lower Roanoke River floodplain*. The Nature Conservancy, Durham, North Carolina.
- Townsend, P.A. and Foster, J.R., 2002. *A synthetic aperture radar-based model to assess historical changes in lowland floodplain hydroperiod*. Water Resources Research 38 (7), pp. 20-1 to 20-10.
- Numerous floodplain assessment studies conducted by the Corps of Engineers for the St. Stephens Rediversion Project.

- Comprehensive plans filed with FERC by the SCDNR including: Instream Flow Study, Phase I (1986), Instream Flow Study, Phase II (1988), South Carolina Instream Flow Studies: A Status Report (1989) and State Water Plan (1998).

BASIC METHODOLOGY:

- SCE&G should work with interested stakeholders to develop detailed study plans. Study methods should be tailored to meet the specific floodplain characteristics of different river segments. Recommended methodology is:

A. Evaluation should be conducted using the steps outlined in the section entitled Floodplain Inundation Method in Instream Flows for Riverine Resource Stewardship (2002). This model consists of the following sequential steps:

- Determine representative floodplain cross-sectional elevations through (a) the Federal Emergency Management Agency (FEMA) and/or the U.S. Corps of Engineers (USACOE) flood risk maps; (b) topographic maps; (c) on-site surveys, including aerial photogrammetric techniques;
- Determine cross-section/stage-discharge relation by (a) measuring and surveying, (b) gage calibration rating table, or (c) gage records;
- Determine wetted perimeter versus discharge relation and inflection points for floodplain cross section;
- Tabulate phenology and inundation needs for floodplain and riparian vegetation and timing of floodplain-dependent life stages of fishes and other floodplain-dependent fauna;
- Determine historical, unmodified hydrological timing, and magnitude of high flows;
- Evaluate surface connectivity between main channel and off-channel habitats such as oxbow lakes through review of information obtained in steps 1 and 2, above;
- Evaluate timing and duration needed to address biological needs tabulated in step 4 and historical hydrology, step 5;
- Develop flow recommendations and compare alternatives based on review of information from steps 5 to 7.

B. Inventory of vegetative communities consistent with study methods included in Rice and Peet (1997) including:

- Tallies of tree species and stem densities by diameter class within 20 x 50 m plots;
- Sampling soil within 10cm of the litter layer, and performing standard analyses of nutrients, pH, base saturation, % organic matter, and bulk density;
- Derived geographic variables (floodplain elevation, distance to channel, distance to river mouth). Elevations will become available through Item C (below).

C. Remote inventory of floodplain inundation to evaluate the river discharge - floodplain inundation relationship along the affected floodplain reaches following the methods of Townsend (2002). This includes the following steps:

- Acquisition of Radarsat-1 Synthetic Aperture Radar scenes covering the area of interest, and spanning a minimum of three (3) different river discharges (high, medium, low flows);

- Using this data, a high resolution Digital Elevation Model of the floodplain is then created through interpolation of the discharge - flooded area relationship via GIS ArcInfo processing;
- Use transect information collected in (A) to calibrate and verify this model and its output.

10.2 LOW INFLOW PROTOCOL STUDY

STUDY REQUEST:

A study is needed to determine how to balance water availability, reservoir levels and downstream flow requirements for all uses during periods of low flow. Specific areas to be assessed include public water supply, reservoir and river water quality, fish and wildlife habitat needs, power generation, etc.

PUBLIC INTEREST:

The citizens of South Carolina have a direct interest in various water uses including uses for drinking water, recreation and fish and wildlife habitat. The balanced use of water resources during low flow periods is clearly in the public interest.

NEXUS TO PROJECT:

The Project was developed to store water in order to operate hydropower facilities. How this stored water is allocated for other purposes is clearly related to the Project.

AVAILABLE INFORMATION:

As detailed above the Conservation Groups are among several parties that have developed the Santee River Basin model. This is a comprehensive hydro operations and hydrologic model that can be used to assess alternative project operations under different water availability scenarios. The Saluda phase of the model is currently being developed and will soon be available. The model should prove a useful tool for developing low inflow protocol and appropriate balance of uses.

BASIC METHODOLOGY: Study the impact of low flow periods on Project operations and other water uses under existing and future scenarios. This study would then lead to the development of a low flow operations plan for Project, with involvement of the public, private and nonprofit sectors. The study should determine how to provide real time information on low flow conditions that can be used to trigger conservation measures and what flows are needed to protect water quality, aquatic habitat and water supply uses.

10.3.2.7 DIADROMOUS FISH STUDY

STUDY REQUEST: We recommend a study of upstream and downstream diadromous fish passage at the project dam, the use of hatchery operations to augment existing stocks, and how to meet the stream flow and water quality requirements of these diadromous species. Alternatives should be developed to enhance diadromous fish populations by establishing access to historic spawning grounds and nursery areas, safe downstream

passage, and improving stream flow and water quality. Part of this study should include cumulative impacts analysis of the Saluda Project on the diadromous fish stocks of the Santee-Cooper Basin.

PUBLIC INTEREST: Enhancement of diadromous fish populations is clearly in the public interest and is reflected in state and federal laws, as well as the policies and guidance of state and federal agencies charged with protecting these resources for the public good.

NEXUS TO PROJECT: Project's dam and operations directly affect upstream and downstream migration of and habitat quality for diadromous fish by blocking migrations, altering instream flows, and affecting water quality including dissolved oxygen and temperature.

AVAILABLE INFORMATION: Numerous scientific publications exist regarding enhancing diadromous fish populations by establishing fishways, and enhancing instream flow and water quality. Management plans for diadromous fish species that are pertinent to the Saluda Project include: Santee-Cooper Diadromous Fish Passage Restoration Plan by USFWS, SCDNR and NMFS which has been filed with FERC as a Comprehensive Plan; ASMFC plans for diadromous species including American Shad; and NMFS recovery plan for the federally endangered shortnose sturgeon.

We know of no information that specifically addresses Project effects on diadromous species, how best to establish fish passage at the dam, use of hatcheries and trap and truck methods to supplement existing stocks, instream flow requirements for these species in river segments and floodplain areas affected by project operations, or project-related water quality effects on these fish.

BASIC METHODOLOGY:

- SCE&G should work with state and federal fisheries agencies, the Conservation Groups and other interested stakeholders to develop detailed study plans. Study methods should be tailored to meet the issues specific to individual reservoir and river segments.
- Studies should focus on answering key fish passage and adult and juvenile migration issues in order to craft a specific and scientifically defensible plan to be included in the next license.
- Studies to be conducted by SCE&G should, at a minimum, include:

A. An evaluation of the feasibility and cost of the most promising fish passage technologies for upstream and downstream migration at the Project. SCE&G should provide conceptual design drawings, including hydraulic information, an estimate of construction, operation and maintenance costs for those designs and measures at each of the three projects. Specific options that should be studied, including a cost analysis for each alternative, include:

- Upstream passage options to be evaluated should, at a minimum, include:
 - Fishways
 - Trap and haul facilities

Dam removal

- Downstream passage options to be evaluated should, at a minimum, include:

- Spill gates
- Collection and bypass facilities
- Turbine intake screens
- Reservoir operations

B. A comprehensive analysis of entrainment of diadromous species. Entrainment in project turbines can be a significant source of fish mortality and affect efforts to reintroduce diadromous fishes. An analysis of entrainment at the Project is necessary to determine the separate and cumulative impacts on fish populations.

C. A thorough analysis of historic and current fish populations, and habitat conditions in the Saluda and Congaree rivers, and their tributaries. This should include an evaluation of diadromous fish habitat lost due to inundation behind the Project dam and an assessment of potential future habitat in the river and its tributaries. Such a study would provide important background information that will assist in the development of an effective reintroduction program. Also, the study results could then be used to identify potential limiting factors and their causes, and PM&E measures could be developed accordingly to improve the opportunity for a successful reintroduction program.

D. An evaluation of habitat conditions and availability under various operational scenarios including reservoir drawdown and run of river operations. The evaluation should rely on modeling, existing information, and field studies.

E. An evaluation of the feasibility and cost of hatchery operations to augment existing diadromous fish stocks.

F. A cumulative impacts analysis of the Project on the diadromous fish stocks of the Santee-Cooper Basin.

G. Evaluation of mitigation opportunities for ongoing impacts to diadromous and migratory riverine fish. An inventory of non-project dams that could be removed both within the project vicinity and in other reaches of the Congaree basin should be compiled after coordination with the stakeholders. Elimination of these barriers would help mitigate project impacts to these fishery resources.

All of this information is critical to determine the feasibility of reintroducing diadromous fish above the Project dam and to improve connectivity of resident fish populations in the Project area. Additional information and a complete study plan should be developed with state and federal agencies, the conservation Groups and other interested relicensing parties.

Study Locations:

- Upstream and downstream fish passage facilities have been identified as a priority of state and federal resource agencies and should be thoroughly assessed.
- Instream flow and water quality effects of project operations on all life stages of diadromous fish should be addressed in the Saluda and Congaree rivers.

10.3.2.11 FRESHWATER MUSSEL STUDY

STUDY REQUEST:

We recommend a study of freshwater mussel occurrences in the project vicinity and how project operation may affect existing and future populations. Alternatives should be developed to enhance mussel populations via project operations including the improvement of stream flow and water quality. Part of this study should include cumulative impacts analysis of the Saluda Project on mussel stocks of the Santee-Cooper Basin.

PUBLIC INTEREST: Enhancement of freshwater mussel populations is clearly in the public interest and is reflected in state and federal laws, as well as the policies and guidance of state and federal agencies charged with protecting these resources for the public good.

NEXUS TO PROJECT: Project's dam, reservoir and operations directly affect habitat quality for freshwater mussels by altering instream flows, impairing migrations of host fishes and affecting water quality including dissolved oxygen and temperature. Ongoing operation of the project will continue to have negative effects of native mussel habitat due to the impoundment of more than 30 miles of the Saluda River and additional miles of tributary streams.

AVAILABLE INFORMATION: We know of no information that specifically addresses distribution of mussels in the Project vicinity or Project effects on those species. The federally endangered mussel, Carolina heelsplitter, is known to occur in the counties surrounding the project.

BASIC METHODOLOGY:

- SCE&G should work with state and federal fisheries agencies, the Conservation Groups and other interested stakeholders to develop detailed study plans. Study methods should be tailored to meet the issues specific to individual reservoir and river segments. These areas include the Saluda River upstream of the dam, streams tributary to the reservoir, the Saluda River and its tributaries, and the Congaree River.
- Field surveys should be conducted in all habitats mentioned above. Shallow-water and deep-water surveying techniques should be employed
- An evaluation of habitat conditions and availability under various operational scenarios including reservoir drawdown and run of river operations. The evaluation should rely on modeling, existing information, and field studies.
- A cumulative impacts analysis of the Project on the freshwater mussels of the Santee-Cooper Basin.
- Evaluation of mitigation opportunities for ongoing impacts.

10.3.2.12 RARE, THREATENED, AND ENDANGERED SPECIES/HABITAT STUDY

STUDY REQUEST: We recommend a study that assesses the current condition of rare, threatened, and endangered species (RT&E), how project operation affects those species, and how project operations can be modified to protect, restore, or enhance those populations.

PUBLIC INTEREST: The public has a significant interest in the protection, restoration and enhancement of RT&E species. Legislative and Congressional intent to further this public interest is clearly reflected in the state and federal legislation such as the South Carolina Pollution Control Act, South Carolina Endangered Species Conservation Act and the Federal Endangered Species Act.

NEXUS TO PROJECT: The project affects RT&E species by the ongoing impoundment of the river. The project operations result in a stream flow that is significantly different from natural flow conditions and prevents species from utilizing historic habitats. These altered conditions have created documented problems with water quality and other habitat variables that affect RT&E species. Under section 7(a)(1) of the Endangered Species Act, FERC, like any other federal agency, must protect and contribute to the recovery of all threatened and endangered species affected by their actions. Under ESA section 7(a)(2), FERC must, in consultation with the Fish and Wildlife Service and the National Marine Fisheries Service, ensure that any action it authorizes, funds, or implements is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. The agency is further required to use the best available data in this analysis. It should be noted that unlike FERC relicensing, the baseline for ESA analysis is the historically existing conditions, not the project as it exists at the time of relicensing.

In issuing a Section 401 water quality certification as required by the Clean Water Act, the South Carolina Department of Health and Environmental Control must not issue the certification if the proposed activity will adversely impact RT&E species. Specifically, South Carolina regulation 61-101 requires SCDHEC to evaluate project effects on rare, threatened or endangered species and section F(5)(c) of those regulations states “Certification will be denied if the proposed activity adversely impacts waters containing State or Federally recognized rare, threatened, or endangered species.”

AVAILABLE INFORMATION: Substantial information exists regarding the presence of RT&E species in the project area. Some of the species present in the area include the federally endangered shortnose sturgeon and wood stork, the American Eel which is currently being evaluated for federal listing, and the globally endangered rocky shoals spider lily. The shortnose sturgeon has been documented in the Congaree River and at the confluence of the Broad and Saluda rivers. Both areas are influenced by project

operations. The wood stork has been documented in the upper reaches of the reservoir where project operations have a direct effect on foraging habitat. The rocky shoals spider lily has been documented at the confluence of the Saluda and Broad rivers and possibly exists on the lower Saluda closer to the dam. Other species that may be present in the area are listed in the comments of the U.S. Fish and Wildlife Service. The Conservation Groups recommend that project effects on all of these species be studied and hereby incorporate that list by reference into our comments.

BASIC METHODOLOGY: The RT&E study should be conducted by comparing the habitat requirements for these species with available habitat types within the action area of the project, including downstream river reaches affected by project operations. Where habitat in the affected project area overlap with the habitat requirements of an RT&E species a well conceived study, designed in coordination with applicable state and federal agencies should be conducted. All studies should account for direct, indirect and cumulative effects of project operations.

Several RT&E species are already known to be in the action area. Our initial recommendations for studying those species as follows:

1. Shortnose sturgeon: The study should include gillnet and electrofishing sampling. Weekly sampling should occur during the months of January through June. These methods should be employed in the Saluda River, at the confluence of the Saluda and Broad rivers and in the Congaree River.
2. Rocky shoals spider lily: Plant surveys should be conducted by a qualified botanist during the flowering or fruiting periods of the species. These methods should be employed in the Saluda River, at the confluence of the Saluda and Broad rivers and in the Congaree River.
3. Wood storks: Surveys for the wood stork should occur throughout the year with an emphasis on summer and fall months when the birds have been previously observed in the project vicinity. Occurrences of the species should be documented and mapped using GPS and GIS technologies. As detailed in the (list reservoir flux study here), project effects on habitat availability should be assessed.
4. American eel: The study should include use of various eel traps and electrofishing. These methods should be employed at the dam, in the Saluda River, at the confluence of the Saluda and Broad rivers and in the Congaree River.

14.0 RECREATIONAL USES AND NEEDS STUDY

STUDY REQUEST: We recommend a study to assess the current and future recreational uses and needs of the project area over the term of the proposed license, specifically in the Saluda River below the dam and in the Saluda River at the reservoir headwaters. The study is needed to determine the best locations for additional public access points and to identify what facilities are needed at what locations such as

launching and parking, handicap access, shoreline/river fishing access for non-boat owners, and any necessary signage to inform the public and protect health and safety.

PUBLIC INTEREST: The public has significant interest in assuring they have sufficient access to the public waters of the Saluda River and headwater section of the reservoir.

NEXUS TO PROJECT: Project operations directly affect public access to the Saluda River. FERC regulations require that recreational interests be considered and the current and future use of public recreation sites directly impacts this analysis.

AVAILABLE INFORMATION: The ICD identifies existing public and private recreation sites and states the total number of visitors to the area. The lower Saluda state scenic river plan identifies recreation locations and other amenities needed for that river segment.

BASIC METHODOLOGY: The study should determine recreational use on a site-specific basis and identify what facilities are needed to meet needs and make these reaches more accessible. The study should determine current use numbers and develop projections for future use based on population growth statistics. Also, the study should determine the relative percentage of visitors to each site that engage in each type of recreation (e.g. 10% of people come to swim, 25% to fish, 25% to paddle). The study should assess put-in and take-out points and portages for canoes. Currently there is no take out or portage above millrace rapids, effectively requiring all boaters to run the dangerous rapid or trespass on private land. An analysis of flows for each type of recreation (fishing, power boating, paddling, swimming) should be conducted and is described in the Recreational Flow Study section.

14.2.2 RECREATION FLOW STUDY:

We recommend that SCE&G develop a plan and conduct a study to address Project effects on instream flow and recreation in the Saluda and at the Congaree River headwaters. This study is needed because dam operations alter downstream flows, and the rate at which discharge and water surface elevation changes occur. Such conditions reduce the quantity and quality of recreational opportunities downstream of Project facilities. We recommend determining flow levels in the rivers required for: 1) enhancing recreational opportunities for anglers, paddlers, and swimmers; and 2) ensuring the safety of the public as they pursue these recreational opportunities. These studies are also needed to determine the flow levels/dam operations that will allow use of canoes and kayaks from the Saluda Dam, through the confluence and into the Congaree River. An additional objective of recreation flow studies is to provide information to develop a system to timely inform the public of flow release schedules and a warning system to inform river users of changes in river flows and potentially hazardous conditions. This is addressed in a separate section 7.4.5.

PUBLIC INTEREST:

The areas listed are all used for public recreation, and would be more widely used if flow conditions made the rivers more accessible and safer for use by anglers, boaters and swimmers. Public interest in public recreational uses is explicit.

NEXUS TO PROJECT:

Operation of the Saluda Project controls virtually all flow of the Saluda River and approximately one-third of the flow at the confluence and in the Congaree River. Not only does the project control water volume, but it also controls the timing and duration of flows needed to meet recreational requirements.

AVAILABLE INFORMATION:

Some navigation flow data is available from instream flow studies conducted by SCDNR. Additional information is available through the Lower Saluda Scenic River Advisory Council and the River Alliance.

BASIC METHODOLOGY:

The quality of boating, fishing and swimming experiences should be studied at incremental levels of water flow released from the dam. The study should employ users with varying levels of expertise for each recreation type. Study participants should rate their recreational experiences at different flow levels to evaluate how future project operations can better meet public recreation needs. Safety of recreational users under the full range of Project operations should also be assessed.

15.1 SHORELINE MANAGEMENT PLAN AND ALTERNATIVES STUDY

STUDY REQUEST: We recommend a study of shoreline classifications at Lake Murray and classification of project lands along the Saluda River downstream of the dam.

PUBLIC INTEREST: Ensure adequate balance of shoreline uses is achieved in the future, and that impacts from Licensee's shoreline decisions are consistent with public values and desired public outcomes such as water quality, fisheries, erosion control, terrestrial habitat, aesthetics, and recreation. The existing SMP may be inconsistent with maximizing public benefits because extensive areas within the project boundary are slated for private development and de facto privatization of the existing 75- foot buffer.

NEXUS TO PROJECT: The Shoreline Management Plan should result in uses achieving maximum public benefit. A project approved by the FERC must be "best adapted to a comprehensive plan for improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce, for the improvement and utilization of waterpower development, for the adequate protection, mitigation, and enhancement of fish and wildlife (including related spawning grounds and habitat), and for other beneficial public uses, including irrigation, flood control, water supply, and recreational and other purposes..." and the FERC must give equal consideration to power and non-power values. (FPA Section 10(a)(1) and FPA Section 4(e).

The continued operation of the project and shoreline classification process has a tremendous impact on public accessibility and needs to be fully understood.

AVAILABLE INFORMATION: The current shoreline management plan and the studies conducted in developing that plan. Tennessee Valley Authority final environmental impact statement, *Assessment of Residential Shoreline Development Impacts in the Tennessee Valley* (1998).

BASIC METHODOLOGY:

- For Lake Murray the study should evaluate future public access needs for non-boating recreation (e.g. bank fishing, hiking, picnicking, wildlife viewing, etc.) and how project lands should be classified to meet these needs for the next license term (30 years or longer). Evaluation of how the SMP can support other uses, such as waterfowl hunting, should also be included.
- For the Saluda River downstream of the dam, the study should inventory of riparian areas and to determine feasibility of establishing permanent vegetated buffers as part of shoreline classification. These buffers will ensure high quality recreational experiences for users and abate sedimentation and non-point source pollution.
- Both reservoir and rivers studies should assess methods for habitat preservation and viewshed protection and other public benefits.

Sincerely,

Gerrit Jöbbsis, American Rivers
Director of Southeast Conservation

Patrick Moore, Coastal Conservation League
Water Quality Associate

August 12, 2005

Mr. James M. Landreth, Vice President
Fossil and Hydro Operations
South Carolina Electric and Gas Company
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Columbia, South Carolina 29203

Attn: William R. Argentieri

**Comments on First Stage (Initial) Consultation Document
Saluda Hydroelectric Project, FERC Project No. 516**

Dear Mr. Landreth:

American Whitewater is a nonprofit organization whose mission is to protect and restore our nation's whitewater resources while enhancing opportunities to enjoy them safely. We have approximately 6,500 dues paying members who are primarily noncommercial whitewater paddlers, and also represent over 100 affiliate paddling clubs. Many of our members live and/or recreate in South Carolina and in particular on the Saluda River. We therefore have a direct interest in the outcome of the Relicensing of the Saluda Project.

AW has participated in the Oct. 2004 scoping workshops, Joint Agency and Public Meetings in June 2005 at Saluda Shoals Park, and as a member of Lower Scenic Saluda River Advisory Council (LSSRAC), at the May 2005 LSSRAC meeting with South Carolina Electric & Gas (SCE&G) Staff. AW recognizes and appreciates SCE&G's decision to use a Traditional/Integrated Relicensing method and having open communication with the public on project issues during this process.

American Whitewater has reviewed the Initial Consultation Document (ICD) prepared by South Carolina Electric and Gas Company (SCE&G) for the proposed Relicensing of the Saluda Hydroelectric Project, FERC No. 516.

As a member of the LSSRAC, AW fully supports the two management plans issued as The Lower Saluda River Corridor Plan – published in 1990 by the South Carolina Water Resources Commission (now part of the South Carolina Department of Natural Resources) and Department of Parks, Recreation, and Tourism; adopted as the management plan for the Lower Saluda State Scenic River in 1991, and Lower Saluda Scenic River Corridor Plan Update – published in 2000 as an update and addition to the 1990 corridor plan.

AW offers these recommendations and comments.

Desired Outcomes of Saluda Hydro Project Relicensing

American Whitewater respectfully offers these following desired outcomes as primary objectives to the management of the Saluda Hydro Project and the associated resources as a result of the FERC Relicensing process

Water Quality

Whitewater paddlers are deeply concerned with water quality both for our own sake and for the sake of the river ecosystem itself. Few members of the public come into as much contact with river water on a regular basis as paddlers, so it is only natural that we should be concerned with water quality. We also empathize with, and appreciate the inherent value of, the many organisms that are supported by a healthy river. As such, we have the following preliminary concerns regarding water quality in the Saluda River.

- As a general principle we feel strongly that all water in the project should meet the State water quality standards set forth by the Department of Health and Environmental Control (DHEC) and the Clean Water Act. This includes addressing and implementing solutions to the low dissolved oxygen problem from lake discharges into the river.
- We request that in-depth water quality studies be carried out as part of the relicensing process that characterize water quality conditions in the Saluda River from below the dam to the confluence with the Broad River. Water quality impacts to the river from other projects, and state and regional plans such as the Council of Governments 208 Plan should be considered.

Access and Safety

American Whitewater always advocates for free, safe, and appropriate public access to FERC regulated rivers. These efforts are based on our belief that publicly accessible rivers are socially beneficial, as well as on a strong legislative base that itself is built on the Public Trust Doctrine and federal navigability laws. Section 2.9 of the Federal Power Act has several standard conditions that clearly state that it is the duty of the Licensee to provide recreational access.

Article 18 states:

“So far as is consistent with proper operation of the project, the Licensee shall allow the public free access, to a reasonable extent, to project waters and adjacent project lands owned by the Licensee for the purpose of full public utilization of such lands and waters for navigation and for outdoor recreation purposes, including fishing and hunting: **Provided**, That the Licensee may reserve from public access, such portions of the project waters, adjacent lands, and project facilities as may be necessary for the protection of life, health, and property.” (emphasis in original)

Article 17 states:

“The Licensee shall construct, maintain and operate or shall arrange for the construction, maintenance and operation of such reasonable recreational facilities including modification thereto, such as access roads, wharves, launching ramps, beaches, picnic and camping areas, sanitary facilities and utilities, and shall comply with such reasonable modifications of the project structures and operations as may be prescribed hereafter by the Commission during the term of this license upon its own motion or upon the recommendation of the Secretary of the Interior or other interested Federal and State agencies, after notice and opportunity for hearing.”

Based on the interests of the paddling community to enjoy the Saluda River, and the aforementioned regulatory basis, we would like the following mitigation to be considered during the relicensing process:

- Upgrading and repairing of all existing access points.
- Creation of a take out above Mill Race Rapid (class IV,) to provide a safe and legal area above a known river hazard for float trips.
- Provision of minimum flow requirements for the river that support navigation for recreational boating.
- Provision of consistent and timely communication concerning anticipated flows on the river for recreational users and rescue via online and phone sources.
- Development of procedures and guidelines for gradual releases (ramping) of flows before peak hydro power production is achieved, to protect river users from harm with rapidly rising water.
- Inclusion of all high and seasonally high use areas in the siren and flashing light system, to warn users of rapidly rising water and dangerous conditions. That includes Tail Race, Saluda Shoals, Hopes Ferry, Mill Race, Shandon Rapid, Oh Brother and Ocean Boulevard Rapids.
- Creation of guidelines for introduction of any structure in the river should be established to prevent public endangerment. (ie. The Proposed Low water bridges at the Broad and Saluda Rivers’ confluence for the proposed greenway.)

River Flows

Whitewater paddling is completely flow dependent. Each river offers a unique relationship between flow volumes and the recreational experience they provide. Each river typically offers flows that are too low or too high for a desirable recreational experience, as well as a range of desirable flows. American Whitewater addresses flow mitigation holistically for each river, seeking to integrate the recreational, ecological, and power production values into one flow regime. Our preliminary thoughts on the Saluda are as follows:

- A seasonally variable minimum flow requirement should be set to support the health, survival and propagation of aquatic life and natural communities in and around the river that meets or exceeds state water quality standards.
- Pre-project flows and project inflows should be studied and used to inform decisions on flow regulation.
- Minimum flows should support navigation of the river for recreational boating.
- Ramping (gradual staged raising of water levels) should be studied and used, especially during high use times of the year.
- Scheduled flow releases for recreational events and at desired times of the year when flows can support optimal conditions for recreational uses, such as whitewater boating, special events, and rescue training should be studied and provided.
- A dependable on-line and phone communication system informing of river flows and special conditions needs to be established.
- The value of the spillway as a whitewater recreation resource should be studied following peer reviewed methods. These methods should include at a minimum an on-water single flow whitewater boating feasibility study, possibly followed by a controlled whitewater flow study.

We hope that these comments help all stakeholders in this process understand the interests of the segment of the population that enjoys whitewater paddling. We, like other stakeholders, treasure the Saluda for its many values and look forward to working together toward improved river management.

Specific Comments on the Initial Consultation Document (IDC)

The following are comments provided to address the information provided in the ICD. The numerical system used, references the system in the ICD itself for easy reference purposes.

7.1 (Project Modification for Consideration)

It is important to acknowledge the need for some modification exists and should be examined in depth in order to enhance and restore the public resources, the public's safety, and improve conditions within the project for the future. Flow levels, regimes, practices, wildlife studies, variety of uses, best practices management and overall natural resource impacts and improvements should be studied carefully.

7.2.1 (Flow Rate and Duration Curves)

We feel the use of the USGS gauging system is not an adequate way to inform river users of the river levels for safety purposes. A more reliable and timely information system needs to be implemented. Flow Regimes also need to be addressed to maintain a healthy aquatic environment for the fish and wildlife and also to rid the river of stagnant pool conditions at too low flow conditions. Navigability is also difficult at the extremely low flows we find recorded in the historical data base of the USGS. Flow studies will be required to effectively protect navigability and water quality issues.

7.4 (Project Safety) & 7.4.3 (warning System)

“A siren warning system informs recreational users...”

Through the years American Whitewater has worked in coordination with SCE&G and DNR to improve the information and warning signs for the rising water conditions that exist in a hydro powered river. However, this system is still severely lacking in its ability to truly warn the public users of increasing volume of water being released. Public safety is a vital concern of AW's, and we feel it needs extensive study, consideration and improvement.

9.2.1 (Lake Murray water Quality Conditions)

The last water quality survey was in 1998 and improvements were implemented by SCE&G in monitoring the areas of concern. We request a new study and more information on all aspects of water quality in the project areas. Further planning for future impacts should be implemented to prevent outdated of the Management plan before its time.

9.2.3.3 (Water Uses)

“The Saluda Hydroelectric Project functions as a Reserve Capacity plant, meaning it runs on an ‘as needed basis’.” Considering the fact the Hydro Project no longer is used as a Peaking Facility, the more safety responsible aspect of Ramping (staged gradual release of water), to protect down stream users from the dangers of rapidly rising water, should be intensely examined and addressed as a public safety issue during high use times of year.

14.0 (Recreation Resources) & 14.2 (Project Resources)

14.2.2 (Saluda River)

“..offers a range of paddling experiences from flatwater to whitewater with class II to V rapids.”

14.3.2 (Existing Use and Activities)

Though in the ICD paddling is listed as a recreational use it is never addressed as tangible use as motor boating, fishing, poker runs, dam charity runs or sailing. Numerous whitewater events are held on the Saluda River each year. Canoeing for Kids, a children’s charity, holds a fund raiser on the whitewater sections of the river. A local group of kayakers holds an annual race each January attended by world class kayakers from all over the USA. The SC Fire Academy uses the whitewater section for training of rescue squads, as do the local paddlers. These events and a few others require some scheduling of releases. Scheduled event releases for reliable planning should be studied and open to consideration.

Respectfully Submitted on August 12th, 2005, by:

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CERTIFICATE OF SERVICE

I hereby certify that I have this 12th day of August 2005, served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Carla R. Miner

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US Fish and Wildlife Service		Amanda K Hill Fisheries Biologist US Department of the Interior 176 Croghan Spur Road, Suite 200 Charleston , SOUTH CAROLINA 29407 UNITED STATES amanda_hill@fws.gov
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WILDLIFE & MARINE RESOURCES DEPT		**LEGAL DEPARTMENT WILDLIFE & MARINE RESOURCES DEPT PO Box 167 Columbia ,SC 292020167 UNITED STATES



COLUMBIA FIRE & RESCUE SERVICE

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Mr. James M. Landreth
Vice President
Fossil & Hydro Operations

Re: Saluda Hydro ICD

Mr. Landreth,

The Columbia Fire Department is interested in having input on safety issues dealing with the upcoming relicensing of the Saluda Hydro. Some of the issues that we would like to address are release levels, specific release levels for training purposes, protocol for emergency release levels, warning systems for releases, ramping, public information regarding safety, and access points. We would be willing to work with you in addressing these issues in anyway we can.

Feel free to contact me regarding these matters.

Sincerely,

A handwritten signature in blue ink that reads "CAPT. Alan Axson". The signature is stylized and includes a large flourish at the end.

Captain Alan Axson
Special Operations Coordinator
Columbia Fire Department
803-545-3731 office
cfdwaxson@columbiasc.net

August 11, 2005

Mr. James M. Landreth, Vice President
Fossil and Hydro Operations
South Carolina Electric and Gas Company
111 Research Drive
Columbia, South Carolina 29203

Attn: William R. Argentieri

**Subject: Comments on First Stage (Initial) Consultation Document
Saluda Hydroelectric Project, FERC Project No. 516**

Dear Mr. Landreth:

I have reviewed the *Initial Consultation Document* prepared by South Carolina Electric and Gas Company (SCE&G) for the proposed relicensing of the Saluda Hydroelectric Project, FERC No. 516, on behalf of the City of Columbia's Parks and Recreation Department, and submit the following comments and recommendations. We appreciate the good will shown by SCE&G to undertake this relicensing process in a cooperative manner. The public will surely benefit from the continued open exchange of ideas regarding the valuable resources comprised in the Saluda Hydro Project.

Through our Whitewater Kids Club kayaking program, our department utilizes sections of the Lower Saluda River frequently. With our involvement in the development of the Three Rivers Greenway, we look forward to the day when we have a presence on the banks of this State Scenic River. It is indeed a unique and valuable natural resource.

We support the Lower Saluda River Advisory Council in the recommendations made through their corridor plans concerning the management of the Lower Saluda River, and urge SCE&G to utilize the plans' recommendations in the relicensing process. They represent a "comprehensive plan for improving, developing, and conserving the waterway" (as described in the Federal Power Act, 16 USC Section 803) and should be used by the FERC and SCE&G to define conditions for the operation and management of Project 516. Both the plans represent a consensus among a diverse population of the river's recreational users, citizens, landowners and resource managers.

Issues of Importance in the Relicensing the Saluda Hydro Project

The Parks and Recreation Department believes the following issues are of importance in the management of this river, and therefore the relicensing of the Saluda Hydro Project.

- Improvements for recreational users, including access/egress points and predictable release levels. While our primary concern is river recreation, we also encourage enhanced public lake access points.
- Scheduled event releases.
- Improvements to assure public safety, including warning systems near Shannon and other heavily used locations in the river corridor. Additional signage combined with an ongoing public information campaign regarding the hazards of hydropower releases.
- The designation of undeveloped land in the riparian corridor and project boundary for conservation, and the protection of water quality, wildlife habitat and environmentally sensitive areas and species.
- Water quality conditions in the Lower Saluda River will meet state standards and support existing uses of the river.
- Instream flows will protect and support aquatic life, navigation, recreational boating and fishing and migratory fish populations in the Saluda and Congaree Rivers.

Comments on the Initial Consultation Document

The following comments are provided to address the information presented in the Initial Consultation Document (ICD).

7.3.1.1 Typical Operations state that meeting reserve capacity during an outage requires reaching full output within 15 minutes. While this ability is integral to SCE&G's mission, it can also endanger people on and around the river when water rises quickly. In accordance with 7.4 Project Safety and 7.4.3 Warning Systems we recommend that improvements be made to warning systems and procedures.

8.5 Climate Consideration should be made, in the design and application of hydrologic models, of possible climate change, and its effects on flow regimes within the timeframe of this license.

9.0 Water Quality We support the recommendations made in the LSRAC's corridor management plan, and will largely defer to the expertise of regulatory agencies in the specifics of this issue while noting that population pressures in the watershed continue to have an adverse effect on water quality in the river, from non-point and phosphorous issues in lake coves to heavy sedimentation in river tributaries.

12.1 T&E Wildlife Species A pair of Bald Eagles has nested at the confluence of the Saluda and Broad Rivers for the past two years.

14. 2.2 Recreation, Saluda River Recreational visits to the river by user group are not well documented, but are steadily increasing. Besides fishermen and non-motorized boaters, there are growing numbers of motor boaters using the river. Studies may be helpful in assessing current use and planning for access/egress and user safety.

Additionally, plans for trails and greenways on river left will bring greater numbers of visitors to the river corridor. It is worth noting that SCE&G's undeveloped riparian corridor land has conserved large portions of the river to date. Plans for riparian trails by the Irmo Chapin Recreation Commission and the River Alliance may help to conserve much of this land in years to come, and the good will shown by SCE& G to assist with these plans to date is greatly appreciated.

Recommended Studies

Recreation Flow Study This study should determine minimum flow needed for boat navigation as well as desirable levels for wade fishing, bank fishing, competitive paddling events, and river safety training as required by fire and rescue operations. While the River Alliance did conduct a recreational flow analysis on the Saluda, more detail is needed to identify optimal levels.

Recreation Flow and Safety Communication Study This study should survey practices in other metropolitan tailrace areas subject to similar release conditions to find the best practices for public safety and communication when full power generation of the Saluda Hydro is necessary within a short timeframe. This study should assess the practice of ramping flows. Additionally, the study should identify the best source for dissemination of information to the public about expected release levels on a daily basis.

Recreation Use and Needs Study There is a need to assess current recreational use of river and lake resources, define any necessary improvements for those users, including trails, boating and fishing access points and other associated facilities, and set future carrying capacities for lake and river recreation.

Available Lands for Recreation and Protection of Environmental Resources Land in and around the project boundary should be inventoried to best determine future management of parcels available. As open land is developed, it is imperative to identify remaining properties that are important for habitat and water quality protection and public recreation.

Low Inflow/Drought Protocol Study This study should define protocol that best meets the combined requirements of power generation, minimum river flows, natural resource protection, optimal lake levels and necessary water withdrawals during periods of drought. This study may be part of a larger Hydrologic/Hydraulic Operations Model This model should simulate project operation variables, including inflow, evaporation and withdrawals, hydropower generation, minimum and maximum flow levels, and the effects of possible climate change on operations. Combined flow levels with the Broad River should be considered from the confluence through the Congaree National Park. This model can provide a tool to determine practices and protocol that best balances the varied interests and requirements of stakeholders and user groups.

Reservoir Level Study Evaluate potential seasonal target elevations for lake Murray along with minimum and maximum levels based on historical data.

Water Quality Study As population on and around the lake and the river increases, water quality worsens. A study is needed to assess current water quality issues, and evaluate operating procedures that would improve or enhance water quality in the lake and on the river. SCE&G's efforts to boost DO on the river are commendable.

Effect of Flow on Aquatic Life in the Lower Saluda River Because project operations affect aquatic life and natural communities in the river corridor, especially in the upper reaches of the river, we recommend an assessment of various flow levels for river segments to the confluence with the Broad River. Consideration should be given to habitat requirements during various life stages of aquatic biota, as well as optimal migratory flow requirements.

The above are of particular interest to the City of Columbia Parks and Recreation Department as current recreational users of the Lower Saluda River and future potential managers of a proposed section of the Three Rivers Greenway on the Saluda River. As stated before, we support the Lower Saluda River Advisory Council's recommendations on the management of the river corridor. We endorse the LSRAC's recommendations for further studies, including the Rare, Threatened and Endangered Species and Habitat Survey, Floodplain Vegetation Assessment, Diadromous Fish Study, Macrobenthic Survey, Cultural Resources Survey, and Mussel Survey.

We appreciate this opportunity to comment and the open spirit of cooperation in which SCE&G has begun this process. We realize that there is much work to be done in clarifying all commentary, and in eventually reaching consensus among all involved parties. Please feel free to call or e-mail me regarding this letter.

Sincerely,



Karen Kustafik
City of Columbia Parks and Recreation
Outdoor and Environmental Programs
1932 Calhoun St.
Columbia, SC 29201

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Commerce Association of Lake Murray
CALM

February 7, 2007

South Carolina Electric and Gas Company (SCE&G)
Tommy Boozer, Manager
Lake Management Programs
Columbia, SC 29218

Dear Mr. Boozer,

Thank you for the opportunity to share with SCE&G Lake Management a summary of the goals and objectives of the Commerce Association of Lake Murray (CALM). CALM represents Lake Murray businesses which share some of the same objectives of SCE&G and the Lake Murray residents in providing Lake Murray quality accessibility and valuable service to the general public and the individuals who reside on the shores of Lake Murray. Together we share a common goal in providing a safe and quality resource for all who desire to participate in the recreational opportunity afforded by Lake Murray.

In order to support our common goal and provide continued excellent services to the general public and other interested parties the marina operators and members of CALM respectfully request SCE&G Lake Management to consider an amendment to the multi-slip moratorium. This would provide existing marina operators the opportunity to resume submission of permit applications at marina facilities on Lake Murray. We also request your assistance in expediting the permit approval process with other regulatory agencies which are involved in the approval process.

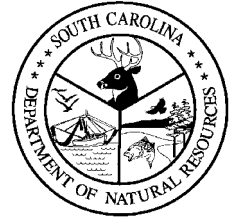
CALM and its affiliated business membership appreciate all the support, assistance and guidance afforded by SCE&G Lake Management in moving toward fulfilling our common interest in providing a continued excellent level of services to all visitors of Lake Murray.

Sincerely,

CALM MEMBERS

Janet Watta *Crava + Resales*
Sammy Wright *Lake Murray Marina*
Stu Jones *Lighthouse Marina*
Jim Dubes *Lake Murray Boat Club*
John Atterbury *SeaTow Lake Murray*
Charlie Heggins *Holland's Marina*
John Jones *AKER Landing*
Bill Duple *Putnam's Landing*

South Carolina Department of Natural Resources



August 11, 2005

Mr. James M. Landreth, Vice President
Fossil and HydroOperations
South Carolina Electric and Gas Company
111 Research Drive
Columbia, South Carolina 29203

Attn: Mr. Bill Argentieri

Subject: Saluda Dam Project (FERC Project No. 516)
First Stage Consultation Comments

Dear Mr. Landreth:

The South Carolina Department of Natural Resources (DNR) has reviewed the *First Stage Consultation Document* for the proposed relicensing of the Saluda Dam. We also participated in the October 26, 27, 28, workshops held in 2004, and attended the Joint Agency/Public meeting on June 16th, 2005. We appreciate the opportunity to provide comments on the Initial Consultation Document (ICD) and to present our information needs. We look forward to working with SCE&G in the development of the studies needed to satisfy appropriate information needs.

The current FERC license for the Saluda project expires on August 31, 2010. Many changes have occurred in the basin since the license was awarded in 1984. The Saluda basin has experienced high growth and development in Richland and Lexington counties, and is facing growing demands to meet the needs of industrial and municipal water supplies, wastewater assimilation, residential development, recreation, and natural resources.

Since the last license was issued, important Federal legislation was passed that reflects changes in the way we view our environment. The Clean Water Act reaffirmed the importance society places on water quality. The Federal Power Act granted natural resource agencies such as the DNR standing in the relicensing process. The DNR views the relicensing of the Saluda project as an opportunity to work with SCE&G to protect, enhance and restore natural resources and the associated recreational uses. Our mutual challenge will be to create and implement a vision that will last well into the future.

Project Overview

The Saluda River Basin covers approximately 2,519 square miles and contains 21 watersheds with geographic regions that extend from the Blue Ridge Mountains to the Piedmont. The Saluda River Basin encompasses 1,612,395 acres of which most (67.4%) is forested land. The remainder includes agricultural land (16.2%), urban land (8.4%), scrub-shrub lands (3.4%), barren land

(0.5%), and 0.2% is forested wetland. About 4% is water (SCLRCC 1990). The urban land is comprised of the Cities of Greenville and Columbia, and to a lesser extent the Cities of Laurens and Newberry. There are a total of 2,416.2 stream miles in the Saluda River Basin.

The Saluda River and the Little Saluda River watersheds form the headwaters of Lake Murray. Lake Murray is approximately 48,000 acres and has over 600 miles of shoreline. The average depth of the lake is about 41 feet and the maximum depth is about 190 feet. The lake watershed includes about 1193 square miles.

The South Carolina State Legislature designated a 10-mile segment of the lower Saluda River as a State Scenic River on May 31, 1991. The Lower Saluda River, from the Saluda Dam downstream to the confluence of the Broad River, is recognized as an outstanding recreational resource. Trout and striped bass fishing as well as whitewater (class II to V rapids) and flatwater paddling are very popular on this piedmont river.

State Comprehensive Plans

Five DNR plans relative to the relicensing of this project have been submitted to and accepted by the FERC as Comprehensive Plans. These are: *South Carolina Rivers Assessment* (1988), *Instream Flow Study, Phase I* (1986), *Instream Flow Study, Phase II* (1988), *South Carolina Instream Flow Studies: A Status Report* (1989), and *State Water Plan* (1998, 2004). We recommend that all relicensing activities and new license conditions are consistent with these plans. In addition to these plans, the lower Saluda River is designated as a State Scenic River, and two comprehensive plans have been submitted to the FERC for consideration. They are 1) *The Lower Saluda River Corridor Plan* (1990); and 2) *Lower Saluda Scenic River Corridor Plan Update* (2002).

DNR Objectives

The Department's management objectives for the Saluda Project include the protection, enhancement and restoration of natural resources and their associated values. These objectives are to:

- 1) Insure that the FERC license recognizes that Lake Murray and the Lower Saluda River are important public trust resource, and that the Project is managed to achieve public benefits.
- 2) Maintain and/or enhance the water quality in Lake Murray to meet current use classifications that protect and provide for fish and wildlife habitat, contact recreation, and public water supply.
- 3) Insure the implementation of appropriate instream flows in the lower Saluda River to protect water quality, provide for reasonable navigation, protect fish and wildlife resources, and meet present and future water supply demands (municipal, industrial, agricultural).
- 4) Develop a Water Shortage Contingency Plan consistent with the State Drought Response Act and the State Water Plan.

- 5) Prevent the impairment of appropriate water uses (water supply, navigation, recreation, power generation) by invasive aquatic plants.
- 6) Protect and enhance fish and wildlife populations and their habitat.
- 7) Protect and enhance rare, threatened and endangered plant and animal species.
- 8) Protect and enhance opportunities for fishing, hunting, wildlife viewing and other outdoor recreation.
- 9) Increase recreational safety on the reservoir and the lower Saluda River.
- 10) Protect cultural and historic resources.

ICD comments

Our comments, offered to correct or clarify the information provided in the ICD, follow:

Section 7.1 Project Modification for Consideration – since the Saluda project impacts public resources, we believe it is necessary to examine Project modifications that might enhance or restore those public resources, which include fish and wildlife resources, water resources, and associated public uses of those resources including recreational uses.

Section 7.4.3 Warning Systems – safety of river users below the project is a significant issue, and as recreational use of project resources increase, the safety warning systems and related information needs for river users will also increase. We think public safety should receive a high priority in the development of operational protocols.

Section 8.1 Geological Setting – this section would be improved with a more detailed description of the Eastern Piedmont Fault System. The terms Dreher Shoals terrane and Kiokee belt are used interchangeably. We suggest that you use one term or the other, and we prefer terrane.

Section 8.2 Late Paleozoic Orogeny Deformation Patterns - the list of lithologies seems out of place and should be included in the first section. The map, which is an excellent source of information, does not appear to be properly cited. Also, there are many significant faults in the project area, and we suggest that more information could be provided.

Section 8.3 Tectonic History - the statement that references a "28-30 km limit to earthquakes" is a very generalized statement, which is only partially correct.

Section 8.5 Climate - on average 40 days are above 90 degrees in July and August. There are an average of 73 days annually above 90 degrees. Temperatures may reach 100 degrees or more four or five days per year, not just two or three.

Section 9.1 – Applicable Water Quality Standards - in this section, SCE&G states that an excellent trout fishery exists in the lower Saluda River. While we may not agree that it is an excellent trout fishery, we would agree that this is a unique fishery made possible by the project. Our data indicates that there is a high mortality of trout during the first year of stocking, and that very few fish survive to the next year. We believe this is due to high water temperatures and/or

low dissolved oxygen in the late summer, and we are interested in knowing if the present facilities can be operated in a manner to provide cooler water in the summer months.

Also, it is true that based on the trout growth model, growth of 0.67 inches per month could be realized. While this is considered to be an excellent growth rate, a trout stocked in the river at a length of 7-8 inches will need about 18 months to reach 20 inches. Since most of the fish are gone by the fall of the year, few are left to grow beyond 12 or 13 inches in length. Also, this section states that based on the model, good trout growth is due in part to the 'relatively high average DO as a result of the aeration system initiated in 1999. We think that other factors could have significantly contributed to the growth observed during the modeling exercise, and we would like to see a graphical comparison of DO, temperature, and flow regimes for July-September for at least one-year prior, the year during, and one-year after the trout study, to validate this observation.

Section 9.2.2.1 – Lake Murray – Past Studies – this section should be updated to reflect the most current watershed assessment report, Technical Report No. 004-04.

Section 9.2.3.1 – Saluda Dam Tailwater – Past Studies – the low dissolved oxygen (DO) problems in the Saluda River caused by the summer-fall, hypolimnetic discharges from Lake Murray were well documented eight to ten years prior to the DHEC reports cited in the ICD. The DO problems are presented the July 1988 study report titled “Oxygen Dynamics in the Lower Saluda River” by H.N. McKellar, Jr. and Mary K. Stecker, from the Department of Environmental Health Sciences at the University of South Carolina. Recently, DHEC has published another report that documents continuing DO problems (excursions) resulting in conditions that only partially support aquatic life in the lower Saluda. The reported is the October 2004 DHEC Watershed Water Quality Assessment for the Saluda River Basin, Technical Report No. 004-04.

Section 9.2.2.6 – DO and Temperature – Lake Murray - in this section, temperature and DO profiles for one year (1998) are presented. Similar data for dry, normal, wet, and drawdown year(s) would be very useful in helping us to better understand the effect of project operations on summer striped bass habitat in the reservoir. Also, a definition of what constitutes a dry, normal or wet year should be included.

Section 9.2.3.2 – DO Enhancements of the Project Turbine Releases - the inclusion of daily DO and Temperature values for lower Saluda River June- September, 1999-2004 would help to support the exceedance figure (Figure E-12) and to further support the statement that operational protocols have benefited DO levels in the lower Saluda River, which in turn has benefited the growth of trout. We believe that both adequate DO and water temperature are needed to maintain trout habitat.

Section 9.2.3.3 – Water uses – while this section describes project water resources as high quality and exceptional, there is no mention of the current fish advisory. SCDHEC issued a 2005 fish consumption advisory in affect for the lower Saluda for largemouth bass and bowfin.

Section 10.3.1 – Lake Murray - the spring sampling for largemouth bass discussed in this section is conducted on a rotational basis, every 5 years, and is scheduled to resume in 2006 (was postponed one year due to drawdown). It is not done annually as stated in this section.

Section 10.3.2 – Lower Saluda River Fishery - a statement made in this section implies that there have been no periods of low DO in the lower Saluda River since 1996. It is our understanding that short periods of low DO have continued to occur since 1996. This statement needs clarification.

Section 10.3.2.1 – Fisheries Community - the first trout stocking in the lower Saluda River occurred in the mid 1960s, not 1950s as stated. Also, the DNR recommendation regarding the establishment of a smallmouth bass fishery in the lower Saluda River was based on the findings that the system would not support a self-sustaining population and would rely on annual stocking. At that time DNR lacked facilities capable of reliable production necessary to establish and maintain a smallmouth bass population in the lower Saluda River. We are producing smallmouth bass at one of our State fish hatcheries, and the increased availability of smallmouth bass may influence future management decisions.

Section 10.3.2.3 – Trout Stocking - the ratio of rainbow trout (RBT) to brown trout (BNT) stocked annually is incorrect. The correct ratio ranges from 2:1 to 3:1 RBT vs. BNT. Also, the trout stocking season occurs late November through April.

Section 10.3.2.4 – Trout Growth Studies - we acknowledge the trout growth study was an acceptable exercise to evaluate trout growth in the lower Saluda River. However, the timing of this study was short in duration, the study occurred at the end of a drought which may have created pre-study conditions conducive to trout carryover and growth, and the environmental conditions in the lower Saluda River were far from “normal”. We suggest caution in drawing correlative conclusions between turbine venting and trout carryover and growth. As agreed by all parties, follow-up studies are needed to further assess trout carryover and growth. Based on DNR and SCE&G population survey data in the lower Saluda River, some of which are presented in the ICD, trout occurrence over time has been variable with no marked increase in abundance since turbine venting was initiated.

Section 10.3.2.6 – Fisheries Management Goals - creel survey economics: Cumulative value of the LSR recreational fishing was estimated to be \$784,600. With the durable goods component added, the fishery would generate in excess of \$1 million. It is important to note that the trout fishery was responsible for the majority of these revenues.

Section 11.1.6 - Invasive Aquatic Plants - the variety of hydrilla in Lake Murray (Dioecious) does not reproduce by seed, only vegetatively. The local common name for *Najas minor* is slender naiad or brittle naiad not brittle water nymph. We recommend including the scientific names in addition to the common names. Aquatic plant surveys on Lake Murray have been conducted periodically beginning in the early 1990's by plane and boat. Eurasian watermilfoil no longer appears to be a problem. There should be discussion of water primrose in the Lake Murray section. There is very little discussion of management activities on the lake. That is

unusual considering the variety and cost (\$1.5 million) of control methods used from 1993-2002. Triploid grass carp were stocked in Lake Murray in 2003 and not in 2002.

Section 11.0 - Botanical Resources – considerable effort and attention has been directed to Lake Murray shoreline management and the classification of environmentally sensitive areas on the lake. However, the ICD seems to indicate that SCE&G has very little information about the natural/sensitive areas or ecologically significant resources along the lower Saluda River; therefore, we think that additional inventory, assessment, and conservation planning for these resources is needed on the river.

Section 11.1.2 – Lower Saluda River – the ICD indicates that SCE&G has little information about the habitats, botanical species, and environmental sensitive areas (ESA) of the lower Saluda River corridor; therefore, we think that additional inventory, assessment, and conservation planning for these resources is needed on the river.

Section 15.0 - Land Use and Aesthetics – the DNR believes improved management and protection of shoreline areas are needed to maintain the lake's natural resource values and public benefits. Also, the lower Saluda is a State Scenic River, and a considerable amount of information is available to describe the river and its surrounding lands in the lower Saluda River Corridor Plan. We found very little information in the ICD that addressed the planning strategies incorporated in this plan.

G-3 – Project maps- all project maps should reflect current conditions as of April 29, 2005.

Information Needs

Project Operations

The DNR needs to develop a thorough understanding of the relationship between inflows and operations. It is important that we have a tool in which both SCE&G and the DNR can evaluate different operational scenarios. Our information needs include, but are not limited to: (1) an operations hydraulic model that reflects a basin-wide management capability, (2) a dataset that includes a sufficient period of record, preferably the life of the project, (3) a definition of dry, normal and wet water years, (4) water level management strategies for the reservoir, (5) spillway operation procedures, (6) hydroelectric generation protocol, (7) stage/storage relationships for the reservoir, (8) runoff/storage relationships, (9) critical lake level elevations and streamflow requirements for all water use interests (water supply, navigation, fish and wildlife, aquatic plants, hydropower, flood control, drought, boating access, recreation, etc., and (10) project inflows. Other project related information, such as sediment control/flushing plans or facilities maintenance plans, should be provided if they result in significant water level manipulation or impacts to aquatic resources.

Instream Flows

Flow regime is the dominant variable that shapes the physical, chemical and biological processes critical to maintenance of a functioning river. A high priority for the DNR will be the establishment of continuous flows in the Saluda River in accordance with the State Water Plan. To adequately address the plan, it will be important to establish the geographic area under project influence, which may extend well downstream of the confluence of the Broad and Saluda rivers.

The DNR has previously conducted site-specific flow studies to evaluate the needs of aquatic habitat and navigation for the Lower Saluda River. In those studies, we determined that an instantaneous flow of at least 470 cfs is needed to support one-way downstream navigation, and flows of 590 cfs (July – November), 1170 cfs (Jan-April), and 880 cfs (May, June and December) are needed to provide seasonal aquatic habitat. Based on the State Water Plan, the higher of these flows should be provided to meet all uses.

In lieu of implementing these recommendations, site-specific studies may be conducted in coordination with the Resource agencies. These studies could include wetted perimeter, Instream Flow Incremental Methodology (IFIM), Physical Habitat Simulation (PHABSIM), or other at a variety of flow conditions. These studies would provide information to further identify the relationship between discharge and channel characteristics such as water depth and velocity, substrate, cover, available habitat for fish and other aquatic organisms and the effects of drought and flooding. Also, the effects of peaking operations on habitat should be evaluated using a dual flow analysis.

Floodplain connectivity is another important ecological issue. The Congaree National Park is a resource of significant State and Federal importance that we believe is under project influence. We would like to know how the project has affected the duration and frequency of flood plain inundation in the Congaree River basin and specifically at the Park. If possible, we recommend that the hydrologic record associated with the operation of the project be compared to the unregulated hydrology that would have occurred under a natural flow regime over the life of the project. An estimate of the timing, duration and magnitude of flood events that occurred and that would have occurred in absence of the project is needed.

Water Quality

The project has a variety of issues associated with water quality. The upper end of the reservoir is impacted by developmental and industrial uses in the Saluda basin, while the water quality in the Lower Saluda River is directly influenced by operations. While the lake as a whole is one of the least eutrophic lakes in South Carolina, we are concerned that there are some problematic areas.

According to the Watershed Water Quality Assessment, 1998 (SCDHEC 1998), some of the sampling sites did not meet standards for copper, and other pollutants associated with point-source dischargers were present in sediments and included copper, chromium, nickel, lead, and various pesticides. The Saluda River Basin Water Quality Assessment dated October 2004, DHEC reported that of the 13 stations sampled, five did not support aquatic life uses and three others only partially supported aquatic life uses. The reason for these non-attainment values was

excursions in pH and elevated levels of phosphorous. The Department is concerned that the majority of these sampling stations showed impacts to aquatic life uses even though the sample set was small.

The DNR is also concerned with increasing trends in fecal coliform bacteria. While recreation use is fully supported at most of the sampling sites on Lake Murray, increasing trends in fecal bacteria jeopardize the recreational potential of the lake.

The Department believes that shoreline development has and will continue to contribute to the existing non-point source pollution. The actions of homeowners in managing lawns, septic tanks, and pet waste, as well as the application of herbicides and insecticides, can adversely impact the waters in the Lake. This problem can be exacerbated due to the lack of shoreline buffers, a decision that is also project influenced.

The occasional but significant summer die-off of large striped bass in the lake indicates that in some years habitat is severely limited. Steve Summer (personal communication) indicated SCE&G will revise its operational protocol this fall. It is our understanding that the current protocol was developed with two units capable of turbine venting, and now that all units are vented, there will be more flexibility in operations. We request information that will help to 1) forecast habitat reductions, and 2) help develop an operational protocol to minimize impacts on striped bass habitat.

We need to have a better understanding of the relationship between project operations and water temperature and dissolved oxygen as they pertain to our management programs. We need to have temperature profiles, on at least a monthly basis, at the unit intakes in the reservoir (specifically June-September).

State water quality standards for Dissolved Oxygen (DO) are not always met in the river below the project. SCE&G is in the process of upgrading turbine runners for the Saluda project, because minimizing the percent of time when DO is less than 5 ppm is important in protecting aquatic habitat. The cold water released from Lake Murray provides a unique opportunity to manage for trout, which are a popular sport fish well suited to a put, grow and take management strategy. The flowing water in the tailrace also attracts a variety of other fish species, including seasonally important sport species such as striped bass.

We recommend that trends in water quality data associated with Lake Murray and the Lower Saluda River be reviewed and summarized. Special attention should be given to the stations and parameters that did not meet State standards or are declining. Also, the role of project operations, if any, in contributing to the current water quality should be assessed. We also recommend that water quality models be developed to identify any relationships between point and non-point pollutants and operations. We request to participate in the review of data and the development and verification of any models, and we request a copy of the data set and the model so we can conduct an independent analysis.

Reservoir Fluctuation

We are interested in enhancing spawning success of shallow water nest builders, such as crappie, sunfish and bass. These species spawn primarily in the spring, and spawning success can be jeopardized if lake levels fluctuate more than about 6 inches during the spring spawning season. We request a summary of water level fluctuations for the months of March, April and May for the period of the current license.

Project Lands

We believe that developmental and non-developmental activities must be balanced to ensure that public access and recreational opportunities are provided now and into the future. Shoreline development has occurred on at least 65% of the shoreline, and we believe that this development has impacted the visual aesthetics of the reservoir, reduced natural shallow water habitat, reduced riparian habitat, reduced areas available for waterfowl hunting, impacted water quality, and discouraged the public use of project lands.

The Department recognizes the effort on behalf of the licensee to balance environmental needs with recreational uses through a detailed SMP. However, we are concerned with the lack of completion of the plan update. Parts of the plan that have not been resolved include: (1) an erosion and sedimentation control plan, (2) a map identifying intermittent and perennial streams and their associated 75' buffer, (3) guidelines for restrictions within the 50' buffer surrounding the ESA's, (4) a map showing the location of all ESA's in front of all easement properties, (5) a woody debris and stump management plan, (6) a buffer zone restoration plan for buffer zone areas that have been improperly cleared by landowners, (7) the designation of new waterfowl hunting areas to compensate for those lost to land sales and development.

The Department believes the completion and implementation of the various management plans will have beneficial ecological, recreational and aesthetic results. Therefore, we believe these plans need to be completed as soon as possible. Although these management plans will contribute to better shoreline management, there are other still issues to address. Our primary concern with the SMP plan continues to be rebalancing of shoreline classifications. In a 2004 order, FERC recognized that the shoreline classifications are weighted heavily towards development and stated that rebalancing is needed. We, along with other resource agencies and stakeholders, have repeatedly asked for and continue to recommend that rebalancing be completed. We also request that specific management restrictions be developed and incorporated into the SMP that would control encroachments into ESA's, conservation areas, and other natural areas. SCE&G is in the process of revising land classifications, and we request an updated classification that clearly describes the existing use of the property, acreage and mileage of shoreline associated with each classification.

Project lands associated with the Lower Saluda River have been less developed, and the riparian buffers and natural features associated with most of these lands are still intact. We request a

summary of project lands and their current classifications, to include acreage and mileage of shoreline.

Fish and Wildlife

Habitat - the project area provides a diversity of fish and wildlife habitat in the central piedmont of South Carolina. Besides creating over 50,000 acres of reservoir, there are about 600 miles of shoreline. Shoreline management mapping has identified the shoreline miles of habitat types such as environmental, forest and game, and vegetated. We would like to know how many acres, within the project boundary, are associated with these land classifications, as well as wetlands. Additionally, we would like to know the relationship between lake levels and shallow water habitat. This knowledge will allow us to evaluate the impacts of any proposed operations on this important habitat. Aquatic habitat for pelagic fish species is compromised in certain years. The combination of increasing water temperature and decreasing dissolved oxygen results in a decrease in available cool-water habitat for some species. It is important that we understand the reasons and contributing factors of this seasonal habitat decline. A model should be developed that will help us to better understand the causative factors that result in habitat declines, and to evaluate scenarios that could reduce or eliminate this problem.

Fish and Wildlife populations - the project area provides a diversity of fish and wildlife populations in the central piedmont of South Carolina. While a summary of fisheries information is provided in the ICD, additional information is needed for other species to evaluate both the current status and the effects of the project. These include:

Diadromous fish - historically, the Saluda River was a regional fishery for diadromous fish species, such as American shad. This area has been known to support important sport and commercial fisheries since pre-European settlement. Although we have evidence that American shad do utilize the Saluda River for spawning, this use appears to be limited. To make informed resource decisions regarding the potential restoration of the Saluda River, information is needed to quantify the present diadromous fish utilization, by numbers and species, in and immediately below the project. Spawning and nursery habitat for diadromous fish species in the river and the lake should be identified and quantified.

Mussels – habitat for many species of mussels has been altered or degraded in the Southeast. Mussel surveys have been conducted in the project area, in both tributaries to the lake and in the lower Saluda River. However the information provided from these surveys is limited, and a thorough evaluation of the species composition and distribution has not been completed. Also, the relationship between project operations and mussel habitat was not presented in the ICD. The present status of mussels in the project area should be evaluated, their habitat needs should be assessed, and any project impacts on habitat should be identified.

Invertebrates – the improved water quality as a result of turbine venting should result in a higher numbers and diversity of invertebrates in the lower Saluda River. However, the high flows associated with peaking power operations can result in low numbers and diversity for some

distance downstream. We are interested in knowing if invertebrate fauna have increased in either number or species diversity, and how far downstream they are impacted.

Fish Entrainment and Associated Mortality

The DNR is concerned that large numbers of fish are being entrained at the Saluda Dam. Entrained fish can experience injury or death. No measure of entrainment was provided in the ICD. We recommend that SCE&G conduct a desktop study of potential entrainment using previous studies conducted at other similar facilities. The objectives of the study should be to (1) quantify the numbers and sizes of fish entrained, by species, (2) estimate mortality rates associated by species, and (3) provide recommendations for project design and operation that can reasonably be made to prevent or minimize fish entrainment and associated injury/mortality.

Also, fish mortality associated with the operations of the project spill gates has occurred in the past. We believe that this mortality is related to the time of year and the presence of fish near the dam. We request a summary of emergency spill gate testing protocol to include the frequency, time of year, and any adaptive measures that are used to reduce fish mortality.

Rare Fish, Wildlife and Plants

All rare, threatened and endangered species associated with the project should be identified. The DNR database (<http://www.dnr.state.sc.us/heritage>) should be reviewed. An assessment of how project operations may affect these species should be prepared. The habitat requirements of all species identified should be compared to habitats available within the project boundary. Management plans for species that are in the project boundary or are under project influence should be developed and included as part of the license application.

Aquatic Plant Management

Aquatic plants provide important aquatic habitat in the project. Some of the plant species present are more desirable than others. The presence of hydrilla presents a high risk to native plant species and a variety of resource users in South Carolina. In the past, SCE&G, in conjunction with the SCDNR, has performed effective control of this species. The large amount of potential habitat available to hydrilla in the reservoirs presents a cause for concern. According to the ICD, aquatic plants have been surveyed and mapped in the past. It is not clear when or how often these surveys were conducted, and no plans for future surveys were provided. Information such as species composition, location, and acreage of aquatic plants in the project is needed to develop an aquatic plant management plan.

Recreational Assessment

Ensuring the public has adequate access to the project is a high interest of the agency. A description of public recreation sites is provided in the ICD (Table E-15). However, no

indication of capacity or handicapped accessibility is provided, and we request that information be included.

Population trends for 1990 through 2000 (Table E-18) indicate that the local area grew by as much as 2.8 % per year. While no growth projections were provided, it appears that additional public recreational facilities may be needed to accommodate future growth. Information regarding recreational use and needs, projected for at least 10 years, is needed to plan for future recreational enhancements.

According to the ICD, there are 20 public recreation sites in the project area. Of these, 15 provide boat access, 10 provide for picnicking, 3 provide for pier fishing, and one provides a swimming beach. We are interested in ensuring that adequate shore based recreational activities are available for public use. Information regarding future plans to develop shore based recreational access is needed. Also, the location and property for a large, multi-lane boating event site should be explored.

In the lower Saluda River, flows are needed to support wade fishing and paddling. Information is needed regarding the flows that provide optimal recreational opportunity and when they should be provided.

Public Safety

The DNR is charged with administering recreational boating and safety laws and regulations. We are interested in identifying any practical means to increase boating safety. In addition, we are interested in identifying ways to reduce the number of water related deaths and accidents associated with the project. We request that a list of all project related accidents that occurred during the existing license period be provided, as well as any accommodations in project operations or facilities by the licensee to address these accidents.

Historic/Cultural Resources

There are many known prehistoric, historic and cultural resources located within the project boundary. There are likely many more unknown sites. Many of these resources have not been fully studied or protected. A plan to identify and protect these valuable resources should be developed in coordination with the DNR and other appropriate agencies.

Conclusion

The Department looks forward to working with SCE&G in the relicensing process. We recommend that all study planning and related activities be closely coordinated with our staff and other relevant natural resource agencies. We request that all data collections, data analyses, and draft and final reports be provided to the SCDNR in both printed and electronic formats for review, verification and comment.

The Department believes the first stage of the consultation has had many positive results. We understand the magnitude of our information needs described in the proceeding pages; however, we believe they are commensurate with the scale of the Saluda Project and the state and national significance of its natural resources. Our staff looks forward to continued close communication during the duration of this relicensing process. The SCDNR project manager for the Saluda Project is Mr. Dick Christie. He can be contacted at: (803) 289-7022.

Sincerely,

Ed Duncan

Environmental Programs Director

cc: The Secretary – FERC
Quinton Epps - SCDHEC
Amanda Hill - USFWS
David Rackley - NMFS
Tony Bebbler – SCPRT



The Lake Murray Association, Inc

Telephone :(

803)749-3888

P. O. Box 495

Ballentine, South Carolina 29002

August 12, 2005

Mr. James M. Landreth, Vice President
Fossil & Hydro Operations
South Carolina Electric & Gas Company
111 Research Drive
Columbia, SC 29203

Attn: Mr. William R. Argentieri
"Comments on the Saluda Hydro ICD"

Dear Mr. Landreth:

The Lake Murray Association, Inc. is an incorporated non-profit organization chartered in 1994 by users of the lake to be "the voice of Lake Murray". LMA's sole focus is the preservation and protection of the lake for all users. Acceptable lake levels, safety, water quality, wildlife protection, shoreline management and education have long been the established goals of this 12 year old organization. LMA's by-laws require the Board of Directors to have members from the 4 counties that encompass the lake to insure all users are properly represented.

The Lake Murray Association, Inc. has reviewed the Initial Consultation Document and requests the following studies and considerations.

Study to Allow for Minimum Year Around Elevation of 354' On Lake Murray

The information will serve:

To determine the feasibility of 354' elevation as the *minimum year around lake level* for Lake Murray.

The information does relate to operation since:

1. Saluda Hydro would be operated at a higher minimum level year around and we assume, a new guide curve would be used.

2. SCE&G's operating capacity would not be impacted greatly as other plants now exist to produce the reserves needed.
3. SCE&G's president, Neville Lorick has publicly indicated that Lake Murray is important to the people of Columbia and has stated in an Article August 11, 2005 in the Lexington Chronicle that it is the "jewel of the midlands". More and more people will be using Lake Murray in the future for recreation.
4. It appears to those who use the lake regularly that hydrilla does not benefit from draw downs as we once believed. It appears that lowering the water exacerbates the problem when the lake comes back. DNR and LMA agreed with others that Grass Carp is a viable solution; therefore there is no need to draw down the lake for control of this weed as has been done in the past.

The lake is now primarily used for recreation. Recreation is in the goals and objectives of the permit issued by the FERC in the previous license. It is anticipated more emphasis will be put on recreation in the new license to accommodate growing population in the surrounding area.

1. The resource is used for recreation which includes boating, fishing, swimming, camping and has increased exponentially since the last license was issued in 1984.
2. Since 1984 many commercial enterprises have opened on Lake Murray including marinas, boat dealers and restaurants, plus many off site businesses that support these shoreline ventures and contribute to the economy.
3. In order to have successful and safer recreation, minimum water level is a necessity. Safety is a primary concern. It is widely accepted that the lake is safer with higher water levels presenting fewer obstacles to safe navigation.

Some studies below have been done and new modeling studies of inflows and outflows, we are sure could meet generally accepted practices.

1. We are unaware of any study SCE&G has proposed.
2. The Lake Murray Association has conducted surveys with Lake Murray homeowners and commercial businesses on the lake to determine the best and most acceptable minimum levels from a use and economic standpoint. A new study is currently being planned.
3. The Lake Murray Association presented a computer generated model designed by the late Gene Anderson to demonstrate how the minimum water level could be kept at 354' year around. SCE&G has twice held the lake level at or above 354' during the winter 1999-2000 and again in 2004-2005. They have stated no adverse impact on operations during the period as a result of higher winter levels.

The FERC issued permit to operate the Saluda Hydroelectric Project has the goal of recreation as one of the objectives of the resource. Recreation on Lake Murray includes, fishing, swimming, boating and camping. A 354' minimum level makes this safer for these activities

1. The resource is used for recreation which has increased exponentially since the last license was issued in 1984. The lake is considerably safer at a minimum of 354' with fewer shoals as hazards.
2. Since 1984 many commercial enterprises have opened on Lake Murray including marinas, boat dealers, restaurants plus many off site businesses that support these shoreline ventures and contribute to the economy. LMA surveys show lower levels are detrimental to these businesses.
3. Eighty-five percent (85%) of homeowners on the shoreline according to LMA surveys cannot use the lake below 354'. In order to have successful year around recreation for thousands of lake users, 354' minimum elevation is required to launch boats or use docks and lifts. Some coves are completely dry below the 354' elevation which makes swimming, boating and fishing recreation unavailable.
4. According to downstream users, a higher year around level seems to do a better job meeting the needs of canoeist, trout fishermen, boaters and protection of the habitat by allowing higher minimum flows and event releases.

Water Quality Studies Lake Murray

The purpose of the information is to:

Determine water quality of all areas of Lake Murray with particular attention to coves with little or no natural flushing action to insure the entire lake meets State and Federal Water Quality Standards for the purposes of protecting the uses, i.e. recreation, fishing, drinking water supply and aesthetics.

This information is related to the operation and maintenance of the Project because:

Building the dam and impounding the river was necessary for operation of the project. Because of the project, assimilation of nutrients such as phosphorus and nitrogen has been reduced. Under these conditions water quality has a tendency to become impaired.

The following excerpts, from the April 2005 Saluda Hydro Initial Consultation Document, (ICD) adequately document the need for this study.

- "From a total of twelve stations on Lake Murray (including embayment), seven stations were listed as non-supporting or only partially supporting water uses. Metal concentrations were listed as the cause for six of these stations and nutrients were listed as the cause for two stations (note: the causes for one station listed both metals and nutrients.)"
- "The stations at Rocky Creek and in the Bush River arm of Lake Murray were reported to be among the most eutrophic sites on large lakes in South Carolina, and both these locations were designated as non-supporting for aquatic life uses."
- "Fecal coli-forms were identified as the cause for impacting recreation at six locations in 1995 and 8 locations in 1998."

- "Fecal coli-forms levels are reported by SCDHEC to be acceptable in Lake Murray but fecal coli-form in inflowing streams are (sic) often above the South Carolina water quality criteria. This is typical of many large reservoirs. *Unfortunately, most of the sampling stations within large lakes like Lake Murray are not in sensitive areas where fecal coli-form might occasionally exceed the water quality criteria.* It is especially important to consider those locations near inflow points where you might expect periodic episodes of high inflows. This concern can be addressed by adding monitoring points closer to the inflow regions (perhaps specifically for fecal coli-form) and by educating the public and using warning signs near these inflow points. Special studies can be used to identify these areas and the extent of the concern for each inflow region."

Under the terms of the current license, SCE&G is required to manage the lake to meet Water Quality Standards and maximize the recreational aspects of the lake, i.e., boating, fishing, swimming and camping. Substantially increased water testing would be required to insure the water meets these standards.

(Note: Italic emphasis above is The Lake Murray Association's)

Because recreation is stated as a goal in the license, water impairment becomes an issue for the resource and LMA's goals and objectives for this resource are to find the source of the impairment and better manage it.

An important problem in the resource is water impairment in many areas of Lake Murray, i.e., phosphorus, fecal coli-form, dissolved oxygen and PH. The Lake Murray Association's goal is to improve the quality of the water in Lake Murray. The objective of the study is to determine Best Management Practices to guarantee that the quality of the water in all areas of Lake Murray meets or exceeds the water quality standards. The resource is used for drinking water for the cities of Columbia, Newberry and West Columbia. As previously mentioned, it is used for swimming, fishing and boating. All of these uses are benefited by high water quality. Additionally numerous lakeshore residences take drinking water directly from the lake with varying degrees of treatment. It is imperative the water quality meet standards to prevent a health hazard.

Study methodology suggested is a representative testing of all areas and to conduct TMDL's on the impaired areas.

We are not aware of SCE&G's proposed studies

Current Technology is capable of ascertaining the information needed and is being used in some areas of the lake by the Department of Health and Environmental Control. However as pointed out in the ICD there is the need for more test sites and more appropriate test sites, i.e. the coves.

After the impairments are certified to be out of standard, a study needs to be done to determine what causes the impairment and actions taken to alleviate the problem such as shoreline buffers, notification and financial partnering with chicken farmers, cattle farmers, educating the users etc. The licensee needs to look to DNR, and DHEC to help solve the problems. With funding from SCE&G and/or other agencies The Lake Murray Association is in a position to assist with EPA's and DHEC required TMDL's

TMDL methodology is a generally accepted practice

The Department of Health and Environmental control has had testing sites on Lake Murray for many years. The tests that are done appear to give accurate readings as to the various impairments of the water, i.e. phosphorus, fecal coli-form, DO, PH. These sites are read on a regular schedule and are certified by professional labs. When impairments are revealed the EPA requires that a TMDL study be done to determine what Best Management Practices should be implemented. These methods are suggested in the Clean Water Act that DHEC operates under. The problem with these tests is that there are not enough sites (none in coves) to accurately assess all areas of Lake Murray.

The FERC permit to SCE&G for operation of the Saluda Hydroelectric Project has among the objectives to be accomplished in the resource, goals of recreation and protection of fish habitats downstream.

1. Good water quality enables these goals to be met. Recreation on Lake Murray includes, but is not limited to fishing, swimming, boating and camping.
2. SCE&G has an obligation to see that an acceptable environment for recreation, wildlife and fish exists on Lake Murray. Lack of impaired water should be an objective for the resource. It is believed that phosphorus has an adverse affect on dissolved oxygen which effects the fish particularly downstream.
3. The cities of Columbia, Newberry, and West Columbia draw their drinking water from Lake Murray. The most important objective in this regard is to maintain the highest possible level of water quality for the safety of those who use it.
4. Some homeowners on Lake Murray draw their drinking water directly from the resource and filter it privately. The reason for good water quality is obvious here.

Study Public Access
Lake Murray

The purpose of this study would be to:

To determine if existing sites are designed and equipped for maximum use.

This relates to the operation because:

The river was dammed for the project and now has become a very important recreation resource. It must therefore provide readily available access for all public users.

A provision is in the license permit to allow for recreation. It is expected that the goals and objectives for recreation will be expanded in this license; therefore there is a need for more public access.

1. The resource is used for recreation which includes boating, fishing, swimming, camping and has increased exponentially since the last license was issued in 1984.

2. Existing sites should be distributed to provide the most favorable access to users. If the study shows more or larger public access sites are needed, it should be determined where they should be located and in what size.

The studies recommended would be an inventory and an accepted means to count the population's use of Lake Murray.

We are unaware that SCE&G has proposed a study. We recommend a survey and inventory of launch sites around Lake Murray.

The studies will further the goals of recreation on Lake Murray according to the permit and will effect SCE&G because they would need to furnish and maintain any public access sites on their properties.

Adequate facilities for each of the four perimeter counties, must meet the anticipated population growth of central South Carolina in the next 30 years and should be to be determined now.

Shoreline Studies


We support the SCDNR position regarding protection of the shoreline. We would like to see the ESA's and buffers mapped and discourage development of approximately 59 miles of shoreline that is in the "to be developed" part of the project. We are not opposed to buffers per se, we oppose uncontrolled and encouraged use of all of the buffer area by the general public. Lake property owners with a buffer area between their home/land and lake which must be traversed for access to private property such as docks, boat lifts, etc. should have reasonable expectations of control on public use of the buffer zone. The home and landowner has restrictions which must be met regarding use of the buffer as should the public if they are allowed to use it. Unfortunately the opportunity to inform the public of their responsibility may not occur. For this reason the LMA requests that SCE&G ask FERC to moved the language from the license that would allow unlimited and uncontrolled use of the buffer areas by the public.

Downstream Releases

LMA has heard nothing from Trout Unlimited's or Whitewater Rafters' needs that would be detrimental to those who use Lake Murray. The only request we have is that Release Events not occur during droughts and late summer.

Thank you very much for your attention to our requests.

Lee Barber



President

Lake Murray Homeowners Coalition
(address)

Additional Comments on the Saluda Hydro Relicensing Operational
Procedures

November 20, 2005

Mr. Bill Argenteri
South Carolina Electric and Gas Co.
Columbia, S.C. 29218

Re: Draft Operational Procedures

Dear Mr. Argenteri:

The Lake Murray Homeowner's Coalition (LMHOC) is made up of 22 homeowner associations and lake communities representing over 4000 lake residents. The Coalition is a Tier I participant in the Saluda Hydro relicensing process.

We have reviewed the draft Operational Procedures document and offer the following comments. The LMHOC endorses the recent comments submitted by the Coastal Conservation League and the additional comments prepared by Dr. Bill Cutler and submitted by the Coastal Conservation League, American Rivers and Lake Murray Watch- with one exception. We recommend that the Saluda Hydro Relicensing Group consider further modifying the Relicensing Mission statement.

The Saluda River Hydro Project was approved and built for the public benefits of hydro generation, recreation, fish and wildlife resources, and other public benefits including aesthetic values. According to the Federal Power Act, the FERC will approve a new license proposal "best adapted to serve the public interest." It is critical that in this relicensing process we do not lose sight of that fact. In simple terms SCE&G is requesting permission from the public (stakeholders) to continue using public water as a free energy source, and to manage other public resources for the next 30 to 50 years. Part of our involvement in this process is to consider everyone's needs including SCE&G's and determine whether those needs will result in public benefits if implemented into a new license plan. Our mission is to work with the relicensing group with the goal of developing a new license application "best adapted to serve the public's interest" as required by Federal law. We recommend the following:

Take out "of those issues that accounts for the needs of SCE&G and the quality of the resource" and replace with "with the ultimate goal of developing a license plan best adapted to serve the public interest".

"SCE&G will manage the Relicensing Process through collaboration with state and federal resource agencies, non-governmental organizations,

special interest groups and other interested stakeholders. This collaborative consultation process will be used to gather as well as disseminate information. The objective will be to learn from, as well as educate, stakeholders on the issues and come to a balanced settlement **of those issues that accounts for the needs of SCE&G and the quality of the resource.** To accomplish this, SCE&G will (1) establish, maintain and improve a solution-discovery process and organization, charged with creating a Relicensing Agreement, and (2) apply the solution-discovery process and organization to create a Relicensing Agreement and get it approved.”

The modified version would read,

“SCE&G will manage the Relicensing Process through collaboration with state and federal resource agencies, non-governmental organizations, special interest groups and other interested stakeholders. This collaborative consultation process will be used to gather as well as disseminate information. The objective will be to learn from, as well as educate, stakeholders on the issues and come to a balanced settlement of those issues **with the ultimate goal of developing a license plan best adapted to serve the public interest.** To accomplish this, SCE&G will (1) establish, maintain and improve a solution-discovery process and organization, charged with creating a Relicensing Agreement, and (2) apply the solution-discovery process and organization to create a Relicensing Agreement and get it approved.”

Respectfully yours,

George Duke
Lake Murray Homeowner’s Coalition
Ph. 803-345-6785

Lake Murray Homeowner's Coalition

637 Webster Pointe
Chapin, SC 29036
Ph. 803-345-6785

August 15, 2005

Mr. William R. Argentieri

Attention: Mr. James Landreth, Vice President
Fossil and Hydro Operations
South Carolina Electric and Gas Company
111 Research Dr.
Columbia, S.C. 29203

Re: Saluda River Hydro Project 516 Relicensing
"Lake Murray Homeowner's Coalition"

Dear Mr. Argentieri:

On May 19, 2005, leaders of five prominent Lake Murray homeowner associations met to form a lake wide homeowners group to better address lake issues associated with the upcoming relicensing of the Saluda Hydro Project. This group chose the name **Lake Murray Homeowners Coalition** as their representative organization which presently represents 16 owner organizations. These sub-organizations represent a total of approximately **4000** lake residents. We anticipate this number will increase over the next few months as our official membership drive kicks into full gear.

Lake Murray homeowners are a very unique and special interest group. As residents, our quality of life and property values are impacted significantly by the manner in which the lake and its resources are managed, both now and in the future. On the average, we utilize the lake's resources much more than the weekend or casual user. As a group, we strongly support the wildlife and water quality professionals and their efforts to protect these important, limited natural resources. We ourselves act as primary caretakers and stewards of the lake and represent the first line of defense in identifying and protecting water quality, fish and wildlife habitats, aesthetic values, as well as concerns regarding boating safety issues.

The **Lake Murray Homeowners Coalition** will represent the interests of Lake Murray homeowners in both meetings and negotiations with SCE&G and the Federal Energy Regulatory Commission, as related to the relicensing process. The **Coalition** will act as the collective voice for homeowner associations, property owner associations as well as individual homeowners who have a stake and civic interest in protecting the lake's recreational and environmental resources.

Coalition Mission statement is:

To gather, convey, represent and negotiate the expressed interests, issues and concerns of homeowners of Lake Murray and the Saluda River tributaries to the FERC, SCE&G and to State and Federal Agencies prior to, during and after the SCE&G Saluda Hydroelectric Project licensing renewal process.

Coalition Goals are:

1. To provide representation for homeowners during the Saluda Hydroelectric Project

relicensing and to establish a voice of representation for homeowners regarding Lake Murray issues in the future.

2. To unify and leverage the voice of various Lake Murray homeowner groups and civic organizations to provide awareness and education regarding lake impacting issues.

3. To interface with State and Federal Agencies regarding Lake Murray issues, bringing focus to specific areas of lake interest, including lake levels, recreational opportunities, boating safety, water quality, project lands, shoreline development and fish & wildlife resources.

4. To partner with SCE&G in protecting the lake's resources now and for the benefit of future generations to come.

Initial Consultation Document Comments

The Lake Murray Homeowners Coalition has reviewed the Saluda River Hydro Project 516 Initial Consultation Document (ICD) and offers the following comments:

Issues to be addressed:

Water quality- According to the latest DHEC report, Lake Murray's water quality is deteriorating and will worsen unless steps are taken to minimize shoreline development impacts.

"In consideration of current water quality trends, DHEC believes that minimization of future urban development along the Lake Murray shoreline is necessary to maintain long term water quality" Rheta Geddings, Bureau of Water

Protecting fish and wildlife habitat - According to SC DNR and the US Fish and Wildlife Service, Lake Murray's fish and wildlife resources have been and continue to be compromised by the continued sale of project lands with high natural resource values.

"Rapid development has caused a general degradation of water quality, boating safety problems due to crowding, and loss of fish and wildlife habitat." Roger Banks, Field Supervisor US Fish and Wildlife Service

Negative impacts from marinas - Large multi-slip docking facilities in certain locations can contribute to poor water quality, congestion and boating safety concerns, impact the quality of life of existing residents and lower property values. Within the past year, several communities have opposed these types of docking facilities.

Lake level fluctuations - Concerns about low lake levels have been an issue for almost a decade. Low fall and winter levels create boating safety concerns, restrict recreation and negatively impact most lake users and businesses.

Communication with the public - Open communication between the licensee and the lake community begs improvement, especially as it relates to public notification and awareness with regard to applications for permitted uses of project lands and waters.

Recommendations for additional disclosure of information -

Generation and/or operational reports - It is requested that SCE&G make available, upon request, copies of generation/operating reports that include information that would allow stakeholders to evaluate the licensee's current generating scheme against other potential alternatives. This could be accomplished as part of the resource meetings relating to operations.

Land use maps - Information regarding the location of land use designations is not included in the ICD. Stakeholders need this information in order to verify the amount and type of shoreline uses

in different areas of the lake.

Marina water quality monitoring records - There is concern regarding water quality impacts as related to large multi-slip docking facilities and these records would give stakeholders an opportunity to better understand the degree of water quality impacts and the results of the monitoring program.

SCE&G's commitment to the grid -The ICD mentions an agreement with other utilities. Reports showing the extent of demands on SCE&G's system resulting from outside utility request is needed in order for stakeholders to understand licensee's position.

Request for additional studies

Water quality in coves- Assimilative Capacity Assessment targeting coves and creek areas

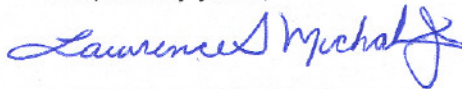
Draw down impacts on public safety, economics, recreation and erosion and sedimentation and other resources

Shoreline developments impacts- as related to fish and wildlife habitat, water quality, recreation, congestion and boating safety

"Total build-out study" – to identify areas not appropriate for private development and marinas

Conclusion-The Initial Consultation phase is the most important part of the re-licensing process. Only with sufficient information through studies and reports, can a proper and complete evaluation be made. As the official representative of homeowners, the Coalition stands ready to assist SCE&G in providing information on homeowner concerns and issues. We will be constantly communicating and taking the "pulse" of the community through out this undertaking. We are excited and optimistic that this process will result in a new license plan that will be acceptable and beneficial to all. We look forward to working with SCE&G staff and Kleinschmidt Consultants in this challenging endeavor.

Respectfully yours,



Lawrence S. Michalec, Jr.

Chairman

Lake Murray Watch
89 Newberry Shores Dr.
Prosperity, SC 29127
Ph. 803-730-8121
Email- bellsteve9339@bellsouth.net

August 15, 2005

Mr. James Landreth
Vice President
Fossil and Hydro Operations
South Carolina Electric & Gas
111 Research Drive
Columbia, SC 29203

Attn: Bill Argentieri

Re: Saluda River Hydro Project 516, First Stage Consultation Comments

Dear Mr. Landreth:

Lake Murray Watch is a citizens' watch dog organization committed to protecting and enhancing the lake's environmental and recreational resources. We promote and encourage public participation in the management of these important resources. This organization has been involved in most lake issues for the past 6 years including the recent review of the Land Use and Shoreline Management Plan. We sponsor a shoreline monitoring program which consist of volunteers from all areas of the lake. Members keep a watchful eye out for inappropriate clearing of protected areas, water quality concerns and safety issues. We work closely with the resources agencies, other environmental groups and the Lake Murray Homeowners Coalition.

Re-licensing will provide a unique and important opportunity for SCE&G and stakeholders to work together in a collaborative process to develop a new license plan which will serve the public's needs for the next 30 to 50 years. The process is part of a comprehensive plan to make better use of this public waterway. Lake Murray and the lower Saluda River provide tremendous recreational opportunities not only for residents of the midlands, but for citizens who travel from all over the country to enjoy the many resources this project has to offer. Likewise, the Saluda Hydro generating facility provides an extremely important public benefit to thousands of residents who depend on the facility to provide an uninterrupted flow of power to homes all across South Carolina.

In order to develop a long term plan, that will protect and enhance the environmental and recreational resources and at the same time meet SCE&G's power requirements, a comprehensive review of all aspects of current project operations and resource management must be undertaken. Considering the

scope of this project, it is difficult if not impossible to determine whether the information in the ICD, in conjunction with additional request, will be sufficient to perform that review. We anticipate that during resource meetings we will discover the need for more information in order to properly understand or clarify the complex aspects of this project. Lake Watch recommends that SCE&G provide additional information as needed throughout the remaining re-licensing process.

Issues/problems that need to be addressed.

Communications- Communication between the licensee and the lake community begs for improvement. A study should be done to determine how best to improve communication including resolving disputes and/or complaints between the licensee and the public. Additionally, more detailed and timely information needs to be made available on SCE&G's website including request for permitted uses of project resources and daily information on planned releases.

Land Use and Shoreline Management Plan-

Land Use-Project land classifications are heavily weighted towards development, with most of the protected areas located in the upper most tributaries. This represents an obvious imbalance of project resources. Since 1989, resources agencies have consistently voiced their objections to the continued sale of project lands for private use. A recent shoreline development impact study prepared by TVA concluded that the public wants its shorelines to stay natural. TVA's decision to implement a policy of "maintaining and gaining" natural areas reflects that public mandate. A similar study should be considered to determine how best to utilize the remaining project lands. The study should include a Gallup poll/survey of lake user concerns.

Shoreline Management- There are many problems with the existing shoreline plan that need to be addressed in the re-licensing process.

Permitted Uses of Project Resources:

Docks- A complete re-evaluation of dock permitting policies needs to be conducted in order to minimize impacts to shoreline resources. Current guidelines allow too large of a "footprint". For example, the permitting of large gazebos and boat lifts in addition to docks, in most cases, exceeds the 450 sq. ft. guideline and is also not consistent with new buffer requirements established to protect the project's aesthetic values. And dock permitting policies on easement lands need to be re-evaluated to better reflect the need for shoreline protection.

Commercial and private marinas- Under the current license, large multi-slip docking facilities are being permitted in confined and congested cove areas. Large marinas in these settings have negative impacts on water quality, fish and wildlife, existing

recreational uses, congestion and boating safety concerns. It also impacts property values and the quality of life of nearby residents. In 1989 a marina “siting” plan was recommended by the agencies but was not implemented. Since then, there has been public opposition to numerous applications for large docking facilities. A complete re-evaluation of current marina permitting policies is needed in order to address public concerns.

Erosion and Sedimentary Control- Erosion and sedimentary run-off have been a problem at this project for decades. Other than an attempt to re-vegetate some of the islands, little has been accomplished. The FERC recently required SCE&G to inventory the shoreline and implement an erosion and sedimentary control plan. This plan should be reviewed within the context of the comprehensive relicensing process to determine consistency with new proposals or modifications in the shoreline plan.

Excavation- Excavations are currently being allowed in the back of shallow coves, and in other areas that have important fish and wildlife habitat. We have observed that in many cases the excavations exceed the limits of the permit. Lake Watch recommends that a complete review of existing excavations policies be undertaken with the goal of limiting excavations to maintaining existing navigation channels.

Permitting application process- The application process needs to be reviewed and updated with an emphasis on providing more detailed information to the applicant regarding the use of buffer zones, including restrictions on vegetated clearing, privatization, and a clear understanding of the public’s right to use these shorelines for recreational opportunities.

Public education- Lake Watch is aware that many shoreline construction activities are being done without permits and/or the proper knowledge to comply with license requirements. We recommend that as part of re-licensing, a public education program be developed to ensure that all property owners understand and comply with the shoreline plan. This program should include educating homeowners on how to be good stewards of the lake. Lake Watch and the Lake Murray Homeowners Coalition would be more than happy to assist in developing and implementing such a program.

Buffer Zone Restoration- Several years ago DNR and US Fish and Wildlife Service surveyed numerous shorelines with buffer zones and determined that there was a substantial amount of inappropriate clearing. In the FERC’s June 23, 2004 order approving a new shoreline plan, the Commission ordered SCE&G to develop a restoration plan for those areas. As of yet, the plan has not been completed or implemented. This issue has not been resolved and should be reviewed as part of the relicensing process.

Operations- Operations under the current license scheme is negatively impacting the recreational and environmental resources of the project. Low lake levels restrict recreation, erode the shoreline, and create boating safety concerns. Discharges downstream impact recreation, water quality, and public safety. A complete and detailed

analysis of the existing operational scheme needs to be conducted in order to provide the appropriate data to development a plan to manage the resources for the next 30-50 years.

Recreation- Recreation is probably the most important public benefit of this project. And as population grows, recreational demands on the project's resources will increase. The current land use plan will severely restrict future recreational opportunities for the general public. An assessment needs to be made to determine how much land needs to be protected as natural areas for public use or for developed recreational sites. A study should be prepared to determine and quantify the existing recreational uses and also to determine future needs and how best to plan to meet those needs.

Water Quality- Lake Murray and the lower Saluda River are currently experiencing water quality problems. These problems are in part due to project operations and past management practices. DHEC's most recent water quality assessment indicates that 8 out of the 14 water quality monitoring stations in Lake Murray are on the 303d list for impaired conditions. In order to determine how best to manage the lake and the lower Saluda River for the next 30 to 50 years, Lake Watch recommends that an "Assimilative Capacity Assessment" be performed, focusing on non-point source pollution in creek and cove areas.

Specific Comments

7.3.1 Typical Operations-

SCE&G indicates that Saluda Hydro is being used for "reserved capacity". Lake Watch would like for SGE&G to provide a clear distinction between past operations as a peaking facility and Saluda's new role as a reserve capacity facility. Additionally we would like SCE&G to explain in detail how other company owned hydro electric facilities are use in conjunction with Saluda to meet "system requirements". Additionally we request a more detailed explanation of what an emergency is. For instance, does this include sudden increases of loads on the system. And how does SCE&G plan on dealing with "load following" or plant maintenance.

In order to better understand SCE&G's obligations to VACAR, more detailed information is needed. We request that SCE&G explain in detail what the "cooperative agreement" entails and provide past records where Saluda Hydro was used to meet grid obligations. Additionally we would like to know how SCE&G benefits from this "contractual" reserve obligation. i.e. What does this project get in return for providing 200 megawatts of stand by power in the reserve sharing agreement?

SCE&G is currently publishing a weekly generation report. The report needs to include more detailed information including times of emergency use and grid obligations. This information is necessary in order for stakeholders to evaluate SCE&G's need to operate in the reserve capacity mode. We recommend that this report be included on the re-licensing website.

7.3.1.2 Flood Control Operations

SCE&G indicates that Saluda Hydro is not operated as a flood control reservoir. But SCE&G is concerned about lake elevations and downstream flows during certain weather conditions. It is our understanding that SCE&G uses information from a weather model in planning daily operations to ensure that reservoir levels are maintained at some appropriate level. We recommend that SCE&G provide information on the weather model and how the Company uses the information to determine the need to control lake levels. In addition we ask SCE&G to explain in detail what criteria is used to determine what levels are appropriate for any given situation.

A part of operations is the possible need to open up the flood control gates. The ICD does not provide information to describe under what conditions or criteria the flood gates would be used or does it specific any FERC regulations that applies to the use of the flood gates. Lake Watch request that SCE&G provide detailed information on potential flood gate operations. A summary of the “Probable Maximum Flood Study” would be helpful for stakeholders to better understand this issue.

7.3.3 Project Operations during a New License Term

SCE&G indicates that it intends to use Saluda Hydro as a reserve capacity facility. In order to fully understand SCE&G’s need to operate in this capacity, Lake Watch recommends that SCE&G conduct a study and/or provide a model which can be used to determine impacts to the project resources from this operational scheme. The model or study should cover a wide range of scenarios possible under this type of operational plan.

7.4.0 Project Safety

Project safety as it relates to operations has been a concern for years. Low lake elevations negate the usefulness of shoal and hazard marker buoys which are positioned to warn of hazards during summer elevations. This problem can be avoided if elevations are maintained at a higher level. SCE&G’s new operation plan most likely will result in higher winter levels. If so, this will solve this upstream issue. But large releases down stream continue to pose a threat to recreational users. We support modifying the use of Saluda Hydro to ensure protection of recreational users in the lower Saluda River.

7.4.2 Back-Up Dam

The back up dam is clearly a new fixture in the project. It is not clear how the new dam might change certain aspects of the project. For instance, with the added safety feature, it could affect lake level maintenance, allowing more free board during operations. We recommend that SCE&G provide any information on the new back up dam that may impact project operations and resource management.

7.4.3 Warning System

The current warning system in the lower Saluda River is inadequate. If it is determined that large releases are eminent, then a complete new system needs to be installed that covers the entire recreational area including the portion where the Saluda and Broad converge.

9.0 Water Quality

Water quality data in the ICD does not accurately reflect conditions in the lake. Data that is collected from stations in the main body of the lake do not reflect conditions in coves and creek areas. We recommend that a study/model be performed in typical cove and creek areas to provide the necessary information to address future project operations and resource management impacts. Of special concern is non-point source pollution including cumulative impacts from shoreline development. We are concerned about storm water run-off from large subdivisions entering the lake, across project lands via large conduits, drainage ditches, and stream influxes. These type storm water systems represent point sources discharges and need to be addressed in the re-licensing process. Additionally, in order to address impaired conditions in the upper lake and tributaries we recommend that SCE&G perform TMDL's for those areas. Finally under the advice of the US Geological Survey, we recommend that an "Assimilative Capacity Assessment" be completed. This information is necessary in order to properly manage these resources for the next 30 to 50 years.

11.1 Botanical Resources- Upland habitat

This section fails to note that "future development" lands represent important botanical resources of the project. It is estimated that over 100 miles of shoreline is in this classification. The FERC indicated in the new approved shoreline plan that "re-balancing" is needed and the appropriate place is re-licensing. An interagency review of undeveloped project lands resulted in a recommendation by DNR to protect all shorelines which have high natural resource values. This information was presented to SCE&G over 2 years ago. We request that SCE&G prepare a map of all existing land uses and include areas that agencies recommend for protection.

12.0 Wildlife Resources

SCE&G indicates in this section that ,” Although the Lake Murray Shoreline continues to undergo development, the project area contains extensive habitats that support diverse and abundant wildlife populations.”

Lake Watch takes issue with this assessment. While this may true for forest management lands in the upper tributaries, it does not represent conditions in the lower to upper mid-lake areas. For over fifteen years, resource agencies have complained that continued development is depleting these important resources. We recommend that a study be prepared to provide information on all existing upland habitat areas and the amount of wildlife in specific lake zones. Wildlife areas should be identified on land use maps..

15.1 Existing Land Use

This section does not provide stakeholders with enough information to evaluate existing and future land use designations. We recommend that an updated land use map be provided which will give a visual accounting and thus a better perspective of where existing land uses are located around the lake.

15.2 Aesthetic Values

Lake Watch does not believe information in this section accurately reflects current aesthetic characteristics. Over 400 miles of Lake Murray's shoreline have been sold down to the 360 contour and most of this has been or will be developed. Another 110 miles is in future development. Lake Watch estimates that 95% of the lake will be developed between the dam and the highway 391 bridges if current land use designations are not changed. Development has a tremendous impact on the aesthetic resources. We recommend that a study be considered to evaluate the existing aesthetic resources.

Additional Information and Studies

Lake Watch request the following information and studies:

Information that explains in detail SCE&G's weather modeling and how the company uses weather predictions in managing lake levels. Information or a summary in layman's terms on the probable maximum flood occurrence and how SCE&G uses this information in managing lake levels.

A shoreline development impact study

Safety- Studies should be done to determine how and if project operations can be changed to better protect public safety.

Information on other SCE&G owned hydro electric generating resources and how these facilities interact with Saluda Hydro operations.

A quantitative analysis of existing recreational uses and a build out study to determine future recreational needs.

Information on minimum flow requirements for downstream industries

Information or a study to determine reservoir evaporation rates and its affect on operations and lake levels.

An assessment and explanation of SCE&G's responsibilities as stated in the standard license articles.

Information regarding FERC requirements and/or restrictions relating to the use of flood gates. Information on impacts from using flood gates.

Information from the existing license which sets parameters for reservoir levels.

A study to determine any existing legal obligations which might exclude certain aspects of the project from the re-licensing process.

A copy of the VACAR agreement

A financial breakdown of revenues SCE&G receives from permits and marina fees and the sale of project lands. This information will be necessary in order to evaluate any recommendations to increase residential permitting fees.

A report on revenues paid to the FERC for administrative services.

Lake Watch has been looking forward to this opportunity for many years. Our goal is to work with SCE&G and other stakeholders to develop a new license plan that will be acceptable to all parties. We look forward to working with SCE&G throughout this process.

Sincerely,

Steve Bell
President



League of Women Voters of the Columbia Area
Mary T. Kelly, Ph.D., Representative
4018 Sandwood Drive, Columbia, SC 29206
803-782-8410; rkelly1@sc.rr.com

August 14, 2005

Mr. James M. Landreth, Vice-president
Fossils and Hydro Operations
South Carolina Electric and Gas Company
111 Research Drive
Columbia, SC 29203

Attn: William R. Argentieri

Subject: Comments on First Stage (Initial) Consultation Document (ICD)
Saluda Hydroelectric Project, FERC Project No. 516

Dear Mr. Landreth:

The League of Women Voters of the Columbia Area welcomes this opportunity to make comments on the First Stage Consultation Document for the relicensing of the Saluda Dam.

We are a non-profit and non-partisan public interest organization, part of the League of Women Voters of the United States and the League of Women Voters of South Carolina, dedicated to the informed and active participation of all citizens in the political process which includes the making of governmental policy decisions which affect the lives and futures of all. We have approximately one hundred and twenty-five local members residing mainly in Richland and Lexington Counties. A number of our members live on or close to Lake Murray and almost all of our members and their families avail themselves of the publicly available recreational activities associated with the lake and the lower Saluda. Many of our members and indeed many in the entire Central Midlands region rely on Lake Murray for their drinking water, a usage that will only increase in importance in the coming years in this high population growth area. We all consider the natural beauty of Lake Murray to be one of the region's primary assets and we are proud that in this metropolitan area both Lake Murray and the lower Saluda River provide such unique opportunities for water sports and fishing.

In reference to Lake Murray our major concerns can be classified under two headings:

Maintenance and improvement of water quality and supply: Drinking water standards must be met and protected. To accomplish this we advocate adequate buffer zones and measures to control run-off. Rules must be clear and enforced. Growth must be limited and controlled, especially for lake shore property. Studies should be made on the effect of power boats and jet skis on drinking water quality. If necessary, such usage should be curtailed.

Recreational access: Access by the non-property owning general public needs to be increased and made safer. As the population of the wider area increases so will the demands on this resource grow.

Again, attention needs to be paid to both the rights of and limitations on boat and jet ski usage. Safety and pollution problems from these sources pose a real threat.

We are confident that a balance between the rights of property owners, recreational users and habitat protection advocates will be achieved through the consultation process about to begin.

In reference to the lower Saluda River careful attention needs to be paid to water flow and to public safety issues. Addressing the safety issue is a problem long overdue for a careful analysis and solution

We wish you well as you initiate this consultation. We are aware that there are many state agencies as well as recreational, environmental, and property owner groups bringing great expertise to this consultation process. We are confident that through the course of these proceedings that expertise will be given serious consideration and that decisions in the best interests of the general public will result while preserving the valuable role of the Saluda Hydro Project as a supplier of electricity.

Sincerely,

Lilla F. Hoefler, President, Columbia Area LWV

Mary T. Kelly
Representative, Columbia Area LWV

November 19, 2005

William R. Argentieri
Kleinschmidt Associates
101 Trade Zone Drive
West Columbia, SC 29170

Comments on “Operating Procedure for the Relicensing of the Saluda Hydroelectric Project FERC Project 516” submitted by the League of Women Voters of the Columbia Area.

Dar Mr. Argentieri:

This letter is to express our support for the comments submitted by the SC Coastal Conservation League, American Rivers, and Lake Murray Watch.

The League of Women Voters, as an organization dedicated to an open and accountable governmental process as well as to the full participation of the public in that process would like to see the Operating Procedures reflect these concerns. We believe that time spent on the front end in ensuring that the operating process incorporate these principles will save time in the long run and avoid a lot of back end second guessing.

As we have said before, Lake Murray is an invaluable resource for the people of the Columbia area and indeed for the whole state from a recreational standpoint and as a source of water for human consumption as well as for industrial and recreational uses.

We request that this letter be posted on the web site.

We wish SCE@G and all the participating stakeholders well as this process proceeds and look forward to participating in it.

Sincerely,

Mary T. Kelly, Representative
League of Women Voters of the Columbia Area
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Lower Saluda Scenic River Advisory Council

c/o South Carolina Department of Natural Resources
1000 Assembly Street, Suite 354, Columbia, SC 29201 ~ 803/734-9096

August 12, 2005

Mr. James M. Landreth, Vice President
Fossil and Hydro Operations
South Carolina Electric and Gas Company
111 Research Drive
Columbia, South Carolina 29203

Attn: William R. Argentieri

**Subject: Comments on First Stage (Initial) Consultation Document
Saluda Hydroelectric Project, FERC Project No. 516**

Dear Mr. Landreth:

The Lower Saluda Scenic River Advisory Council (LSSRAC) has reviewed the *Initial Consultation Document* prepared by South Carolina Electric and Gas Company (SCE&G) for the proposed relicensing of the Saluda Hydroelectric Project, FERC No. 516, and we offer the following comments and recommendations. These views represent a consensus among 14 individuals who represent diverse interests in the lower Saluda River including residential, industrial, and public landowners on the river; recreational fishing groups; local and national paddlesport groups; local outfitters; state and local recreation/natural resource management agencies; land trusts; and several conservation organizations. Members of the LSSRAC participated in the October 2004 scoping workshops and the Joint Agency/Public Meetings in June 16, 2005 at Saluda Shoals Park. SCE&G staff also met with members of the LSSRAC on May 24, 2005 to discuss Saluda Project relicensing issues of interest to us. We appreciate the positive efforts being taken by SCE&G to start this relicensing process in a cooperative manner, being open and available to the public for constructive communication on issues concerning the Saluda Hydro Project.

The Lower Saluda Scenic River Advisory Council was established in 1991 according to the South Carolina Scenic Rivers Act to represent river-bordering landowners, river users, and community interests for the purpose of assisting the South Carolina Department of Natural Resources (SCDNR) in management of the Lower Saluda State Scenic River. In 1991, the State Legislature designated the lower Saluda as a State Scenic River and the SCDNR formed the Advisory Council. The broad purpose of the South Carolina Scenic Rivers Act is to protect unique and outstanding river resources throughout the State. However, specific goals and actions for management of the Lower Saluda Scenic River are guided by two management plans:

- The Lower Saluda River Corridor Plan – published in 1990 by the South Carolina Water Resources Commission (now part of the South Carolina Department of Natural Resources) and Department of Parks, Recreation, and Tourism; adopted as the management plan for the Lower Saluda State Scenic River in 1991.
- Lower Saluda Scenic River Corridor Plan Update – published in 2000 as an update and addition to the 1990 corridor plan.

These Lower Saluda River planning documents are available on the SCDNR website: <http://www.dnr.state.sc.us/etc/conservation.html>

Both of these Saluda River plans have been submitted to the FERC by the SCDNR as a “comprehensive plan for improving, developing, and conserving the waterway” (as described in the Federal Power Act, 16 USC Section 803) and, as such, should be used by the FERC and SCE&G to define conditions for the operation and management of Project 516. Both the 1990 Corridor Plan and 2000 Plan Update are community-based plans created by local citizens representing a wide-range of interests and expertise related to this river. The plans address natural and cultural resource protection, law enforcement, recreational access and facilities, user safety, litter, and tourism. A 60-member task force (representing 50 state and local organizations) created the 1990 plan and the 2000 plan was created from a planning workshop involving over 100 local leaders and citizens.

Desired Outcomes for Relicensing the Saluda Hydro Project

The Lower Saluda Scenic River Advisory Council, exercising its role in the management of the State Scenic River, has defined a set of desired outcomes that we would like to see result from the FERC relicensing process for the Saluda Hydro Project. Listed below, our desired outcomes represent the primary management objectives that we have for the Saluda Hydro Project and its associated resources.

- Water quality conditions in the lower Saluda River and waters released from Saluda Hydro to the river will meet State standards and support existing uses in the river.
- Instream flows from Lake Murray Dam to the lower Saluda and Congaree Rivers will protect and support aquatic life, water quality, migratory fish, navigation, recreational boating and fishing, and other instream uses.
- SCE&G lands in the lower Saluda River corridor will be dedicated to conservation purposes for the protection of wildlife habitats, environmentally sensitive areas, and rare/sensitive species.
- Migratory fish in the Saluda and Congaree Rivers will be protected and supported with instream flows.
- Rare, threatened, and endangered species, critical habitats, and floodplain vegetation communities associated with the Saluda and Congaree Rivers will be protected and supported with instream flows.
- River safety warning systems and communication procedures will be improved to protect river users from hazards associated with hydropower flow releases.
- Recreational uses will be enhanced with additional access facilities, predictable flow releases, and land conservation.

These desired outcomes, presented above, are rooted in the goals of the Lower Saluda River Corridor Plan of 1990 and the Plan Update of 2000 and form the basis of our comments on the Initial Consultation Document and guide our recommendations for additional information and studies needed to resolve management issues associated with the Saluda Hydro Project.

Specific Comments on the Initial Consultation Document

The following comments are provided to address the information presented in the Initial Consultation Document (ICD). The numbers, which begin the following paragraphs, reference specific sections of the ICD.

7.1 (Project Modification for Consideration) – We think it is important to acknowledge that public resources are being used and impacted by the hydro project; therefore, it is necessary to examine Project modifications that might enhance or restore those public resources, which include fish and wildlife resources, water resources, and associated public uses of those resources including recreational uses.

7.4.3 (Warning Systems) – We have sought to improve user safety on the Saluda River below the dam by partnering with other organizations including SCE&G to implement many of the User Safety recommendations of the 1990 Lower Saluda River Corridor Plan; however, the safety warning systems and related information needs for river users will only continue to increase. We think the river-safety information needs of the public will warrant a greater, more consistent level of attention than has been provided in the past by the power company.

9.2.3 (Water Quality) – Regarding water quality in the river, the Lower Saluda River Corridor Plan and the Corridor Plan Update (both referenced above) specify management goals and recommendations that we have advocated over many years, in numerous situations for the protection and enhancement of water resources in the lower Saluda River.

In addition to the water quality problems caused by the Saluda Hydro Project (primarily DO), the river is heavily impacted by polluted runoff from the tributary streams, which drain a watershed that is 25% urban and 20% agricultural land. The river and its tributaries are currently permitted to receive over 7-million gallons per day of treated wastewater; and nearby developing communities continue to look to the lower Saluda as a destination for more wastewater disposal.

9.2.2.1 (Water Quality Reports) – Regarding SCDHEC Saluda River Basin Water Quality Reports, a third report in this series has been published: the October 2004 DHEC Watershed Water Quality Assessment for the Saluda River Basin, Technical Report No. 004-04.

9.2.3.1 (Water Quality, past studies) – The low dissolved oxygen (DO) problems in the Saluda River caused by the summer-fall, hypolimnetic discharges from Lake Murray were well documented eight to ten years prior to the DHEC reports cited in the ICD. The DO problems are presented the July 1988 study report titled “Oxygen Dynamics in the Lower Saluda River” by H.N. McKellar, Jr. and Mary K. Stecker, from the Department of Environmental Health Sciences, University of South Carolina. DHEC helped to fund this study along with Trout

Unlimited and the S.C. Wildlife and Marine Resources Department.

Recently, DHEC has published another report that documents continuing DO problems (excursions) resulting in conditions that only partially support aquatic life in the lower Saluda (see the October 2004 DHEC Watershed Water Quality Assessment for the Saluda River Basin, Technical Report No. 004-04).

9.2.3.2 (Dissolved Oxygen Enhancement) – We appreciate the cooperation SCE&G has exhibited in recent years in seriously addressing the low DO problems in waters released from the Saluda Hydro to the lower Saluda River. We are pleased to know that SCE&G has implemented and will continue to review operational protocols to maintain appropriate DO levels in the river.

10.2 (Aquatic Resources, Saluda River) – The Lower Saluda River Corridor Plan and the Corridor Plan Update provide general management goals and recommendations that we have advocated for the protection and enhancement of aquatic resources in the lower Saluda River.

The ICD indicates that there is very little known about the mussels of the lower Saluda; therefore we think that additional inventory of these resources may be needed.

10.3.2.6 (Fish Advisory) – DHEC has issued a 2005 fish consumption advisory in affect for the lower Saluda for largemouth bass and bowfin.

10.3.2.6 (Fisheries Management) – The Lower Saluda River Corridor Plan of 1990 provides general management goals and recommendations that we have advocated for the protection and enhancement of fishery resources in the lower Saluda River.

11.0 (Botanical Resources) – Considerable effort and attention has been directed to Lake Murray shoreline management and the classification of environmentally sensitive areas on the lake. However, the ICD indicates that there is very little information on the natural/sensitive areas or ecologically significant resources along the lower Saluda River; therefore, we think that additional inventory, assessment, and conservation planning for these resources is needed.

11.1.2 (Upland Habitat, Saluda River) – Again, the ICD indicates that there is little information on the habitats, botanical species, and environmental sensitive areas (ESA) of the lower Saluda River corridor; therefore, we think that additional inventory, assessment, and conservation planning for these resources is needed on the river.

12.1 (Wildlife Resources, T&E Species) – Bald eagles are seen in the lower Saluda River corridor and an eagle's nest is located on a river island in the confluence with the Broad River adjacent to the area where the rocky shoals spider lily exists.

Table E-9 and E-13 (Species lists) – There are many more botanical species present in the lower Saluda River corridor than those represented in Table E-9. Other birds that are often seen/heard along the lower Saluda include: barred owl, belted kingfisher, Mississippi kite. The SCDNR has produced reports for the lower Saluda River, one report compiled in 1984 by the former Water Resources Commission, that presents information (lists provided by Rudy Manke) for flora and

fauna species.

14.1 (Recreational Resources) – The discussion of regional recreation resources mentions various trails in the region and should include the Three Rivers Greenway and its various components which include trails (some are currently in place and some are proposed) in Cayce, West Columbia, and Columbia along the Congaree, Broad, and lower Saluda Rivers.

14.2.2. (Recreation, Saluda River) – While the ICD reports information produced by the SCDNR about recreational fishing on the river, we perceive that the level of fishing and the level of boating that occurs on the river is steadily increasing. We are aware of increased use of the river by wading anglers as well as those that fish from the bank and from boats. We are also aware of increasing use of the river by recreational boaters, those who canoe and kayak. However, there is little or no information to quantify these uses and trends.

Significant planning information about recreational issues of the river is provided in the Lower Saluda River Corridor Plan and the Corridor Plan Update. The Plan Update in particular is focused on recreational access issues of the river and explores the feasibility of creating a trail on the north bank of the river connecting Saluda Shoals Park with Gardendale Landing and Riverbanks Zoo. SCE&G is working with the Irmo-Chapin Recreation Commission and the LSSRAC to pursue implementation of the trail concepts presented in the Plan Update; and we very much appreciate the interest and cooperative assistance of SCE&G staff in these efforts.

15.0 (Land Use and Aesthetics) – We found very limited information in the ICD regarding land use and aesthetics associated with the lower Saluda River corridor. The lower Saluda is a State Scenic River and considerable information is available to describe the river and its surrounding lands. In addition, the ICD should note that SCE&G donated a Scenic River easement to the State of South Carolina in 1997; the easement conserves a 100-foot-wide strip along approximately six miles of riverbank.

G-3 (Project Map) – Up-to-date maps are needed with more descriptive information about the types of lands that are part of the Saluda Hydro Project. The two maps of the river corridor (G3) appear to be out of date. The maps indicate certain lands to be owned by SCE&G, which are actually no longer owned by the company (e.g. the Police Club property off Candi Lane). The maps do not show all areas where Scenic River easements were donated by SCE&G to the State of South Carolina in 1997, and the easements are not described in the ICD. The maps show other, larger easements areas, which are also not defined in the ICD. The PBL (Project Boundary Line) appears on these maps but the ICD seems to provide no definition of the PBL and no explanation regarding the management or ownership of lands associated with this boundary. Additional explanation is needed about project lands to allow citizens to understand the purposes that the project lands serve and how they are managed.

Recommendations for Studies to Address Information Needs

The following list of studies is recommended to provide the information that we anticipate will be needed to address the important management issues associated with the Saluda Hydro Project and to make well-informed decisions that will serve the public's interest. We understand that some of the studies recommend here may already be in process, either by SCE&G or other entities. We also recognize that existing relevant information and studies are available from various sources and may fill some of the information needs we have identified.

We will certainly offer our assistance in the relicensing process as it moves forward to identify existing information sources and to provide input to the scoping, design, and implementation of studies.

Hydrologic / Hydraulic Operations Model

We recommend development of a computer simulation model that incorporates the operating characteristics of the Saluda Hydro Project. The model should be capable of simulating the Project's operations using specific hydraulic relationships based on inflows from all drainages to Lake Murray ending downstream in the Congaree River floodplain. The model should also include water flows in the Broad River above its confluence with the Saluda to accurately model combined flow conditions at the confluence and in the Congaree River. The model should be capable of analyzing the effects on the downstream flows and lake levels under proposed project operational alternatives. The model should provide a tool for all interests to evaluate various operational scenarios simulating changes in flows, lake levels, and other operational constraints. The resulting data should be readily analyzed and made available to assist stakeholders in evaluating the impact of the scenarios on specific water quantity interests.

Instream Flow Study (aquatic life support and navigation)

We recommend a study of how project operations affect stream flows and what flow regimen(s) would best protect and support the health of aquatic life and natural communities in the river. Flow regimens should be assessed for all downstream segments of the Saluda River and upper segments of the Congaree River. Flow regimens and season variations of flow should be identified that fully support all life stages of aquatic biota including spawning, juvenile and adult habitat requirements, and flows for upstream and downstream fish migrations.

In addition, we recommend downstream navigation studies to be conducted to determine flows needed to support boat passage (canoe, kayak, and small motor boat) on the lower Saluda and into the Congaree River.

Recreation Flow Study

In addition to determining minimum flow needs for navigation/boat passage (for canoes, kayaks, and small motor boats); we recommend a study to determine the flow range and duration that provides acceptable and optimal recreation experiences for anglers and boaters (particularly for canoeing and kayaking) of various experience levels on the lower Saluda River. To assist in evaluating potential alternative target flows this study should solicit input from parties with an interest in the affect of flow on instream recreational experiences.

Recreation Flow and Safety Communication Study

We recommend a study to review recreation and safety communication needs to the public as they pertain to the operation of the Saluda Hydro Project. The study should review current practices in providing river flow and lake level information and safety warnings, solicit public input from recreational users, define the communication needs based on public input, and make recommendations to meet those communication interests. The study should address alternatives for developing an information system that will: 1) better inform the public in a timely manner of flow release schedules; and 2) improve the safety-warning system to inform river users of changes in river flows and potentially hazardous conditions. This study should also address alternative operational protocols for gradual release (ramping) of flows leading to peak hydro releases for the purpose of protecting downstream users from rapidly rising water

Reservoir Level Study

We recommend a study to evaluate potential seasonal target elevations for Lake Murray along with maximum and minimum elevations based on historical operation. The study should solicit input from parties with an interest in lake levels and provide data to assist in evaluating potential alternative target elevations for Lake Murray in order to assist in the balancing of all related interests, including lakeside homeowners, municipal water users, environmental interests, power production capabilities, and downstream river users.

Low Inflow Protocol Study

We recommend a study to develop a low inflow protocol that will provide trigger points and procedures for how the Saluda Hydro Project will be operated by SCE&G during periods of low inflow (i.e. periods when there is not enough water flowing into the project reservoir to meet the normal needs for power generation, recreation flows, minimum flows, any on-reservoir water withdrawals and designated lake levels). The protocol should be developed on the basis that all parties with interests in water quantity will share the impact of low inflow. This includes consideration of impacts to natural resources. The study should also evaluate the potential of using forecasting approaches to determine the probabilities of shortfalls in water availability before they occur.

Water Quality Study

We recommend a study to identify the current status of water quality for the Saluda Hydro Project and to identify and evaluate alternative operating, engineering, or policy scenarios to improve water quality in the lower Saluda River and Lake Murray.

Lower Saluda River: As mentioned above in our comments on the ICD, we are pleased to know that SCE&G has implemented and will continue to review operational protocols to maintain appropriate DO levels in the river and we encourage ongoing study with agency review to refine operational protocols that will enhance DO in hydro releases to the lower Saluda River to meet state standards and protect and support existing river uses. We also suggest that other sources of water quality impairment to the river should be understood and distinguished from the effects of operations at the dam and that minimum flows should be defined to sustain water quality standards in the river regardless of the source of water quality degradation. Therefore, we recommend a water quality study to: 1) characterize the water quality of the hydro release and the downstream temperature and dissolved oxygen concentrations (and transport of other water quality constituents) under a variety of project operations and flows; 2) establish the extent of

project influence on the downstream water quality; 3) characterize water quality conditions under extreme low flow scenarios to document non-hydro sources of water quality impairment and to identify critical minimum flows for the assimilation of pollutants in the river; and 4) provide recommendations for long-term, continuous monitoring of downstream water quality.

Lake Murray: The ICD indicates that phosphorus is a critical pollutant affecting water quality conditions in Lake Murray particularly the low DO in the hypolimnion, which impairs aquatic life support within the lake and in the lower Saluda River. To address this problem we suggest that the water quality study involve the completion of a TMDL to define limits for phosphorus loading to Lake Murray; and the TMDL should define phosphorus-loading limits for all major tributaries that drain into the lake.

Rare, Threatened, and Endangered (RTE) Species and Habitat Survey

We recommend a study that assesses the current condition of RT&E plant and wildlife species and their habitats, how Saluda Hydro Project operation affects those species, and how project operations can be modified to protect, restore or enhance those populations. The study should provide information to assist in developing any potential protection, mitigation, and enhancement (PM&E) measures.

Diadromous Fish Study

We recommend a study to evaluate options for diadromous fish restoration to the Saluda Hydro Project waters. Anadromous target species for studies include: American shad, hickory shad, blueback herring, striped bass, shortnose sturgeon, and Atlantic sturgeon. Restoration of the catadromous American eel should be considered throughout its historical range in the drainage. Alternatives should be developed to enhance diadromous fish populations by establishing access to historic spawning grounds and nursery areas, safe downstream passage, and improving stream flow and water quality.

Macrobenthic Survey Study

We recommend a macrobenthic survey study to provide information about benthic macroinvertebrate (aquatic insects and other bottom-dwelling organisms) communities and evaluate any potential project-related effects on these resources. This study should also establish the downstream extent of potential project impacts on macrobenthic organisms.

Mussel Survey

We recommend a mussel survey study to identify the species and distribution of mussels in the Saluda River within the project boundary, the zone of project influence, and in selected tributaries. The study should also evaluate potential project-related effects on these resources.

Floodplain Vegetation Assessment

We recommend a study to provide information on the location and distribution, vegetative species composition and structure, classification, and relative condition of the existing floodplain communities within the zone of operational influence along the river reaches of the lower Saluda and Congaree Rivers; and this study should certainly encompass the ecologically significant floodplain area of Congaree National Park. The objectives of this botanical study are to: 1) identify and delineate the floodplain areas within the zone of operational influence of the river

reaches; 2) classify and characterize the vegetative species composition and structure of the floodplain areas within the zone of operational influence of the river reaches; 3) qualify and quantify the relationship between floodplain vegetation and existing hydroperiods; 4) assess the effects of current and proposed hydropower operations (e.g., river fluctuations and stage changes) and impact on the designated floodplain areas; and 5) provide information to assist in developing any potential protection, mitigation, and enhancement (PM&E) measures.

Recreation Use and Needs Study

We recommend a study to characterize the types and amounts of existing and estimated future recreation use within the project area, and the ability of the project to support existing and future increases in use. The study should address the following: 1) provide data and analysis sufficient to estimate the carrying capacity of Lake Murray and the lower Saluda River to support present and future demand for public boating and fishing; 2) assess the quantity and quality of existing and proposed recreation facilities available at and adjacent to the project and their ability to support existing and estimated future needs; and 3) prioritize the types of, and locations for additional facilities or enhancement to facilities that may be needed.

Available Lands for Recreation and Protection of Environmental Resources

We recommend that an inventory of land ownership around the project boundary be conducted to determine the feasibility of aggregating desirable parcels for parks, open space, other recreation, habitat preservation, and viewshed protection. Such an inventory could also provide valuable information about the current and proposed rate of development, thereby determining the urgency of assembling valuable parcels for the public benefit.

Cultural Resources Survey and Management Plan

We recommend a survey to identify significant archaeological and historic sites that are affected by operation of the Saluda Hydro Project. We also recommend development of a plan to address the management of historic properties affected by the project.

Conclusion

The amount of information we have recommended here is substantial but we think that the related issues are important given the significance of the land, water, and wildlife resources of the lower Saluda River and Lake Murray; and the public's interests in those resources. The public demands on the resources will only increase and the related management issues will become increasingly complex. More, good quality information will help SCE&G and partnering agencies make better, lasting decisions for the new license term. We, therefore, encourage SCE&G to partner with the resource management agencies and stakeholders to seek out and produce the best, most objective, science-based information possible to address the issues of public concern regarding the Saluda Hydro Project.

Thank you for this opportunity to provide our comments and recommendations to address the ICD and information needs for the relicensing of the Saluda Hydro Project. If you have questions or need additional information please contact me, Bill Marshall, at 803/734-9096 or by email at

marshallb@dnr.sc.gov. We would like to remain involved in the relicensing process so please add me to your mailing lists to receive future notifications and information.

Sincerely,

Bill Marshall

Bill Marshall
Chairman, Lower Saluda Scenic River Advisory Council
1000 Assembly Street, Suite 354
Columbia, SC 29201
803/734-9096
marshallb@dnr.sc.gov

The members of the Lower Saluda Scenic River Advisory Council listed below are providing these comments and recommendations

Bill Marshall
Malcolm Leaphardt
Ed Diebold
Guy Jones
Larry Jones

Tom Stonecypher
Dan Wells
Rick Wilson
Tony Bebber - *ex officio*
Steve Dennis- *ex officio*

Ann Jennings- *ex officio*
Gerritt Jobsis- *ex officio*
Karen Kustafik- *ex officio*
Charlene Coleman- *ex officio*



Lower Saluda Scenic River Advisory Council

c/o South Carolina Department of Natural Resources
1000 Assembly Street, Suite 354, Columbia, SC 29201 ~ 803/734-9096

October 21, 2005

To: Alan Stuart, Randy Mahan, and Bill Argentieri

From: Bill Marshall, Chairman

Subject: Comments on Operating Procedures for the Relicensing of the Saluda Hydroelectric Project, FERC Project 516

The Lower Saluda Scenic River Advisory Council has reviewed the Operating Procedures prepared by South Carolina Electric and Gas Company (SCE&G) for the relicensing of the Saluda Hydroelectric Project. We understand that the Operating Procedures have the intended purpose to establish structure for the relicensing process and provide guidelines to facilitate communications and cooperation among the various committees to promote an orderly, efficient and effective process. To support that purpose, we offer the following comments and recommendation for your consideration.

We recommend establishing a procedural group. Because the relicensing process will be complex, lengthy, and to some extent, evolving through time, we think it is essential that the Operating Procedures (which are general in nature) provide a means to address and resolve the details of procedural questions and problems in a timely, responsive, and consensus-based manner. It seems to us that a reasonable and constructive approach to addressing this need is to form a group that is representative of the process participants, and has the purpose of assisting SCE&G in resolving procedural/process issues. Formation of a procedural group is an idea being advocated by other participants in the Saluda hydro relicensing process and we support the concept.

A procedural group could provide SCE&G with more proactive input from agencies and stakeholder groups as the communication protocol is drafted. A procedural group could serve as the forum for participants of the relicensing process to resolve questions and problems and assist SCE&G in amending (improving) the process as it moves forward. Already there are questions and concerns being raised about choosing participants for technical committees, appropriate persons to act as facilitators, the number of absences allowed from RCG meetings, the timing of meetings to allow more public participation, communications with the media, and who can move issues in or out of the "parking lot." These are only a few examples of issues that a procedural group could assist SCE&G to resolve more effectively.

By establishing a procedural group, one that represents a cross-section of process participants, SCE&G can well serve its interest in conducting the relicensing process in a collaborative manner with stakeholders. Without such a group there appears to be minimal provision of procedure to facilitate effective communication and resolution of problems among participants within the general framework provided by the Operating Procedures.

Thank you for this opportunity to provide input and for your consideration of our recommendation. Please contact me at 803/734-9096 or by email at marshallb@dnr.sc.gov if you have questions about comments from the Lower Saluda Scenic River Advisory Council.



Lower Saluda Scenic River Advisory Council

c/o South Carolina Department of Natural Resources
1000 Assembly Street, Suite 354, Columbia, SC 29201 ~ 803/734-9096

October 27, 2005

To: Alan Stuart, Randy Mahan, and Bill Argentieri

From: Bill Marshall, Chairman

Subject: Comments on Operating Procedures (Meeting Schedules) for the Relicensing of the Saluda Hydroelectric Project, FERC Project 516

The Lower Saluda Scenic River Advisory Council is offering this our second letter of comments to address the Operating Procedures prepared by South Carolina Electric and Gas Company (SCE&G) for the relicensing of the Saluda Hydroelectric Project. The comments of this letter address the topic of meeting schedules.

We have concerns that the meeting times planned for the Resource Conservation Groups (RCGs), currently scheduled during typical work hours, will have the effect of excluding interested citizens from the process. We understand that SCE&G needs to have the various public agencies involved and that agency personnel have families and need to work regular hours. However, because there are others who want to participate we think that a compromise in scheduling should be considered to encourage participation and alleviate some of the burden on those who will have to take leave from their regular job responsibilities in order to be involved.

One suggestion for a compromise is to schedule meetings to begin at mid-afternoon and run into the evening. Perhaps some other options would work better. We recommend that as the RCGs have their initial meetings that alternative scheduling of future meeting times be considered by the participants in order to better accommodate the involvement of all interested citizens.

Thank you for this opportunity to provide input and for your consideration of our recommendation. Please contact me at 803/734-9096 or by email at marshallb@dnr.sc.gov if you have questions about comments from the Lower Saluda Scenic River Advisory Council.

August 15, 2005

Mr. James Landreth, Vice President, Fossils and Hydro Operation
SCANA
Columbia, SC

Dear Sir:

Midlands Striper Club, the largest striped bass fishing club in South Carolina and the oldest inland striper fishing club in the nation, is extremely concerned about the maintenance of adequate dissolved oxygen levels needed to sustain the Lake Murray striped bass fishery during late summer. For this reason, we unanimously oppose the use of turbine five to pull water from the 50'-55' depths at the Lake Murray Dam during months when daytime air temperatures approach or exceed 90 degrees. Such temperatures are usually reached between late June and early September.

Our club and its family members have worked diligently through the years to promote a healthy striped bass fishery in Murray. The most important element in maintaining such a fishery during the summer months is maintaining dissolved oxygen levels at the 50-55 foot level in the big pool surrounding and in front of the power turbines. Stripers from throughout the lake system stage at this level during mid to late summer, seeking a critical combination of adequate oxygen and cool temperatures. If this water is pumped through the turbines, there is no way to replace it, as water from up-lake is typically oxygen poor during summer.

In 1991 MSC members saw the disastrous effects of a hot summer and running turbine five -- massive die-offs of large stripers evident throughout the big pool. Since that time, with SCE&G's cooperation in not pulling from this level and the efforts of DNR and clubs like MSC, our striper fishery has prospered.

Murray is now the state's premier striper fishery, with more fishing hours devoted to stripers than any other species and more fishing hours devoted to stripers on Murray than any other SC lake. It has been estimated that the economic impact of the Murray striper fishery is in the neighborhood of \$12 million annually.

The current die off of large striped bass over the past two weeks further illustrates the results of using turbine five at this time. It is MSC's fear that our striper has again been damaged and such damage is likely to occur annually, causing the ultimate collapse of this great fishery and the recreation and economic impact it brings to SC and the Midlands.

The citizens and anglers of South Carolina support the continued stocking and growth of striped bass in Lake Murray through their tax dollars, license fees and through their adherence to restricted daily size and creel limits. For SCE&G to fail to develop and act on a plan that will safeguard this fishery would be tantamount to wanton waste of these valuable resources. We urge SCE&G to find ways to eliminate the use of turbine five during July and August. We also strongly request that some type of oxygen injection

system be installed on the turbine intake towers for use at this critical 50'-55' level during summer.

Respectfully Submitted,

John E. Davis, Vice President and acting Conservation Chair, Midlands Striper Club

August 14, 2005

Midlands Striper Club

--- John Davis

--- johnd44@earthlink.net

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United States Department of the Interior



NATIONAL PARK SERVICE
Congaree National Park
100 National Park Road
Hopkins, South Carolina 29061

IN REPLY REFER TO:

August 11, 2005

Mr. James M. Landreth
Vice President
Fossil and Hydro Operations
South Carolina Electric & Gas
111 Research Drive
Columbia, SC 29203

Subject: Initial Consultation Document for Saluda Dam Relicensing

Dear Mr. Landreth:

The National Park Service (NPS) submits the following comments for consideration regarding the Initial Consultation Document (ICD) for the relicensing of Saluda Dam (FERC #516). While NPS fully supports the goal of relicensing Saluda Dam for the numerous benefits it provides the citizens of South Carolina, we believe it is important to balance these benefits with those provided by the area's numerous natural and cultural resources. Specifically, during the relicensing process, we ask that South Carolina Electric & Gas (SCE&G) and the Federal Energy Regulatory Commission (FERC) thoroughly evaluate any adverse effects of dam operations, particularly on nationally-significant natural and cultural resources downstream of Saluda Dam. Downstream interests of the NPS include Congaree National Park and segments of both the Saluda and Congaree rivers which are listed on the Nationwide Rivers Inventory (NRI).

The NPS is committed to being an active and engaged partner throughout the relicensing process. Particularly in light of our recent participation under FERC's Integrated Licensing Process (ILP), we are fully supportive of and endorse SCE&G's decision to use an "Enhanced Traditional Process." This process, as described at SCE&G's initial stakeholder meeting in Columbia, SC on June 16, 2005, will include a detailed communications protocol as well as the establishment of resource working groups made up of SCE&G staff and consultants and interested stakeholders. The NPS looks forward to collaborating with SCE&G and all other stakeholders in this endeavor.

Background

Congaree National Park (CNP), originally designated Congaree Swamp National Monument, was authorized by Congress in 1976 (PL 94-545) to protect the largest remnant tract of old growth bottomland hardwood forest in the United States. Located along the northern bank of the Congaree River, CNP currently protects a floodplain ecosystem consisting of 22,200 acres in the heart of South Carolina's Piedmont ecoregion. The Congaree River begins approximately 17 miles upstream of CNP at the confluence of the Saluda and Broad rivers near Columbia, South Carolina.



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AUG 16 2005

**FOSSIL & HYDRO
OPERATIONS**

Historically, the Congaree River experienced seasonal fluctuations in water levels and lateral flow across its floodplain producing alternating periods of flooding and drying at what is now the Congaree National Park floodplain. Over thousands of years, the presence of these environmental conditions led to the co-evolution of a complex and interdependent ecological community with the CNP floodplain. Since 1930, flow in the Congaree River has been regulated by the Saluda Dam located upstream on the Saluda River, and to a lesser degree, by small dams on the Broad River which predated the establishment of the Park. Today, the Saluda Dam is operated for the purpose of hydroelectric power production, particularly during times of high electrical demand. To meet this need, SCE&G operates the dam as a peaking facility where releases from the dam produce brief periods of extremely high flows followed by periods of extremely low flows. In addition, releases from the dam are typically inconsistent with the natural hydrograph resulting in modified flood events at times that are less than ideal to support the floodplain ecosystem.

After the Saluda Dam became operational in 1930, frequency of floods on the Congaree River floodplain, including CNP, decreased (Patterson et al. 1985). Floods with a 2-year recurrence interval before the dam had only a 4.5-year recurrence interval after the dam. Even more noticeable was that a 5-year recurrence flood before the dam was only a 25-year recurrence flood after the dam.

Although the exact ecological effects of decreased flood frequency on the floodplain community at CNP is poorly known, preliminary studies have shown that operations of the Saluda Dam create a series of relatively cold pulses that move down the Saluda River to its junction with the Broad River, and then downstream on the Congaree River to Congaree National Park. These pulses require about 15 hours to reach the park where they cause fluctuations of 0.2 to 0.5 feet in river stage. These fluctuations, in turn, alter the amount, timing, and duration of floodplain inundation within the park, and they thus influence ecosystem constraints of the park.

The effects of the Saluda Dam, however, play themselves out against the backdrop of flows from the Broad River that mix with discharges from the Saluda River and the Saluda Dam. At present, we know that on average, the Saluda supplies approximately one third of the flows received by the Congaree—flows from the Broad making up the other two thirds. The ecological implications of this regulated hydrologic regime on the CNP ecosystem is poorly known, but it is the subject of present research at the park.

Studies in similar settings suggest ecological impacts of dams can extend far downstream. For example, Hyslop (1988) found altered fish compositions and decreased fish diversity in a floodplain of the Sokota-Rima system, Nigeria after a dam was constructed 100-km upstream. Other studies have shown that flooding influences floodplain fish with regard to somatic growth (Gutreuter et al. 1999), species composition (Killgore and Baker 1996, Turner et al. 1994), species diversity (Chapman and Chapman 1993, Hyslop 1988), and recruitment (Copp 1989, Killgore and Baker 1996). Anecdotal evidence from CNP suggests that decreased flood frequencies favors exotic species such as wild hogs. With fewer major flood events, hog populations are able to exist for longer periods of time within the CNP floodplain severely damaging floodplain flora and altering soil conditions. Currently, hydrological studies of the floodplain's inundation and soil saturation characteristics are being conducted by the United States Geological Survey, the University of South Carolina, and others.

Specific Comments on the ICD

- 1) Congaree National Park is mentioned briefly on p. 163 of the ICD as a recreational resource. No other mention of CNP is made in the document. Although we agree that CNP is an important recreation resource within the project vicinity, the park would not exist if it were not for its unique, complex, and nationally-significant floodplain ecosystem. In order to fulfill recreational potential of the park, a fully intact and relatively unimpaired ecosystem is essential. The NPS, therefore, requests that SC&G and FERC evaluate the full suite of potential ecological impacts from the Saluda Dam on the CNP floodplain as the process moves forward.



- 2) On p. 164 the ICD correctly states that no federally-designated Wild and Scenic Rivers exist within the project area. However, it should be noted that both the lower Saluda and the Congaree are listed on the NRI. The NPS is mandated by Congress to manage and provide oversight on matters pertaining to rivers designated under the Wild and Scenic Rivers Act of 1968 (U.S.C. 1271-1287) (PL 90-542). In partial fulfillment of Section 5(d) of the Wild and Scenic Rivers Act, and under Executive Order, the NPS is also charged with overseeing and maintaining the NRI. Streams listed on the NRI are viewed as potential candidates for inclusion in the Wild and Scenic Rivers System. River segments can become listed if they possess certain locally-, regionally-, nationally-, or globally-significant "outstandingly remarkable values (ORVs)" such as scenery, geology, wildlife, or recreational potential. The NRI is also on file with the FERC as a Comprehensive Plan pursuant to Section 10(a)(2)(a) of the Federal Power Act.

The Saluda River is listed on the NRI from river mile 3 to river mile 10 for its significant scenic, recreation, geologic, fish, wildlife, historic, and cultural values. Similarly, the Congaree River is listed on the NRI from river mile 0 (the confluence of the Saluda and Broad rivers) to river mile 40, a segment that encompasses CNP. Under a 1979 Presidential directive and related Council on Environmental Policy procedures, "all federal agencies must seek to avoid or mitigate actions that would adversely affect one or more NRI segments." In accordance with this directive, the NPS requests that SCE&G and the FERC address any potential impacts to the ORVs for which these river segments are designated.

Ongoing Research and Requested Studies

The NPS, along with its partners, has initiated basic research in order to conduct a modified "ecologically sustainable water management" (ESWM) process relevant to flows from the Saluda Dam. ESWM is an inclusive, collaborative, and consensus-based process to determine a scientifically-based set of river flow prescriptions in order to protect downstream resources while balancing upstream benefits. ESWM was originally developed by The Nature Conservancy's Freshwater Initiative to improve ecological conditions below dams operated by the Army Corps of Engineers. In 2003, a successful ESWM process was performed for flows resulting from the Corps' Thurmond Dam on the Savannah River (the next major basin to the south of the Saluda-Congaree system). We believe this process can be readily adapted and applied within the context and time frame of the Saluda relicensing. Accordingly, NPS has begun in earnest to undertake some initial steps for implementing the ESWM process.

At present, the NPS is developing a comprehensive literature review that identifies essential physical, chemical, biological, and socioeconomic resources that are affected by the operations of Saluda Dam, particularly as it relates to CNP. This information will be suitable for use within stakeholder workshops associated with ESWM with the ultimate goal of a consensus-based flow recommendation. In addition, an interactive geographic information system (GIS) tool is being developed that will be capable of providing quantitative and visual information regarding the effect of various Saluda operational scenarios on the degree of inundation at CNP.

Despite this progress being made, NPS recognizes that an ESWM process cannot be successful without the active engagement and buy-in from a breadth of stakeholders. For this reason, we seek a partnership with SCE&G and others involved in the relicensing to fully implement an ESWM process. Specifically, assistance in improving the GIS model and facilitation of stakeholder workshops is critical.

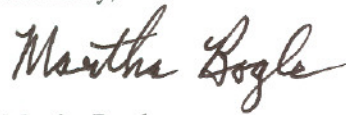
Specific resource issues of concern in managing CNP include the exact nature of river stage and the timing, frequency, magnitude, and duration of floodplain inundation as a function of Saluda operating alternatives. The effects of various flooding scenarios on nutrient dynamics, gene flow, aquatic invertebrates, fish, amphibians, vascular plants, wildlife, and exotic species should also be addressed. In



addition, potential recreational and socioeconomic issues associate with Saluda operations should be addressed by the ESWM or any other process used to evaluate operating alternatives and their effects.

Once again, the National Park Service looks forward to participating in the relicensing process. If you have any questions, do not hesitate to contact the park's Chief of Resources Management Bill Hulslander at 803-776-4396, ext. 20.

Sincerely,

A handwritten signature in cursive script that reads "Martha Bogle".

Martha Bogle
Superintendent

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COUNTY OF NEWBERRY

OFFICE OF THE COUNTY COUNCIL
COURTHOUSE ANNEX, 1309 COLLEGE STREET
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SUSAN C. FELLERS
CLERK TO COUNCIL

August 15, 2005

Mr. James M. Landreth, Vice President
Fossil & Hydro Operations
South Carolina Electric & Gas Company
111 Research Drive
Columbia, SC 29203

Attn: Mr. William R. Argentieri

RE: "Comments on Saluda Hydroelectric ICD"

Dear Mr. Argentieri:

Thank you for the opportunity to submit comments on the relicensing of the Saluda Hydro FERC # 516. As you are well aware, a large portion of Lake Murray is located within Newberry County. This resource is treasured by both residents and visitors, and the County is pleased to see your company's efforts to maintain this valuable natural resource.

While sustaining the environmental integrity of Lake Murray is certainly a valid purpose, Newberry County is concerned that it will be forced to shoulder the majority of this responsibility along with Saluda County. Currently, Newberry's shoreline is less developed than its neighbors in Lexington and Richland. However, as the Columbia area grows, Newberry is seeing an increase in development opportunities related to the lake. Newberry must be allowed to capitalize on these opportunities in the same fashion as its more urban counterparts.

Newberry (and Saluda) cannot become the "preserved side" of Lake Murray while others enjoy the significant tax base that comes with lakefront development. This opportunity is even more vital to Newberry because the county does not have as many

assets to attract wealth as its metro neighbors. Being small and rural, Newberry County's voice in the FERC process may easily be ignored and yet so much of our future prosperity depends on our ability to capitalize on the economic development opportunities presented by Lake Murray. While Newberry County understands the need to protect our natural resources, this responsibility should be shared equally among the counties involved.

In addition to the above, Newberry County has a few additional concerns and or comments associated with the relicensing procedures and control of the lake. The County would appreciate your company taking the following comments and requests into consideration during this relicensing period.

- The County would like to encourage SCE&G to identify the Base Flood Elevations (BFE) on a lake map, preferably in a GIS format. All information should also be submitted in accordance with FEMA regulations and specifications. This action will reduce the risk of property owners building in the flood zone associated with the project boundary. This request is justified because the dam significantly increases Newberry County's flood zone. Both the County and private property owners incur considerable expense to comply with flood zone regulations.
- SCE&G also owns property or "Buffer Zone" along much of the shore line. The County requests that this property be mapped and posted with the applicable restrictions. This information should be made available through local government offices in order to help property owners adhere to the appropriate regulations.
- The County also requests that SCE&G post the draw down dates because of safety concerns for lake users. If people are not aware of shallow water this could cause boating or swimming accidents.
- It would also be helpful if SCE&G would inform lake users of weed control measures.

The County would like to thank your agency once again for accepting our comments on your proposed project. If we can assist you on this project or any others in the future, please do not hesitate to call Tom Brooks or myself at 803-321-2100.

Sincerely,


Leonard B. Sossamon, Jr.
County Administrator

CC: Tom Brooks



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
263 13th Avenue South
St. Petersburg, Florida 33701

August 1, 2005

Mr. James M. Landreth, Vice President
Fossil & Hydro Operations
South Carolina Electric & Gas Company
111 Research Drive
Columbia, South Carolina 29203

Re: Saluda Hydroelectric Project (FERC Project No. 516), Application for New License,
First Stage Consultation

Dear Mr. Landreth:

The National Marine Fisheries Service (NMFS) has reviewed the April, 29, 2005, Initial Stage Consultation Document (ICD) prepared by South Carolina Electric & Gas Company (SCE&G). The following comments are provided to supplement the ICD with regard to proposed environmental studies and information needs for relicensing of the Saluda Hydroelectric Project (Project).

Project Description

The Project is located on the Saluda River near the City of Columbia, South Carolina. Power generation began in 1930. Facilities include the 1.5-mile-wide Saluda Dam, the project head pond (Lake Murray), and appurtenant hydropower generation systems. The Project's licensed hydroelectric power generating capacity is 202.6 megawatts which are produced by four power generation units.

The Saluda River drainage basin encompasses over 2,420 square miles and is one of the larger sub-basins of the Santee River Basin of North and South Carolina. The Saluda River receives inflow from the Little River, Little Saluda River, Ninety Six Creek, Bush River, and Reedy River. The Saluda River Basin above Lake Murray contains over 220 miles of riverine habitat and 13 major dams, including several hydropower dams licensed by FERC. Lake Murray covers approximately 75 square miles; is 41 miles long; and is 14 miles wide at its widest point. The river extends approximately ten miles from the Project dam to its confluence with the Congaree River in Columbia, South Carolina.

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Fishery Resources of the Santee-Saluda River Basin

The Santee River Basin provides habitat for important wild populations of diadromous fishes including American shad (*Alosa sapidissima*), hickory shad (*Alosa mediocris*), blueback herring (*Alosa aestivalis*), striped bass (*Morone saxatilis*), American eel (*Anguilla rostrata*), Atlantic sturgeon (*Acipenser oxyrinchus*), and the federally listed endangered shortnose sturgeon (*Acipenser brevirostrum*). These and other diadromous species formerly ranged throughout the Saluda River and supported important subsistence and commercial river fisheries into the late 19th Century.

The Saluda River is one of the three primary sub-basins of the Santee River, and formerly contained a major portion (estimated 30 percent) of the basin's rocky rapids and shoal habitat, which served as high quality spawning habitat for anadromous and resident fish. Rapids or "rapids-complex" areas are higher-gradient riverine reaches containing shoals, rock outcrops, pools, and riffles with hard substrates of bedrock and boulders, cobble-gravel mixtures, and/or coarse sand. The locations provide well-oxygenated sites for reproduction and maturation of micro- and macro- invertebrates and resident and migratory fishes. Because of habitat diversity, water quality (oxygenation), and protection from predators, rapids-complex locations are optimal and essential habitat for egg, larval and juvenile life stages of anadromous species such as American shad, sturgeon, and striped bass. In the Santee River Basin, most rapids-complex habitats are found in the fall-line zone and the Piedmont -- ranging from the upper Coastal Plain to the Appalachian foothills. In the Saluda, Broad, and Catawba-Wateree sub-basins much of the original rapids-complex habitat remains, but is blocked by major mainstem dams. Spawning habitat for anadromous species in the Saluda River is presently restricted to the ten-mile-long river reach between the Saluda Dam and the Congaree River.

National Marine Fisheries Service Management Goals and Objectives

The overall goal of NMFS with respect to licensing of the Saluda Project is to foster protection, restoration, and prudent management of living marine resources, including diadromous species within the Santee River Basin. Specific goals include provision of safe and effective passage to essential spawning and maturation habitats for all diadromous fish species, maintenance of aquatic habitat quality, and recovery of depressed populations of diadromous species. The NMFS considers the Saluda River as an important habitat component for restoration and recovery of American shad, American eel, the endangered shortnose sturgeon, and the Atlantic sturgeon, a species of concern. Shortnose sturgeon are known to occur in the upper Congaree River and their occurrence in the lower Broad and Saluda Rivers is considered probable due to their proximity to the Congaree River and occurrence of accessible habitat. Since construction of the Saluda Dam, blockage of fish migrations in combination with altered water temperature, flow, and dissolved oxygen levels have adversely affected fish habitat and populations in the Saluda River.

Recommended Studies and Information Needs

During 2003-2004 NMFS personnel worked with your staff and representatives of the U.S. Fish and Wildlife Service, and the South Carolina departments of Natural Resources (SCDNR) and Health and Environmental Control (DHEC) to identify the environmental studies needed for relicensing of the Project. The following study requests were developed through interagency coordination, including continuance of the "early start" studies already begun. The requested studies have direct relevance to our fishery protection and conservation mandates.

1 Comprehensive Habitat Assessment

Provide quantitative and qualitative data in GIS format of available and potential spawning, rearing, and foraging habitats (i.e., riffles, shoals, open water, shallow coves, littoral zones) for diadromous and resident fishes in Lake Murray, the Saluda River and its major tributaries, and the Lower Saluda River below the project.

Justification. Information is needed on the existing available diadromous and resident fish spawning, rearing, and foraging habitat and candidate areas for restoration upstream, downstream, and within the project. This information will aid in the assessment of project impacts on aquatic resources, determination of the need for fish passage, development of fish species target numbers, potential habitat restoration areas, and alternative mitigation alternatives for continuing Project impacts.

2. Instream Flow Study

Project operations have altered instream flows and aquatic habitats in the Saluda and Congaree Rivers in terms of water quantity (timing and delivery) and water quality (dissolved oxygen, pH, temperature, nutrients, and suspended solids). A comprehensive instream flow study of the lower Saluda River is needed.

Acceptable standard flow assessment methods may include the Instream Flow Incremental Methodology, Physical Habitat Simulation Model (PHABSIM), MESOHABSIM, Indicators of Hydrologic Alteration (IHA), or others acceptable to the interagency relicensing team to evaluate Project effects on aquatic and riparian communities. We look forward to participating in an interagency team to determine detailed study plans including identification of target species and/or habitat guilds, habitat suitability model relationships, location of study reaches, and placement of transects. At a minimum, the study should address:

- (a) Potential operational scenarios involving ramping of discharges to dampen the effects of peaking and load following operations on downstream habitats.
- (b) Potential stable spawning flow "windows" for target species.
- (c) The effects of project operations on sediment transport, riparian erosion, and sedimentation of important habitats in the ten mile reach of the lower Saluda River and upper Congaree River.

Justification. An instream flow study is needed to determine the affects of project operations at the Saluda Dam on the aquatic habitat and resources in the downstream ten mile reach of the lower Saluda River. This reach consists of rocky shoal habitat which is important to a variety of species including a put-grow-and-take trout fishery, and resident and shoal-dependent species. This reach of the river also provides potential high quality habitat for anadromous fish spawning and maturation. This information is also needed for development of potential enhancement and mitigation measures.

3. Benthic Macroinvertebrate Study

Identify and evaluate benthic macroinvertebrate assemblages in the lower and upper Saluda River including crayfish and EPT's (*Ephemeroptera, Plecoptera, and Trichoptera*) to describe and evaluate project related effects on benthic communities/resources. Sampling should occur in spring and summer and sites should be located directly below the dam, downstream of the dam, in major tributaries, in representative reaches of the Saluda River above the reservoir, and in a reference reach of the Broad River or other river reach as determined by the interagency study team.

Justification. Benthic macroinvertebrates form a vital base of aquatic food webs and, due to their sedentary nature, server as an indicator of local long term and short term ecological conditions and environmental stressors. The status of benthic macroinvertebrate communities and populations is directly related to the health and condition of the riverine ecosystem and its ability to support fishery resources.

4. Water Quality

The NMFS and partner state and federal natural resource agencies will continue working with SCE&G to improve water quality in Lake Murray and the Saluda River tailwater areas to meet state standards, to improve aquatic ecosystem health, and to provide suitable habitat for target species including the endangered shortnose sturgeon. Sturgeon are particularly sensitive to low dissolved oxygen levels. Extensive historic and recent water quality data collection and modeling has been undertaken by SCE&G and the State of South Carolina. A special water quality study should be designed by the interagency team and undertaken to review existing information and hydrodynamic models, and to determine the need for additional data collection and analyses.

Justification. Important progress has been made in improvement of dissolved oxygen conditions in the Saluda River during recent years. The effectiveness of recent operational improvements and turbine runner hub baffle installation should be evaluated to ensure protection for aquatic resources and recreational fisheries, and to restore high quality habitat for sensitive native species including but not limited to shortnose sturgeon, American shad, and striped bass.

5. Entrainment and Out-migration Study

An evaluation of existing and resident and diadromous fish out-migration and entrainment/mortality potential at the dam is needed to assess project-related factors influencing fish populations. Out-migration (spillway and turbine passage) may be significant in terms of recruitment for river basin populations. An understanding of existing and potential out-migration and turbine passage is needed in connection with diadromous fish passage feasibility analyses at the project.

The out-migration study should include the frequency and characteristics of spillway water releases with respect to potential out-migration by target resident and diadromous fish species at the project dams. Limnological studies should be included to document monthly changes in dissolved oxygen, temperature, conductivity, turbidity, thermocline development and overturn under normal hydropower operations. This study element should include multiple years of data to help provide an understanding of limnology and habitat conditions likely to be encountered by out-migrating adult, juvenile, and egg/larval fish life stages at the project dams.

A literature-based study summarizing entrainment mortality studies on similar projects should be conducted. It is conceivable that a sufficient database exists on similar sites with similar turbines from which to draw reasonable conclusions relative to entrainment and mortality in lieu of conducting a site-specific study. NMFS would be pleased to provide criteria, specifications and methods, and examples of "desk-top" turbine mortality studies for review by the interagency team.

Justification. The cumulative loss of fish from entrainment and mortality at the project is a concern. A reasonable determination of these losses at the project is needed for determining the type and extent of mitigation (avoidance, minimization, compensation) necessary to offset the loss of public trust resources. Additionally, an analysis of possible entrainment of diadromous species (adults and juvenile out-migrants) is needed for evaluation of potential fish passage at the project, and/or the feasibility of fish fry stocking programs in upstream riverine habitats.

6. Rare, Threatened, and Endangered Species

NMFS acknowledges the cooperative "early start" study being undertaken by SCE&G to evaluate diadromous fish population abundance (including shortnose sturgeon) in the Saluda and upper Congaree rivers. We recommend that this study be continued and that an annual review of methods and results and methods be provided. Provisions for adjusting the study design and term, as needed, should also be included. A goal of the study should be establishment of a protection and recovery plan for sturgeon in the Saluda River.

Justification. As previously noted, NMFS considers the lower Saluda River to be within the historical range of shortnose sturgeon. This wide ranging migratory species is known

to include open reaches of the upper Santee, Congaree, and Wateree rivers. Prudent protective determination of the range of this species in the Santee Basin extends throughout all tributary river systems up to the first physical habitat barrier. Accordingly, NMFS considers all waters up to the base of the Saluda, Columbia, and Wateree dams to be within the distribution limits of the endangered shortnose sturgeon; hence, important for protection and recovery of the species. Construction of the Saluda Dam and its operation from 1930 to present has blocked upstream migrations of sturgeon and other migratory species and has adversely impacted spawning and maturation habitat quality and recruitment potential in the Saluda River. NMFS looks forward to continuing cooperation with SCE&G and partner agencies to develop a protection and recovery plan for shortnose sturgeon.

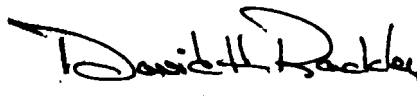
7. Diadromous Fish Surveys

Continue diadromous fish surveys in the lower Saluda River during the spring 2006 spawning period as outlined in the *2005 Diadromous Fish Studies* study plan. This plan was developed in the fall of 2004 in concert with state and federal natural resource agencies as an "early start" study. NMFS recommends the study be conducted for a minimum of two sampling seasons.

Justification. The Saluda River below the Project dam contains approximately ten miles of typical fall-zone riverine habitat. Currently, diadromous fish are mechanically passed upstream of the Santee Cooper Hydroelectric Project and migrate up the Congaree, Broad, and Wateree rivers. The ten miles of river below the Saluda project contains potential high quality spawning habitat for American shad, hickory shad, blueback herring, shortnose sturgeon and Atlantic sturgeon. The study plan and surveys would allow evaluation of exiting diadromous fish utilization of the lower Saluda River and aid in identification of limiting factors and project impacts. The study is needed for determining protection, mitigation, and enhancement measures for diadromous fishes affected by the project.

NMFS appreciates the opportunity to work with SCE&G and the natural resource agency team to address management of important public water and fish and wildlife resources in the Saluda River Basin. Please direct related questions or comments to the attention of Mr. Prescott Brownell at our South Atlantic Branch Office. He may be reached at P.O. Box 12559, Charleston, South Carolina 29422, or at (843) 953-7204.

Sincerely,



Miles M. Croom
Assistant Regional Administrator
Habitat Conservation Division

Enclosure

cc:

OCRM, Charleston

SCDNR, Charleston

EPA, Atlanta

FWS, Charleston

F/SER3, 4

South Carolina

Department of Parks, Recreation & Tourism

Recreation, Planning and Engineering Office

August 12, 2005

Mr. James Landreth, Vice President
Fossil & Hydro Operations
South Carolina Electric & Gas Company
111 Research Drive
Columbia, SC 29203

Attn: Mr. William R. Argentieri

RE: Saluda Hydroelectric Project (FERC Project 516)
Initial Consultation Document Comments

Dear Mr. Landreth:

The South Carolina Department of Parks, Recreation and Tourism (SCPRT) has reviewed the *Initial Consultation Document* for South Carolina Electric and Gas (SCE&G) Company's proposed relicensing of the Saluda Hydroelectric Project. We participated in the recent Initial Consultation Meetings. Thank you for seeking information about the relicensing objectives of SCPRT and other agencies.

Many changes that affect parks, recreation, and tourism have occurred in the Lake Murray/Saluda River area since the current license was awarded in 1984. The population growth alone puts a significant stress on the existing facilities and further high growth is anticipated. People in the surrounding region need and expect adequate opportunities for outdoor recreation and growth spurs the demand for additional facilities. During this time period there have also been significant changes in the way people recreate – changes in boating, fishing, hunting, wildlife watching, and numerous other activities. These changes add to the expectations of the public for outdoor recreation opportunities. There has also been an increased awareness of the need to protect open space and natural and cultural resources. Tourism has changed too. Long summer family vacations have evolved into a variety of short excursions on a year round basis. Nature-based tourism has become an expanding interest. In light of all these changes, SCPRT anticipates that the relicensing of the Saluda project will provide opportunities to work cooperatively with South Carolina Electric and Gas Company (SCE&G) to enhance quality of life by conserving and improving the parks, recreation, and tourism resources within the project area.

We offer the following comments and recommendations concerning relicensing of this project:

Authority

SCPRT is the state agency responsible for outdoor recreation planning in the State. The South Carolina General Assembly created the SCPRT in 1967 and reaffirmed its role in 1993 (Title 51, South Carolina Code of Laws, 1976, as amended) to promote the State's tourist attractions; to promote the general health and welfare of the citizens by developing and expanding recreational areas, including state parks; to develop a coordinated plan which best utilizes the State's facilities and resources such as the natural scenery, outdoor sports, and recreational activities; to provide for the preservation and perpetuation of the state's rich historical heritage; to lease or convey lands to local governments for parks and recreation facilities; and to study the State's park and outdoor recreational resources and facilities, the needs for the resources, and the extent to which these needs are being met. SCPRT is also charged with promoting

economic diversity in all areas of the Palmetto State by extending the full benefits of tourism and recreation.

State Comprehensive Plans

Several plans have been completed in the last few years which may impact the relicensing process: *State Parks - The Vision for the 21st Century* (2003); *South Carolina State Comprehensive Outdoor Recreation Plan* (2002); *Expanding the Experience, Trails for South Carolina: The 2002 South Carolina State Trails Plan* (2002); and *The Saluda River Corridor Plan* (1990) and *Lower Saluda Scenic River Corridor Plan Update* (2000). Relicensing activities and new license conditions should be consistent with these plans. The South Carolina State Comprehensive Outdoor Recreation Plan will be updated in the next two years.

Parks, Recreation, and Tourism Values

The natural, cultural, and recreational resources within the project boundary and the surrounding area are both substantial and diverse. Lake Murray provides about 48,000 surface acres and 691 miles of shoreline, including islands. The 11-mile Lower Saluda regulated river section downstream of Lake Murray and Congaree River below that also provides significant resource values. Forested areas, wetlands, islands, river shoals and open waters provide outstanding fish and wildlife habitat, biodiversity, interesting viewsheds, and recreational and tourism opportunities. Current activities in the area include motorboating (including waterskiing, jetskiing), sailing/windsurfing, canoeing/kayaking, fishing (including from boats, banks/piers, and wade fishing), hunting (big game, small game, waterfowl), wildlife watching/nature study, swimming, camping, picnicking, visiting historic/cultural sites and museums, hiking/walking, bicycling, and many types of field sports.

General priority issues identified by state residents in the 2002 State Comprehensive Outdoor Recreation Plan that pertain to this project include:

Issue 1: Protect lands for natural and cultural resources allowing public recreational use.

Issue 2: Manage and expand trail resources.

Issue 3: Maintain and improve existing parks and recreation facilities.

Issue 5: Acquire public open space for recreational use, including urban parks, neighborhood parks, and greenways.

Issue 7: Create partnerships between and among government agencies and the private sector to build, maintain, and promote recreation resources, and to implement existing plans.

Issue 8: Implement existing plans.

Issue 9: Increase opportunities for activities of high recreational demand (walking/running, swimming, driving for pleasure, bicycling, fishing, wildlife watching, golf, motorboating, picnicking, camping, visiting historic sites, gardening, and hiking).

SCPRT Objectives

As the agency responsible for outdoor recreation planning in the State and as a manager of public lands on Lake Murray, SCPRT provides a long-term commitment to the stewardship of significant natural and cultural resources and to quality recreational service. Supporting this resource-management approach, SCPRT recognizes the following important issues as being high priority needs regarding the Saluda Relicensing Project:

1. Ensure that recreational facilities and opportunities are protected and enhanced for current and future users, on and near the lake and river.
2. Provide sufficient recreation and nature-based tourism opportunities to support the growing population of the region throughout the license period.
3. Provide safe and enjoyable recreation experiences for the boating and non-boating public including state residents and visitors.
4. Conserve natural, cultural, and recreational resources for future generations to enjoy.
5. Include enough land in the project boundary to assure optimum development of recreational resources afforded by the project.

Specific interests include the following:

1. Permanent protection for Dreher Island State Recreation Area.
2. Permanent protection of a new state park property with significant shoreline on the Lexington/Saluda side of the lake.
3. Continuation of existing recreational resources on Lake Murray and new/expanded resources where possible and appropriate.
4. Conservation of areas identified as important during interagency review of shoreline management maps.
5. Continued implementation of the Lower Saluda River Corridor Plan & Update, including additional recreational access at “Sandy Beach”, I-20, I-26, take out above Mill Race Rapids, and development of the Saluda River greenway and Three Rivers Greenway.
6. Continuation of existing recreational resources on the Saluda River.
7. Improved water quality for the lake and river to meet recreational needs (suitable for propagation of aquatic life and primary and secondary recreational contact and coldwater trout fishery).
8. Maintenance/enhancement of the scenic integrity of Lake Murray and the Saluda River.
9. Safe, predictable hydro flows for waders, boaters, and other downstream users.
10. Identification and enhancement of paddling opportunities in the tributaries and tributary arms of the lake.
11. Interactive process to periodically review recreation needs and adjust resources associated with the project.

Study Recommendations and Information Needs

The Saluda project (lake and regulated river) offers tremendous opportunities for parks, recreation, and tourism now and in the future. We are concerned that insufficient project shoreline has been set aside for public recreation, especially shore-oriented recreation such as bank/pier fishing, picnicking, camping, wildlife watching, and hiking/walking. As the population of this area grows and as this resource becomes more attractive to potential visitors from other areas, more shoreline and adjacent properties will be needed to serve the recreational and natural resource needs of the public. In the current Shoreline Management Plan (SMP), very little of the shoreline on the lake has been set aside for current or future public recreation. Some of this recreational shoreline includes the islands which are generally inaccessible except by boat. Approximately 75 percent of the shoreline is developed or planned for future development. We believe that this development has impacted recreation use, visual aesthetics, fish and wildlife habitat, and water quality. We request that SCE&G review the current allocation for the project in consultation with resource agencies and stakeholders and identify a more balanced allocation that will meet the public recreation and natural resource needs over the life of the license. To accomplish this, an

updated classification of the existing use of the property, acreage, and shoreline mileage associated with each classification should be completed and the shoreline management plan should be updated.

The ICD reports that only 404 acres are provided for public recreation on Lake Murray which includes the 348 acre Dreher Island State Park. The access areas listed are small - from 1.1 acre to 17.9 acres - with most under 10 acres (excluding the state park and three sites that did not list acreage). On the Saluda River, Saluda Shoals Park is 240 acres and the other three access areas are small (Gardendale acreage not identified). We suggest acreage be added to all small sites to the extent possible to allow for future expansion as recreational needs change and to provide options for shore based recreation. The recreation information provided in the ICD does not describe the number, size, or other specifics for facilities provided in the various access areas. For instance, Table E-15 should describe such items as the number of picnic tables/shelters, miles of hiking trails, number of campsites, number of lodge units, feet of swim beach, feet of bank fishing shoreline or piers, number of boat ramps, number of marina slips, amount of dry storage, tournament facilities, and number of trailer and car parking spaces.

In addition to this inventory, current users, adjacent (including off water common dock) property owners, and area residents should be interviewed to determine recreational use (including frequency, volume, and type of use) and potential use and needs in the future. Furthermore, future recreational use for the term of the new license should be estimated based on population projections and recommended adjustments provided by the State Office of Research and Statistics and adopted state and local plans. This study should identify where and what type of additional public recreation facilities are needed at Lake Murray and the Lower Saluda River. This should address fishing (including wading, banks/piers, and boats), boating (including waterskiing, jetskiing), canoeing/kayaking, sailing/windsurfing, wildlife watching/nature study, picnicking, camping, hiking/walking, bicycling, hunting (big game, small game, waterfowl), visiting historic/cultural sites, parking, and restroom facilities. A portion of the study should also identify longer term “future recreation” opportunities and needs.

A boat carrying capacity study should be performed for Lake Murray to identify concerns with current or future over-crowding and safety. As part of the process, include an inventory of current and future residential docks, public and private marinas, dry storage, and other boat access opportunities. Project related accidents during the current license period should be identified for use in addressing safety needs. This study will identify areas to target or avoid for new boating facilities.

A “build out” scenario should be used to identify the volume of use based on future development proposed in the shoreline management plan. This should help identify areas to avoid or target for new recreational access and may also identify areas that should be addressed for amendments to the shoreline management plan. Information is needed on how the “build out” will affect boating carrying capacity, water quality, and fish and wildlife habitat.

Due to state laws affecting Lake Murray, each new building or marina on the lake further restricts waterfowl hunting. An estimate of remaining legal waterfowl hunting areas should be mapped for consideration of designated waterfowl hunting areas.

A plan should be developed to protect islands in the lake and river while allowing recreational use. Population growth and increasing boat use may severely affect these recreational resources over the term of the license.

Safety in the Lower Saluda River is a concern due to unanticipated and unannounced hydro generation. A review of operations, project information, and warning devices is needed to provide adequate safety to waders, boaters, and other recreational users. Recent operations have provided false impressions to users that the high water is going down, only to go up significantly again, sometimes within the hour. Wading anglers are particularly affected. An increase in water level of a few inches can knock a wader down and often these releases can be measured in feet. These flows are also dangerous for beginning and intermediate boaters. Hydro flows that can be anticipated through posted flow schedules, gradual ramping that fluctuates less severely, and additional warning devices and information methods should be considered.

Recreational flow studies are needed to test the suitability of various releases for the various users at different locations throughout the regulated river. Volunteers from paddling and angling groups may be available to assist. The concerns of Congaree National Park to receive adequate flows during proper seasons should be addressed as well.

Trout and striped bass fishing are existing recreational uses in the Lower Saluda River. The water quality concerns of other agencies and recreational anglers should be considered.

There are many known and unknown cultural resources located within the project boundary. A plan should be developed in coordination with appropriate resource agencies to identify and protect these valuable resources.

Specific Comments on ICD

Section 14.1 Regional Resources – Include Saluda Shoals Park as a regional resource. It offers boat, canoe, and kayak access, picnicking, walking and bicycling trails, nature programs, and bank and wade fishing access to the Lower Saluda River. The Three Rivers Greenway should also be noted as a regional resource and described.

Section 14.2.1 Lake Murray – More information should be provided on locations of public access and number of facilities provided. Estimates of fishing tournaments and guide services should be provided. Describe the change in hunting and other activities since the current license was issued.

Section 14.2.2 Saluda River – The discussion of the Lower Saluda River should note that the active recreational fishery is only active during part of the year due to water quality. Also, safety is a concern to anglers, boaters, paddlers, and other users due to hydro flows.

Section 14.2.3 Recreation Sites – Provide more information on number of facilities in public and private sites. In the discussion regarding islands, note that access is only available to those users with boats. The property leased to the Boy Scouts of America is not open to the general public and the SCANA Pine Island Site is strictly private and should not be listed under public sites. Under private sites, enumerate the hundreds(?) of private docks that provide access to private landowners and their guests.

Section 14.3.2 Existing Use and Activities – Boat registrations have increased 44% in the seven years up to the year 2000. Please provide current estimates of boating and non-boating use of the project for fishing, walking, camping, wildlife watching, picnicking, etc., including the regulated river.

Section 15 – Land Use and Aesthetics – Discuss the Lower Saluda State Scenic River and its associated corridor management plan (Lower Saluda River Corridor Plan, 1990, and Lower Saluda Scenic River Corridor Plan Update, 2000). These community based planning documents recommend significant strategies for the river and associated lands.

Section 16 – Socioeconomics – Provide projections and discuss trends regarding the future of the next license period. Much of the data provided here is from 2000 or earlier.

Figure E-15 and E-16 – Updated boat registrations and boat counts should be provided. Data on non-boating use of the project should be provided.

G-3 (Project Map) – Current maps with sufficient detail to determine project boundary, recreational sites, etc. should be provided.

Conclusion

SCPRT looks forward to working with SCE&G in the relicensing process. We recommend that all study activities be closely coordinated with our staff and other relevant resource agencies. We should be provided the opportunity to participate in all scoping activities, study design and review processes, and field studies. All data collections, data analyses, as well as all draft and final reports should be provided to the SCPRT in both printed and electronic formats for review and verification. Besides myself, please include the following on your mailing list for copies of items related to the FERC license: Mr. Phil Gaines (pgaines@scprt.com, 803-734-0345) and Mr. Irvin Pitts (ipitts@scprt.com, 803-734-0153), both at the following address: SCPRT, 1205 Pendleton Street, Columbia, SC 29201, and Mr. Mark Davis (mdavis@scprt.com, 803-364-4152), Dreher Island State Recreation Area, 3677 State Park Road, Prosperity, SC 29127.

The Initial Consultation process has provided many positive results. We believe that the additional research that is ongoing or suggested in our comments is appropriate for a project with the scale of the Saluda Project and the state significance of its natural, cultural, and recreational resources. Our staff looks forward to continued close communication during this relicensing process. Please contact me (tbebber@scprt.com, 803/734-0189) should you wish to discuss this relicensing project.

Sincerely,



Tony Bebber
Planning Manager

cc: Gina Kirkland - SCDHEC
Amanda Hill - USFWS
Dick Christie – SCDNR
The Secretary – FERC
BJ Willoughby – SCPRT
Beth McClure – SCPRT
Phil Gaines – SCPRT
Irvin Pitts – SCPRT
Mark Davis - SCPRT

August 15, 2005

Mr. James M. Landreth
Vice President
Fossil & Hydro Operations
South Carolina Electric & Gas
111 Research Drive
Columbia, South Carolina 29203

Re: First Stage Consultation Comments and Request for Studies, Saluda Hydroelectric Project, FERC No. 516, Richland, Lexington, Newberry, Saluda Counties, South Carolina

Dear Vice President Landreth:

Comments on the Saluda Hydro ICD

Purpose

The purpose of this document is to address issues affecting the Lake Murray shoreline that are relevant to the Federal Energy Regulatory Commission's (FERC) relicensing of the Saluda/Lake Murray Hydroelectric Project (FERC Project No. 516) and define desired outcomes that represent a consensus view among people and organizations associated with the use of Lake Murray for birding, boating, camping, and other recreational and residential activities.

Introduction

The South Carolina Wildlife Federation (SCWF) facilitates effective habitat conservation and respect for outdoor traditions for current and future generations through statewide leadership, education, advocacy and partnerships

The Saluda/Lake Murray Hydroelectric Project is a facility managed by South Carolina Electric and Gas Company (SCE&G). The project includes Lake Murray Dam, electric generating facilities at the dam, a 48 to 50,000-acre lake, shoreline lands of the lake, and lands along the lower Saluda River.

The Federal Energy Regulatory Commission (FERC) requires a license for all private dams built and managed for the production of electricity. SCE&G holds the license for the Saluda/Lake Murray Project, which is referred to as FERC Project No. 516. The license for this project expires August 31, 2010 and the process for relicensing the project should begin five year prior to the expiration date, which would be August 2005.

The relicensing process will allow the entire Saluda/Lake Murray Project to be evaluated by the public for the purpose of defining the terms and conditions of a new license. The new license will regulate how the project is operated and managed for the next 30 to 50 years.

Comments

The Federation supports the comments of the Lower Saluda River Advisory Council (SCWF members participate in this broad-based group) and endorses the Department of Natural Resources and the Fish and Wildlife Service recommendations and comments regarding the Initial Consultation Document.

As importantly, and a new issue for the Federation, is that a comprehensive model be developed to assist all interested parties in the understanding and management of water- and habitat-related issues. This model should offer insight related to seasonal habitat issues in the Lower Saluda and Congaree National Park, draught, high- and low- flow conditions - basically a cumulative model to assist all involved in understanding the relationship of generating issues to environmental and recreational issues. It is our understanding that such a model might indicate that a somewhat higher winter lake level, as advocated by homeowners and Lake Murray Association, could generally allow more flexibility during spring releases, most particularly by avoiding too-low and too-high flows and providing for flows somewhat more consistent with the run of the river, and advanced publication of planned releases. The Federation is hopeful that such a model might lead to properly scheduled events such as Canoeing for Kids and Kayak Rodeos when water conditions and Lake levels are permissible.

Another new issue for the Federation is the monitoring and comparison of water quality in developed, buffered, and undeveloped coves, and a subsequent analysis of how higher priority to shoreline management could improve water quality. Real Estate development is part of the Project Operation, and part of future development.

The Federation is concerned that the Initial Consultation Document does not include high natural resource values issues which have been discussed over the years, such as:

Environmentally sensitive areas (ESAs), where they have been identified, how to protect them, monitoring plans, and strategies for compelling redress when misuse of ESAs occurs; ESA NO-dock policies, importance of continuous ESAs, perennial stream protection, setbacks, etc.

Future access sites and other land use designations. Because this relicensing must anticipate the nature of the lake for decades into the future, previously identified sites and future access sites should be included.

Including wildlife habitat considerations when assessing how much natural space should be set aside for the public use. Lake Murray and the Lower Saluda have a diversity of flora and fauna to include rare, threatened and endangered species. Areas with high natural resource values should be set aside and protected for the conservation of wildlife and their natural habitat.

A public safety plan, particularly for persons using the Lower Saluda. For the last several years there have been numerous instances requiring rescue and approximately one death per year on the Lower Saluda. Obviously more and different signs, sounds, and horns are required along official and less official access points. Although the Federation is concerned about safe habitat for critters, we also wish to protect recreational users and their rescuers, who are too often put in harms way. Better notice and more gentle releases and less abrupt action at the end of release are appropriate. Research and follow-through regarding management and notice at other sites, some as close as Hopes Ferry, should improve local safety.

The Federation appreciates this opportunity to comment.

Sincerely,

Angela Viney
Executive Director



SOUTH CAROLINA WILDLIFE FEDERATION

An affiliate of the National Wildlife Federation

November 21, 2005

William R. Argentieri
Kleinschmidt Associates #21A
101 Trade Zone Drive
West Columbia, SC 29170

Re: South Carolina Wildlife Federation Official Comments on Operating Procedures for the Relicensing of the Saluda Hydroelectric Project FERC Project 516

Dear Mr. Argentieri:

The South Carolina Wildlife Federation wishes to officially support the comments submitted by the Coastal Conservation League, American Rivers, and Lake Murray Watch regarding Operating Procedures. We request that this support be posted on the web site.

The Operating Procedures drafted by the Project managers do not support the FERC goal that the process improve the quality of the final relicensing product.

The Federation intends to assist in developing strategies to protect the habitat of the wildlife and people which depend upon the natural areas of the project lands, as well as downstream.

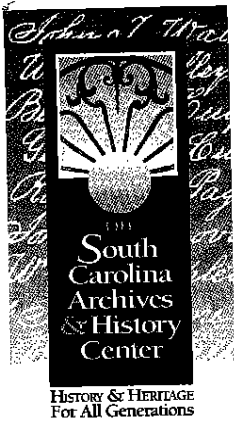
Federation experience with other relicensing efforts in South Carolina indicates that a true collaborative process is necessary to meet relicensing objectives that better meet the needs of Lake users.

We appreciate the opportunity to support these important comments.

Sincerely,

Angela Viney
Executive Director

c: Alison.Guth@KleinschmidtUSA.com
Suzrhodes@juno.com
jenno@scwf.org



May 24, 2005

Mr. William Argentieri
SCE&G
111 Research Drive
Columbia, SC 29203

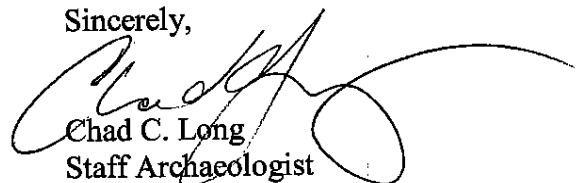
RE: Saluda Hydroelectric Project
FERC Project No. 516-SC
Initial Consultation Document

Dear Mr. Argentieri:

Thank you for providing us with a digital copy of the Saluda Hydro Initial Consultation Document. We reviewed the document and found it to be acceptable. Our only recommendation is to include a discussion of the current survey project (by TRC) in Section 13.5.

These comments have been provided to assist you with your responsibilities under Section 106 of the National Historic Preservation Act, as amended. Please contact me at 803-896-6181 if you have any questions or comments regarding this matter.

Sincerely,



Chad C. Long
Staff Archaeologist
State Historic Preservation Office

ARGENTIERI, WILLIAM R

From: ARGENTIERI, WILLIAM R
Sent: Friday, May 27, 2005 2:00 PM
To: Alan Stuart; bjmcmanus@jonesday.com; MAHAN, RANDOLPH R
Subject: SHPO Acknowledgement of Saluda Hydro Relicensing ICD Package

To all,

Today, I spoke with Chad Long of the SHPO about his May 24, 2005 letter acknowledging receipt and providing a comment on our Saluda Hydro relicensing ICD package. Chad was in agreement that the work TRC is doing now does not have to be in Section 13.5 as stated in his letter. His comment was just an observation and Chad understands that the work TRC is doing now will be described in more detail in the license application. This message will serve as a telephone conversation memo clarifying Chad Long's May 24, 2005 letter.

William R. Argentieri
South Carolina Electric & Gas Company
111 Research Drive
Columbia, SC 29203

Phone - (803) 217-9162
Fax - (803) 933-7849
Cell - (803) 331-0179

Malcolm Leaphart, Treasurer
SC Council Trout Unlimited
115 Conrad Circle
Columbia, SC 29212
August 15, 2005

Mr. James Landreth, Vice President
Fossil and Hydro Operations - c/o email to William Argentieri, August 15, 2005
South Carolina Electric and Gas Company (SCE&G)
111 Research Drive
Columbia, SC 29203

Subject: Saluda Hydroelectric Project, FERC Project #516
Initial Consultation Document (ICD)

Dear Mr. Landreth:

Opening/Introduction:

I am filing these statements on behalf of the SC Council of Trout Unlimited (TU) of which I am past Chair after a review of the Initial Consultation Document (ICD). As a coordinating body for the state chapters with regional and national TU offices, the SC TU Council speaks in a unified voice for the entire organization on coldwater conservation, such as the relicensing of the Saluda hydro. I have also monitored and advocated for better management of the Saluda River below Lake Murray for the Saluda River Chapter of TU since 1982 when I helped to found the chapter, serving as its first president, and then as Conservation Chair for many years focusing on the lower Saluda River.

TU has been a long time advocate of science-based management of our natural resources and has supported and helped to fund several research projects for the lower Saluda with the US Geological Survey (USGS), the SC Department of Natural Resources (DNR) and the SC Department of Health and Environmental Control (DHEC). Those projects included an oxygen dynamics study, a temperature and flow regime study, a marked trout study, and an aquatic insect study.

Endorsements:

The SC Council of Trout Unlimited endorses the ICD recommendations of the Lower Saluda Scenic River Advisory Council which I have served on since its inception. That Advisory Council is mandated by SC 'Wild & Scenic Rivers' legislation for local guidance in managing designated rivers, under the leadership of the SC DNR. The recommendations of the Advisory Council represent consensus views as compiled by the SC DNR Council Chair, Bill Marshall, of many different individuals and entities with varying concerns for the river, including SCE&G and other industries. Those plans have been previously documented in the following two publications, archived on the SC DNR web page noted:

- 1) The Lower Saluda River Corridor Plan (1990)
- 2) Lower Saluda Scenic River Corridor Plan Update (2000)
<http://www.dnr.state.sc.us/etc/conservation.html>

The 2000 Plan Update was based on a series of ‘charrettes’ which allowed for input from a broad range of landowner, public, and special interests groups, including SCE&G, to keep the management recommendations current since the original 1990 plan.

The main categories of items addressed by these plans include:

- Access and Facilities
- Historic and Archaeological sites
- Law Enforcement
- Resource Protection
- Tourism and Promotion

While the key issues of interest to a coldwater conservation group of water quality, including dissolved oxygen maintenance, and adequate continuous flows, are included in Resource Protection, TU supports all of the recommendations in this broad range of topics as in the best overall interests of the citizens and the resource.

TU has reviewed and supports the recommendations and comments on the ICD from the US Fish & Wildlife Service (USF&WS) and the SC DNR.

TU supports the overall concerns and recommendations of many groups to improve the water quality of Lake Murray. Doing that for what is basically the ‘headwaters’ of the lower Saluda River will improve conditions there too. A model for the lake and river basin showing inflows and outflows and the effects of changes in either has also been proposed by many, including the SC Wildlife Federation. While TU is supportive of a comprehensive science based watershed modeling program to help understand all of the dynamics of the river system, the first priority is to maintain the necessary flow and water quality at the hydro plant as discharges are made into the lower Saluda River.

Further Recommendations:

Approach:

In addition to the above jointly supported recommendations regarding the ICD, TU offers the following further comments and recommendations, including studies. In general any recommended study done should include a multi-agency team of appropriately assigned and qualified scientists to help formulate and guide a study, while providing oversight and ultimate approval of the study goals and methods and results, including ‘sign off’. The agencies to be included are: SC DHEC, SC DNR, and the USF&W. Any study done without the agencies involvement will suffer in credibility for not having these long time public resource protectors and managers involved as noted.

Establishment of Coldwater Fishery

Background/Reasoning:

Because of the construction of the dam at Lake Murray for the hydro-electric operation, the Saluda River below the dam ('lower Saluda') was changed to a coldwater fishery in 1930. Since the lower Saluda was changed from a warmwater to a coldwater river habitat by the construction of the reservoir and hydro power plant, the river's water quality and flows should be maintained to a level that allows coldwater species like trout to not only thrive year round, but be self sustaining as they would in a normal coldwater river system. That has not been possible however due to the severe, lethal anoxic water quality problems in the months preceding lake 'turnover' each fall. It has taken periodic stockings of 'adult' trout by SC DNR to maintain the fishery since the early 1960's because of the very low levels of dissolved oxygen each fall before 'turn over' from the summer stratification. The conditions have been so bad each year that the adult trout stocked were barely able to cope with the low levels of dissolved oxygen, especially when levels often approached 0 mg/l! These fish have been observed to be severely stressed and nearly lifeless when caught during the fall; and, as expected with the conditions, there was little significant hold-over of trout following the months of anoxic water conditions. This condition was summed up well in a "Lake Line" article from SCE&G in the November 2, 1995 issue of the 'Lake Murray News', and also is well documented by both our federal and state fishery agencies and also by DHEC. SC DNR even maintains a trout stocking schedule now based on an initial stocking only after 'turn over' when dissolved oxygen levels have rebounded, followed by periodic stockings through late spring or early summer when the stratification has begun again.

The 'trout – put, grow, and take' water classification by DHEC was based on the creation and maintenance of an adult trout fishery by the SC DNR Fisheries Division since the early 1960's. That was the appropriate fish species for the coldwater habitat for them to introduce and try to establish and manage; but, the adult fishery dependent on stocked trout was all that could be developed because of the lethal low levels of dissolved oxygen. For many years the failure of trout to hold over, spawn, and thrive was noted, but not understood until the dissolved oxygen problem was scientifically documented, first in the TU co-funded study in 1988 on the 'oxygen dynamics' (H. McKellar, USC School of Public Health) and over the years by the readings from the USGS dissolved oxygen meters first introduced to the river for the study. Reproduction in that harsh environment is not possible as eyed and young trout fry have even higher requirements for dissolved oxygen than do the adults, preventing development of a self sustaining trout population. Yet the state standards have been set based on the limited criteria of adult trout because that was the only fishery that could be developed. This is the classic situation of "which comes first – the chicken or the egg?" in that SC DHEC was limited to the 'current uses' in formulating the standards; but, that the current use was limited by lethal low levels of dissolved oxygen caused by the stratification of the lake built for the hydro.

SCE&G has installed turbine venting and baffles to their generators to increase dissolved oxygen in the outflow to the lower Saluda. Those efforts are commendable and have increased the dissolved oxygen levels in recent years; but, cannot be counted on to work

in all operating scenarios. It is not satisfactory to be in compliance with state standards ‘most of the time’, especially when those standards are not high enough for a self sustaining coldwater trout fishery at this time. 100% maintenance of the needed dissolved oxygen required to allow a thriving, reproducing trout fishery should be the goal – and further techniques like liquid oxygen injection should be employed as needed to reach the determined levels consistently for a healthy coldwater river.

Conclusion:

A complete assessment requiring several studies of the lower Saluda River aquatic environment should be made under multi-agency supervision. This assessment should include the needs of rainbow and brown trout in this coldwater habitat, in order to be a self sustaining fishery. Dissolved oxygen, flows, spawning and rearing habitat, the aquatic food base, especially in the shallow, rocky foraging areas, and actual water chemistry should be key items in such an assessment. The purpose should be to determine the factors needed for a self sustaining trout fishery that can reproduce and thrive year round, and, how the operation can be modified to meet the habitat needs.

Recommended Assessment Studies:

IFIM/Dual Flow Analysis:

One key component of a comprehensive assessment should be an ‘IFIM’ study (instream flow, incremental methodology) or similar process as deemed appropriate by the multi-agencies to determine the required minimum, continuous (‘instantaneous’ flow) flow to prevent spawning and food producing riffle areas from being de-watered as has been routinely done for years. A ‘dual flow analysis’ should also be considered to look at negative impacts on the aquatic communities from the scouring of the high flow levels reached when all 5 generators are run at close to 100 per cent. The results should be used to establish a flow regime that would not severely limit or destroy aquatic life and prevent periodic low flow de-waterings and high flow scourings of the river bottom and banks.

Macroinvertebrate Survey:

An update of the 1985 DHEC macro-invertebrate study led by Butch Younginer should be done to determine the current state of the river. That study was commissioned by the SC DHEC Water Quality section in follow up to the Saluda River Chapter of TU’s kick seining observations for the entire river which showed dramatically less aquatic life in the upper miles. The study confirmed the low populations in the upper reaches, citing the scouring effects of the high flows as the probable cause, and provided a scientific measurement of the negative effects of scouring flows. The results of a new study should be used to determine an operating mode for the hydro plant that significantly improves the aquatic life below the dam. Such a study would have the benefit of providing an excellent indication of water quality that would aid the community in wastewater 208 planning. Any improvements to the water quality in the lower Saluda should be a catalyst for further river protection by the community by eliminating all wastewater discharges into the lower Saluda and its tributaries, rather than allowing increases in revised 208 plans.

Water Quality/Chemistry:

A thorough analysis of water quality, including of actual samples of water taken from the river, especially at low flow conditions, at the dam and at logical downstream locations where degradation could occur should be done. That analysis would provide credible data to show scientifically the water chemistry from the actual discharges through the hydro plant, and changes as the lower Saluda flowed toward the confluence with the Broad. While some of those changes would not be the responsibility of SCE&G, a study by the utility company using the multi-agency approach recommended would confirm whether the water coming from the lake was the source of any water quality problems that would negatively impact the aquatic life in the river. It's important to note that the current monitoring is mostly self-monitoring by dischargers of the effluent as it leaves their plants. The actual water chemistry of the Saluda below the hydro plant, below the discharges, and at points where assimilation could reasonably be expected should be determined from actual water sample analysis. Results of the tests could be used for making fishery decisions and to protect public trust resources. The research would answer questions of concern to both SCE&G and to the citizens and could be used for reassessments as needed to the water quality regulations of all concerned.

Recreational and Safety Needs of the lower Saluda:

In addition to the above studies which are resource oriented, the recreational and safety needs of the lower Saluda should be studied and improvements made accordingly. The current situations are very hazardous and life threatening and ways need to be determined and implemented to make public use safer, including improved access to the river.

Safe Flow Levels:

The uneven pattern of releases with sharp drops or rises in the river water level in a short period of time are very unsafe to all recreational users, including boaters. Consideration should be given to an efficient way to release water more evenly over a 24 hour period that is closer to the average flow for that day. USGS records show that often the bulk of the flow into the river in a 24 hour period is released in only 1 or 2 hours time; or, is done with numerous peaks and valleys with variations of several thousands of cfs (cubic feet per second). Dealing with 'walls of water' or de-watered rocky shoals in upstream passages is unsafe and needs to be minimized as much as possible. Publicizing water release levels at least daily would also help make the river much safer.

Also, of concern is the current usage of the hydro for needs outside of the SCE&G service area. Meeting demands around the southeast on short notice should not put midlands citizens in peril. SCE&G should only use the hydro for their own back up needs. Other utilities need to develop and use their own systems such as natural gas plants that can be brought online in relatively short time periods to meet backup needs. Also, a study to determine the minimum navigational flow should be made. But, first it must be decided whether the flows are for floaters or motorized boats as the two have distinctly different requirements. If motor boats are to be considered, a minimum navigable flow level for upstream passage must be set as the low flows now result in extremely hazardous boating through shallow, rocky stretches.

Safety Warnings/Rescues:

'River rescues' are made every year because of the volatile up and down swing in the flows of the lower Saluda. The number of wading fishermen has increased dramatically over the past decade, as the membership of over 350 in the local TU chapter shows. Many of the general public are drawn to the river for bird watching, nature viewing, swimming, and sunbathing. Boating continues to grow in popularity, especially with kayakers and canoeists. The rescues of many of these from high flow surges are not only life threatening to those in peril, but put rescue personnel, many of whom are volunteers, at risk and are costly to local governments. Warning sirens and lights over the entire lower Saluda are not very feasible as those are nuisances to citizens living near those devices. Safety education information at access points and more markers such as those at Saluda Shoals and on the I20 and I26 bridges are more practical. The most effective approach, however, is to reduce the big swing in flows.

Access:

Access needs should be studied in a way that allows for broad citizen input along with the appropriate resource agencies. Additional access is needed due to increasing usage and for safety reasons. For example:

- There is no legal access above the Mill Race Rapids at Riverbanks Zoo for boater 'take out' upstream of that dangerous section of river. No one, regardless of experience, should boat through there at any time, including expert boaters when the river flows reach level 5 whitewater status.
- The landing built by SCE&G near the WVOC radio station is a 'throw in' landing only, requiring an unacceptable carry of boats and motors and other gear to the water. The only boat landings with ramps for trailered launches are both at the 'Hopes Ferry' location, requiring downstream trips to access the 5-6 miles of water between there and the Mill Race. Motor boats are often forced into navigating rocky shoals at very low flows on return upstream trips, and cannot float back to their landing as an upstream trip would allow. Paddlers launching there and going downstream often must exit the river at unplanned sites downstream as flows can rise to very high levels that can make paddling upstream back to the landings very perilous or even impossible. A downstream site such as the one near WVOC should be available to the public with a ramp for trailered boats, whether motorized or not, for safer boating.
- The 2000 'charrette' for the Lower Saluda Corridor Update noted a significant demand for more trails along the river corridor. SCE&G should try to accommodate that demand and do so in conjunction with the River Alliance and other entities that work for a trail system along the entire river from Saluda Shoals Park to the Columbia Greenway Park.
- The Lower Saluda Corridor Plan envisioned an additional park downstream from Saluda Shoals. Increasing public use and demand makes this need even more imperative and a recreational study should identify an appropriate site for SCE&G to develop to meet the growing demands over the next license term.

Pertinent Observations:

There is overwhelming public support in the Columbia metro area for the lower Saluda to be cleaned up by removing all discharges and protected for future generations as a state designated wild and scenic river. This support has been proven by the building of the Saluda Shoals Park, the addition of the Botanical Gardens, including a bridge across the Saluda to the Riverbanks Zoo, and the new riverfront greenways in the confluence area by the cities of Columbia, West Columbia, and Cayce. It is very unlikely that any of these entities would have built these facilities unless they envisioned a clean and healthy Saluda River as it leaves the hydro plant at Lake Murray flows past these facilities.

The lower Saluda is unique for many reasons, especially for recreational uses. It provides whitewater for paddling in an area of the state where that is not usually found. It provides a unique 'rainbows and rockfish' fishery in spite of the water quality problems of the past 75 years. It is increasingly used as a natural oasis in a growing urban area, for field studies by our schools, and is recognized as a focal point for economic and other promotion of the midlands as an area where rivers are seen as 'crown jewels', providing the life blood to our quality of life.

The 208 planning has dealt with maintenance of the water quality through consolidation of wastewater to regional lines built by the Joint Water and Sewer Commission of Lexington County; but, the water quality must be adequate after it is used at the hydro plant and enters the lower Saluda.

In light of the Saluda's state scenic river status and these significant new major public areas along the river, the long-time, unique recreational uses, and as a focal point for the midlands, it should be very clear that the community's wishes are for a clean, well managed Saluda River as befits its designation and community value. SCE&G's use of the river at their hydro plant should in no way prevent or detract from the wishes of the community.

Sincerely,

Malcolm Leaphart

CC:

Kleinschmidt, Guth, Mealing

FERC, Salas

SC DNR – Christie, Aule, Marshall

SC DHEC – Kirkland

SC PRT - Bebber

USF&WS – Hill

TU – distribution list



UNIVERSITY OF
SOUTH CAROLINA

DEPARTMENT OF BIOLOGICAL SCIENCES

12 August 2005

Mr. James M. Landreth, Vice President
Fossil & Hydro Operations
South Carolina Electric & Gas Company
111 Research Drive
Columbia, SC 29203

Mr. Landreth:

This letter contains some general comments concerning the relicensing process for the Saluda Hydroelectric Project. I appreciate the opportunity to provide input to this effort.

Because the FERC license interval is so long, it is essential that planning to cover that period be as thorough as possible using the best available tools and other resources. It is reasonable to expect that there will be substantial changes to, and interactions among, social and political institutions, land use, demands for natural resources, and the natural environment itself. Because of the likely nature and magnitude of the changes, it is not possible to adequately assess their potential impact solely in the context of past experience.

South Carolina Electric & Gas, as the steward of the significant water and land resources contained in Lake Murray and its shoreline, has an obligation to ensure that the planning for the upcoming license period takes into account the range of possible effects through the use of the appropriate models and related studies. Examples include watershed water quantity and quality, projected land use changes and their effect, fisheries impacts both upstream and downstream from the dam, recreational impacts, and other downstream effects such as the Congaree National Park. Public policy alternatives influence both the trajectories of these items and the interactions among societal expectations, decision-making processes, and natural resource utilization and conservation. It is possible that not all these issues will require a complete analysis, but that should be a consensus decision after reasonable effort is made to understand each particular situation.

The faculty and students of the University of South Carolina are a rich source of relevant expertise. I will be glad to work with you or your representative to explore ways that we can assist you with this important project.

With regards,

Daniel L. Tufford, Ph.D.
Phone: 777-3292
E-mail: tufford@sc.edu

COLLEGE OF ARTS AND SCIENCES

UNIVERSITY OF SOUTH CAROLINA • COLUMBIA, SOUTH CAROLINA 29208 • 803/777-4141 • FAX 803/777-4002



United States Department of the Interior

FISH AND WILDLIFE SERVICE
176 Croghan Spur Road, Suite 200
Charleston, South Carolina 29407

August 1, 2005

Mr. James M. Landreth
Vice President
Fossil & Hydro Operations
South Carolina Electric & Gas
111 Research Drive
Columbia, South Carolina 29203

Re: First Stage Consultation Comments and Request for Studies, Saluda Hydroelectric Project, FERC No. 516, Richland, Lexington, Newberry, Saluda Counties, South Carolina

Dear Mr. Landreth,

The U.S. Fish and Wildlife Service (Service) has reviewed the May 20, 2005, Initial Consultation Document (ICD) for the Saluda Hydroelectric Project, FERC No. 516. This document identifies our information needs and study requests for the first stage consultation for the relicensing of the project. The following comments are submitted in accordance with the provisions of the Fish and Wildlife Coordination Act, as amended (16 U.S.C. §§ 661-667e); Section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. §§ 1531-1543); the Federal Power Act (16 U.S.C. § 791 et seq.); the Migratory Bird Treaty Act (16 U.S.C. §§ 1536, 1538); the National Environmental Policy Act (42 U.S.C. § 4321 et seq.); the Clean Water Act (33 U.S.C. § 1251 et seq.); and the Electric Consumers Protection Act of 1986 (Pub. L. No. 99-495, 100 Stat. 1243).

I. Saluda Hydroelectric Project

The Saluda Hydroelectric Project, FERC No. 516, constructed in 1930, consists of Lake Murray, the Saluda Dam, the new back-up Saluda Berm, spillway, powerhouse, intakes, and penstocks. Lake Murray is a large reservoir, approximately 41 miles in length and 14 miles at its widest point. It contains a surface water area of 48,000 acres and 691 shoreline miles. The Saluda Dam is approximately one and a half miles in length. The south side of the dam contains a spillway

with six Tainter gates and a 2,900 foot long man-made spillway channel. In 2002 the applicant began a seismic remediation resulting in the Saluda Berm, a Roller Compacted Concrete and Rock Fill Dam along the downstream toe of the existing dam. The remediation was necessary to stabilize the dam during a seismic event. The Saluda powerhouse contains four generators with a fifth exterior unit, and five intakes and five penstocks. The hydraulic capacity of all five units at normal gate opening is 18,000 cubic feet per second (cfs). Units 1 through 4 contain a hydraulic capacity of 3,000 cfs and unit 5 contains a hydraulic capacity of 6,000 cfs. The project has a licensed capacity of 202.6 MW.

II. Project Resources

The Saluda River joins the Broad River to form the Congaree River which flows to the Santee-Cooper Hydroelectric Project and on to the Santee River. The Saluda sub-basin is one of four basins that form the Santee Basin which encompasses most rivers within South Carolina. The Saluda sub-basin includes over 220 miles of river and 63,000 surface acres, and contains more than 13 dams. The Saluda Hydroelectric Project impounds approximately 41 miles of the Saluda River and its associated tributaries, inundating significant shoals and riffles complexes, and associated riparian and floodplain habitats. It is the first dam encountered on the Saluda River by upstream migrating fish. Below the Saluda Dam there is a 10 mile regulated reach to its confluence with the Broad River. This reach of river is located within the fall zone and is characterized by bedrock and rocky shoal habitat. Currently this 10 mile reach is the only rocky shoal habitat accessible in the Saluda River by migrating fish. Rocky shoal habitats are unique, considering the majority in the Santee Basin has been impounded by hydroelectric projects. Rocky shoals provide habitat for shoal-dependent species including the rocky shoal spider lily, a federal species of concern, and spawning habitat for anadromous fishes such as the American shad, hickory shad, and shortnose and Atlantic sturgeon.

The Saluda Hydroelectric Project and the other twelve projects within the Saluda basin have cumulatively affected and significantly fragmented the river system, altered flows, bedload movements, water chemistry, and aquatic and upland habitat. The Saluda Dam impedes the upstream migration of migratory fish and separates these fish from important spawning and rearing habitats. The water temperature and flow below the Saluda Dam have been altered by the hypolimnetic releases and varied discharges.

III. Fish and Wildlife Service Management Goals

The Service's general management goals and objectives for the Saluda River and Lake Murray are to protect and enhance a balanced, diverse fish community and the diversity of aquatic habitats on which that community depends, as well as to restore habitats for diadromous fish, migratory and riverine game and non-game fish species, and freshwater mussels. Further goals include the recovery of diadromous fish populations of the Santee Basin (which includes the Saluda sub-basin) to levels that provide enhanced economic, social and ecological values and the protection and recovery of endangered species. An Interagency *Santee-Cooper Basin*

Diadromous Fish Passage and Restoration Plan which identifies these resource goals has been accepted by the FERC as a Comprehensive Plan under Section 10(a)(2)(a) of the Federal Power Act and FERC Order No. 481-A. The Saluda Hydroelectric Project and other hydroelectric projects have disproportionately eliminated and cumulatively affected riffle and shoal habitats in the Saluda River watershed. Therefore, restoration, protection and/or enhancement of certain habitats types (i.e., riffles and shoals) are priority goals for the Service. Identification of opportunities for the protection and enhancement of valuable wildlife habitat and enhancing potential use of public trust waters for recreation are additional resource goals of the Service.

IV. Studies Requests for Relicensing

1. Comprehensive Habitat Assessment

Provide quantitative and qualitative data in GIS format of the available and potential spawning, rearing and foraging habitats (i.e., riffles/shoals, open water habitat, shallow cove areas, littoral zones) in Lake Murray, Saluda River, and Lower Saluda River below the project, including tributaries for diadromous and resident fish species.

Justification. Information is needed on the existing available diadromous and resident fisheries spawning, rearing, and foraging habitat and candidate areas for restoration upstream, downstream and within the project. This information will aid in the assessment of project impacts on aquatic resources, determination of the need for fish passage, possible development of fish species target numbers, potential habitat restoration areas, and alternative mitigation alternatives.

2. Instream Flow Study

The Service is concerned about the effects of project operation on downstream flows in terms of water quantity (timing and delivery) and water quality (dissolved oxygen, pH, temperature, nutrients, suspended solids). We recommend a comprehensive instream flow study in the lower Saluda River.

- (1) The study should utilize standard methods including Instream Flow Incremental Methodology, Physical Habitat Simulation (PHABSIM), Indicators of Hydrologic Alteration (IHA), and/or others to evaluate the project effects on aquatic and riparian communities. The Service is looking forward to participating in an interagency team to determine detailed study plans which consider target species and/or habitat guilds, habitat suitability indices, location of study reaches and placement of transects.
- (2) Explore and analyze potential operational scenarios involving ramping of discharges to dampen the affects of peaking and load following operations on downstream habitats.

- (3) Evaluate the affects of project operations on sediment transport and riparian erosion in the 10 mile reach of the lower Saluda River.

Justification. An instream flow study is needed to determine the affects of project operations at the Saluda Dam on the aquatic habitat and resources in the downstream 10 mile reach of the lower Saluda River. This reach consists of rocky shoal habitat important to a variety of species including a put-grow-and-take trout fishery, and resident and shoal-dependent species. It is also potential high quality anadromous fish spawning habitat. This information is necessary to develop potential enhancement and mitigation measures.

3. Mussel Surveys

Survey the reservoir, the upper Saluda River and lower Saluda River and significant tributaries for freshwater mussels to document the distribution, relative abundance, and reproductive success of populations. Additional targeted surveys should determine the presence/absence of federally listed mussels and federal species of concern.

Justification. The license application is required to discuss fish, wildlife, and botanical resources in the vicinity of the project and the impact of the project on those resources § 4.51(f)(3). Information is needed regarding the identification and status of mussel populations at the project. The Saluda Hydroelectric Project impounds a significant portion of the Saluda River which has effectively reduced the amount of free-flowing reaches and has significantly fragmented habitats. This information is necessary to develop potential enhancement and mitigation measures.

4. Macroenthic Invertebrate Study

Identify and evaluate macroenthic invertebrate assemblages in the lower and upper Saluda River including crayfish and EPT's (*Ephemeroptera*, *Plecoptera*, *Trichoptera*) to describe and evaluate project related effects on benthic resources. Sampling should occur in spring and summer and sites should be located directly below the dam, downstream of the dam, major tributaries, and in Saluda River above the reservoir.

Justification. Basic information regarding the identification of project related fish and wildlife resources is required under 18CFR4.51. Macroenthic invertebrates due to their sedentary nature provide basic information on local long term and short term conditions such as potential affects from project operations or other environmental stressors. Status of macroenthic populations can also provide information on fish communities. These study results will provide information on the health and status of invertebrates and fisheries communities at the project.

5. Water Quality

The Services' goal is to insure that water quality of the reservoir, and tailwater meet all standards set by the State for the designated surface water classification. The Service is also interested in ensuring that project operations do not cause the concentration of toxic and other deleterious substances in fish to rise above State standards, Food and Drug Administration action levels, or U.S. Environmental Protection Agency screening values for the protection of human health. We seek to ensure that project operations such as cleaning of trashracks, does not create water quality problems. We are interested in optimizing water quality for selected target species, and want to assist in the design of appropriate mitigation for project impacts.

Water quality information concentrating on dissolved oxygen and temperature in the reservoir, tailrace, and downstream area is necessary. Available existing water quality data should be reviewed to determine the need for additional sampling. If additional sampling is necessary, seasonal samples should be taken diurnally (early morning and late afternoons) and should adequately cover the water column.

Justification. Adequate water quality conditions are necessary for the continual existence of aquatic biota. Historically, water quality concerns have been in the lower Saluda River, tributaries, and in the area of the thermocline near the dam. The lower Saluda River has had a history of low dissolved oxygen levels from project discharges, tributaries to the project have been major contributors of pollutants, and low dissolved oxygen conditions near the dam have resulted in fish kills. Water quality reports including the enhancement measure that address these issues should be updated for the project.

6. Entrainment and Out-migration Study

An evaluation of existing and potential resident and diadromous fish out-migration and entrainment/mortality at the dam is needed to assess project-related factors influencing fish populations. Out-migration (spillway and turbine passage) may be significant in terms of recruitment for river basin populations. An understanding of existing and potential out-migration and turbine passage is needed in connection with diadromous fish passage feasibility analyses at the project. The status of entrainment relative to striped bass, blueback herring, the catadromous American eel, and potential anadromous species needs to be evaluated.

The out-migration study should include the frequency and characteristics of spillway water releases with respect to potential out-migration by target resident and diadromous fish species at the project dams. Limnological studies should be included that document monthly changes in dissolved oxygen, temperature, conductivity, turbidity, thermocline development and overturn under normal hydropower operations. This study element should include multiple years of data to help provide an understanding of limnology and

habitat conditions likely to be encountered by out-migrating adult, juvenile, and egg/larval fish life stages at the project dams.

A literature-based study summarizing entrainment mortality studies on similar projects should be conducted. It is conceivable that a sufficient database exists on similar sites with similar turbines from which to draw reasonable conclusions relative to entrainment and mortality in lieu of conducting a site-specific study. The Service is amenable to exploring the possibility of this approach however there is a distinct possibility that site-specific studies utilizing recovery netting and appropriately designed mortality studies may be necessary. The top and bottom elevation of the trashracks, the width of the trashracks, or the clear spacing for all of the trashracks should be described. Also, provide the mean velocities in front of the intakes across the full range of operating conditions. These are the minimum data needed to determine if fish impingement and entrainment may be considered a problem at the project.

Justification. The cumulative loss of fish from entrainment and mortality at the project is a concern. An estimate of these losses at this project is necessary to determine the type and extent of mitigation (avoidance, minimization, compensation) necessary to off-set loss of public trust resources. Additionally, an analysis of the potential entrainment of diadromous species (adults and juvenile out-migrants) is necessary for the Service's evaluation of potential fish passage at the project.

7. Land Use and Shoreline Management Plan

The Land Use and Shoreline Management Plan (LUSMP) should be updated and revised in concert with the state and federal natural resource agencies as required in the Federal Energy Regulatory Commission Orders of June 23, 2004, and October 28, 2004. We request a thorough analysis of land use at the project, particularly including determination of the amount of land developed in the lower, middle, and upper areas of the reservoir.

Justification. The Service is interested in collaboratively working to resolve issues surrounding the Land Use and Shoreline Management Plan as expressed in our numerous correspondences to SCEG in the last decade. It is imperative that issues including shoreline buffers, fringeland sales, environmentally sensitive areas, erosion areas, woody debris, and rebalancing of land use designations be resolved in the new license.

8. Rare, Threatened, and Endangered Species

Provide a comprehensive list and location map of all rare species, and federally threatened and endangered species within the project area. Develop management plans for all federally protected species that occur within the project to be included with the license application.

Rare species that may occur in the project area include the robust redhorse sucker, Carolina redhorse, and the highfin carpsucker. Additionally, the Service recently was petitioned to consider listing the American eel under the Endangered Species Act (ESA). A 90 Day Finding period has determined that substantial evidence exists to warrant further consideration. You should be aware that the American eel could potentially be listed under the ESA in the near future.

Enclosed is a list of species from Richland, Lexington, Newberry, and Saluda Counties in South Carolina, that are on the *Federal List of Endangered and Threatened Wildlife and Plants* or constitutes species of Federal concern that may occur in the project impact area. We recommend surveying the project area for these species prior to any further planning. The Services recognize that species of Federal concern are not legally protected under the Act and are not subject to any of its provisions, including Section 7, unless they are formally proposed or listed as endangered or threatened. We are including these species in our response to give you advance notification. The presence or absence of these species in the project boundary and the area of effect of the project operation should be addressed in any environmental document prepared for this project.

County	Common Name	Scientific Name	Status	Occurrence
Lexington	Bald eagle	<i>Haliaeetus leucocephalus</i>	T	Known
	Carolina heelsplitter	<i>Lasmigona decorata</i>	E	Possible
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E	Known
	Shortnose sturgeon	<i>Acipenser brevirostrum*</i>	E	Possible
	Smooth coneflower	<i>Echinacea laevigata</i>	E	Possible
	Schweinitz's sunflower	<i>Helianthus schweinitzii</i>	E	Known
	Southern Dusky Salamander	<i>Desmognathus auriculatus</i>	SC	Possible
	Dwarf aster	<i>Aster mirabilis</i>	SC	Possible
	Shoal's spider-lily	<i>Hymenocallis coronaria</i>	SC	Known
	Prairie birdsfoot-trefoil	<i>Lotus purshianus</i> var. <i>helleri</i>	SC	Possible
	Piedmont cowbane	<i>Oxypolis ternata</i>	SC	Known
	Wire-leaved dropseed	<i>Sporobolus teretifolius</i>	SC	Known
	Pickering's morning-glory	<i>Stylisma pickeringii</i> var. <i>pickeringii</i>	SC	Known
	Rayner's blueberry	<i>Vaccinium crassifolium</i> ssp. <i>sempervirens</i>	SC	Known
	Bachman's sparrow	<i>Aimophia aestivalis</i>	SC	Known
Henslow's sparrow	<i>Ammodramus henslowii</i>	SC	Known	

American kestrel	<i>Falco sparverius</i>	SC	Possible
Loggerhead shrike	<i>Lanius ludovicianus</i>	SC	Possible
Painted bunting	<i>Passerina ciris ciris</i>	SC	Possible
Southern hognose snake	<i>Heterodon simus</i>	SC	Possible
Robust Redhorse Sucker	<i>Moxostoma robustum</i>	SC	Possible

Newberry

Bald eagle	<i>Haliaeetus leucocephalus</i>	T	Known
Carolina heelsplitter	<i>Lasmigona decorata</i>	E	Possible
Butternut	<i>Juglans cinerea</i>	SC	Possible
Prairie birdsfoot-trefoil	<i>Lotus purshianus</i> var. <i>helleri</i>	SC	Possible
Biltmore green briar	<i>Smilax biltmoreana</i>	SC	Known
Sweet pinesap	<i>Monotropsis odorata</i>	SC	Known
Bachman's sparrow	<i>Aimophia aestivalis</i>	SC	Known
Henslow's sparrow	<i>Ammodramus henslowii</i>	SC	Known
American kestrel	<i>Falco sparverius</i>	SC	Possible
Loggerhead shrike	<i>Lanius ludovicianus</i>	SC	Possible
Saluda crayfish	<i>Distocambarus youngineri</i>	SC	Known

Richland

Bald eagle	<i>Haliaeetus leucocephalus</i>	T	Known
Red-cockaded woodpecker	<i>Picoides borealis</i>	E	Known
Shortnose sturgeon	<i>Acipenser brevirostrum</i> *	E	Known
Smooth coneflower	<i>Echinacea laevigata</i>	E	Known
Rough-leaved loosestrife	<i>Lysimachia asperulaefolia</i>	E	Known
Canby's dropwort	<i>Oxypolis canbyi</i>	E	Known
Carolina heelsplitter	<i>Lasmigona decorata</i>	E	Possible
Georgia aster	<i>Aster georgianus</i>	C	Known
Southern Dusky Salamander	<i>Desmognathus auriculatus</i>	SC	Possible
Sandhills milk-vetch	<i>Astragalus michauxii</i>	SC	Known
Purple balduina	<i>Balduina atropurpurea</i>	SC	Known
Shoals spider-lily	<i>Hymenocallis coronaria</i>	SC	Known
Creeping St. John's wort	<i>Hypericum adpressum</i>	SC	Known
Bog spicebush	<i>Lindera subcoriacea</i>	SC	Known
Prairie birdsfoot-trefoil	<i>Lotus purshianus</i> var. <i>helleri</i>	SC	Possible
Carolina bogmint	<i>Macbridea caroliniana</i>	SC	Known
Algae-like pondweed	<i>Potamogeton confervoides</i>	SC	known
False coco	<i>Pteroglossaspis ecristata</i>	SC	Known
Awnead meadowbeauty	<i>Rhexia aristosa</i>	SC	Known

Reclined meadow-rue	<i>Thalictrum subrotundum</i>	SC	Known
White false-asphodel	<i>Tofieldia glabra</i>	SC	Known
Rayner's blueberry	<i>Vaccinium crassifolium</i> ssp. <i>empervirens</i>	SC	Known
Bachman's sparrow	<i>Aimophia aestivalis</i>	SC	Known
Henslow's sparrow	<i>Ammodramus henslowii</i>	SC	Known
American kestrel	<i>Falco sparverius</i>	SC	Known
Loggerhead shrike	<i>Lanius ludovicianus</i>	SC	Known
Painted bunting	<i>Passerina ciris ciris</i>	SC	Possible
Carolina darter	<i>Etheostoma collis</i>	SC	Known
Rafinesque's big-eared bat	<i>Corynorhinus rafinesquii</i>	SC	Known
Southern hognose snake	<i>Heterodon simus</i>	SC	Known

Saluda

Bald eagle	<i>Haliaeetus leucocephalus</i>	T	Known
Red-cockaded woodpecker	<i>Picoides borealis</i>	E	Known
Carolina heelsplitter	<i>Lasmigona decorata</i>	E	Possible
Piedmont bishop-weed	<i>Ptilimnium nodosum</i>	E	Known
Little amphianthus	<i>Amphianthus pusillus</i>	T	Known
Dwarf burhead	<i>Echinodorus parvulus</i>	SC	Known
Creeping St. John's wort	<i>Hypericum adpressum</i>	SC	Known
Prairie birdsfoot-trefoil	<i>Lotus purshianus</i> var. <i>helleri</i>	SC	Possible
Bachman's sparrow	<i>Aimophia aestivalis</i>	SC	Known
Henslow's sparrow	<i>Ammodramus henslowii</i>	SC	Known
American kestrel	<i>Falco sparverius</i>	SC	Possible
Loggerhead shrike	<i>Lanius ludovicianus</i>	SC	Possible
Savannah lilliput	<i>Toxolasma pullus</i>	SC	Known
Southern hognose snake	<i>Heterodon simus</i>	SC	Known

We recommend that surveys be conducted by comparing the habitat requirements for these species with available habitat types within the action area of the project. "Action area" is defined at 50 CFR § 402.02 as "...all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action." Field surveys for the species should be performed if habitat requirements overlap with that available at the project site. Surveys for protected plant species must be conducted by a qualified biologist during the flowering or fruiting period(s) of the species. We welcome the opportunity to assist with the design of studies, sampling schemes, methodology, and target areas for the above species, as well as analysis of the "effects of the action," (as

defined by 50 CFR § 402.02) on any listed species including consideration of direct, indirect, and cumulative effects.

We also recommend contacting the S.C. Department of Natural Resources (SCDNR), Data Manager, Wildlife Diversity Section, Columbia, S.C. 29202 concerning known populations of federal and/or state endangered or threatened species, and other sensitive species in the project area. Additional habitat information may also be available from SCDNR. NOAA Fisheries endangered species office in St. Petersburg, Florida should be contacted relative to shortnose sturgeon which may occur in the action area.

9. Migratory Bird Surveys

Evaluate the effects of the project on migratory bird use at Lake Murray and the Saluda River and riparian ecosystems. Surveys of migratory birds and their habitats should begin in the Fall of 2005 to provide baseline information on populations.

Continue aerial surveys for potential roosting, nesting, and foraging sites for the federally endangered woodstork.

Justification. Migratory birds, particularly neo-tropical migrants, utilize the Saluda River ecosystem for wintering habitat. These species have potentially been adversely affected by the project by the decrease in available wetlands and floodplain habitat, loss of foraging habitat, and alteration of riparian habitat. Information on population estimates and habitat utilization are needed to determine potential enhancement measures.

10. Fish Community Surveys

Conduct fish community surveys including small non-game species in the Saluda River above and below the reservoir as well as in Lake Murray, to supplement existing fish community data and/or replace dated information. Specific sampling focused on determining presence or absence of the rare robust redhorse sucker, Carolina sucker, and the highfin carpsucker should be conducted in the lower Saluda River.

Justification. Information is needed on the status of fish communities in the reservoir as well as the Saluda River above and below the reservoir for game and non-game fish species. River impoundments and reservoirs fragment fisheries communities and impede migration patterns. The inundation of project tributaries in conjunction with such a large reservoir also fragments populations within the reservoir and tributaries. Data gathered as part of relicensing should be compared to historically gathered data for comparison. These study results will provide information on the status of reservoir and riverine communities.

11. Temperature Analysis – Downstream Affects

Provide an analysis of the effects of the temperature of discharges from the Saluda Dam on downstream habitats including: (1) An analysis that determines the travel distance downstream to effectuate completion of temperature mixing in the Congaree River; (2) an evaluation of the affects to species and habitats within the downstream Congaree National Park; (3) an evaluation of the affects to upstream migrating diadromous fish.

Justification. The Saluda Dam typically discharges hypolimnetic water which is cooler than water in adjacent watersheds. We are interested in determining how far the cooler water travels before completely mixing with the ambient water temperatures from the Broad and Congaree Rivers, and how these cooler temperatures may affect downstream habitats, particularly in the Congaree National Park. We are also interested as to how these cooler discharges affect diadromous species during their upstream migration from the Santee-Cooper Hydroelectric Project.

12. Striped Bass Evaluations

Provide and evaluation project operations on the reservoir striped bass population, particularly regarding: (1) the effectiveness of current turbine operations, (2) potential additional enhancements in association with the summer thermocline near the powerhouse; and (3) determine if striped bass migrate upstream of the project within the Saluda River during the spring spawning season, and if and where spawning activities occur.

Justification. The reservoir striped bass fishery is an important recreational fishery at Lake Murray. The status of the fishery needs to be described and any potential enhancements identified.

13. Diadromous Fish Surveys

Continue diadromous fish surveys in the lower Saluda River during the spring 2006 spawning migrations as outlined in the *2005 Diadromous Fish Studies* study plan. This plan was developed in the fall of 2004 in concert with state and federal natural resource agencies as an “early start” study for project relicensing.

Justification. There are 10 miles of riverine reach below Saluda Dam to its confluence with the Broad and Congaree Rivers. Currently, diadromous fish are passed upstream of the Santee Cooper Hydroelectric Project and migrate up the Congaree, Broad, and Wateree Rivers. The 10 miles below the Saluda project contains potential high quality spawning habitat for American shad, hickory shad, blueback herring, shortnose sturgeon and Atlantic sturgeon. The shortnose sturgeon is a federally listed endangered species and all federal agencies (including the FERC) are responsible for undertaking actions toward its recovery under Section 7(a)(1) of the Endangered Species Act (16 U.S.C. 1531-1543). These surveys will determine if diadromous fish are utilizing the lower Saluda River. This information will aid the Service in developing potential enhancement measures for the lower Saluda and/or determining if fish passage is warranted at the project. We believe it is necessary to conduct sampling for two seasons at a minimum to accurately identify the status of diadromous fish utilization in the lower Saluda River.

V. Information Requests for Relicensing

1. Existing Studies and Data

Please provide copies of the existing environmental studies conducted at the Saluda Hydroelectric Project by SCE&G contractors and the South Carolina Department of Natural Resources that are referenced in the literature cited section of the Initial Consultation Document. These may be provided as hard copies or via CD (preferable).

2. Project Operations

Provide a detailed description of current and past project operations pursuant to existing license conditions. This analysis should include the frequency, magnitude, and duration of turbine discharges, spills, and reservoir drawdowns.

3. Dissolved Oxygen Concentrations in Lower Saluda River

Provide an updated report on the status of dissolved oxygen concentrations in the lower Saluda River and the efficacy of existing enhancement measures.

We appreciate the opportunity to comment on the Initial Consultation Document for the relicensing of the Saluda Hydroelectric Project. We look forward to further coordination throughout the relicensing process. If you have any questions or need further information please contact Ms. Amanda Hill of my staff at (843) 727-4707 ext. 303.

Sincerely,

Timothy N. Hall
Field Supervisor

TNH/AKH

FROM THE DESK OF DANNY HOOD

DATE: 10/24/2006
TO: MR. BILL ARGENTIERI, P.E., PROJECT MANAGER, SOUTH CAROLINA ELECTRIC & GAS COMPANY
FROM: THE BALLENTINE COVE HOMEOWNERS' ASSOCIATION
RE: LAKE MURRAY ELEVATIONS

Dear Mr. Argentieri,

At the 2006 annual meeting of the Ballentine Cove Homeowners' Association, the elevations of Lake Murray received quite a bit of discussion, as I'm sure that it has in many homeowners' group meetings! This led into a discussion of the ongoing relicensing process.

As you may be aware, Ballentine Cove is one of those wonderful communities that makes Lake Murray accessible to ALL of its residents, not just those fortunate enough to live ON the water. We have a very good and usable boat storage yard...which includes a very nice ramp into the lake.

However, when the lake levels drop down at or below 353', the cove leading to the boat ramp is unusable by many of our residents. All in attendance at the meeting strongly agreed that if the lake were regularly maintained at a level at or above the 354' level, then all of our residents would be able to enjoy the use of Lake Murray. Not only would this greatly enhance our enjoyment of living here, but obviously would also greatly enhance our property values.

As SCE&G goes through this relicensing process, we, as an Association of Lake Murray homeowners, strongly and respectfully request that the new agreement include language that would keep lake levels at or above the 354' level.

Thank you so much for your consideration!

DLH

August 16, 2005

Mr. James M. Landreth, Vice President
Fossil and Hydro Operations
South Carolina Electric & Gas Company
111 Research Drive
Columbia, South Carolina 29203

Attn: Mr. William R. Argentieri
"Comments on the Saluda Hydro ICD"

E-mailed to: bargentieri@scana.com

Dear Sir:

My comments concern the safety of those individuals who use the Lower Saluda River, and the convenience of use for both users of the resource and the organizations which facilitate this use.

The Saluda Hydro Plant, as currently operated, does not provide any immediate information to river users as to releases into the Lower Saluda River. Therefore, the only information available to persons using, or anticipating using, the river is actual observation of water level conditions. There is no real-time communication between operators of the Hydro Plant and river users.

I am the owner of a paddlesports business, River Runner Outdoor Center. Over the past twenty-three years, we have sold products and provided services for users of the Lower Saluda River. In addition, for the past six years, my company has provided canoes, kayaks, and related equipment for Saluda Shoals Park. We conduct trips and provide instructional clinics on the Lower Saluda. I am an original and current member of the Lower Saluda Scenic River Advisory Council.

Members of the public are frequently amazed to learn that SCE&G's Saluda Hydro Plant does not schedule releases into the river. And they are even more amazed to discover that there is no communication between the Plant operators and Saluda Shoals Park, located only 1.5 miles below the Hydro facility. The lack of any release schedule and lack of communication regarding releases has the following adverse effects on members of the public who use the Lower Saluda River.

1. The public cannot make informed judgements about the safety of their use of the river. Different water levels cause vastly different conditions on all stretches of the Lower Saluda.
2. The public cannot plan for an appropriate use of the river in the absence of any meaningful information about future releases into the river.
3. Officials of Saluda Shoals Park cannot provide park visitors with adequate information regarding use of the river for canoeing, kayaking, or other river uses such as fishing or swimming, without real-time information about releases from Saluda Hydro.
4. Officials of Saluda Shoals Park cannot plan events for the use and enjoyment of the public without knowledge of future likely releases into the Lower Saluda River.

803 • 771 • 0353
803 • 771 • 0359 Fax

905 Gervais Street • Columbia • South Carolina • 29201 • 3127



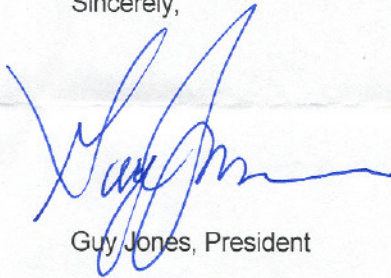
● Page 2

August 16, 2005

I would like to request that you examine in your Initial Consultation Document appropriate methods to provide the following items in the proposed new operating license for Saluda Hydro:

1. A release schedule for the operation of Saluda Hydro, with criteria for deviations from planned releases, so that members of the public may make reasonably informed decisions about their use of the Lower Saluda River.
2. Communication methods which will allow members of the public and officials of organizations to obtain real-time information about releases into the Lower Saluda River.

Sincerely,



Guy Jones, President

River Runner Outdoor Center

Federal Energy Regulatory Commission
888 1st St., N. E.
Washington, D. C., 20426
Attn: Magallie Sallas

 ORIGINAL

2007 AUG 30 P 2:51
FEDERAL ENERGY REGULATORY COMMISSION

Dear Magallie Sallas:

I have written to you before regarding the re-licensing to the Saluda River Hydro Electric Project, which is controlled by SCE@G's management. I certainly hope they will not receive this license, because they are a most obstinate, and uncaring company. They had promised they would not drop the Lake Murray levels more than 4 feet, but as of this morning, it is more than 6 feet down. They will say they had an EMERGENCY situation due to the drought conditions, but yet during the spring, with frequent rains, they did not bring the lake up as much as they could. My neighbor stated he called about the lake levels in July, and was told they had released water for a WHITE WATER RAPID EVENT, I suppose, in the Saluda River. This doesn't seem very fair to residents on the lake, who would at least like to enjoy the lake during the summer. The residents in our cove, now, don't have enough water to get their boats out.

I sincerely hope all of this will be considered before SCE@G is re-licensed. (Docket # P-516)

Sincerely,



Mrs. Denny Knighton
210 Collette Street
Moore, S. C., 29369
August 21, 2007
Tele: 864-574-3920

LAKE LEVELS

*Aug. 21
2007*

	Lake Level	Full Level
Hartwell	653.67	680.0
Russell	474.14	475.0
Thurmond	324.11	330.0
Etowah	707.90	710.0
Greenwood	98.50	100.0
Murray	353.57	360.0
Keowee	97.50	100.0
Marion	72.62	76.8
Moultrie	72.53	75.5
Waterhouse	98.75	100.0
Bowen	813.87	815.0

* Surface of water as measured from the level as of 7 a.m. yesterday

Mr. James M. Landreth, V.P.
Fossil & Hydro Operations
SCE&G
111 Research Dr.
Columbia, S.C. 29203
Attn: Mr. William R. Argentieri

Re: COMMENTS ON THE SALUDA HYDRO ICD

Dear Sir,

I am a long time resident of Saluda County, S.C. I own property on Lake Murray and am a developer and owner of a real estate company on Lake Murray.

It is in my opinion that SCE&G has taken a stand that is very unbalanced toward the future development of properties in Saluda and Newberry Counties. The "Lake Watch" environmental groups have tipped the scale for all the things they want. They already have their own non-vegetative areas, individual docks, ramps, etc. One of their main advocates, Mr. Steve Bell, lives in Newberry Shores. Mr. Bell's shoreline and waterfront is completely vacant of any type of vegetation to the waters edge, and he makes sure it stays in that condition. This is a double standard.

I am for balanced natural and wooded vegetation. The limited brushing 75' buffer zone has been an effective rule, however, SCE&G needs to allow these rural counties the opportunity to have sensible and balanced development. Today we live in a "world economy". Saluda County recently lost it's only two industrial textile plants. Over 400 people lost their jobs. Saluda County needs Lake Murray development to help cover their tax needs and it will also create jobs and support hundreds of business owners in the county.

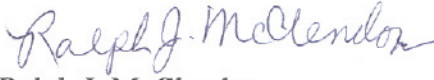
The people who are primarily purchasing land on Lake Murray in these counties are retirees from up north who have lost interest in the coastal areas due to high costs and hurricanes and want our warm climate.

SCE&G's stand not to allow progress also affects many land owner's who presently own land surrounding the lake. Many of these people have counted on selling their lands for retirement funding. This land now can only be considered woodlands without the ability to purchase the fringe land so that dockage can be obtained.

It may be a good idea, instead of SCE&G's previous attempt to donate their lands in these counties to the State of S.C., to consider donating these lands to Saluda and Newberry Counties. This way these counties and the people who live there could decide the best usage.

Ralph J. McClendon
108 Front Street
Gilbert, S.C. 29054

Respectfully,


Ralph J. McClendon

Carl Shealy
226 Rocky Retreat Ct
Leesville, SC 29070
September 18, 2007

Dear Mr. Boozer,

I'm very concerned about the boater traffic problem that occurs every weekend of the summer months out here in Hurricane Hole (so named by the boaters) where my family and my mother have year- round homes. The cove is partially surrounded by 22 acres owned by my brothers, my mother, and myself. Many of these boaters that tie up have told us that they also own property on the lake, but that they prefer to come and party with their friends.

We understand that Two Bird Cove, partially owned by the Harmon family and Phil Hamby, has a similar problem and they have attended a meeting with the TWC and SCE&G and FERC. We also read in the newspaper that the boaters have asked for these two coves to be specified as boater recreation areas. It is odd that no-one contacted the homeowners surrounding these coves to inform them of the possible plans.

As few as seven years ago, we occasionally saw a few sailboats tie up and anchor in our back cove but we did not have a problem with them as they made good and courteous neighbors. From those years the boat traffic continues to grow and it is no longer on rare occasions (holiday weekends) that we compete for use of our cove. It has grown continually, so that now it is every weekend (Saturday and Sunday) with loud and discourteous "neighbors" who care only about themselves and how much fun they can have. They average 75 boats per day. We rarely see sailboats come in and anchor any longer, and I understand that they were the ones who first asked for designated recreation areas. We are concerned about this because we don't plan to move, as this land we inherited from my grandfather.

When this number of boats are parked in the cove, there has to be an environmental impact caused by the affluence of the boats, as well as the discharge from the people. There is also unacceptable levels of noise pollution especially from the extremely loud motors of the cigar boats entering and leaving, so that we cannot carry on a normal conversation on our screen porch or deck at the time of entrance and exit. Many weekends we feel like prisoners inside our home, so that we don't have to be a part of the unpleasant surroundings. When we are entertaining friends and family, we cannot use our cove for recreation because it is too crowded, and we are forced to go elsewhere to ski, etc. I feel that if this continues to elevate even greater, that there will be drownings, injuries and other safety hazards for us and the boaters because of too much alcoholic drink consumed by the boaters and simply too many power- boats.

A true recreation area would have to have regulations to ensure safety to the users and protection to the environment - including no-wake zones, no- speed zones, and a no-alcohol zone.

In addition, we have read that you monitor the eagles nests on the lake. You may not be aware that there was an eagle's nest in the trees off of the causeway that is part of Hurricane Hole. We are not sure if it remains inhabited by eagles since the traffic has grown because we

have seen only one eagle this year in this area. We are fearful that they may not return to nest during upcoming nesting seasons of October to March. These eagles are a protected species, and I see that DNR and the Forestry Commission have qualified certain areas for scoring, management to determine the impact of development on the natural resources of the lake. I believe that someone has failed to take this into account when they allowed such a great number of boats to use one specific area as a party cove.

the swim area of this existing state park, along with it's public boat ramps and bathrooms, and has no private homes surrounding it, this would solve everyone's need, diminishing the congestion of Hurricane Hole greatly, returning it to it's natural and pleasant state.

I'm very concerned that when the decision was made for a boaters recreation area, no-one considered the back property owners. As you can see from the way we have structured our homes, and maintained the 75' setback and buffer zones, we care deeply about the shoreline and the protection of that shoreline.

I have tried to keep a positive outlook about the boaters rights to use the lake, and I believe many of the family boaters just want a nice place to park for a few hours and swim, but unfortunately many of the boaters (the party groups) are very confrontational. We have spoken to some of the boaters directly when they get too close to our dock, and for the most part they agree to move a little further away. One of our friends at our home on one occasion wanted to know which marina we lived near. We explained it was not a named marina, just a tail-gating parking lot. I think that does speak to the impact on the environment. Similar restrictions as those for the development of a marina might need to be applied. Since these boaters are not our invited guests, we can not be responsible for the safety of those in our cove, and you must be held responsible. Any action you take now would go along way to prevent injury in the future to both the boaters, and damage to the environment. There is just a limit to how much the environment can take with noise and trash pollution. There are certainly limits to the enforcement of basic rules and regulations needed to make this a safe environment for all. I would be glad to discuss this with you or your team. I will be glad to share the photos and video of the traffic and the impact of the numerous boats. If something is not done to protect these boaters form themselves some one is going to get hurt.

Sincerely,

Carl Shealy

Allen



Pictures
Hurricane Cove

