

## MEETING NOTES

### **SOUTH CAROLINA ELECTRIC & GAS COMPANY Lake and Land Management and Recreation RCG Meeting**

**October 16, 2013**

Final KDM 11-13-13

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#### **ATTENDEES:**

Tommy Boozer (SCE&G)	Bill Marshall (SCDNR)
Dick Christie (SCDNR)	Beth Trump (SCE&G)
Bill Stangler (Congaree Riverkeeper)	Bill Argentieri (SCE&G)
Randy Mahan (SCE&G)	Scott Collins (SCE&G)
Alison Jakupca (Kleinschmidt)	Steve Summer (SCANA)
Kelly Miller (Kleinschmidt)	Vivianne Vejdani (SCDNR)
E. J. Jones (SCPRT)	Henry Mealing (Kleinschmidt)
Joseph Wojcicki (By-PAS)	David Haddon (SCE&G)

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*These notes serve to be a summary of the major points presented during the meeting and are not intended to be a transcript or analysis of the meeting.*

Alison opened the meeting by reviewing the agenda and the mission statement of the Lake and Land Management and Recreation RCG. She then directed the group in a discussion on the Recreation Use and Needs Study (RUNS) plan. David mentioned that the surveys included in the study plan seem to be extensive. He doesn't believe that many people will be willing to spend that much time answering questions. Alison said that we can go through the interview questions and remove any questions that the group decides are extraneous. Alison also mentioned that an incentive will be used to keep people interested, such as a floating key chain.

As the group reviewed the study plan, Tommy mentioned that the Scenic Overlook is only partially owned by SCE&G. He said he will call the county to see if they have any information on their portion of the overlook that can be included in the final recreation report. Dick also mentioned SCDNR will contribute data on the waterfowl areas that are located within the Project Boundary. Sam Stokes (Broad River waterfowl area) and Brett Moule (Enoree River waterfowl area) are the contacts for this information.

Alison discussed the study season for the RUNS. The study is scheduled so that it will cover the early crappie season, the Canada goose season, and the turkey season at Lake Monticello and the migratory waterfowl seasons at Parr Reservoir. However the exact study dates will not be set until 2015, since hunting and fishing season dates can change slightly each year. Henry asked if we want to study the Canada goose season on Parr Reservoir as well. Dick said he will investigate and let the group know what he finds out. After lunch Dick confirmed that the Canada geese season should also be studied on Parr Reservoir so that both the Parr and Monticello studies are consistent.

Henry mentioned that the data Tommy will collect for the Form 80 Reports will also be included in the recreation report. The recreation site inventory for the report will be completed in 2015. The group agreed to the list of sites that were designated for on-site interviews and traffic counters as a means of data collection.

Bill M. asked if we want to quantify the number of users on the Broad River below the Parr Shoals Dam. If so, he mentioned that the Palmetto Trail would be a good place to do this. The option of using a traffic counter was suggested however the counters may collect false numbers because of residences in the area. Bill M. said he will find out if there are any use estimates available for the Palmetto Trail. Bill S. suggested using a traffic counter at the site on the west side of the river instead.

The group discussed the sample days that are included in the study. Alison will develop a draft schedule that will list the sample days and will send this out to the RCG for approval. Special event days, such as fishing tournaments, will not be determined until 2015, so the table will remain a draft until exact dates for the special events are set.

The group then agreed to adjust the waterfowl focus groups to only include 10-12 representatives. The smaller groups will allow for greater productivity at the meetings.

The group then moved on to discuss the Recreational Flows Study Plan. Bill S. asked how far down the study area reaches. This will be specified more clearly in the plan. Henry mentioned that a map will be developed for this plan, and also for the RUNS plan. Bill S. asked that the public access areas be shown on these maps. Maps will be developed, sent to the RCG for approval, and included in the final study plans.

Henry asked the group if there is a list of people that need to be included in the focus group for this study. Alison asked Bill S. if he and others could help develop that list. Bill S. said that the Chestnut Hill Plantation HOA and Stuart Greeter, a former Congaree Riverkeeper, could offer some information regarding this. He also suggested asking local outfitters, the Palmetto Paddlers, and Charlene Coleman for a list of names and organizations. Dick also mentioned that there may be some local river guides that would be good to include in the focus group, and that Hal Beard and Ron Ahle may be able to help identify these people.

Bill M. asked about the timeframe for when we want these flows, and mentioned that this is not included in the study plan. Henry said that we need to have the IFIM study completed before we complete the Recreational Flows Study. Dick mentioned that we also need to complete the Navigational Flows Study first, to develop a baseline for the Recreational Flows Study. The group decided that phase one, which includes the focus group meeting, should occur in late 2014. After the IFIM study, phase two and a second meeting of the focus group will occur in the fall of 2015 or spring of 2016. A final report will be issued by June 2016.

The group then discussed the Navigational Flows Study Plan. Bill S. said that the study area described in the plan does not include additional areas that were discussed at previous meetings. The group will look at the IFIM study transects to determine what additional study sites need to be examined. The areas of the river that are known to be the most difficult to navigate downstream of Parr Shoals Dam need to be studied, to ensure that navigation is possible in these areas.

After lunch, the group discussed the Shoreline Management Plan (SMP) for Lake Monticello. Alison reviewed the comment submitted by Bill M. regarding residential land use. Tommy said that there is no land to sell at Lake Monticello and there is no intention of selling any land. The majority of the land around the lake is classified as recreation. Section 3.2 of the Monticello SMP will discuss why there are no residential classifications at Lake Monticello.

Alison then began to review the Monticello and Parr SMPs from the beginning. She mentioned that any extraneous information will be removed from the SMPs for inclusion in the PAD. Specifics can be added back in later. The group removed and edited the land classifications included in the SMPs. The group also noted that examples of acceptable shoreline stabilization and rip-rap will be included in the permitting handbook, which is separate from the SMPs and does not require FERC approval. Also examples of private and common dock layouts and information on clearances in coves will be included in the permitting handbook.

The five documents discussed during this meeting are included at the end of these notes, with all edits shown in track changes. Revised and finalized copies of the documents will be emailed to the RCG. Bill A. told the group that he would like to begin developing text for the SMPs in 2014. A straw man will be sent out for RCG review no later than 2015, along with a straw man of the permitting handbook. The group agreed to this timeline.

Action items stemming from this meeting are detailed below.

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*ACTION ITEMS:*

- Bill M. will find out if the Palmetto Trail collects use estimates for inclusion in the RUNS.
- Alison will develop a schedule that details the sample days for the RUNS and distribute to the RCG for review.
- Kleinschmidt will develop a map for inclusion in the RUNS Plan and a map for inclusion in the Recreational Flows Study Plan. These will be distributed to the RCG for review and included in the final study plans.
- SCE&G and Kleinschmidt will use the information provided by the RCG to begin reaching out to various people and organizations to help develop a list of participants for the RUNS and Recreational Flows Study focus groups.

**DRAFT**  
**RECREATION USE AND NEEDS**  
**STUDY PLAN**

**PARR HYDROELECTRIC PROJECT**  
**(FERC No. 1894)**

*Prepared for:*

**South Carolina Electric & Gas Company**  
**Cayce, South Carolina**

*Prepared by:*

**Kleinschmidt**

Lexington, South Carolina  
[www.KleinschmidtUSA.com](http://www.KleinschmidtUSA.com)

September 2013

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**RECREATION USE AND NEEDS STUDY PLAN**  
**PARR HYDROELECTRIC PROJECT**  
**(FERC No. 1894)**  
**SOUTH CAROLINA ELECTRIC & GAS COMPANY**

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**RECREATION USE AND NEEDS STUDY PLAN**

**PARR HYDROELECTRIC PROJECT  
(FERC No. 1894)**

**SOUTH CAROLINA ELECTRIC & GAS COMPANY**

**1.0 INTRODUCTION**

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South Carolina Electric & Gas Company (SCE&G) is the Licensee of the Parr Hydroelectric Project (FERC No. 1894) (Project). The Project consists of the Parr Hydro Development and the Fairfield Pumped Storage Development. Both developments are located along the Broad River in Fairfield and Newberry Counties, South Carolina.

The Parr Hydro Development forms Parr Reservoir along the Broad River. The Development consists of a 37-foot-high, 200-foot-long concrete gravity spillway dam with a powerhouse housing generating units with a combined licensed capacity of 14.9 MW. Parr Hydro operates in a modified run-of-river mode and normally operates to continuously pass Broad River flow. The 13-mile-long Parr Reservoir has a surface area of 4,400 acres at full pool and serves as the lower reservoir for pumped-storage operations.

The Fairfield Pumped Storage Development is located directly off of the Broad River and forms the 6,800-acre upper reservoir, Monticello Reservoir, with four earthen dams. As noted, Parr Reservoir serves as the lower reservoir for pumped storage operations. The Fairfield Development has a licensed capacity of 511.2 MW and is primarily used for peaking operations, reserve generation, and power usage.

**2.0 PURPOSE OF THE STUDY**

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The Project is currently involved in a relicensing process which involves cooperation and collaboration between SCE&G, as licensee, and a variety of stakeholders including state and federal resource agencies, state and local government, non-governmental organizations (NGO), and interested individuals. The collaboration and cooperation is essential to the identification of and treatment of operational, economic, and environmental issues associated with a new

**Comment [b1]:** Include map of Project area and study plan location.

operating license for the Project. SCE&G has established several Technical Working Committees (TWC's) with members from among the interested stakeholders with the objective of achieving consensus regarding the identification and proper treatment of these issues in the context of a new license.

As a part of this process, SCE&G is proposing to perform an assessment of existing and future recreational use, opportunities, and needs for the Project. The assessment is designed to provide information pertinent to the current and future availability and adequacy of SCE&G owned and managed recreation sites and specific informal recreation areas at Monticello Reservoir and the Parr Reservoir. The overall study plan objective is to identify current and potential recreational use, opportunities, and needs at the Project by addressing the following goals and objectives:

Goal 1: *Characterize the existing recreational use of SCE&G's recreation sites on Monticello Reservoir and Parr Reservoir. This will be accomplished by meeting the following objectives:*

- i. Identify recreation points, inventory the services and facilities offered at each, and assess the general condition of each site (including American with Disabilities Act [ADA] compliance).
- ii. Identify the patterns of use at each site (type, volume, and daily patterns of use).

Goal 2: *Characterize existing use of waterfowl areas (Broad River Waterfowl Area, Enoree River Waterfowl area) and SCE&G recreation lands by hunters during designated hunting seasons. This will be accomplished by meeting the following objectives:*

- i. Identify the patterns of use within the Project boundary (type, volume, and daily/seasonal patterns of use).

Goal 3: *Identify future recreational needs relating to public recreation sites on Monticello Reservoir and Parr Reservoir. This will be accomplished by meeting the following objectives:*

- i. Identify existing user needs and preferences, including perceptions of crowding at recreation sites.
- ii. Estimate future recreational use of existing recreation sites.
- iii. Identify future needs for new recreation sites and facilities.



### 3.0 STUDY AREA

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SCE&G designated recreation sites and informal recreation areas on Monticello Reservoir and Parr Reservoir that will be included in this assessment include the following:

**TABLE 1 RECREATION SITES TO BE ASSESSED**

<b>MONTICELLO RESERVOIR RECREATION SITES &amp; INFORMAL AREAS</b>		<b>PARR RESERVOIR RECREATION SITES &amp; INFORMAL AREAS</b>	
1.	Scenic Overlook (SCE&G-maintained portion)	1.	Cannon's Creek Boat Ramp
2.	Hwy 215 Boat Ramp	2.	Heller's Creek Boat Ramp
3.	Hwy 99 Boat Ramp	3.	Broad River <del>Creek</del> -Waterfowl Area (vehicle counter only)
4.	Recreation Lake Access Area	4.	Hwy 34 Boat Ramp
5.	Informal fishing area, east side of Hwy 99	5.	Enoree River Waterfowl Area (vehicle counter only)
		6.	Enoree River Bridge Informal Access Area (vehicle counter only)

### 4.0 STUDY SEASON

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Study seasons will vary by study area based upon current knowledge of use patterns. Study seasons should capture specific seasonal activities, including hunting during legal seasons and on-water recreational use during the peak season (typically defined as Memorial Day to Labor Day). As hunting season dates vary annually based upon SCDNR board decisions, only approximate date ranges for specific targeted mail-in survey activities are provided within this study plan. Exact dates for waterfowl survey activities will be determined ~~in~~ when study season dates are published, anticipated being mid-summer 2014. Study season specifics are further described below.

#### 4.1 MONTICELLO RESERVOIR

Primary interview activities will occur from April 1 through Labor Day, 2015. Additional interviews will be conducted from February 1 through March 31, 2016 in order to capture recreational activity on the Reservoir during early crappie season. Specific targeted survey activities with mail-in surveys, as described in Section 5.5, will occur during the Canada Geese

hunting season ([approximately](#) September 1 through September 30, [depending on yearly SCDNR approved seasons](#)).

#### 4.2 PARR RESERVOIR

Primary interview activities, as described in Section 5.0, will occur from April 1 through Labor Day, 2015, to encompass turkey hunting season, as well as the peak recreation season. Specific targeted survey activities with mail-in surveys, as described in Section 5.5, will occur during Migratory Waterfowl [Seasons](#) (approximately ~~mid~~ September 2015 through January 2016, depending on yearly SCDNR approved seasons).

**Comment [b2]:** Add Canada Geese wording to Parr Reservoir also.

### 5.0 DATA COLLECTION METHODS

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A variety of data collection techniques will be used to obtain the information necessary to meet the study objectives. Table 2 identifies the information needed to address each objective and the data collection methods to be used. Both primary and secondary data will be utilized. Primary data will entail site inventories, user counts, and use surveys (exit interviews). Secondary data will include U.S. Bureau of Census data, the South Carolina Statewide Comprehensive Outdoor Recreation Plan (SCORP), SC Recreation Participation & Preference Study, and other relevant, readily available literature. Additional input will be solicited from the Lake & Land Management and Recreation Resource Conservation Group (RCG), Recreation TWC, and target "focus groups" of especially knowledgeable individuals, offering knowledge of the recreation resources and needs of the lake and river.

**TABLE 2 RECREATION USE AND NEEDS STUDY PLAN OBJECTIVES AND EFFORTS**

OBJECTIVES	INFORMATION NEEDED	SOURCE
<i>Goal 1: Characterize existing recreational use of recreation sites on Monticello Reservoir and the Parr Reservoir</i>		
Identify formal recreation sites, inventory the services and facilities offered at each, and assess the general condition and ADA compliance of each site	<ul style="list-style-type: none"> <li>• Physical inventory of all boat ramps, grills, shelters, restrooms, parking capacity, etc., at each site</li> <li>• General assessment of site condition to include maintenance, basic rehabilitation needs, etc.</li> <li>• Visitors' assessment of site conditions</li> <li>• Identification of activities that occur at each site</li> <li>• ADA compliance assessment</li> </ul>	<ul style="list-style-type: none"> <li>• Recreation Site Inventory</li> <li>• Survey of Recreation Site Users</li> </ul>
Identify the patterns of use at each site (type, volume, and daily patterns of use)	<ul style="list-style-type: none"> <li>• Utilize vehicle counts as an estimation of people</li> <li>• Estimate of # people/vehicle</li> <li>• Estimate of # vehicles/site</li> <li>• Parking capacity</li> </ul>	<ul style="list-style-type: none"> <li>• Traffic Counter Data</li> <li>• Surveyor Counts of Vehicles at Recreation Sites</li> <li>• Survey of Recreation Site Users - # of people per vehicle and length of visit</li> <li>• Recreation Site Inventory - # of parking spaces</li> <li>• <a href="#">County data from Scenic Overlook</a></li> </ul>

OBJECTIVES	INFORMATION NEEDED	SOURCE
<i>Goal 2: Characterize existing use of waterfowl areas (Broad River Waterfowl Area, Enoree River Waterfowl area) and SCE&amp;G recreation lands by hunters during designated hunting seasons.</i>		
Identify the patterns of use within the Project boundary (type, volume, and daily/seasonal patterns of use).	<ul style="list-style-type: none"> <li>• Estimation of # hunters/site or waterfowl area</li> </ul>	<ul style="list-style-type: none"> <li>• Counts of Vehicles at Recreation Sites/waterfowl areas</li> <li>• Mail-in questionnaire specific to hunting use at the Project</li> <li>• SCDNR waterfowl use data</li> <li>• SCDNR hunting permit data</li> </ul>

OBJECTIVES	INFORMATION NEEDED	SOURCE
<i>Goal 3: Identify future recreational needs relating to public recreation sites on Monticello Reservoir and Parr Reservoir</i>		
Identify existing user needs and preferences, including perceptions of crowding at recreation sites	<ul style="list-style-type: none"> <li>• User preferences and opinions of needs and crowding at sites</li> <li>• Condition assessment</li> </ul>	<ul style="list-style-type: none"> <li>• Survey of Recreation Site Users</li> <li>• Recreation Site Inventory</li> </ul>
Estimate future recreational use of existing recreation sites	<ul style="list-style-type: none"> <li>• Current inventory and use data from Goals 1 and 2</li> <li>• Population projections for the project area</li> <li>• Recreational use trends</li> </ul>	<ul style="list-style-type: none"> <li>• Results of Goals 1 and 2</li> <li>• U.S. Bureau of Census Data</li> <li>• SC Division of Research &amp; Statistics (Budget and Control Board)</li> <li>• SCORP, SC Recreation Participation &amp; Preference Study, or other readily available literature</li> </ul>
Identify future needs for new recreation sites and facilities	<ul style="list-style-type: none"> <li>• Population projections</li> <li>• Recreation use trends</li> <li>• "focus group" (stakeholders) knowledge of recreation resources and needs</li> </ul>	<ul style="list-style-type: none"> <li>• SC Div. of Research &amp; Statistics</li> <li>• SCORP, SC Recreation Participation &amp; Preference Study, or other literature</li> <li>• Recreation TWC and Lake and Land Management &amp; Recreation RCG</li> </ul>

The capacity, availability, and overall condition of existing recreation sites will be assessed through review of existing information and an on-site inventory (Section 5.1). Recreational use of SCE&G's public recreation sites (Table 2) during the appropriate recreation season (as described in 4.0) will be estimated using a combination of data including traffic count, survey data, spot counts, and additional collection methods as described in Section 5.2, 5.3, 5.4, and 5.5. Methods for estimating recreational use are described in Section 6.0.

## 5.1 RECREATION SITE INVENTORY

Data on the types of amenities, activities supported, and the parking capacity of recreation sites at the Project, and the land area each site encompasses will be obtained from two sources. First, existing information regarding recreation sites such as FERC Form 80's and existing GIS data layers will be referenced. Second, a site visit will be made to collect data on the type, number, and size of facilities (restrooms, parking areas, boat ramps, picnic shelters and tables, etc.) located at each site. The general condition of recreation facilities and a qualitative assessment of each site's compliance with the ADA will also be recorded. A copy of the inventory form is provided in Appendix A.

**Comment [b3]:** Change all references of ADA to "Barrier Free"

Upon completion of the inventory, all data will be uploaded into a database; anticipated to be a GIS database. The database will be structured so that it can be used in a variety of formats (brochure, maps, web pages, etc.) and can be updated as recreation sites are modified, added, or changed in any way.

## 5.2 TRAFFIC COUNTS

Traffic counters will be installed to record the number of vehicles that enter and exit the public recreation areas. Traffic count data will be collected for an entire year in order to capture the various hunting seasons. On Monticello Reservoir, traffic counters will be installed at the lake access point of the Scenic Overlook, the Hwy 215 Boat Ramp, the Hwy 99 Boat Ramp, Recreation Lake Access Area, and the Hwy 99 informal fishing area. At Parr Reservoir, traffic counters will be installed at Cannon's Creek Boat Ramp, Heller's Creek Boat Ramp, Broad River Waterfowl Area, Hwy 34 Boat Ramp, Enoree River Waterfowl Area, and the Enoree River Bridge informal area.

### 5.3 PUBLIC RECREATION AREA VISITOR EXIT INTERVIEWS

The preferences and perceptions of people using SCE&G's recreation sites and informal areas are important inputs in management decisions regarding the adequacy and availability of existing recreation sites. Information from recreation site users will be obtained via an onsite survey from April 1 through Labor Day, 2015, and from February 1 through March 31, 2016, on Monticello Reservoir and from April 1 through Labor Day, 2015, for Parr Reservoir.

Exit surveys will be administered to collect user characteristics (origin, gender, age, group size, etc.), the type of land-based and water-based recreation activities individuals are participating in, length of stay, perceptions of crowdedness, and conditions of recreation sites at the Project.

Visitor demographic information will also be collected. Surveys will be conducted at the following locations:

#### Monticello Reservoir

- Scenic Overlook
- Hwy 215 Boat Ramp
- Hwy 99 Boat Ramp
- Recreation Lake Access Area
- Hwy 99 informal Fishing Area

#### Parr Reservoir

- Cannon's Creek Boat Ramp
- Heller's Creek Boat Ramp
- Hwy 34 Bridge

The data collected will be used to provide a general pattern of recreation use and assist in the development of recreation use estimates at access sites. The data will also provide recreation user inputs on "crowdedness" and potential facility needs. The survey will be pre-tested in the field prior to implementation and revisions will be incorporated, as necessary. If any significant revisions to the survey or study protocol are deemed necessary subsequent to field pre-testing, the TWC will be notified.

Two survey versions will be implemented – one for Monticello Reservoir and one for Parr Reservoir. The two survey versions will be very similar to each other and will contain similar questions. Draft questionnaires are provided in Appendix B.

Stratified random sampling will be used to develop a sampling plan in order to complete at least 30 days of interviewing at each recreation site. Sampling days will be made up of weekends, weekdays and holidays; however, weekends and holidays will be sampled at a greater rate than weekdays, to account for the heavier use that typically occurs during those periods. In preparing the sampling plan, the TWC will be consulted on the potential for including special event days with the holidays.

**Comment [b4]:** Clarify better which days are being surveyed. Identify all holidays will be surveyed.

**Comment [b5]:** Add to this study plan a list of the proposed days that will be surveyed.

All survey clerks will be trained thoroughly as a means of quality control. Survey clerks will be provided with detailed information on the study schedule, appropriate materials to aid in data collection, and direction on appropriate interviewing techniques and attire. Interviewers will also be provided with an incentive for survey respondents to complete the survey.

#### 5.4 SPOT COUNTS

Spot counts will be conducted at the public recreation sites identified in Section 5.3 once per interview period, concurrent with exit interviews. Specifically, spot counts will document the number of visitors and/or vehicles present at that visit and help to characterize site use.

Information recorded during spot counts will include: date, time, and weather; amount of vehicle and vehicle/trailer parking capacity in use; number and type of activities observed at the site; and state license plate data. Spot count data will be used in parallel with traffic counter data.

#### 5.5 ADDITIONAL USER DATA COLLECTION EFFORTS

Waterfowl hunting typically occurs during the fall and winter months. Waterfowl hunters represent a unique group of users whose preferences and perceptions may differ from those using recreation sites during the summer months. The preferences and perceptions of waterfowl hunters will be identified through use of a panel of waterfowl hunters.

Kleinschmidt will work with the Recreation TWC to identify waterfowl organizations whose hunters use the Project. A panel will be assembled from willing participants of the respective organizations. Should not enough participants be available from the organizations, additional individual hunters may be sought out to serve on the panel. Up to 20A small group of hunters will be invited to participate in a group meeting, similar to a focus group, to identify the opportunities and needs of waterfowl hunters using Project access areas. The information collected will be similar to that of the access site survey. Kleinschmidt will recruit the hunters,

develop a meeting format and materials, and will conduct the meeting. It is anticipated that the meeting will occur during the waterfowl hunting season.

Additionally, mail-in surveys similar to the access site survey will be distributed at the Broad River and Enoree River Waterfowl Areas during waterfowl hunting season. The study seasons for Monticello Reservoir and Parr Reservoir, as discussed in Section 4.0, will capture the turkey hunting season through exit interview activities.

Representation of those utilizing the Project during local fishing tournaments are anticipated to be represented during access site exit interviews, as registration, check-in and weigh-in typically occurs at access areas.



## 6.0 ANALYSIS

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The following sections provide a description of the approach for estimating existing and future recreational use, recreation site capacity and use density percentages, and recreation needs.

### 6.1 CURRENT RECREATION USE ESTIMATES

The reported estimates of recreation will be presented in "recreation days". The FERC defines a recreation day as one visit by a person to a development for purposes of recreation during any 24-hour period. The weekday, weekend, and holiday average recreation days will be calculated for each Monticello Reservoir and Parr Reservoir recreation site utilizing the traffic counters and recreation site survey data. The average number of people at each site within the morning and afternoon periods will be estimated within each day type and converted to a daily estimate. Daily estimates for each day type will be expanded to represent the study period and summed for a total estimate for each recreation site.

### 6.2 FUTURE RECREATION USE ESTIMATES

Estimated projections of future recreation use at Monticello Reservoir and Parr Reservoir will be developed using the average annual increase in population growth over the past 10 years, as reported by the Census Bureau or the State Division of Research and Statistics, for Newberry, Fairfield and Richland counties<sup>1</sup>. The estimates will be augmented with discussion of trends reported in the SCORP (2014) and the SC Recreation Participation & Preference Study (2005). Estimated projections will be provided in 5 year intervals for the anticipated term of the license up to 50 years into the future (through year 2070).

While it is acknowledged that future changes in the supply of recreation resources, either in their quantity, accessibility, and/or quality may influence future demand and use, the demand analysis undertaken for this study does not attempt to predict what these future changes might consist of or how they might specifically affect levels of use at Project facilities. Therefore, the demand analysis results should be viewed as a general guide of potential future recreation pressure developed for planning purposes only.

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<sup>1</sup> Although Richland County is not within the FERC Project boundary, it is believed that a significant number of those who recreate at the Project reside within Richland County.

### **6.3 RECREATION SITE CAPACITY**

For purposes of this study, the carrying capacity for a recreation site is defined as the number of vehicles and boat trailers that can be parked at a recreation site at one time, based on the number of available parking spaces associated with each site. For paved parking areas, this will be achieved by counting the number of designated parking spaces available at the recreation site. For gravel parking areas, the number of available parking spaces for each recreation site will be estimated by measuring the area (sq ft) available for parking and estimating the number of vehicles that could be parked at the location, if optimal space were utilized. These estimates will be based on parking capacity standards for vehicle length, width, and available turn around space.

### **6.4 RECREATION SITE USE DENSITY**

The use density of recreation sites will be estimated by comparing the average observed number of vehicles at the sites on sampled weekday, weekend, and holiday days with the available parking capacity for each recreation site. The average observed number of vehicles divided by the parking capacity will provide an estimated use density for each site.

### **6.5 RECREATION NEEDS ASSESSMENT**

The need for recreation and site development or modification of existing recreation resources will be assessed based on the inventory, condition, capacity, and exit interview survey results. The needs assessment will focus on the existing condition and user opinions of recreation sites, ADA compliance, and the ability of sites to meet current and anticipated future recreation demand pressures. Consideration will also be given to site opportunities and constraints, as well as support facilities such as signage and maintenance. The need for new recreational sites, facilities, and shoreline will be determined through assessment of the information collected and the input of stakeholders on the Recreation TWC and Lake & Land Management RCG.

## 7.0 SCHEDULE

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The proposed schedule for completion of the Recreation Use and Needs Study is as follows:

TASK	DATE
Mobilization for field work (includes field clerk hiring, training, etc.)	March 2015
Survey development and pre-testing	March 2015
Installation of Traffic Counters	March 31, 2015
Interview survey collection (Monticello Reservoir)	April 1-September 7 (Labor Day, 2015); and February 1 - March 31, 2016 <sup>2</sup>
Interview survey collection (Parr Reservoir)	April 1 -September 7 (Labor Day, 2015)
Waterfowl survey activities	Throughout 2015 and early 2016 during appropriate seasons.
Early data entry, cleaning, and processing	Early October 2015
Determine if additional data collection is needed	December 2015 <sup>3</sup>
Conduct analyses	April - July 2016
Submit draft report	July 2016
Finalize report	July/August 2016

## 8.0 REFERENCES

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South Carolina Department of Parks, Recreation and Tourism, Recreation, Planning and Engineering Office. 2008. South Carolina Statewide Comprehensive Outdoor Recreation Plan.

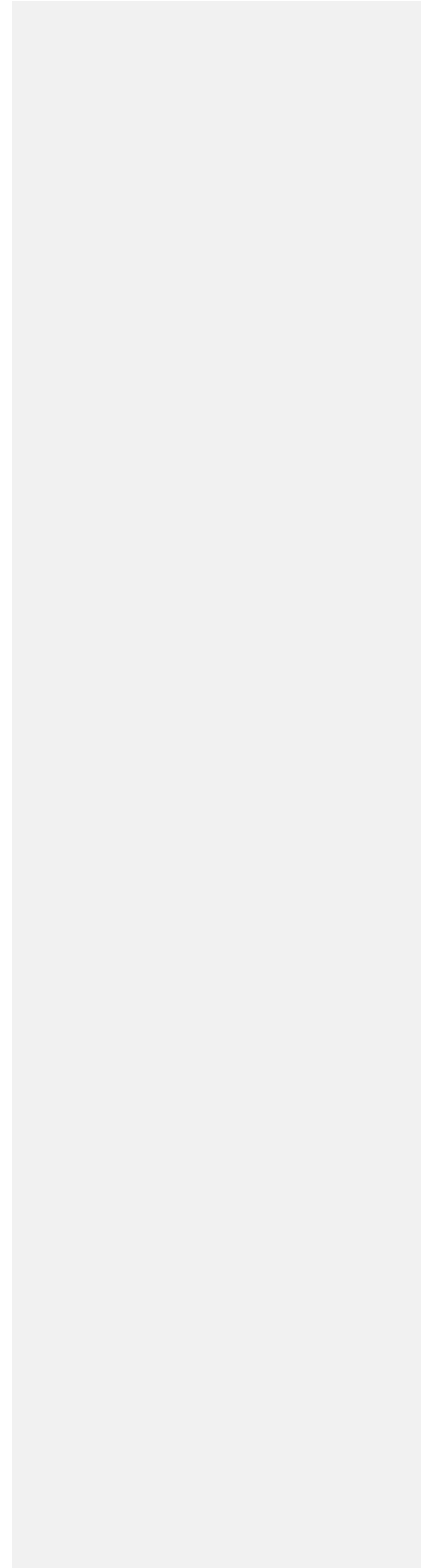
University of South Carolina. 2005. South Carolina Recreation Participation & Preference Study. Prepared for the South Carolina Department of Parks, Recreation and Tourism. (Online) [URL]: <http://www.scprtr.com/files/RPE/2005%20Rec%20Study.pdf>

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<sup>2</sup> The recreation season has been extended into 2016 on Monticello Reservoir in order to capture use data during the early crappie season, from February 1 through March 31, 2016.

<sup>3</sup> If additional data collection is required, data collection methods, results and analyses, developed and assessed in cooperation with the Recreation RCG, will be provided in an addendum to the report.

**APPENDIX A**  
**SITE INVENTORY FORM**



**SOUTH CAROLINA ELECTRIC & GAS COMPANY**

**RECREATION ASSESSMENT STUDY PLAN**

**PARR HYDROELECTRIC PROJECT  
(FERC NO. 1894)**

**SCE&G Public Site Inventory Form**

Inspected by: \_\_\_\_\_ Date: \_\_\_\_\_

Site Name: \_\_\_\_\_

Site Address: \_\_\_\_\_

City: \_\_\_\_\_ State: SC Zip Code: \_\_\_\_\_

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**Facility Type:**

\_\_\_\_ Primitive Camp                      \_\_\_\_ Picnic Area                      \_\_\_\_ Day Use  
\_\_\_\_ Overlook Site                      \_\_\_\_ Informal Site                      \_\_\_\_ Launch Ramp

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**Road Access:**

\_\_\_\_ Paved access..... # of lanes  
\_\_\_\_ Unpaved access..... # of lanes – (Circular entrance/exit)

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**Operations:**

\_\_\_\_ Manned                                      \_\_\_\_ Seasonal      (From \_\_\_\_ To \_\_\_\_)  
\_\_\_\_ Unmanned                                      \_\_\_\_ Year Round  
\_\_\_\_ Fee (\$) ..... (Site \_\_\_\_; Parking; \_\_\_\_)

**Site Amenities:**

#	Type	#	Type
_____	Picnic Tables	_____	Potable Water
_____	Grills	_____	Boat Fuel
_____	Firepit/ring	_____	Trash Cans
_____	Boat Pump Out	_____	Docks
_____	Trails (specify use _____: Miles _____)	_____	Playground
_____	Shelter	_____	Showers
_____	Designated Swim Area	_____	Concession
_____	Store	_____	Marina (# of slips _____)
_____	Dumping Station		

**Parking Lots:**

Type	Estimated # Paved	Estimated # Gravel	
ADA Spaces	_____	_____	_____ Spaces delineated?
Regular Spaces	_____	_____	_____ Curbs?
Vehicle & trailer spaces	_____	_____	

**Sanitation Facilities:**

	Flush	(ADA?)	Portable	(ADA?)	Showers	(ADA?)
Unisex	_____	(_____)	_____	(_____)	_____	(_____)
Women	_____	(_____)	_____	(_____)	_____	(_____)
Men	_____	(_____)	_____	(_____)	_____	(_____)

**Campground/Campsite:**

	RV sites	Cabins	Tent sites	Primitive sites
# of sites	_____	_____	_____	_____
On site parking	_____	_____	_____	_____
Water front	_____	_____	_____	_____
ADA compliant	_____	_____	_____	_____

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**Boat Launch Facilities:**

\_\_\_\_ Hard surface                  \_\_\_\_ Unimproved (informal)      \_\_\_\_ # of Lanes  
\_\_\_\_ Gravel                          \_\_\_\_ Carry In                          \_\_\_\_ Boat Prep Area?

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**Courtesy/Fishing Docks:**

Courtesy/Fishing	Dimensions	ADA Compliant
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

**Notes:**

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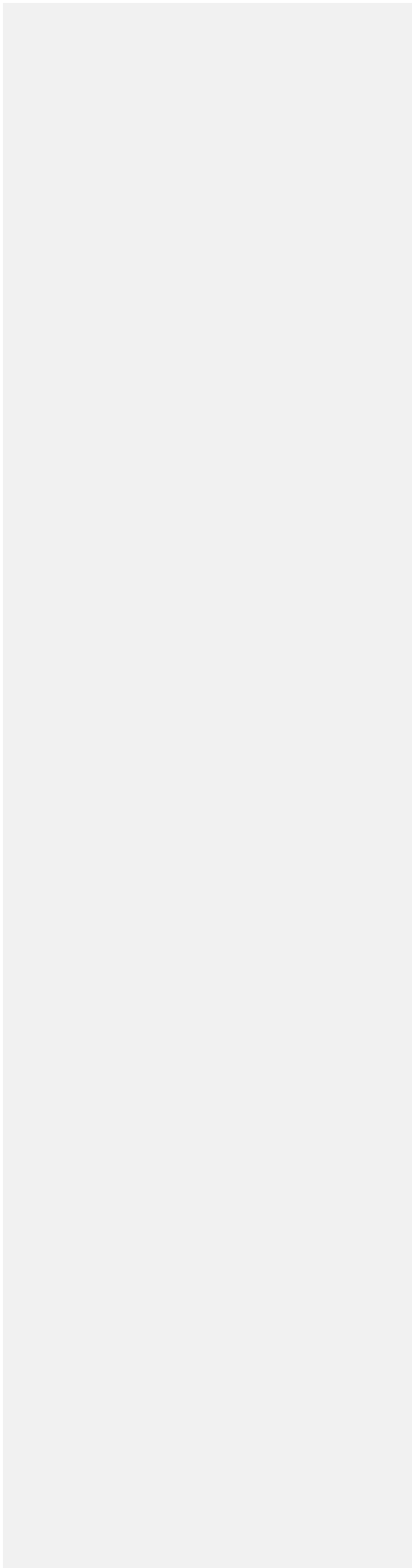
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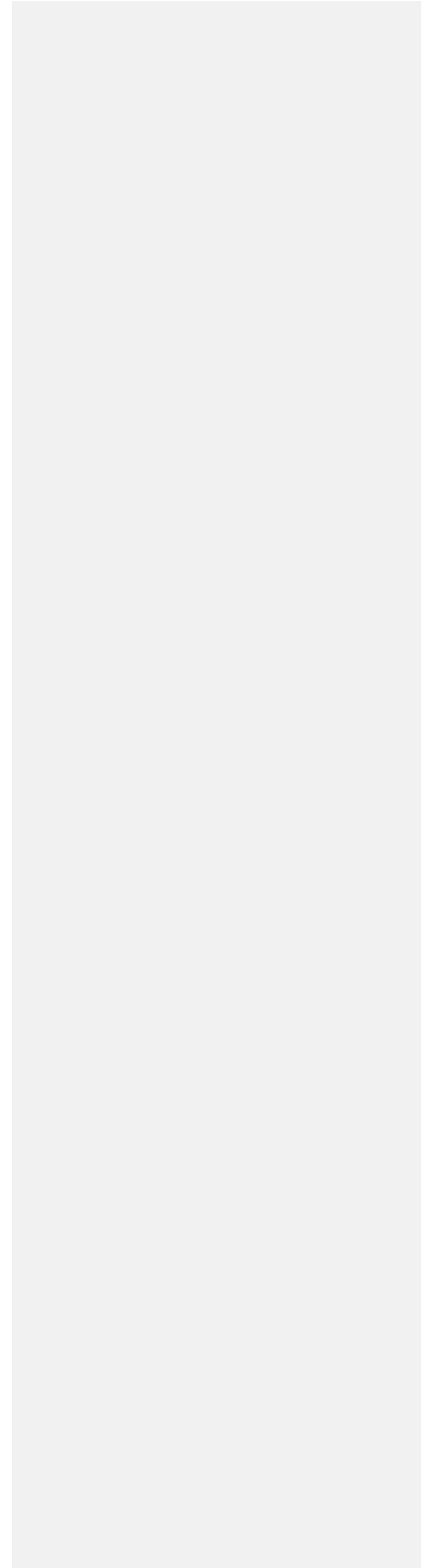
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Picture Number From \_\_\_\_ To \_\_\_\_



**APPENDIX B**  
**RECREATION SITE QUESTIONNAIRES**





### Monticello Reservoir Public Access Site Questionnaire

Clerk: _____	Site: _____	Date: _____	Time: _____	am/pm
Weather: <input type="checkbox"/> Sunny <input type="checkbox"/> Partly Cloudy <input type="checkbox"/> Cloudy <input type="checkbox"/> Light Rain <input type="checkbox"/> Heavy Rain				
RESPONDENT GENDER: <input type="checkbox"/> Male <input type="checkbox"/> Female		RESPONDENT REFUSED INTERVIEW: <input type="checkbox"/>		
NUMBER OF PEOPLE IN VEHICLE:		RESPONDENT DOES NOT SPEAK ENGLISH: <input type="checkbox"/>		
VEHICLE HAS A BOAT TRAILER: <input type="checkbox"/>		RESPONDENT IS NOT 18 YEARS OR OLDER: <input type="checkbox"/>		
RESPONDENT HAS BEEN INTERVIEWED AT THIS SITE PREVIOUSLY: <input type="checkbox"/>				

**THE FIRST FEW QUESTIONS ASK ABOUT YOUR EXPERIENCE HERE TODAY**

1. Including yourself, how many people are in your party today? *(Fill in blank.)*  
       \_\_\_\_\_ people in party
  
2. What time did you arrive **at Monticello Reservoir** today? *(Fill in blank.)*  
       \_\_\_\_\_ am / pm
  
3. What is the primary recreation activity that you participated in today **at Monticello Reservoir**? *(Please read the list to respondents. Check only one main activity in the first column.)*

What other activities did you participate in today **at Monticello Reservoir**? *(Check all that apply in the second column.)*

<i>Check only one main activity</i>	<i>Check all other activities</i>	<i>Types of Activities</i>
		<b>FISHING:</b>
<input type="checkbox"/>	<input type="checkbox"/>	<b>boat fishing</b>
<input type="checkbox"/>	<input type="checkbox"/>	<b>pier/dock fishing</b>
<input type="checkbox"/>	<input type="checkbox"/>	<b>bank fishing</b>
		<b>BOATING:</b>
<input type="checkbox"/>	<input type="checkbox"/>	<b>motor boating</b>
<input type="checkbox"/>	<input type="checkbox"/>	<b>pontoon/party boating</b>
<input type="checkbox"/>	<input type="checkbox"/>	<b>sailing</b>
<input type="checkbox"/>	<input type="checkbox"/>	<b>canoeing/kayaking</b>
<input type="checkbox"/>	<input type="checkbox"/>	<b>windsurfing</b>
<input type="checkbox"/>	<input type="checkbox"/>	<b>paddleboarding</b>
		<b>OTHER:</b>
<input type="checkbox"/>	<input type="checkbox"/>	<b>bicycling</b>
<input type="checkbox"/>	<input type="checkbox"/>	<b>tent or vehicle camping</b>
<input type="checkbox"/>	<input type="checkbox"/>	<b>horseback riding</b>
<input type="checkbox"/>	<input type="checkbox"/>	<b>walking/hiking/backpacking</b>
<input type="checkbox"/>	<input type="checkbox"/>	<b>sightseeing</b>
<input type="checkbox"/>	<input type="checkbox"/>	<b>hunting</b>
<input type="checkbox"/>	<input type="checkbox"/>	<b>nature study/wildlife viewing/photography</b>
<input type="checkbox"/>	<input type="checkbox"/>	<b>swimming</b>
<input type="checkbox"/>	<input type="checkbox"/>	<b>picnicking</b>
<input type="checkbox"/>	<input type="checkbox"/>	<b>sunbathing</b>
<input type="checkbox"/>	<input type="checkbox"/>	<b>other:</b>

Check only <u>one</u> main activity	Check all other activities	Types of Activities
	<input type="checkbox"/>	<b>None</b>

4. Did you spend any time **on the water on Monticello Reservoir** today? (Check one box.)

- YES  
 NO (If no, skip to Question 6.)

5A. Did you recreate on any of the **islands on Monticello Reservoir** today?

- YES  
 NO (If no, skip to Question 6.)

5B. [Here is a map of the islands on Monticello Reservoir. Can you show me which island\(s\) that you went to? \(Check all that apply.\)](#)

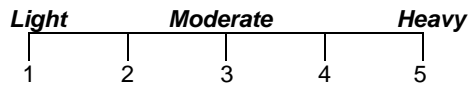
- |  |                                   |
|--|-----------------------------------|
| <input checked="" type="checkbox"/> Island 1 | <input type="checkbox"/> Island 5 |
| <input type="checkbox"/> Island 2            | <input type="checkbox"/> Island 6 |
| <input type="checkbox"/> Island 3            | <input type="checkbox"/> Island 7 |
| <input type="checkbox"/> Island 4            |                                   |

Formatted: Tab stops: Not at 1.5"

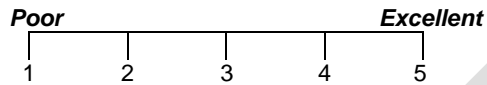
5C. What activities did you participate in **while on the island(s)**? (Do not read this list. Allow respondent to answer and check all that apply and/or fill in the blanks.)

<input checked="" type="checkbox"/> boat fishing	<input type="checkbox"/> bank fishing	<input type="checkbox"/> hunting
<input type="checkbox"/> camping	<input type="checkbox"/> walking/hiking	<input type="checkbox"/> sightseeing
<input type="checkbox"/> nature study/wildlife viewing/photography	<input type="checkbox"/> swimming	<input type="checkbox"/> picnicking
<input type="checkbox"/> sunbathing		
<input type="checkbox"/> other (please specify: _____)		

6. On a scale from 1 to 5, with 1 being light, 3 being moderate, and 5 being heavy, how would you rate the crowdedness **at this recreation site** today? (Circle one number.)



7A. On a scale from 1 to 5, with 1 being poor and 5 being excellent, how would you rate the overall condition **of this recreation site** today? (Circle one number.)



7B. Why did you choose to come to **this recreation site** today? (Fill in the blank.)

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7C. Are there any additional facilities needed **at this recreation site**? (Check one box.)

- YES
- NO (If no, skip to Question 8.)

7D. What do you recommend? (Do not read this list. Allow respondent to answer and check all that apply and/or fill in the blanks.)

<input type="checkbox"/> access road	<input type="checkbox"/> bank fishing area	<input type="checkbox"/> boat dock
<input type="checkbox"/> boat launch	<input type="checkbox"/> camping area	<input type="checkbox"/> fish cleaning station
<input type="checkbox"/> fishing pier/dock	<input type="checkbox"/> lighting	<input type="checkbox"/> parking lot
<input type="checkbox"/> picnic tables/shelter	<input type="checkbox"/> restrooms	<input type="checkbox"/> signs & information
<input type="checkbox"/> swimming area	<input type="checkbox"/> trails	<input type="checkbox"/> trash cans
<input type="checkbox"/> RV camping	<input type="checkbox"/> tent camping	<input type="checkbox"/> bilingual signs & information
<input type="checkbox"/> other (please specify: _____)		

7E. Are there any other improvements that you would recommend for this site?

- YES
- NO (If no, skip to Question 8.)

7F. What improvements do you recommend? *(Fill in the blank.)*

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8. What was your primary reason for choosing to recreate **at Monticello Reservoir** today versus another lake or area? *(Fill in blank.)*

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9. What **other lakes** do you recreate at? *(Fill in blank.)*

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**I HAVE JUST A FEW MORE QUESTIONS**

10. Do you own a permanent or seasonal lakefront residence **on Monticello Reservoir**? What is your zip code? *(Check one box and fill in the blank for zip code.)*

- YES – Permanent Home → ZIP CODE: \_\_\_\_\_
- YES – Seasonal Home → ZIP CODE: \_\_\_\_\_
- NO - Non-lakefront resident → ZIP CODE: \_\_\_\_\_

11. In what year were you born? *(Fill in blank.)*

\_\_\_\_\_ YEAR

12. Do you have any additional comments about the recreation facilities at **Monticello Reservoir**? *(Please fill in blank and be as specific as possible.)*

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**THANK YOU FOR YOUR HELP! WE APPRECIATE YOUR TIME TODAY!**

**Parr Reservoir/Broad River Public Access Site Questionnaire**

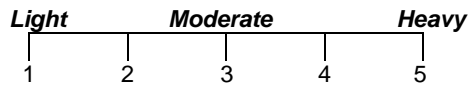
Clerk: _____	Site: _____	Date: _____	Time: _____	am/pm
Weather: <input type="checkbox"/> Sunny <input type="checkbox"/> Partly Cloudy <input type="checkbox"/> Cloudy <input type="checkbox"/> Light Rain <input type="checkbox"/> Heavy Rain				
RESPONDENT GENDER: <input type="checkbox"/> Male <input type="checkbox"/> Female		RESPONDENT REFUSED INTERVIEW: <input type="checkbox"/>		
NUMBER OF PEOPLE IN VEHICLE: _____		RESPONDENT DOES NOT SPEAK ENGLISH: <input type="checkbox"/>		
VEHICLE HAS A BOAT TRAILER: <input type="checkbox"/>		RESPONDENT IS NOT 18 YEARS OR OLDER: <input type="checkbox"/>		
RESPONDENT HAS BEEN INTERVIEWED AT THIS SITE PREVIOUSLY: <input type="checkbox"/>				

**THE FIRST FEW QUESTIONS ASK ABOUT YOUR EXPERIENCE HERE TODAY**

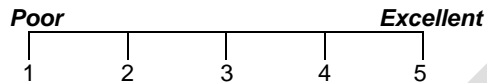
- Including yourself, how many people are in your party today? *(Fill in blank.)*  
\_\_\_\_\_ people in party
- What time did you arrive **at Parr Reservoir** today? *(Fill in blank.)*  
\_\_\_\_\_ am / pm
- What is the primary recreation activity that you participated in today **at Parr Reservoir**? *(Please read the list to respondents. Check only one main activity in the first column.)*  
What other activities did you participate in today **at Parr Reservoir**? *(Check all that apply in the second column.)*

<i>Check only one main activity</i>	<i>Check all other activities</i>	<i>Types of Activities</i>
		<i>FISHING:</i>
<input type="checkbox"/>	<input type="checkbox"/>	<b>boat fishing</b>
<input type="checkbox"/>	<input type="checkbox"/>	<b>pier/dock fishing</b>
<input type="checkbox"/>	<input type="checkbox"/>	<b>bank fishing</b>
		<i>BOATING:</i>
<input type="checkbox"/>	<input type="checkbox"/>	<b>motor boating</b>
<input type="checkbox"/>	<input type="checkbox"/>	<b>canoeing/kayaking</b>
		<i>OTHER:</i>
<input type="checkbox"/>	<input type="checkbox"/>	<b>tent or vehicle camping</b>
<input type="checkbox"/>	<input type="checkbox"/>	<b>horseback riding</b>
<input type="checkbox"/>	<input type="checkbox"/>	<b>walking/hiking/backpacking</b>
<input type="checkbox"/>	<input type="checkbox"/>	<b>Sightseeing</b>
<input type="checkbox"/>	<input type="checkbox"/>	<b>Hunting</b>
<input type="checkbox"/>	<input type="checkbox"/>	<b>nature study/wildlife viewing/photography</b>
<input type="checkbox"/>	<input type="checkbox"/>	<b>Swimming</b>
<input type="checkbox"/>	<input type="checkbox"/>	<b>Picnicking</b>
<input type="checkbox"/>	<input type="checkbox"/>	<b>Sunbathing</b>
<input type="checkbox"/>	<input type="checkbox"/>	<b>other: _____</b>
	<input type="checkbox"/>	<b>None</b>

4. On a scale from 1 to 5, with 1 being light, 3 being moderate, and 5 being heavy, how would you rate the crowdedness **at this recreation site** today? (Circle one number.)



- 5A. On a scale from 1 to 5, with 1 being poor and 5 being excellent, how would you rate the overall condition **of this recreation site** today? (Circle one number.)



- 5B. Why did you choose to come to **this recreation site** today? (Fill in the blank.)

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- 5C. Are there any additional facilities needed **at this recreation site**? (Check one box.)

- YES  
 NO (If no, skip to Question 6.)

- 5D. What do you recommend? (Do not read this list. Allow respondent to answer and check all that apply and/or fill in the blanks.)

<input type="checkbox"/> access road	<input type="checkbox"/> bank fishing area	<input type="checkbox"/> boat dock
<input type="checkbox"/> boat launch	<input type="checkbox"/> camping area	<input type="checkbox"/> fish cleaning station
<input type="checkbox"/> fishing pier/dock	<input type="checkbox"/> lighting	<input type="checkbox"/> parking lot
<input type="checkbox"/> picnic tables/shelter	<input type="checkbox"/> restrooms	<input type="checkbox"/> signs & information
<input type="checkbox"/> swimming area	<input type="checkbox"/> trails	<input type="checkbox"/> trash cans
<input type="checkbox"/> RV camping	<input type="checkbox"/> tent camping	<input type="checkbox"/> bilingual signs & information
<input type="checkbox"/> other (please specify: _____)		

- 5E. Are there any other improvements that you would recommend for this site?

- YES  
 NO (If no, skip to Question 6.)

5F. What improvements do you recommend? *(Fill in the blank.)*

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**I HAVE JUST A FEW MORE QUESTIONS**

6. Do you own a permanent or seasonal residence **on the Broad River**? What is your zip code? *(Check one box and fill in the blank for zip code.)*

- YES – Permanent Home → ZIP CODE: \_\_\_\_\_
- YES – Seasonal Home → ZIP CODE: \_\_\_\_\_
- NO - Non-lakefront resident → ZIP CODE: \_\_\_\_\_

7. In what year were you born? *(Fill in blank.)*

\_\_\_\_\_ YEAR

8. Do you have any additional comments about the recreation facilities on **Parr Reservoir**? *(Please fill in blank and be as specific as possible.)*

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**THANK YOU FOR YOUR HELP! WE APPRECIATE YOUR TIME TODAY!**

**DRAFT**  
**DOWNSTREAM RECREATIONAL FLOW ASSESSMENT**  
**STUDY PLAN**

**PARR HYDROELECTRIC PROJECT**  
**(FERC No. 1894)**

*Prepared for:*

**South Carolina Electric & Gas Company**  
**Cayce, South Carolina**

*Prepared by:*

**Kleinschmidt**

Lexington, South Carolina  
[www.KleinschmidtUSA.com](http://www.KleinschmidtUSA.com)

September 2013



DRAFT  
DOWNSTREAM RECREATIONAL FLOW ASSESSMENT  
STUDY PLAN

PARR HYDROELECTRIC PROJECT  
(FERC No. 1894)

*Prepared for:*

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*Prepared by:*

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Lexington, South Carolina  
[www.KleinschmidtUSA.com](http://www.KleinschmidtUSA.com)

September 2013

**DOWNSTREAM RECREATIONAL FLOW ASSESSMENT STUDY PLAN**

**PARR HYDROELECTRIC PROJECT  
(FERC No. 1894)**

**SOUTH CAROLINA ELECTRIC & GAS COMPANY**

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2.0 PURPOSE OF THE STUDY .....2  
3.0 STUDY AREA .....3  
4.0 METHODOLOGY .....3  
    4.1 PHASE 1 - FOCUS GROUP AND EXISTING INFORMATION REVIEW .....4  
    4.2 PHASE 2 - SITE RECONNAISSANCE .....4  
5.0 DELIVERABLES .....5  
6.0 SCHEDULE .....6  
7.0 REFERENCES .....7

**LIST OF APPENDICES**

APPENDIX A – RECREATIONAL TECHNICAL WORKING COMMITTEE MEMBERS

**DOWNSTREAM RECREATIONAL FLOW ASSESSMENT STUDY PLAN**

**PARR HYDROELECTRIC PROJECT  
(FERC NO. 1894)**

**SOUTH CAROLINA ELECTRIC & GAS COMPANY**

**1.0 INTRODUCTION**

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South Carolina Electric & Gas Company (SCE&G) is the Licensee of the Parr Hydroelectric Project (FERC No. 1894) (Project). The Project consists of the Parr Hydro Development and the Fairfield Pumped Storage Development. Both developments are located along the Broad River in Fairfield and Newberry Counties, South Carolina.

The Parr Hydro Development, in particular, forms Parr Reservoir along the Broad River. The Development consists of a 37-foot-high, 200-foot-long concrete gravity spillway dam with a powerhouse housing generating units with a combined licensed capacity of 14.9 MW. Parr Hydro operates in a modified run-of-river mode and normally continuously operates to pass Broad River flow. The 13-mile-long Parr Reservoir has a surface area of 4,400 acres at full pool and serves as the lower reservoir for pumped-storage operations at the Fairfield Pumped Storage Development.

The Project is currently involved in a relicensing process which involves cooperation and collaboration between SCE&G, as licensee, and a variety of stakeholders including state and federal resource agencies, state and local government, non-governmental organizations (NGO), and interested individuals. The collaboration and cooperation is essential to the identification of and treatment of operational, economic, and environmental issues associated with a new operating license for the Project. SCE&G has established several Technical Working Committees (TWC's) with members from among the interested stakeholders with the objective of achieving consensus regarding the identification and proper treatment of these issues in the context of a new license.

Accordingly, SCE&G organized a Recreation TWC (Appendix A), comprised of interested stakeholders who will collaborate with SCE&G to identify and make recommendations related to

recreational needs and opportunities in the Project area. The TWC has requested that a study be designed and implemented that would assess flows downstream of the Parr Shoals Dam (Parr Dam) that provide quality recreational experiences and identify preferred flows for recreational activities, primarily as they relate to wade-angling, canoeing and kayaking.

## **2.0 PURPOSE OF THE STUDY**

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To fulfill the needs identified by the TWC, this study will serve to assess potential and identify preferred recreational flows downstream of the Parr Dam primarily as they relate to wade-angling, canoeing and kayaking. This study encompasses the following goals and objectives:

**Goal 1:** *Characterize currently available recreational opportunities on the Broad River, downstream of the Parr Dam, as they relate to wade-angling, canoeing and kayaking. This will be accomplished by meeting the following objectives:*

- i. Utilize the information collected during focus group activities to identify the current patterns of non-motorized boating use on the Broad River, below the Parr Dam, by location and volume, and the quality of those activities.
- ii. Estimate preferred flows **and seasonal distribution** associated with reasonable and safe recreational use of the Broad River, below Parr Dam, for target activities.

**Goal 2:** *Evaluate potential issues related to portage around Parr Dam. This will be accomplished by meeting the following objectives:*

- i. Identify the need among paddlers for portage opportunities around Parr Dam through focus group discussions.

### 3.0 STUDY AREA

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The Project boundary, as defined by FERC, does not encompass the Broad River below the Parr Dam. However, operation of the Parr Development affects and could serve to enhance recreational opportunities below Parr Dam. As noted, SCE&G currently operates the Parr Dam in a modified run-of-river capacity.

**Comment [b1]:** Add map of boundary of study area and location of current public access points

For this study, the geographic scope will begin at the base of the Parr Dam and encompass limited downstream areas of the Broad River. Focus group discussions will be directed toward recreational wading and boating flow opportunities as they relate to representative hydraulic conditions (i.e. runs, pools, and rapids) in identified reaches of the Broad River. Should Phase 2 be implemented, as discussed below, the specific areas of any on-water evaluations/verifications will be chosen with regards to access and in consultation with the TWC/focus group.

### 4.0 METHODOLOGY

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Information gathered for this study will be used to examine the suitability of the Broad River, downstream of the Parr Dam, for different recreational activities under various flow ranges. The study may involve a one or two-phase approach, depending upon the outcome of Phase 1, to meet the goals of the study through the objectives identified above. Phase 1 will involve convening a panel of experienced anglers, paddlers, NGOs and agency staff familiar with the study reaches to assess the feasibility and potential quality of particular flow ranges for specified on-water activities. Pertinent existing information will also be reviewed as it relates to this effort. Phase 2 will involve an on-site evaluation with members of the TWC and/or focus group convened during Phase 1, if the information gleaned during Phase 1 activities does not serve to meet study goals.

In addition to these efforts, the planned Project Recreation Use and Needs Study will provide information regarding recreational opportunities, patterns and levels of use on the Broad River, primarily above the Parr Dam. This data may be utilized in association with the data gathered from Phase 1 and, potentially, Phase 2 efforts.

#### **4.1 PHASE 1 - FOCUS GROUP AND EXISTING INFORMATION REVIEW**

A panel of knowledgeable and experienced parties will be formed to collect and disseminate information regarding recreation opportunities and potential flow effects on recreation on the Broad River downstream of the Parr Dam. The panel will include local paddlers/outfitters, anglers, canoe/kayak clubs, and members of the TWC. A focus group discussion will be conducted to identify and document characteristics of the Broad River within the Study Area with respect to the nature, seasonal distribution, and quality of target on-water activities and preferred river flows.

Existing information about the Broad River channel, hydrology, and flow data for the Broad River in the vicinity of the Project, will be compiled and reviewed to determine if there is any information or data pertinent to this effort. Literature searches will be conducted via the web, libraries, and SCE&G and agency and NGO collections.

#### **4.2 PHASE 2 - SITE RECONNAISSANCE**

Contingent upon discussions with the TWC and panel members under Phase 1, a site reconnaissance may be necessary to augment existing information and for the field verification of preferred recreational flows. Critical areas for evaluation will be pre-determined in consultation with the TWC. Information gained from mesohabitat studies may also aid in the identification of instream hydraulic alterations and may provide useful information for selecting on-water evaluation areas. The TWC and panel will observe and assess the quality of target recreational activities at the pre-determined locations and at the preferred flow ranges determined as part of the Phase 1 analysis.

## 5.0 DELIVERABLES

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A draft and final report will be prepared for this effort. The draft report will be reviewed internally by the Recreation TWC and the Lake and Land Management and Recreation Resource Conservation Group (RCG). Comments and edits from the TWC will be incorporated into a Final Report for the relicensing effort. The report will include an executive summary, an introduction, objectives, methods and the resulting recommendations for recreational flows.

## 6.0 SCHEDULE

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The proposed schedule for completion of the Downstream Recreational Flow Assessment is as follows:

TASK	DATE
Focus Group <u>Meeting 1</u> and Literature Review	<del>April – June 2015</del> <u>September – October 2014</u>
<u>Focus Group Meeting 2</u>	<u>September 2015</u>
Phase 2 Panel Reconnaissance	<del>July – September</del> <u>October - November 2015</u>
Submit Draft Report	<del>October – November 2015</del> <u>2016</u>
TWC Review	<del>December 2015 – January 2016</del>
Submit Final Report	<del>February – March 2016</del>



## 7.0 REFERENCES

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South Carolina Department of Parks, Recreation and Tourism, Recreation, Planning and Engineering Office. 2008. South Carolina Statewide Comprehensive Outdoor Recreation Plan.

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**DRAFT**  
**DOWNSTREAM NAVIGATIONAL FLOW ASSESSMENT**  
**STUDY PLAN**

**PARR HYDROELECTRIC PROJECT**  
**(FERC No. 1894)**

*Prepared for:*

**South Carolina Electric & Gas Company**  
**Cayce, South Carolina**

*Prepared by:*

**Kleinschmidt**

Lexington, South Carolina  
[www.KleinschmidtUSA.com](http://www.KleinschmidtUSA.com)

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**DOWNSTREAM NAVIGATIONAL FLOW ASSESSMENT STUDY PLAN**

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**SOUTH CAROLINA ELECTRIC & GAS COMPANY**

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**DOWNSTREAM NAVIGATIONAL FLOW ASSESSMENT STUDY PLAN**

**PARR HYDROELECTRIC PROJECT  
(FERC No. 1894)**

**SOUTH CAROLINA ELECTRIC & GAS COMPANY**

**1.0 INTRODUCTION**

---

South Carolina Electric & Gas Company (SCE&G) is the Licensee of the Parr Hydroelectric Project (FERC No. 1894) (Project). The Project consists of the Parr Hydro Development and the Fairfield Pumped Storage Development. Both developments are located along the Broad River in Fairfield and Newberry Counties, South Carolina.

The Project is currently engaged in a relicensing process which involves cooperation and collaboration among SCE&G, as licensee, and a variety of stakeholders including state and federal resource agencies, state and local government, non-governmental organizations (NGO), and interested individuals. The collaboration and cooperation is essential to the identification of and treatment of operational, economic, and environmental issues associated with a new operating license for the Project. SCE&G has established Technical Working Committees (TWC's) with members from among the interested stakeholders with the objective of achieving consensus regarding the identification and proper treatment of these issues in the context of a new license.

The Recreation TWC has requested that flows downstream of the Parr Shoals Dam (Parr Dam) be assessed during planned Instream Flow Incremental Methodology (IFIM) studies to determine if downstream flows currently facilitate one-way navigation at an identified point of constriction in the Broad River, downstream of the Project. Although the primary purpose of the IFIM study is to develop an understanding of key habitat-flow relationships for aquatic species in the Broad River, the IFIM study also provides an appropriate means of determining consistency with navigational goals under various flow scenarios.

## 2.0 STUDY OBJECTIVE

---

The objective of the navigational analysis is to assess the flow levels within the Broad River, at identified points of constriction, needed to facilitate one-way navigation. The criteria for one-way navigation can be defined as a "minimum depth of one foot across a channel 10 feet wide or across 10 percent of the total stream width, whichever is greater. Minimum depth does not need to occur across a continuous 10 percent of the stream width, but each point of passage must be at least 10 feet wide."(SCWRC, 1988)

## 3.0 GEOGRAPHIC AND TEMPORAL SCOPE

---

The navigational analyses will evaluate flows within the Broad River at points of navigational constriction downstream of the Parr Dam. Recreation TWC participants initially have identified one point of potential constriction at the shoal located roughly 2.4 miles upstream of Haltiwanger Island or Bookman Island (Figure 1). This area is included within the study area for the IFIM and Mesohabitat studies. Other specific areas of constriction may be reviewed and assessed during IFIM study efforts.

**Comment [b1]:** Revise map to include Book man Island in addition to Haltiwanger Island and IFIM Study Site 7.

**Comment [b2]:** Revise wording to determine for most restrictive spot as determined by mesohabitat field survey later this year. .

The navigational analyses will be conducted during the summer of 2015 concurrent with IFIM study efforts.

## 4.0 METHODOLOGY

---

IFIM study transects will include representative locations at points of navigational constriction, as discussed in 3.0, to allow the characterization of hydraulics (wetted depth and width) during a range of flows. The "navigational" transect locations will be field blazed with flagging, recorded via GPS, or other appropriate means. The study sites will be mapped sufficiently to quantify the areas represented by the transects. Consistent with IFIM survey protocol, transect headpin and tailpin ends will be located at or above the top-of-bank elevation, and secured by steel rebar or other similar means. A measuring tape accurate to 0.1-foot will be secured at each transect to enable repeat field measurements, if necessary. Stream bed and water elevations tied to a local datum will be surveyed to the nearest 0.1-foot using standard optical surveying instrumentation and methods. If USGS gage data is not available, a staff gage may be placed at the study site to confirm stable flow during measurements. Survey activities are anticipated to take place at a

flow of 400 cfs. A water level logger will also be placed at the transect locations to gather water surface elevation data under various flow events. Water surface elevations will be used to develop stage-discharge relationships for the site and the stage-discharge relationships will be assessed on whether one-way navigation is achieved.

Information obtained during survey activities will be included within the draft IFIM report that will be submitted to the study team for review and comment. The report will document the methods and results as encountered in the field. Supporting data will be presented in graphic and tabular form and appendices will include cross-sectional survey data and reference photographs of study sites.

The methodology for this analysis may be revised or supplemented based on consultation with the Instream Flow TWC and other interested stakeholders, or if field efforts so dictate.

## **5.0 SCHEDULE AND REPORTING**

---

Data will be gathered during the IFIM study, anticipated to occur in 2015. A final report summarizing IFIM study findings, including an analysis of impediments to one-way navigation under various flow conditions, will be issued subsequent to the completion of field work.

## **6.0 USE OF STUDY RESULTS**

---

Study findings will be used as an information resource during discussion of downstream flow issues with the Instream Flows TWC, and other relicensing stakeholders.

## **7.0 LIST OF ATTACHMENTS**

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Figure 1: Potential Point of Navigational Constriction

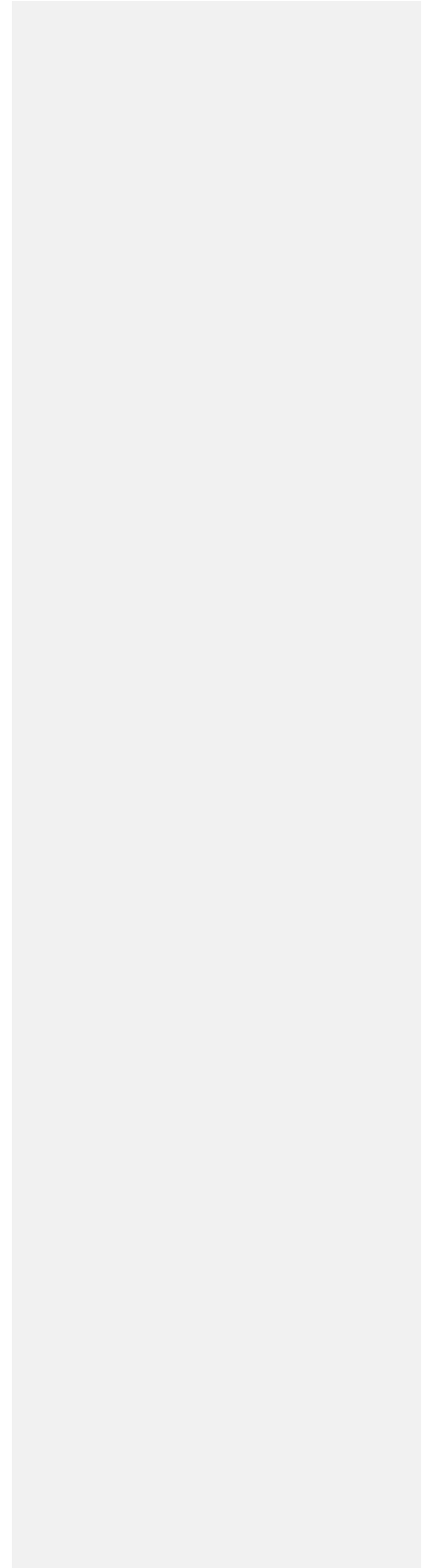
## **8.0 REFERENCES**

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**FIGURE 1**     **POTENTIAL POINT OF NAVIGATIONAL CONSTRICTION**



# **PARR HYDROELECTRIC PROJECT**

**(FERC No. 1894)**

## **SHORELINE MANAGEMENT PLAN PARR RESERVOIR**

**DRAFT**

*Prepared for:*

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*Prepared by:*

**Kleinschmidt**

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PARR RESERVOIR**

**DRAFT**

**SOUTH CAROLINA ELECTRIC & GAS COMPANY**

***PREAMBLE FOR RELICENSING PROCESS***

Since initiating the Parr Fairfield Hydroelectric Project (FERC No. 1894) (Project) relicensing process, South Carolina Electric & Gas Company (SCE&G) has held initial consultations with resource agencies and other interested stakeholders and has subsequently formed the Lake and Land Management and Recreation Resource Conservation Group (RCG) and the Lake and Land Management Technical Working Committee (TWC), a sub-group to the RCG. RCG members have agreed that the mission of the Lake & Land Management and Recreation Resource Conservation Group should, in part, be to develop a consensus based Shoreline Management Plan (SMP) that identifies appropriate shoreline activities within the Project boundary and guidelines that provide a structure that helps to ensure these activities are conducted in a manner to avoid or minimize environmental impacts. In depth reviews of, and the resulting proposal for changes to, the existing SMP have been undertaken by the TWC. TWC members have worked together to develop the enclosed draft outline for a revised SMP. TWC members will continue to work together through this relicensing to populate the SMP outline in a consensus-based manner with the goal of developing an SMP consistent with project purposes and one that addresses the needs of the public.

**PARR HYDROELECTRIC PROJECT  
(FERC No. 1894)**

**SHORELINE MANAGEMENT PLAN  
PARR RESERVOIR**

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**SOUTH CAROLINA ELECTRIC & GAS COMPANY**

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Comment [b1]: Revise or remove pages and appendices that follow.

**PARR HYDROELECTRIC PROJECT  
(FERC NO. 1894)**

**SHORELINE MANAGEMENT PLAN  
PARR RESERVOIR**

**DRAFT**

**SOUTH CAROLINA ELECTRIC & GAS COMPANY**

***EXECUTIVE SUMMARY***

*[Summarize the purpose of the SMP, goals and objectives of the SMP, brief description of project purpose and project history and operations, a brief description of shoreline classifications, brief description of the types of permitted uses]*



## 1.0 INTRODUCTION

---

*[General Project Details and History of the Shoreline Management Plan. Include an updated Map of the Project]*

## **2.0 PURPOSE AND SCOPE OF THE SHORELINE MANAGEMENT PLAN**

---

*[Discuss the purpose of the SMP and balance that it assists in providing between developmental, recreational and environmental issues]*

### **3.0 HISTORY OF THE SHORELINE MANAGEMENT PLAN**

---

*[Include discussion on the history of the Project and a discussion of the history of development surrounding the Project. Also discuss FERC approval of the current SMP.]*

#### **3.1 CURRENT SMP DOCUMENT AND SHORELINE CLASSIFICATIONS**

#### **3.2 PROJECT BOUNDARY**

#### **3.3 ACREAGE OF PROJECT LANDS**

## **4.0 SHORELINE MANAGEMENT PLAN GOALS AND OBJECTIVES**

*[Discuss specific goals related to the relicensing process, and consultation that has taken place]*

### **4.1 CONSULTATION**

#### **4.1.1 RECREATION/LAKE AND LAND MANAGEMENT RESOURCE CONSERVATION GROUP**

#### **4.1.2 LAKE AND LAND MANAGEMENT TECHNICAL WORKING COMMITTEE**

#### **4.1.3 MEETING SCHEDULE**

## **5.0 INVENTORY OF EXISTING ENVIRONMENTAL RESOURCES**

---

**5.1 GEOLOGY AND SOILS**

**5.2 WATER QUALITY**

**5.3 AQUATIC RESOURCES**

**5.4 TERRESTRIAL RESOURCES**

**5.5 CULTURAL RESOURCES**

**5.6 LAND USE AND AESTHETICS**

**5.7 RECREATION FACILITIES AND USE**

## **6.0 LAND USE CLASSIFICATIONS**

---

*[Identify and define the various land use classifications ]*

- 6.1 FOREST MANAGEMENT**
- 6.2 PUBLIC RECREATION**
- 6.3 NATURAL AREAS**
- 6.4 PROJECT OPERATIONS**
- 6.5 WILDLIFE CONSERVATION AREA**
- 6.6 DOCK EXCLUSION AREA**
- 6.7 DOCK APPROVAL AREA**
- 6.8 ISLANDS**

## **7.0 LAND USE PRESCRIPTIONS**

---

*[Discuss the land management prescriptions, as administered through the permitting handbook, and the guiding principles regarding the management of SCE&G-owned lands within each classification]*

### **7.1 FOREST MANAGEMENT PRESCRIPTIONS**

### **7.2 PUBLIC RECREATION PRESCRIPTIONS**

### **7.3 NATURAL AREAS PRESCRIPTIONS**

### **7.4 PROJECT OPERATIONS PRESCRIPTIONS**

### **7.5 WILDLIFE CONSERVATION AREA PRESCRIPTIONS**

### **7.6 DOCK EXCLUSION AREA PRESCRIPTIONS**

### **7.7 DOCK APPROVAL AREA PRESCRIPTIONS**

### **7.8 ISLANDS PRESCRIPTIONS**

## **8.0 ACTIVITIES AND STRUCTURES NOT ALLOWED WITHOUT SCE&G APPROVAL**

---

[Discuss the activities and structures requiring approval through SCE&G's permitting program]

### **8.1 PERMITTED SHORELINE STRUCTURES**

### **8.2 PERMITTED ACTIVITIES**



## **9.0 EVALUATION PROCESS FOR NEW SHORELINE ACTIVITIES OR STRUCTURES**

---

### **9.1 LAND MANAGEMENT CLASSIFICATION OF PROPOSED PROJECT LOCATION**

### **9.2 ALLOWABLE AND PROHIBITED FACILITIES AND USES FOR PROPOSED PROJECT LOCATION**

### **9.3 SHORELINE PERMITTING PROCEDURES**

#### **9.3.1 LIMITED BRUSHING ABOVE HIGH WATER MARK OR IN BUFFER ZONES**

#### **9.3.2 WOODY DEBRIS & STUMP MANAGEMENT**

#### **9.3.3 WATER WITHDRAWALS**

#### **9.3.4 SHORELINE STABILIZATION**

#### **9.3.5 DOCKS**

#### **9.3.6 BOAT LIFTS**

## **10.0 SCE&G PERMITTING FEE POLICIES**

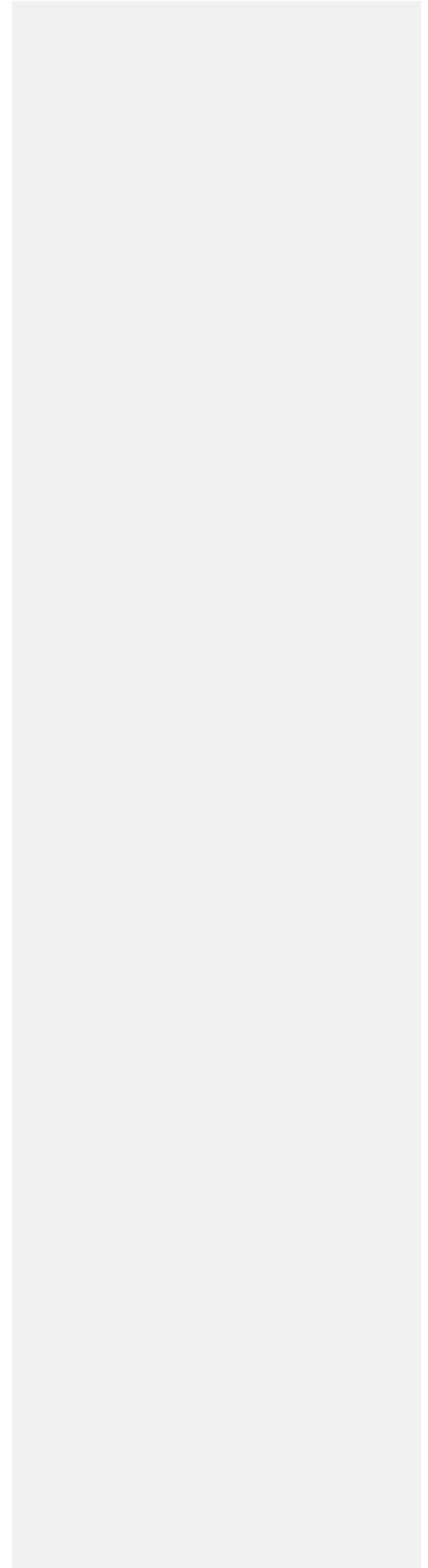
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*[FERC allows SCE&G the right to charge a reasonable fee to cover the costs of administering the Shoreline Permitting Program. Discussion of any fee policies and public notice of changes in fee policies will be included within this section]*

**11.0 ENFORCEMENT OF SHORELINE MANAGEMENT PLAN**

---

**11.1 VIOLATIONS OF SHORELINE MANAGEMENT PLAN**



## **12.0 SHORELINE MANAGEMENT PRACTICES**

---

*[Discussion of programs promoted by SCE&G to protect and improve the Project shorelines through the use of Shoreline Management Practices]*

### **12.1 SCE&G SHORELINE MANAGEMENT PRACTICES**

#### **12.1.1 FOREST MANAGEMENT BEST MANAGEMENT PRACTICES**

#### **12.1.2 SHORELINE PERMITTING PROGRAM**

#### **12.1.3 EROSION CONTROL**

#### **12.1.4 RE-VEGETATION OF DISTURBED AREAS**

#### **12.1.5 SHORELINE ENHANCEMENT PROGRAM**

#### **12.1.6 AQUATIC PLANT MANAGEMENT ACTIVITIES**

### **12.2 RECOMMENDED LAND OWNER SHORELINE MANAGEMENT PRACTICES**

#### **12.2.1 MINIMIZING NON-POINT SOURCE POLLUTION**

#### **12.2.2 VEGETATION MANAGEMENT**

## **13.0 PUBLIC EDUCATION AND OUTREACH**

---

**13.1 SHORELINE MANAGEMENT PLAN EDUCATION**

**13.2 SHORELINE MANAGEMENT PRACTICES EDUCATION**

**13.3 BACKYARD HABITAT PROGRAMS**

**13.4 PUBLIC ACCESS AREA MAPS**

**13.5 PUBLIC SERVICE ANNOUNCEMENTS**

**13.6 SAFETY PROGRAMS**

## **14.0 MONITORING AND REVIEW PROCESS**

---

*[Discussion of GIS, or other methods by which SCE&G will monitor changes in land use over time. Also, discuss the recommended SMP review cycle and any changes to the review cycle]*

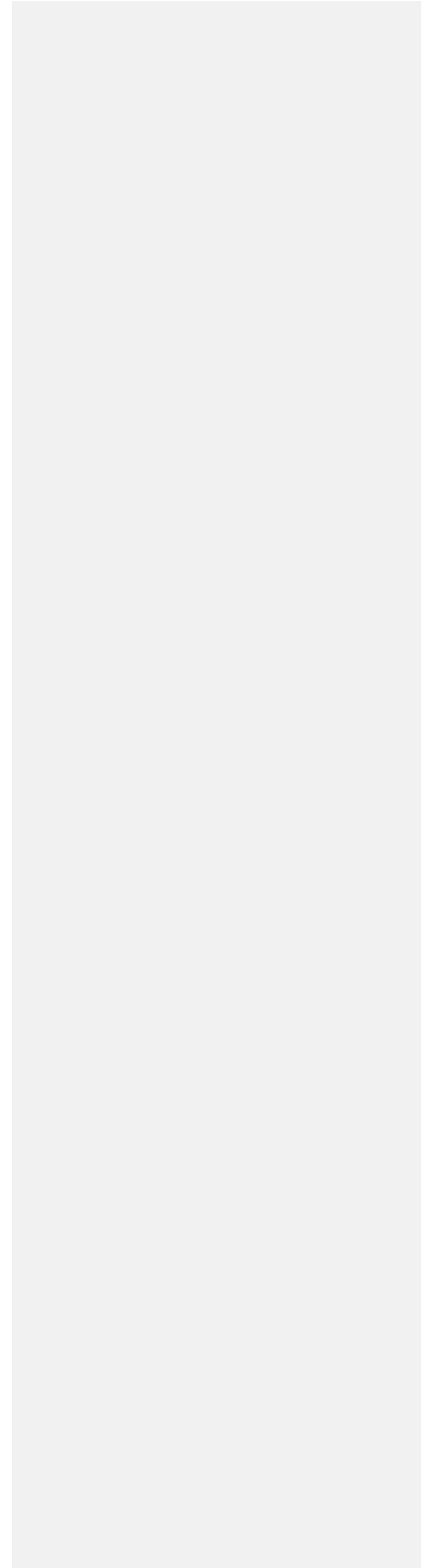
### **14.1 OVERALL LAND USE MONITORING**

### **14.2 REVIEW PROCESS**

## 15.0 REFERENCES

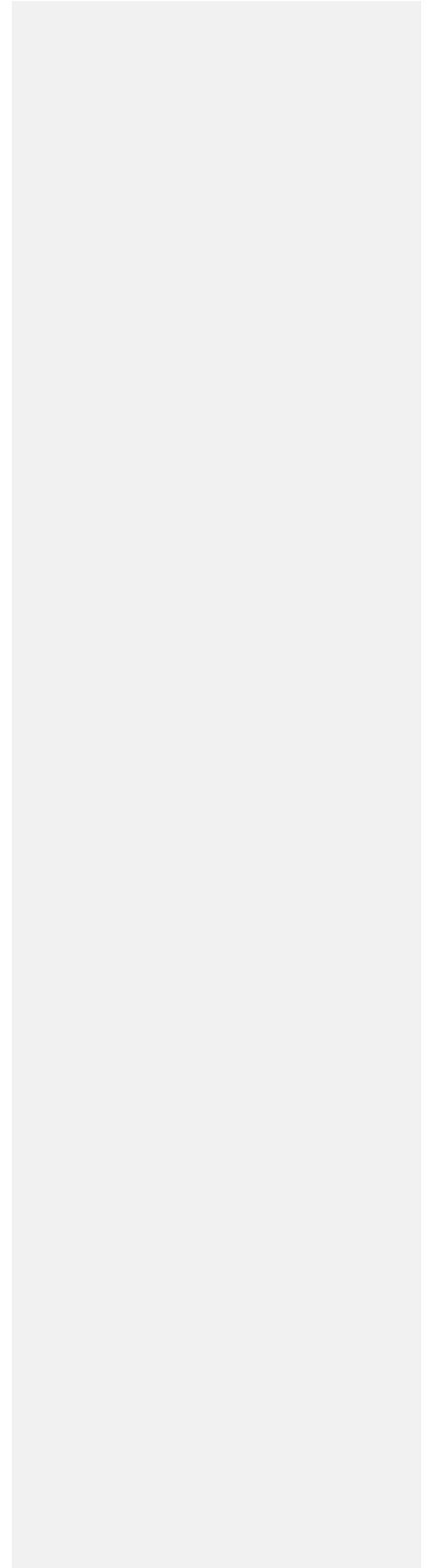
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**APPENDIX A**  
**WOODY DEBRIS MANAGEMENT PLAN**

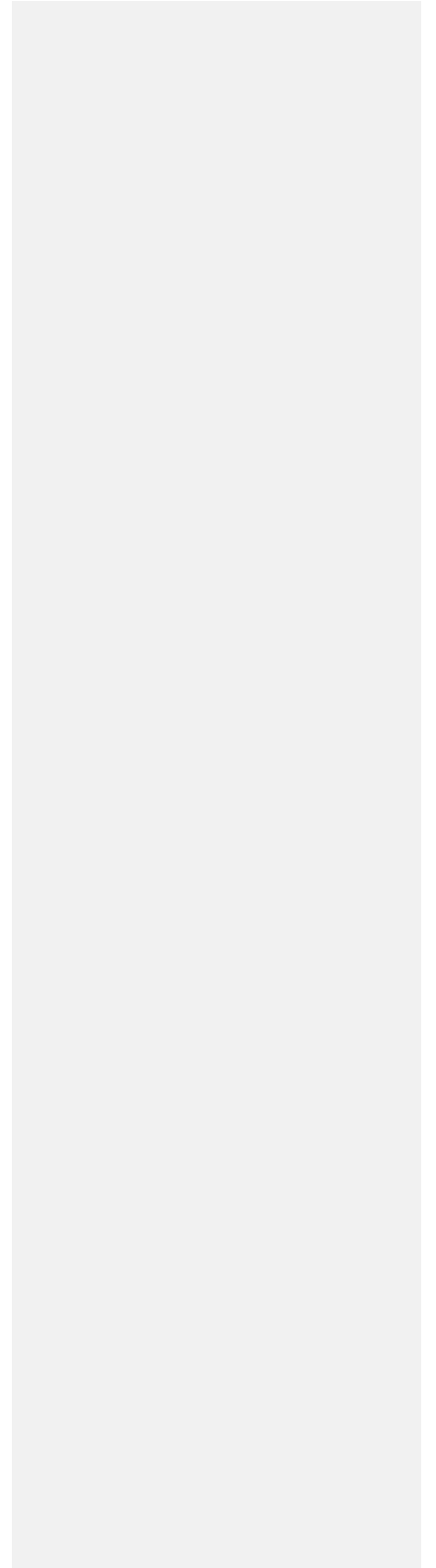




**APPENDIX B**  
**BUFFER ZONE MANAGEMENT PLAN**



**APPENDIX C**  
**SEDIMENTATION AND EROSION CONTROL PLAN**





# **PARR HYDROELECTRIC PROJECT**

**(FERC No. 1894)**

## **SHORELINE MANAGEMENT PLAN MONTICELLO RESERVOIR**

**DRAFT**

*Prepared for:*

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Cayce, South Carolina**

*Prepared by:*

**Kleinschmidt**

Lexington, South Carolina  
[www.KleinschmidtUSA.com](http://www.KleinschmidtUSA.com)

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Cayce, South Carolina

*Prepared by:*

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Lexington, South Carolina  
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MONTICELLO RESERVOIR**

**DRAFT**

**SOUTH CAROLINA ELECTRIC & GAS COMPANY**

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(FERC No. 1894)**

**SHORELINE MANAGEMENT PLAN  
MONTICELLO RESERVOIR**

**DRAFT**

**SOUTH CAROLINA ELECTRIC & GAS COMPANY**

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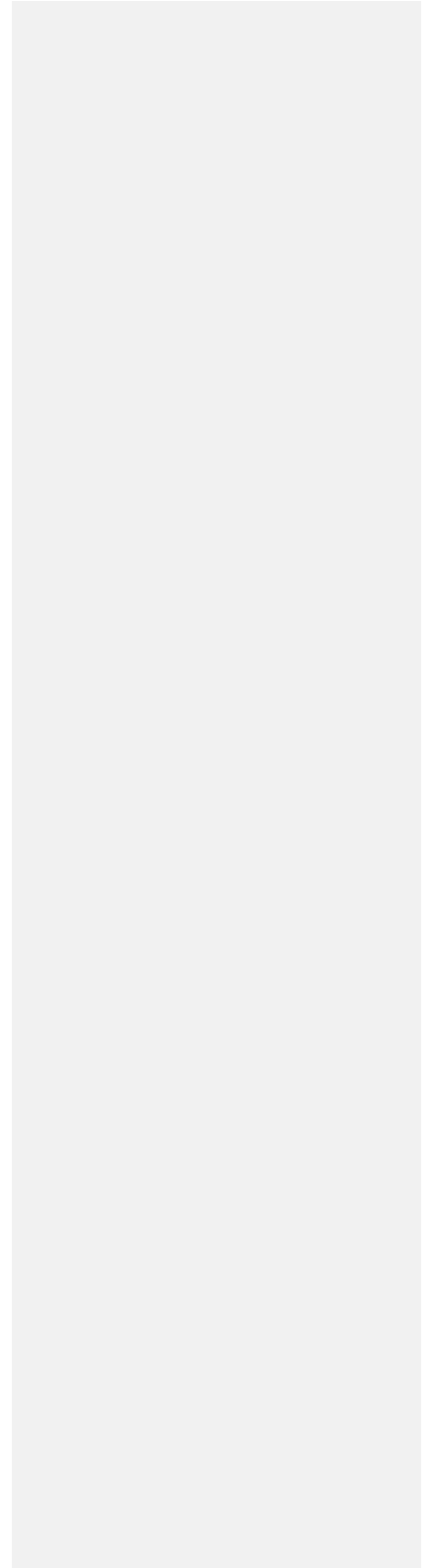
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**Comment [b1]:** Reorganize, move Docks to top of list in Section 9.

**Comment [b2]:** Sections 6 and 7 - Reorder as appropriate

**Comment [b3]:** Revise or remove pages and appendices that follow.

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(FERC NO. 1894)**

**SHORELINE MANAGEMENT PLAN  
MONTICELLO RESERVOIR**

**DRAFT**

**SOUTH CAROLINA ELECTRIC & GAS COMPANY**

***EXECUTIVE SUMMARY***

*[Summarize the purpose of the SMP, goals and objectives of the SMP, brief description of project purpose and project history and operations, a brief description of shoreline classifications, brief description of the types of permitted uses]*

## 1.0 INTRODUCTION

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*[General Project Details and History of the Shoreline Management Plan. Include an updated Map of the Project]*

## **2.0 PURPOSE AND SCOPE OF THE SHORELINE MANAGEMENT PLAN**

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*[Discuss the purpose of the SMP and balance that it assists in providing between developmental, recreational and environmental issues]*

### **3.0 HISTORY OF THE SHORELINE MANAGEMENT PLAN**

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*[Include discussion on the history of the Project and a discussion of the history of development surrounding the Project. Also discuss FERC approval of the current SMP.]*

#### **3.1 CURRENT SMP DOCUMENT AND SHORELINE CLASSIFICATIONS**

#### **3.2 PROJECT BOUNDARY**

#### **3.3 ACREAGE OF PROJECT LANDS**

## **4.0 SHORELINE MANAGEMENT PLAN GOALS AND OBJECTIVES**

*[Discuss specific goals related to the relicensing process, and consultation that has taken place]*

### **4.1 CONSULTATION**

#### **4.1.1 RECREATION/LAKE AND LAND MANAGEMENT RESOURCE CONSERVATION GROUP**

#### **4.1.2 LAKE AND LAND MANAGEMENT TECHNICAL WORKING COMMITTEE**

#### **4.1.3 MEETING SCHEDULES**

## **5.0 INVENTORY OF ENVIRONMENTAL RESOURCES**

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**5.1 GEOLOGY AND SOILS**

**5.2 WATER QUALITY**

**5.3 AQUATIC RESOURCES**

**5.4 TERRESTRIAL RESOURCES**

**5.5 CULTURAL RESOURCES**

**5.6 LAND USE AND AESTHETICS**

**5.7 RECREATION FACILITIES AND USE**



## **6.0 LAND USE CLASSIFICATIONS**

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*[Identify and define the various land use classifications ]*

- 6.1 FOREST MANAGEMENT**
- 6.2 PUBLIC RECREATION**
- 6.3 NUCLEAR EXCLUSION ZONE**
- 6.4 NATURAL AREAS**
- 6.5 PROJECT OPERATIONS**
- 6.6 WILDLIFE CONSERVATION AREA**
- 6.7 DOCK EXCLUSION AREA**
- 6.8 DOCK APPROVAL AREA**
- 6.9 ISLANDS**
- 6.10 RECREATION LAKE**

## **7.0 LAND USE PRESCRIPTIONS**

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*[Discuss the land management prescriptions, as administered through the permitting handbook, and the guiding principles regarding the management of SCE&G-owned lands within each classification]*

- 7.1 FOREST MANAGEMENT PRESCRIPTIONS**
- 7.2 PUBLIC RECREATION PRESCRIPTIONS**
- 7.3 NUCLEAR EXCLUSION ZONE PRESCRIPTIONS**
- 7.4 NATURAL AREAS PRESCRIPTIONS**
- 7.5 PROJECT OPERATIONS PRESCRIPTIONS**
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- 7.8 DOCK APPROVAL AREA PRESCRIPTIONS**
- 7.9 ISLANDS PRESCRIPTIONS**
- 7.10 RECREATION LAKE PRESCRIPTIONS**

## **8.0 ACTIVITIES AND STRUCTURES NOT ALLOWED WITHOUT SCE&G APPROVAL**

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[Discuss the activities and structures requiring approval through SCE&G's permitting program]

### **8.1 PERMITTED SHORELINE STRUCTURES**

### **8.2 PERMITTED ACTIVITIES**

## **9.0 EVALUATION PROCESS FOR NEW SHORELINE ACTIVITIES OR STRUCTURES**

---

### **9.1 LAND MANAGEMENT CLASSIFICATION OF PROPOSED PROJECT LOCATION**

### **9.2 ALLOWABLE AND PROHIBITED FACILITIES AND USES FOR PROPOSED PROJECT LOCATION**

### **9.3 SHORELINE PERMITTING PROCEDURES**

#### **9.3.1 LIMITED BRUSHING ABOVE HIGH WATER MARK OR IN BUFFER ZONES**

#### **9.3.2 WOODY DEBRIS & STUMP MANAGEMENT**

#### **9.3.3 WATER WITHDRAWALS**

#### **9.3.4 SHORELINE STABILIZATION**

#### **9.3.5 DOCKS**

#### **9.3.6 BOAT LIFTS**

## **10.0 SCE&G PERMITTING FEE POLICIES**

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*[FERC allows SCE&G the right to charge a reasonable fee to cover the costs of administering the Shoreline Permitting Program. Discussion of any fee policies and public notice of changes in fee policies will be included within this section]*

## **11.0 ENFORCEMENT OF SHORELINE MANAGEMENT PLAN**

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### **11.1 VIOLATIONS OF SHORELINE MANAGEMENT PLAN**

## **12.0 SHORELINE MANAGEMENT PRACTICES**

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*[Discussion of programs promoted by SCE&G to protect and improve the Project shorelines through the use of Shoreline Management Practices]*

### **12.1 SCE&G SHORELINE MANAGEMENT PRACTICES**

#### **12.1.1 FOREST MANAGEMENT SHORELINE MANAGEMENT PRACTICES**

#### **12.1.2 SHORELINE PERMITTING PROGRAM**

#### **12.1.3 EROSION CONTROL**

#### **12.1.4 RE-VEGETATION OF DISTURBED AREAS**

#### **12.1.5 SHORELINE ENHANCEMENT PROGRAM**

#### **12.1.6 AQUATIC PLANT MANAGEMENT ACTIVITIES**

### **12.2 RECOMMENDED LAND OWNER SHORELINE MANAGEMENT PRACTICES**

#### **12.2.1 MINIMIZING NON-POINT SOURCE POLLUTION**

#### **12.2.2 VEGETATION MANAGEMENT**

## **13.0 PUBLIC EDUCATION AND OUTREACH**

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**13.1 SHORELINE MANAGEMENT PLAN EDUCATION**

**13.2 SHORELINE MANAGEMENT PRACTICES EDUCATION**

**13.3 BACKYARD HABITAT PROGRAMS**

**13.4 PUBLIC ACCESS AREA MAPS**

**13.5 PUBLIC SERVICE ANNOUNCEMENTS**

**13.6 SAFETY PROGRAMS**



## **14.0 MONITORING AND REVIEW PROCESS**

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*[Discussion of GIS, or other methods by which SCE&G will monitor changes in land use over time. Also, discuss the recommended SMP review cycle and any changes to the review cycle]*

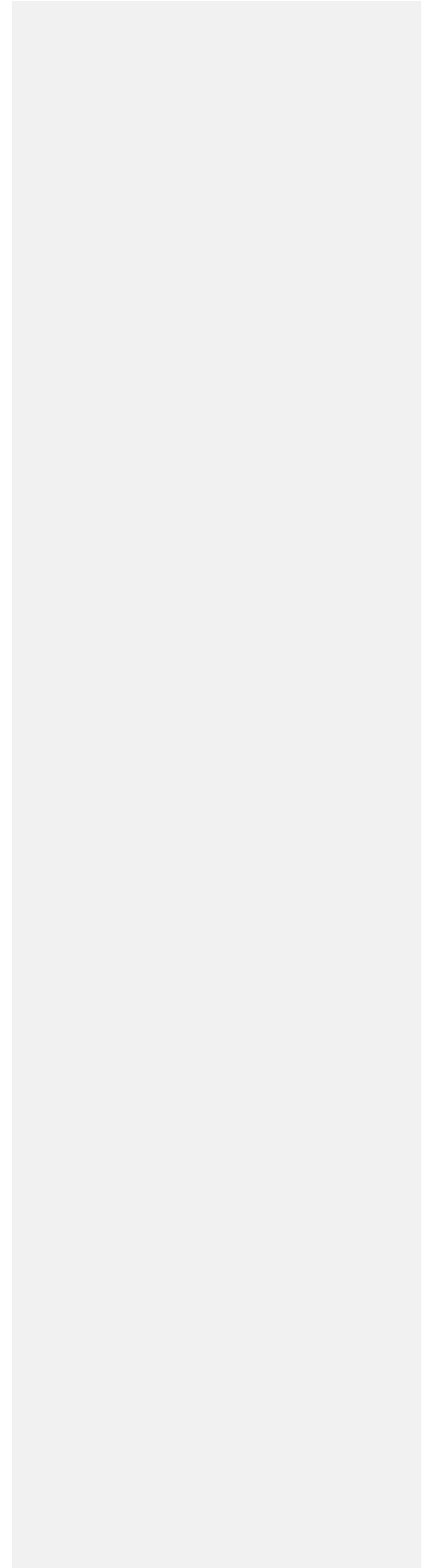
### **14.1 OVERALL LAND USE MONITORING**

### **14.2 REVIEW PROCESS**

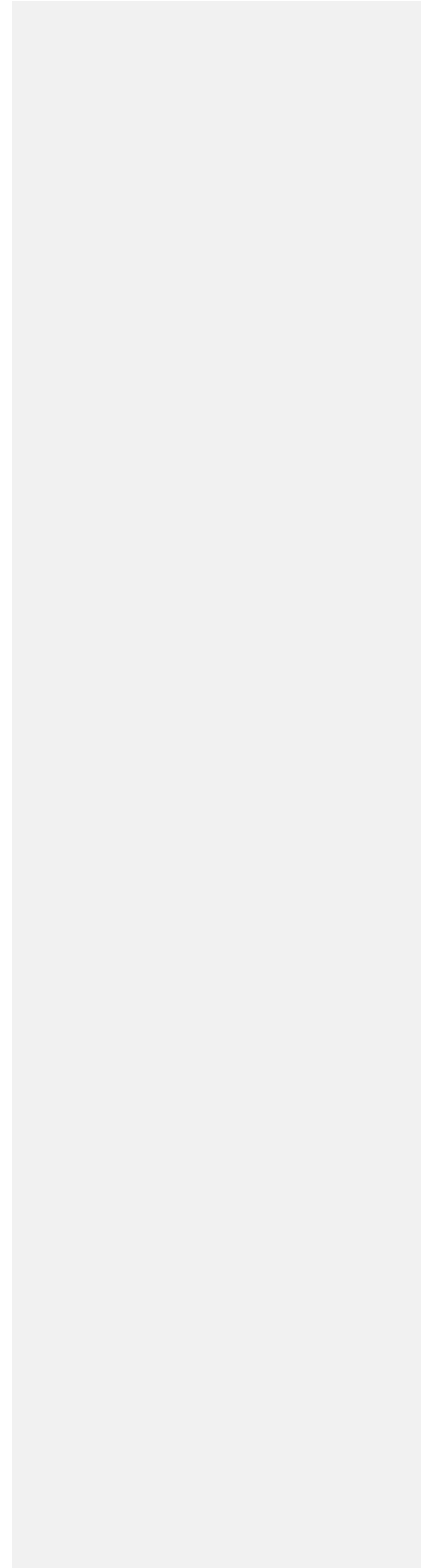
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**WOODY DEBRIS MANAGEMENT PLAN**



**APPENDIX B**  
**BUFFER ZONE MANAGEMENT PLAN**



**APPENDIX C**  
**SEDIMENTATION AND EROSION CONTROL PLAN**

