

RECREATION USE AND NEEDS STUDY REPORT

PARR HYDROELECTRIC PROJECT

(FERC No. 1894)

Prepared for:

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

Prepared by:

Kleinschmidt

Lexington, South Carolina
www.KleinschmidtGroup.com

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SOUTH CAROLINA ELECTRIC & GAS COMPANY

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RECREATION USE AND NEEDS STUDY REPORT

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 Shoals Development (“Parr Development”) and the Fairfield Pumped Storage Development (“Fairfield Development”). Both Developments are located along the Broad River in Fairfield and Newberry counties, South Carolina.

The Parr Development creates the Parr Reservoir along the Broad River. The Development consists of a 37-foot-high, 200-foot-long concrete gravity spillway dam with a powerhouse and generating units with a combined licensed capacity of 14.9 MW. The Parr Development 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. Recreation opportunities at Parr Reservoir include hunting, boating, fishing, hiking and picnicking opportunities.

The Fairfield Development is located directly off of the Broad River and forms the 6,800-acre Monticello Reservoir, with four earthen dams. Monticello Reservoir serves as the upper reservoir and, 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. Recreation opportunities at Monticello Reservoir include hunting, boating, fishing, camping, hiking and picnicking opportunities.

In addition to the Monticello and Parr Reservoirs, the Recreation Lake, which was constructed by SCE&G solely for recreational use, is located adjacent to Monticello Reservoir and has a surface area of 300 acres. The Recreation Lake is maintained at a stable water level and is not affected by the operation of the pumped storage facility. The Recreation Lake encompasses approximately 10.2 miles of shoreline and offers opportunities for fishing and picnicking.

Approximately 9,000 acres of land and water within the Project are part of the statewide Wildlife Management Area (“WMA”) Program, managed by the South Carolina Department of Natural Resources (“SCDNR”) (SCE&G, 2002).

1.1 STUDY PURPOSE AND OBJECTIVES

South Carolina Electric & Gas is currently in the process of obtaining a new federal operating license for the Project from the Federal Energy Regulatory Commission (“FERC”). This process 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 (“NGOs”), and interested individuals. SCE&G has established several Resource Conservation Groups (“RCGs”) and Technical Working Committees (“TWCs”) composed of 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 part of this process, SCE&G performed an assessment of existing and future recreational use, opportunities, and needs for the Project. The assessment was designed to collect and provide information pertinent to the current and future availability and adequacy of SCE&G owned and managed recreation sites as well as specific informal recreation areas at Monticello Reservoir and Parr Reservoir. The overall study objective was 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 was accomplished by focusing on the following objectives:

- i. Identifying recreation points, inventorying the services and facilities offered at each, and assessing the general condition of each site, including whether the site provides barrier free access.
- ii. Identifying the patterns of recreation 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 was accomplished by focusing on the following objectives:

- i. Identifying the patterns of recreation 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 was accomplished by focusing on the following objectives:*

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

1.2 STUDY DEVELOPMENT AND CONSULTATION

Preceding submittal of the Pre-Application Document (“PAD”) for the Project, stakeholders requested additional information on the Project through the implementation of several studies, one of which was a Recreation Use and Needs Study (“RUNS”). At a meeting with the Lake and Land Management and Recreation RCG on October 16, 2013, stakeholders discussed the proposed draft RUNS Study Plan. The study plan was revised based on comments received at that meeting, and a finalized study plan was filed with the PAD on January 5, 2015. A copy of the study plan, along with meeting notes from the RCG meetings on February 19, 2013, and October 16, 2013, are included in Appendix A. This RUNS report provides the results of the study.

2.0 METHODOLOGY

This section describes data collection and analysis efforts used for this study. Data collection focused on obtaining information related to existing public recreation sites and facilities owned by SCE&G¹, estimating recreational use of those sites, and learning recreation user perceptions and site capacities. Analysis was performed to support study objectives, to characterize existing and potential future recreational use at SCE&G’s public access sites, and to assess future requirements necessary to support adequately, public recreational use of the Project resources.

2.1 STUDY AREA

Eleven recreation sites and informal recreation areas on Monticello Reservoir and Parr Reservoir were included in this assessment, with five on Monticello Reservoir and five on Parr Reservoir, and one, Enoree River Bridge Informal Access Area, upstream of Parr Reservoir and outside of the Project boundary. Table 1 summarizes the sites for which data was collected at each reservoir, which sites are considered Project recreation facilities, and the general type of data collected at each site. More specific and detailed descriptions of the data collection methods are provided in the following section. Figure 1 identifies the location of each recreation site for Monticello Reservoir and Parr Reservoir included in this study.

TABLE 1 RECREATION SITES ASSESSED

Recreation Sites and Informal Areas	Parr Project Facility	Site Inventory	Vehicle Counts	Exit Interviews	Mail-in Surveys	Spot Counts
Monticello Reservoir						
Scenic Overlook (SCE&G-maintained portion)	●	●	●	●		●
Highway 215 Boat Ramp	●	●	●	●	●	●
Highway 99 Boat Ramp	●	●	●	●	●	●
Recreation Lake Access Area	●	●	●	●		●
Highway 99 Informal Fishing Area	●	●	●	●		●
Parr Reservoir						
Cannon’s Creek Public Access Area	●	●	●	●	●	●

¹ At the request of the RCG, the RUNS also assessed recreation use at the Enoree River Bridge Informal Access Area, which is outside of the Project Boundary, and the Enoree and Broad River Waterfowl Areas which are within the Project boundary, but managed by South Carolina Department of Natural Resources.

Recreation Sites and Informal Areas	Parr Project Facility	Site Inventory	Vehicle Counts	Exit Interviews	Mail-in Surveys	Spot Counts
Heller's Creek Public Access Area	●	●	●	●	●	●
Highway 34 Primitive Ramp	●	●	●			
Broad River Waterfowl Area		●				
Enoree River Waterfowl Area		●	●		●	
Enoree River Bridge Informal Access Area		●	●			

2.2 DATA COLLECTION

A variety of data collection techniques were used to obtain the information necessary to meet the study objectives. Table 2 identifies the information collected to address each objective as well as the data collection methods. Primary data collection included site inventories, user counts, and use surveys (exit interviews). Secondary data included information from the U.S. Bureau of Census data, the South Carolina Statewide Comprehensive Outdoor Recreation Plan (SCORP), the South Carolina Recreation Participation & Preference Study, data provided by the South Carolina Department of Natural Resources (“SCDNR”) and other relevant, readily available literature. Additional input was obtained from the Lake & Land Management and Recreation RCG, Recreation TWC, and target "focus groups" offering “in the field” knowledge of the recreation resources and needs of the lake and river.

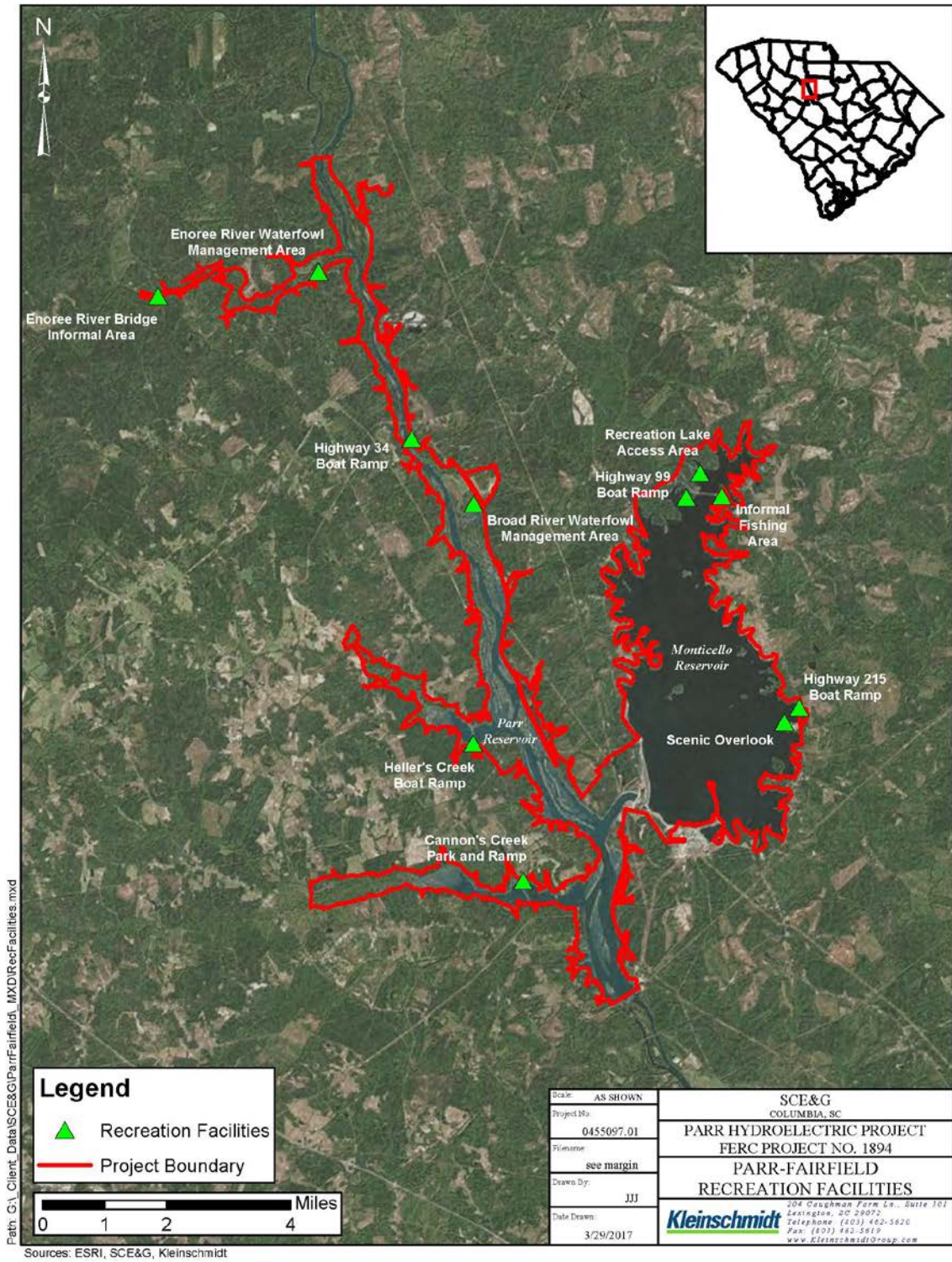


FIGURE 1 RECREATION FACILITIES AT PARR PROJECT

TABLE 2 RECREATION USE AND NEEDS STUDY 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"> • Physical inventory of all boat ramps, grills, shelters, restrooms, parking capacity, etc., at each site • General assessment of site condition to include maintenance, basic rehabilitation needs, etc. • Visitors’ assessment of site conditions • Identification of activities that occur at each site • ADA compliance assessment 	<ul style="list-style-type: none"> • Recreation Site Inventory • Survey of Recreation Site Users
Identify the patterns of use at each site (type, volume, and daily patterns of use)	<ul style="list-style-type: none"> • Utilize vehicle counts as an estimation of people • Estimate of number people/vehicle • Estimate of number vehicles/site • Parking capacity 	<ul style="list-style-type: none"> • Traffic Counter Data • Surveyor Counts of Vehicles at Recreation Sites • Survey of Recreation Site Users - number of people per vehicle and length of visit • Recreation Site Inventory - number of parking spaces • County data from Scenic Overlook
<i>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.</i>		
Identify the patterns of use within the Project boundary (type, volume, and daily/seasonal patterns of use).	<ul style="list-style-type: none"> • Estimate number of hunters/site or waterfowl area 	<ul style="list-style-type: none"> • Counts of Vehicles at Recreation Sites/waterfowl areas • Mail-in questionnaire specific to hunting use at the Project • SCDNR waterfowl use data • SCDNR hunting permit data

TABLE 2 RECREATION USE AND NEEDS STUDY OBJECTIVES AND EFFORTS (CONTINUED)

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"> • User preferences and opinions of needs and crowding at sites • Condition assessment 	<ul style="list-style-type: none"> • Survey of Recreation Site Users • Recreation Site Inventory
Estimate future recreational use of existing recreation sites	<ul style="list-style-type: none"> • Current inventory and use data from Goals 1 and 2 • Population projections for the project area • Recreational use trends 	<ul style="list-style-type: none"> • Results of Goals 1 and 2 • U.S. Bureau of Census Data • SC Division of Research & Statistics (Budget and Control Board) • SCORP, SC Recreation Participation & Preference Study, or other readily available literature
Identify future needs for new recreation sites and facilities	<ul style="list-style-type: none"> • Population projections • Recreation use trends • "focus group" (stakeholders) knowledge of recreation resources and needs 	<ul style="list-style-type: none"> • SC Div. of Research & Statistics • SCORP, SC Recreation Participation & Preference Study, Palmetto Conservation Foundation trail use data, or other literature • Recreation TWC and Lake and Land Management & Recreation RCG

2.2.1 STUDY SEASON

Primary interview activities occurred during the April 1 through September 7 (Labor Day), 2015 period. Additional interviews were conducted from February 1 through March 31, 2016, on the Monticello Reservoir in order to capture recreational activity on the reservoir during early crappie season. Specific targeted survey activities with mail-in surveys were implemented at both reservoirs during the migratory waterfowl seasons, including the Canada geese hunting season. The 2015 and 2016 waterfowl seasons extended as follows:

- September 1- September 30, 2015: Early Canada Geese Season
- September 11- September 26, 2015: Early Teal Season
- November 21- November 28, 2015, December 12, 2015 - January 31, 2016: Duck and Canada Geese Seasons
- February 14- February 29, 2016: Canada Geese Season

2.2.2 RECREATION SITE INVENTORY

Site inventories were completed at recreation sites on Monticello and Parr Reservoirs (see Table 1). Data on the types of activities supported, parking capacity, the type, number, and size of facilities (bathhouses/restrooms, boat ramps, picnic shelters and tables, etc.) were collected for each location.

2.2.3 VEHICLE COUNTS

Traffic counters were installed to record the number of vehicles entering and exiting the public recreation areas. Vehicle counts were conducted at ten² study sites during the recreation season and at the five Monticello Reservoir recreation sites during the crappie season. The data collected was summarized by day type (weekdays, weekends, and holidays) for each site location. The traffic counters were configured to divide the number of vehicles counted by two, in order to account for the same vehicle entering and exiting the recreation site. Two access areas on Monticello Reservoir have two separate entrance/exit locations: the Highway 99 Informal Fishing Area, and the Highway 215 Boat Ramp. A traffic counter was installed at each entrance/exit location in order to count all vehicles entering or exiting the site. Vehicle counts provided by each counter were divided by two, consistent with the other recreation sites.

² After communication with SCDNR, a vehicle counter was not placed at the Broad River Waterfowl Management Area, as it is a draw-hunt site and SCDNR is well-apprised of use at that site.

Additionally, the vehicle counts for both entrances/exits were added together to account for total vehicle use at that site.

2.2.4 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 was obtained via onsite exit interviews during the prime recreation season at both the Monticello and Parr Reservoirs during April 1 through September 7 (Labor Day), 2015. In addition, exit interviews were conducted during the crappie fishing seasons from February 1 through March 31, 2016, on Monticello Reservoir.

The surveys were designed to collect user characteristics (origin, gender, age, number of people per vehicle, total group size, etc.), the type of land-based and water-based recreation activities being participated in, length of stay, perceptions of crowdedness, conditions of recreation sites, and additional recreation facility needs at the Project. Exit interviews were conducted at all five of the Monticello Reservoir sites, and at the Parr Reservoir, Cannon's Creek and Heller's Creek Public Access Areas. Surveys were not conducted at the remaining Parr Reservoir sites due to the seasonal usage of these areas or the rural and informal nature of these areas.

Two survey versions were implemented, one for Monticello Reservoir and one for Parr Reservoir. The two survey versions were similar to each other and contained similar questions (see Appendix A). The survey was pre-tested in the field, prior to implementation. All survey clerks were trained as a means of quality control and were provided detailed information on the study purpose, schedule, data collection protocols and data sheet chain of custody, and direction on appropriate interviewing techniques and attire. Clerks were monitored regularly during the entire study period.

A sampling plan was prepared in consultation with the TWC utilizing stratified random sampling to target conducting at least 30 days of interviewing at each recreation site. Sampling days included weekends, weekdays and holidays. Weekends were sampled at a greater rate than weekdays to account for the heavier use that typically occurs during those periods. All major national holidays that fell within the recreation season were included in the sampling plan (see Table 3).

**TABLE 3 LIST OF HOLIDAYS INCLUDED IN THE 2015 RUNS
EXIT INTERVIEW SAMPLING PLAN**

Date	Holiday
May 23, 2015	Saturday before Memorial Day
May 24, 2015	Sunday before Memorial Day
May 25, 2015	Memorial Day
July 3, 2015	Friday before Independence Day
July 4, 2015	Independence Day
July 5, 2015	Sunday after Independence Day
September 5, 2015	Saturday before Labor Day
September 6, 2015	Sunday before Labor Day
September 7, 2015	Labor Day

A total of 710 surveys were distributed at the Project area, and a total of 681 useable surveys were completed. Interviewers provided an incentive of a floating keychain for survey respondents to complete the survey. Table 4 provides a summary of the response rates.

TABLE 4 SURVEY RESPONSE RATES

	Monticello Reservoir	Parr Reservoir	Total Project
Total Number Attempted	480	230	710
Individual did not speak English	8	1	9
Refusals	18	2	20
Total Number Completed	454	227	681
Survey Response Rate	95%	99%	96%

2.2.5 SPOT COUNTS

Spot counts were conducted at the public recreation sites where the exit interviews were conducted once per interview period, concurrent with exit interview period. Information recorded during spot counts included: 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 was used in parallel with traffic counter data to document the number of visitors and/or vehicles present at that visit and to characterize site use.

2.2.6 WATERFOWL MANAGEMENT AREAS FOCUS GROUP AND SURVEYS

Waterfowl hunting typically occurs during the fall and winter months outside of the typical recreation season. Waterfowl hunters represent a unique group of users whose preferences and

perceptions may differ from those using recreation sites during the summer months. Therefore, in order to capture the preferences and perceptions of waterfowl hunters a panel of waterfowl hunters were asked to serve as an expert panel, or focus group, to provide information about waterfowl hunting at the Project.

SCE&G, in consultation with stakeholders, formed a Waterfowl Focus Group to aid in gathering this information, and conducted a focus group of waterfowl hunters in December of 2014. The focus group was comprised of 9 individuals, which included unaffiliated waterfowl hunters, Tyger Enoree River Alliance members, and SCDNR representatives. Similar to the recreation survey, the purpose of conducting the focus group of waterfowl hunters was to obtain information about:

- hunting preferences to understand how waterfowl hunters use public access sites and areas in the Project area (identify access sites used, time and locations on the lake where hunting occurs);
- waterfowl hunting seasonal trends and distribution of activities;
- waterfowl hunting Project area preferences and needs to identify perceptions of the adequacy and condition of existing recreation sites and identify needs for additional public access for waterfowl hunting.

In addition to this focus group, mail-in surveys similar to the access site survey were distributed at the Enoree River Waterfowl Area and on Parr and Monticello reservoirs during appropriate waterfowl hunting seasons. On Monticello Reservoir, mail-in surveys were distributed on vehicles parked at the Hwy 215 boat ramp and the Hwy 99 boat ramp during the Canada Geese hunting season. A total of 18 completed surveys were returned, with 6 individuals indicating that they were waterfowl hunting at the time the survey was distributed. On Parr Reservoir, mail-in surveys were distributed on vehicles parked at Heller's and Cannon's Creek Public Access Areas during Early Teal and Duck hunting seasons. A total of 43 completed surveys returned with 40 individuals indicating that they were waterfowl hunting at the time the survey was distributed. Additionally, a survey box was placed at the Enoree River Waterfowl Area containing mail-in surveys. An unknown number of surveys were distributed at that site with only 1 completed survey returned.

2.3 ANALYSIS

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.

2.3.1 CURRENT RECREATIONAL USE ESTIMATES

Estimates of recreation use were developed for weekdays, weekends, and holidays for each public access site at the Monticello and Parr Reservoirs utilizing the traffic counters and recreation site survey data. The reported estimates of recreation are 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 period³. The average number of people at each site within the morning and afternoon periods were estimated within each day type and converted to a daily estimate. Daily estimates for each day type were expanded to represent the study period and summed for a total estimate for each recreation site. Recreational use data at the Enoree River and Broad River waterfowl areas was provided by SCDNR, including annual use estimate and harvest data.

2.3.2 FUTURE RECREATIONAL USE ESTIMATES

Estimated projections of future recreation use at Monticello Reservoir and Parr Reservoir were 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 counties⁴. The estimates were augmented with discussion of trends reported in the SCORP (2014) and the SC Recreation Participation & Preference Study (2005). Estimated projections are 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

³ Recreation use estimates are provided in recreation days, which the Federal Energy Regulatory Commission (FERC) defines as "each visit by a person to a development for recreational purposes during any portion of a 24-hour period." Providing use estimates in this fashion allows for comparisons between sites, as well as between FERC projects around the country.

⁴ 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.

analysis results should be viewed as a general, data supported projection of potential future recreation pressure developed for planning purposes only.

2.3.3 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, capacity was estimated 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 was 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 were based on parking capacity standards for vehicle length, width, and available turn around space.

2.3.4 RECREATION SITE USE DENSITY

The use density of recreation sites was estimated by comparing the estimated peak number of vehicles at the sites during a specific time period with the available parking capacity for the recreation sites. Use densities were calculated for the sites at which a survey clerk was present, as the other necessary data input (i.e. initial spot count and average length of stay) was gathered through clerk data and exit interviews. One weekend day and one week day per month was randomly selected from the sampling period for each site at which a clerk performed exit interviews. Recreation capacity should be considered for typical weekday and weekend use in management and site design decisions. Therefore, holidays were not used to estimate recreation site use density as they are regarded as special circumstances, with use levels that are experienced only a few times a year.

Recreation clerk spot count data was used to determine the amount of vehicles occupying spaces at the start of a shift. The total number of vehicles entering a site per hour during a shift was obtained from traffic counters. The average trip length in hours (from survey results) was used to estimate the length of time vehicles were occupying spaces at each site. For example, if the average length of stay was 3 hours, vehicles entering the site at 1:00 pm were assumed to remain at the site and exit at 4:00 pm. Total hourly vehicle counts from the initial spot count and from traffic counters were then estimated for each hour during the selected sample day for each site. The maximum number of vehicles at the site at a given time (peak hour) was then derived from

the totals. The maximum number of vehicles was then divided by the parking capacity to provide an estimated use density for each site.

It should be noted that use density should be considered an *over-estimate*, as traffic counter data also includes those individuals that drive through the site, but do not stay to recreate. Moreover, vehicles observed by clerks performing initial spot counts at the beginning of their shift were assumed to have stayed for the entire average length of stay estimated for the site. Therefore, this should also be considered an over-estimate as these vehicles may have departed soon after the initial count.

An example of how this analysis was performed is shown in Table 5, and explained as follows. Fictitious numbers are used for this explanation. Suppose a recreation site had 250 parking spaces, and survey results show that people using that site spent an average of 3 hours there. Initial spot count data indicated that there were 24 vehicles parked at the site when the clerk arrived. If 56 vehicles arrive from 7:00 to 8:00 AM, 50 arrive from 8:00 AM to 9:00 AM, and 64 arrive from 9:00 AM to 10:00 AM, then the parking area would be at 78 percent capacity until the first vehicle departed around 10:00 AM. If 56 additional vehicles arrive before 10:00 AM, then there may not be enough parking spaces (capacity) to accommodate demand (number of vehicles).

TABLE 5 HYPOTHETICAL CALCULATION OF ESTIMATED AVERAGE DEMAND FOR PARKING SPACES

Methods	Example Calculation
On average, length of time that individuals spend at the recreation site	Average Length of Stay 3 hours
Vehicle counts by hour from spot count and traffic counter for recreation clerk shift	Initial Spot Count: 24 at 7 AM (assume vehicles stay the 3 hour length of stay) 56 vehicles traffic counter from 7:00 AM to 8:00 AM 50 vehicles traffic counter from 8:00 AM to 9:00 AM 64 vehicles traffic counter from 9:00 AM to 10:00 AM 48 vehicles traffic counter from 10:00 AM to 11:00 AM 62 vehicles traffic counter from 11:00 AM to 12:00 PM 50 vehicles traffic counter from 12:00 PM to 1:00 PM
Vehicle counts are summed across the average length of stay	Vehicles at the site from 7:00 AM to 10:00 AM = $24+56+50+64=194$ Vehicles at the site from 8:00 AM to 11:00 AM = $50+64+48=162$ Vehicles at the site from 9:00 AM to 12:00 PM = $64+48+62=174$ Vehicles at the site from 10:00 AM to 1:00 PM = $48+62+50=160$ Vehicles at the site from 11:00 AM to 2:00 PM = $62+50+50=162$ Vehicles at the site from 12:00 AM to 3:00 PM = $50+50+50=150$ Vehicles begin departing at 10:00 AM, resulting in a maximum estimate of 194 vehicles at the recreation site.
Ratio of maximum vehicles at site to parking capacity	Site parking capacity = 250 spaces Maximum vehicles = 194 Capacity at which the site is used = $194/250 = 78\%$

2.3.5 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, whether a particular site provides "barrier free" access, 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 and facilities will be determined through assessment of the information collected and summarized within this report and the input of stakeholders on the Recreation and Lake & Land Management RCG. Final protection mitigation and enhancement measures relating to recreation resources will be included in a Settlement Agreement and proposed Recreation Management Plan.

3.0 RECREATION RESOURCES

This section provides an overview of regional recreational resources available in the Project vicinity. Additionally, detailed information is summarized regarding the recreation facilities located at Parr and Monticello reservoirs included in this study.

3.1 REGIONAL RECREATION RESOURCES

The Project is located within Newberry and Fairfield Counties and situated in the Piedmont Region of South Carolina. The Piedmont Region is the largest geographic region in the State and is home to Kings Mountain National Military Park, Sumter National Forest, and major tourist attractions such as Lake Keowee, Lake Hartwell, Lake Wylie, the Catawba River, and the Saluda River (StudySC.org, 2014). The Project is not located on a designated wild and scenic river segment. In addition, no Project lands are being considered for inclusion in the National Trails System or as a Wilderness Area.

Regionally and nationally recognized recreation opportunities within the Project vicinity include Dreher Island State Park, Chester State Park, Kings Mountain National Military Park, Sumter National Forest, Lake Greenwood State Park, and Lake Wateree State Park. These areas provide opportunities for hunting, boating, fishing, hiking, picnicking, swimming, and camping in the Project vicinity (StudySC.org, 2014).

Sumter National Forest is a 371,000-acre national forest providing walking, riding, and camping opportunities. Lake Greenwood State Park provides access to the 11,400-acre Lake Greenwood along the southwestern border of Newberry County with several miles of shoreline and public access. Lake Wateree State Park is a 72-acre state park containing outdoor and water-oriented facilities, a campground, picnic areas, and a boat ramp. Lynch's Woods Park is a 260-acre woodland area in the city of Newberry which has 7.5 miles of hiking and biking trails, 3.5 miles of equestrian trails, a primitive camp site, and picnic tables. Lake Monticello Park is a 25-acre park containing tennis courts, ball field, basketball court, picnic facilities, fishing pier, and walking trail.

Lake Murray is a 79.5 square-mile hydropower reservoir located in Newberry, Saluda, Lexington and Richland Counties. Lake Murray supports numerous on-water recreation opportunities through 15 public access sites situated around the reservoir. Lake Murray also hosts several

national and local fishing tournaments. The lower Saluda River, which extends 10 miles downstream of the Lake Murray Dam, supports an active recreational fishery and provides a variety of paddling experiences, from flatwater to whitewater.

Fairfield and Newberry Counties encompass several municipal recreation areas. Fairfield County has 16 public parks and recreation facilities encompassing approximately 90 acres, and Newberry County has 45 public parks and recreation facilities encompassing more than 530 acres. These facilities (Table 6) provide the following amenities: playgrounds, picnic areas, softball fields, horseback riding, hand-carried and trailered boat launches, basketball courts, swimming pools, birding and wildlife watching opportunities, and multi-use trails that support hiking.

TABLE 6 RECREATION FACILITIES IN FAIRFIELD AND NEWBERRY COUNTIES

Fairfield County	Newberry County
Lake Monticello	Brick House Recreation Area
Feasterville Mini Park	Broad River Canoe Access
Mitford Mini Park	Cannon's Creek Public Access Area
Sheldon Mini Park	Dreher Island State Park
Eunice Shelton Trail	Heller's Creek Access Area
Adger Park	Little Mountain Reunion Park
Blair Park/Willie Lee Recreation Center	Lynch's Woods Park
Garden St. Park	Peak-to-Prosperity Rail Trail
Middle Six Mini Park	Wells Japanese Garden
Chappelltown Mini Park	Little Mountain Explorer Bicycling Route
Centerville Mini Park	
Horeb Glenn Park	
Alton Trail	
Fortunes Spring Park	

The South Carolina State Comprehensive Outdoor Recreation Plan (SCORP) provides information on the supply and demand for outdoor recreation facilities in South Carolina, creates policies for meeting that demand, and to qualify South Carolina for funding from the federal Land and Water Conservation Fund (LWCF) for acquiring or developing lands for public outdoor recreation (SCPRT 2008). The SCORP offers no recommendations specific to the

Project, but the recreation goals outlined in the SCORP may be applied by governments at the state, county, or municipal levels, including Newberry and Fairfield Counties and the city of Newberry. The following goals of the SCORP may be relevant to the Project: promote the state's tourist attractions; provide for the preservation and perpetuation of South Carolina's rich historical heritage; lease or convey lands to local governments for parks and recreation facilities; and, study the state's park and outdoor recreational resources and facilities, the current and projected needs for these resources, and the extent to which these needs are being met (SCPRT, 2008).

3.2 PROJECT AREA RECREATION RESOURCES

SCE&G permits public use of the Project land and waters for recreation. Monticello and Parr Reservoirs are popular recreational sites in western Fairfield County. SCE&G maintains six public access sites on Monticello and Parr reservoirs that are considered Project recreational facilities. In addition to the Project recreation sites, there are two informal recreation sites at the Project and one informal recreation site located primarily outside of the Project boundary. Sites are not regularly staffed, but are frequented by managing personnel and/or law enforcement to check on site and safety conditions. Table 7 lists recreation sites and associated facilities provided at these sites at Monticello and Parr Reservoirs. The location of these sites are shown in Figure 1.

On Monticello Reservoir, Project and non-Project recreation access sites include the Scenic Overlook, the Highway 215 Boat Ramp, the Highway 99 Public Access Area, the Recreation Lake Access Area, and the Highway 99 Informal Fishing Area. Monticello Reservoir recreation sites provide boating and fishing access and scenic viewing opportunities. The Scenic Overlook is managed in conjunction with the Fairfield County Recreation Commission, and includes a multiple-use recreational area at Monticello Reservoir, that includes a scenic overlook, baseball field, tennis courts, basketball court, picnic facilities, and fishing facilities. The Highway 99 Informal Fishing Area is available for bank fishing only.

On the Parr Reservoir, there are two Project boat ramps maintained by SCE&G and one informal boat ramp. Cannon's Creek and Heller's Creek provide boat launches, courtesy docks, and picnic facilities. The Highway 34 Primitive Ramp provides primitive boat access to the upper portions of Parr Reservoir. Additionally, two waterfowl management areas, the Broad River and the

Enoree River waterfowl areas were included in this study. These facilities provide public waterfowl hunting access and are under management jurisdiction of SCDNR under its WMA Program. These waterfowl areas are located within the Project boundary adjacent to the Parr Reservoir (Broad River Waterfowl Sub-impoundment) and the Enoree River (Enoree River Waterfowl Sub-impoundment). The RCG also requested that the study include collecting use information for the Enoree River Bridge Informal Access area which is located outside of the Project boundary, on U.S. Forest Service lands.

TABLE 7 PUBLIC RECREATION SITE INVENTORY SUMMARY FOR MONTICELLO AND PARR RESERVOIRS

Site Name	\$ Fee	Barrier Free/ADA Amenities ^a	Picnicking	# Shelters	# of Tables	# of Grills	Trail Length (Mi)	Camping	Swimming	Bank Fishing	Dock Fishing	# Ramps	# Docks	Parking Spaces	Restrooms	Playground and Sport Facilities	Owned by SCE&G	Operated by SCE&G	Leased to Other Entity
Monticello Reservoir																			
Scenic Overlook	\$0	●	●	5	12		1	●	●	●	●		1	100	●	●	●	Partial	Partial
Highway 215 Boat Ramp	\$0		●	1	2					●		2	1	30			●	●	
Highway 99 Public Access Area	\$0		●	2	5	1		●		●		3	1	80	●		●	●	
Recreation Lake Access Area	\$0	●	●	2	26	7	0.3		●	●		1		105	●		●	●	
Highway 99 Informal Fishing Area	\$0									●				20			●	●	
TOTALS	\$0			10	45	8	1.3					6	3	335					
Parr Reservoir																			
Cannon's Creek Public Access Area	\$0		●	2	2	1		●	●	●		1		30	●		●	●	
Heller's Creek Public Access Area	\$0		●	2	2			●		●		1		25	●		●	●	
Highway 34 Primitive Ramp	\$0							●		●		1		5			●	●	
TOTALS	\$0			4	4	1						3		60					

^a Although a recreation site may not be entirely ADA-compliant, this column indicates that the facility provides some level of barrier free amenities. Barrier free access at Project recreation sites is discussed further in Section 6.0.

3.2.1 PROJECT RECREATION FACILITIES - MONTICELLO RESERVOIR

SCENIC OVERLOOK



PHOTO 1 SCENIC OVERLOOK

Scenic Overlook Park (Photo 1) is located on the eastern shore of the reservoir and can be accessed from Highway 215. This is a day use site, managed in conjunction with Fairfield County. The site is designed primarily for dock fishing, bank fishing, and picnicking. The site provides one picnic shelter and eight picnic tables, a fishing pier, a scenic overlook, gravel parking areas and restrooms. In addition to these amenities, the portion of the site maintained by Fairfield County includes tennis courts, a baseball field, a playground area, additional picnic shelters, a 1-mile hiking trail, and a community center. The site is unstaffed and free to visitors year round.

Based on a scale of 1 to 5, with 5 being excellent, 2015 exit interview survey respondents rated the overall site condition of the Scenic Overlook Park as 4.42 (n=132).

HIGHWAY 215 BOAT RAMP



PHOTO 2 HIGHWAY 215 BOAT RAMP

The Highway 215 Boat Ramp (Photo 2) is located on the eastern side of the reservoir, off of Highway 215. The site is primarily used as a boat launch, and offers a dock and two boat ramps. There are 30 parking spaces for vehicles with trailers. The site also provides a picnic shelter with two tables. There are no restrooms at the site. The site is unstaffed, and use of the boat ramp is free to visitors year round.

Based on a scale of 1 to 5, with 5 being excellent, 2015 exit interview survey respondents rated the overall site condition of the Highway 215 Boat Ramp as 4.44 (n=134).

HIGHWAY 99 PUBLIC ACCESS AREA



PHOTO 3 HIGHWAY 99 PUBLIC ACCESS AREA

The Highway 99 Public Access Area (Photo 3) is a medium sized recreation area that is open for both day use and primitive tent camping. It is located on the northern side of the reservoir off of Highway 99. The site is primarily used as a boat launch, and also provides opportunities for

primitive tent camping, picnicking, bank fishing, and boating. The site offers three boat ramps and one dock, as well as 80 parking spaces for vehicles with trailers. The site also provides restrooms, two picnic shelters, five picnic tables, and one grill. The area is unstaffed and access is free to visitors year round.

Based on a scale of 1 to 5, with 5 being excellent, 2015 exit interview survey respondents rated the overall site condition of the Highway 99 Public Access Area as 4.17 (n=104).

RECREATION LAKE ACCESS AREA



PHOTO 4 RECREATION LAKE ACCESS AREA

The Recreation Lake Access Area (Photo 4) is adjacent to Lake Monticello, off of Highway 99. The site provides a boat launch that is open year-round and a beach area that is open from April 1 to September 30. The site provides a total of 2 picnic shelters, 26 tables, and 7 grills. There is a 0.3-mile-long hiking trail at the beach area, as well. The beach area provides a gravel parking area for approximately 95 vehicles, including designated ADA parking spaces (although unpaved). The boat launch provides parking for up to 10 vehicles with trailers. Restrooms are provided at both the beach area and the boat launch. Both areas are unstaffed and free to visitors.

Based on a scale of 1 to 5, with 5 being excellent, the average survey response rating the overall condition of the site was 4.0 (n=61).

3.2.2 PROJECT RECREATION FACILITIES - PARR RESERVOIR

CANNON'S CREEK PUBLIC ACCESS AREA



PHOTO 5 CANNON'S CREEK PUBLIC ACCESS AREA

Cannon's Creek Public Access Area (Photo 6) is located on the western side of Parr Reservoir off of Broad River Road. This site provides one boat launch, as well as amenities that include two shelters, two tables, a grill, and restrooms. There are parking spaces for up to 30 vehicles with trailers. Primitive camping is allowed at this site.

Based on a scale of 1 to 5, with 5 being excellent, 2015 exit interview survey respondents rated the overall site condition of this site as 3.95 (n=146).

HELLER'S CREEK PUBLIC ACCESS AREA



PHOTO 6 HELLER'S CREEK PUBLIC ACCESS AREA

Heller's Creek Public Access Area (Photo 7) is located on the western side of Parr reservoir, off of Broad River Road. This site provides one boat launch, as well as amenities that include two picnic shelters, two tables, and restrooms. There are parking spaces for up to 25 vehicles with trailers. Primitive camping is allowed at this site. The site is unstaffed and open year round to visitors with no fees required.

Based on a scale of 1 to 5, with 5 being excellent, 2015 exit interview survey respondents rated the overall site condition of this site as 3.81 (n=80).

BROAD RIVER WATERFOWL MANAGEMENT AREA

The Broad River Waterfowl Management Area is a Category I waterfowl area, meaning hunts are conducted on selected Saturdays during the waterfowl season, with hunters having been selected by the SCDNR through a lottery system. This site is closed to the public during waterfowl season, and it is open to the public from February 2 through October 31. Recreation opportunities outside of waterfowl season include bird watching, bank fishing, deer hunting, and small game hunting.

ENOREE RIVER WATERFOWL MANAGEMENT AREA

The Enoree River Waterfowl Management Area is a category II hunting area, meaning it is open to the general public for waterfowl hunting. Waterfowl hunting is permitted on Saturdays until 12 p.m. during the hunting season. Outside of the waterfowl season, the area is open to visitors for activities including bird watching, deer hunting, and small game hunting.

3.2.3 NON-PROJECT ACCESS AREAS

HWY 99 INFORMAL FISHING AREA



PHOTO 7 HIGHWAY 99 INFORMAL FISHING AREA

The Highway 99 Informal Fishing Area (Photo 5) is located on the north side of Monticello Reservoir, off of Highway 99. This small, day use recreation site is primarily designed for bank

fishing. Swimming is prohibited at this site and there are no tables or other amenities. The site provides parking for up to 20 vehicles, as well as shoreline access for bank fishing. There are no fees at this site and it is open year round to visitors.

Based on a scale of 1 to 5, with 5 being excellent, 2015 exit interview survey respondents rated the overall site condition of the Highway 99 Informal Fishing Area as 4.24 (n=21).

ENOREE RIVER BRIDGE INFORMAL ACCESS AREA



PHOTO 8 ENOREE RIVER BRIDGE INFORMAL ACCESS AREA

At the request of the RCG, a traffic counter was placed at the Enoree River Bridge Informal Access Area. This area is located on U.S. Forest Service lands, outside of the Project boundary. The Project boundary extends to the high water mark in the vicinity of this access area. This site provides a primitive ramp, used primarily for small watercraft access to the Enoree River.

HIGHWAY 34 PRIMITIVE RAMP



PHOTO 9 HIGHWAY 34 PRIMITIVE RAMP

The Highway 34 Primitive Ramp (Photo 8) provides a gravel/earthen boat ramp and parking for up to five vehicles. The site provides boaters and shoreline anglers with access to the Broad River at the upper end of Parr Reservoir. Primitive camping is also permitted at the site. There are no fees at this site and it is open year round.

A site condition rating is not available for the Highway 34 Primitive Ramp, as exit interviews were not conducted at this site.

4.0 CHARACTERIZATION OF EXISTING RECREATION USE

The following sections characterize the existing recreation use at public access sites on Monticello Reservoir and Parr Reservoir during the study season. This section summarizes visitor characteristics at the recreation sites, as well as the patterns of recreational use at the sites including type of recreation activity.

4.1 PUBLIC ACCESS SITE USERS

Knowledge of who is using Project sites and why they are using them can be useful in understanding future needs and how best to accommodate them. In this section, the characteristics of public access site users and their reasons for recreating at the Project are described.

4.1.1 MONTICELLO RESERVOIR

Of the individuals interviewed at Monticello Reservoir sites, the majority were male (72 percent) and the average age was 48. Almost all of the visitors were from South Carolina (97 percent) with a large representation from the surrounding four (Fairfield, Lexington, Newberry and Richland) counties and the Columbia area (18 percent). Of those respondents interviewed, less than 2 percent indicated they owned a permanent or seasonal lakefront residence on Monticello.

In terms of why visitors chose to recreate at Monticello Reservoir, 17 percent indicated it was close to home, 15 percent indicated they visited the site to go fishing, and others indicated that the easy access and facilities were a motivating factor for recreating at the Reservoir. In addition, many visitors stated that it provided a place to recreate with friends and family.

Table 8 provides a summary of visitor characteristics at the recreation sites where visitor interviews were conducted. The average party size of visitors interviewed at Monticello sites was 2.7 visitors, with 2.3 being the average number of people in a vehicle when visiting the sites. The average length of stay was about 3 hours 20 minutes, with the Scenic Overlook having the shortest length of stay per visit and the two boat ramp access areas having the longest, at 5 hours for the average length of stay.

TABLE 8 SUMMARY OF VISITOR CHARACTERISTICS AT MONTICELLO RESERVOIR SITES

Site Name		Age	Number of People in Vehicle	Party Size	Length of Stay
Scenic Overlook	Mean	47	2.59	3.06	0:56:48
	Median	49	2.00	2.00	0:15:00
	<i>N</i>	131	93	132	132
Highway 215 Boat Ramp	Mean	51	2.23	2.26	4:50:36
	Median	53	2.00	2.00	4:26:00
	<i>N</i>	134	107	134	133
Highway 99 Boat Ramp	Mean	48	2.05	2.69	4:53:34
	Median	49	2.00	3.00	4:05:30
	<i>N</i>	99	55	106	106
Recreation Lake Access Area	Mean	41	2.05	3.03	2:33:30
	Median	42	2.00	3.00	2:35:00
	<i>N</i>	53	20	61	61
Highway 99 Informal Fishing Area	Mean	45	2.50	2.71	2:59:45
	Median	45	2.00	3.00	0:30:00
	<i>N</i>	17	10	21	21
Total	Mean	48	2.31	2.72	3:19:34
	Median	49	2.00	2.00	2:40:00
	<i>N</i>	434	285	454	453

4.1.2 PARR RESERVOIR

The average age of the individuals interviewed at the Parr Reservoir sites was 43 and 89 percent were male. Of those respondents interviewed, less than 2 percent indicated they owned a permanent or seasonal lakefront residence on Parr Reservoir. All except for one visitor interviewed were from South Carolina with a large representation from Newberry County (over 75 percent) and from the Columbia area (12 percent).

In terms of why visitors chose to recreate at Parr Reservoir, the majority of those individuals interviewed indicated good fishing (52 percent). Others indicated that they selected the site because it was not crowded, had easy access, and that the site was close to home. The average party size was 2.3 visitors, with the average number of people in a vehicle when visiting the sites of 2.1 people. The average length of stay was about 3 hours 30 minutes. Table 9 provides a summary of visitor characteristics at the recreation sites where visitor interviews were conducted.

TABLE 9 SUMMARY OF VISITOR CHARACTERISTICS AT PARR RESERVOIR SITES

Site Name		Age	Number of People in Vehicle	Party Size	Length of Stay
Cannon's Creek Public Access Area	Mean	44	2.19	2.46	3:13:55
	Median	41	2.00	2.00	3:10:00
	<i>N</i>	139	124	147	148
Heller's Creek Public Access Area	Mean	42	2.08	2.09	3:58:06
	Median	39	2.00	2.00	3:50:00
	<i>N</i>	77	76	80	80
Total	Mean	43	2.15	2.33	3:29:25
	Median	41	2.00	2.00	3:31:30
	<i>N</i>	216	200	227	228

4.2 CURRENT USE

Recreation use estimates and identification of recreation activities are provided below for the Project, followed by total and site-specific estimates for the Monticello Reservoir and the Parr Reservoir.

4.2.1 PROJECT

During the April through September 2015 recreation season, recreation site visitation at the Project was estimated at a total of 152,709 recreation days. About 52 percent of the total use occurred on weekdays, and 38 percent on weekends and 10 percent on holidays. The greatest amount of use occurred during May (23 percent) followed by June (19 percent) and July (18 percent) during this period. Monticello Reservoir sites received the greatest use of the developments at 126,525 recreation days (83 percent of the total use) and Parr Reservoir sites received 26,184 recreation days during this period. See Table 10 for the summary of the recreation visitation by reservoir and day type during the 2015 study period.

TABLE 10 ESTIMATED RECREATION DAYS FOR MONTICELLO RESERVOIR AND PARR RESERVOIR SITES

	Monticello Reservoir Sites	Parr Reservoir Sites	Total
April	18,318	4,217	22,535
Weekdays	11,503	2,703	14,206
Weekends	6,815	1,514	8,329
Holidays	-	-	-
May	29,267	6,018	35,284
Weekdays	10,895	2,799	13,695
Weekends	11,975	2,232	14,208
Holidays	6,396	986	7,382
June	23,992	4,645	28,636
Weekdays	12,216	3,031	15,247
Weekends	11,776	1,614	13,390
Holidays	-	-	-
July	23,721	4,191	27,912
Weekdays	12,571	2,417	14,988
Weekends	6,776	1,195	7,971
Holidays	4,374	579	4,953
August	17,463	4,103	21,566
Weekdays	9,481	2,169	11,650
Weekends	7,983	1,934	9,916
Holidays	-	-	-
September	13,765	3,010	16,775
Weekdays	8,042	1,763	9,805
Weekends	2,810	775	3,585
Holidays	2,913	472	3,386
Total			
Weekdays	64,707	14,883	79,590
Weekends	48,135	9,263	57,398
Holidays	13,683	2,038	15,721
TOTAL	126,525	26,184	152,709

4.2.2 MONTICELLO RESERVOIR

Overall, the public recreation sites at Monticello Reservoir supported an estimated 126,525 recreation days during the study period (Table 11). The most used site was the Scenic Overlook (30 percent of total use at Monticello Reservoir sites and 37,384 recreation days), followed by the Highway 99 Informal Fishing Area (21 percent of total use). The Recreation Lake Access Area (17 percent of total use) and the Highway 215 Boat Ramp (17 percent of total use) and the Highway 99 Boat Ramp (15 percent of total use) received fairly equal amounts of use across the recreation season. About 51 percent of the total use occurred on weekdays, about 38 percent on weekends and the remaining 11 percent on holidays. The month of May received the greatest use at 23 percent of the total use during the recreation study season, following by June (19 percent) and July (19 percent).

TABLE 11 ESTIMATED RECREATION DAYS FOR MONTICELLO RESERVOIR SITES

	Scenic Overlook	Highway 215 Boat Ramp	Highway 99 Boat Ramp	Recreation Lake Access Area	Highway 99 Informal Fishing Area	Total
April						18,318
Weekdays	3,362	2,110	1,894	947	3,190	11,503
Weekends	2,051	1,249	1,246	689	1,580	6,815
Holidays	-	-			-	-
May						29,267
Weekdays	3,108	2,185	1,763	1,189	2,650	10,895
Weekends	3,730	2,105	1,968	2,312	1,860	11,975
Holidays	1,756	1,244	990	1,581	825	6,396
June						23,992
Weekdays	3,362	1,864	1,759	2,481	2,750	12,216
Weekends	3,750	1,766	1,689	3,050	1,520	11,776
Holidays	-	-	-	-	-	-
July						23,721
Weekdays	3,476	2,011	1,939	2,120	3,025	12,571
Weekends	1,958	1,231	972	1,820	795	6,776
Holidays	1,368	549	640	1,285	533	4,374
August						17,463
Weekdays	2,883	1,639	1,248	1,033	2,678	9,481
Weekends	2,253	1,539	1,271	1,620	1,300	7,983
Holidays		-	-	-	-	-
September						13,765
Weekdays	2,448	1,218	947	1,119	2,310	8,042
Weekends	901	482	615	197	615	2,810
Holidays	979	468	406	603	458	2,913
Total						

	Scenic Overlook	Highway 215 Boat Ramp	Highway 99 Boat Ramp	Recreation Lake Access Area	Highway 99 Informal Fishing Area	Total
Weekdays	18,638	11,027	9,551	8,889	16,603	64,707
Weekends	14,644	8,371	7,761	9,688	7,670	48,135
Holidays	4,103	2,261	2,036	3,469	1,815	13,683
TOTAL	37,384	21,660	19,348	22,046	26,088	126,525

The primary recreation activities on Monticello Reservoir included boat fishing (42 percent), following by bank fishing, pier/dock fishing and swimming (Table 12). Visitors also indicated they participated in other activities while at the reservoir in addition to their primary activities, these included picnicking, sunbathing, sightseeing, and walking. In terms of the activity by day-type, visitors interviewed indicated participation in similar type of activities during weekdays and weekend periods. For holidays, visitors reported some increased activities for canoeing and kayaking, as compared to the non-holiday periods.

TABLE 12 PRIMARY ACTIVITIES AT MONTICELLO RESERVOIR

Activity	Day Type			Total
	Weekday	Weekend	Holiday	
Boat Fishing	42%	43%	34%	42%
Pier/Dock Fishing	13%	11%	9%	11%
Bank Fishing	14%	20%	16%	18%
Motor Boating	3%	1%	0%	2%
Pontoon/Party Boating	0%	0%	0%	0%
Sailing	1%	0%	0%	0%
Canoeing/Kayaking	0%	1%	11%	2%
Windsurfing	1%	0%	0%	0%
Paddleboarding	0%	0%	2%	0%
Bicycling	0%	0%	0%	0%
Tent/Vehicle Camping	2%	5%	2%	4%
Walking/Hiking/Backpacking	2%	1%	5%	1%
Sightseeing	5%	3%	2%	4%
Hunting	0%	0%	2%	0%
Swimming	10%	6%	14%	8%
Picnicking	3%	5%	2%	4%
Sunbathing	1%	1%	0%	1%
Other	3%	2%	0%	2%
Total	100%	100%	100%	100%
<i>N</i>	<i>127</i>	<i>282</i>	<i>44</i>	<i>453</i>

About 54 percent of exit interview respondents indicated they spent time on Monticello Reservoir and about 15 percent indicated they recreated on Monticello Reservoir Islands. Of those respondents that recreated on the islands, the primary activity was bank fishing on the islands at 53 percent followed by camping on the islands at 38 percent (see Table 13).

TABLE 13 PRIMARY ACTIVITIES AT MONTICELLO RESERVOIR ISLANDS

Activity ^a	Day Type			Total
	Weekday	Weekend	Holiday	
Island Sunbathing	0%	20%	0%	13%
Island Bank Fishing	43%	70%	0%	53%
Island Hunting	0%	10%	40%	13%
Island Camping	43%	45%	0%	38%
Island Walking/Hiking	0%	15%	20%	13%
Island Sightseeing	14%	30%	0%	22%
Island Nature Study/Wildlife Viewing/Photography	14%	20%	20%	19%
Island Swimming	29%	30%	40%	31%
Island Picnicking	14%	20%	20%	19%
<i>N</i>	7	20	5	32

^a Respondents were asked what activities they participated in while on Monticello island(s). Many individuals provided more than one activity in response to this question. Therefore, percentages equal greater than 100 percent.

In addition to data collected during the primary recreation season (April 1 through September 7), recreation use data was collected at the Monticello Reservoir sites during early crappie fishing season (February 1 through March 31, 2016). Table 14 summarizes recreation use at each site. The Highway 99 Informal Fishing Area site visitation was estimated at the greatest use; at about 36 percent, following by the Scenic Overlook at 25 percent of the total use during this period. Weekdays during March comprised the most use with 45 percent of the total estimated use during this period.

TABLE 14 MONTICELLO RESERVOIR RECREATION USE DURING EARLY CRAPPIE SEASON, 2016

	Scenic Overlook	Highway 215 Boat Ramp	Highway 99 Boat Ramp	Recreation Lake Access Area	Highway 99 Informal Fishing Area	Total
February						
Weekdays	1,360	1,030	646	215	2,940	6,191
Weekends	767	785	656	180	860	3,248
Holidays	-	-	-	-	-	-
March						
Weekdays	2,919	2,103	2,027	660	4,313	12,022
Weekends	1,595	981	1,033	344	1,480	5,434
Holidays	-	-	-	-	-	-
TOTAL	6,641	4,899	4,362	1,400	9,593	26,895

4.2.3 PARR RESERVOIR

The public recreation sites at Parr Reservoir supported an estimated 26,184 recreation days during the study period (Table 15). The most used sites were the Cannon's Creek Public Access Area (14,452 recreation days and 55 percent of the total use at the Parr Reservoir sites), followed by Heller's Creek Public Access Area (29 percent), and Highway 34 Primitive Ramp (16 percent). About 57 percent of the total use occurred on weekdays, about 35 percent on weekends and the remaining 8 percent on holidays. The month of May received the greatest use at 23 percent of the total use during the recreation study season, following by June (18 percent), April (16 percent), July (16 percent) and August (16 percent).

TABLE 15 ESTIMATED RECREATION DAYS FOR PARR RESERVOIR SITES

	Cannon's Creek Public Access Area	Heller's Creek Public Access Area	Highway 34 Primitive Ramp	Total
April				4,217
Weekdays	1,638	686	378	2,703
Weekends	823	433	258	1,514
Holidays	-	-	-	-
May				6,018
Weekdays	1,621	749	430	2,799
Weekends	1,121	716	396	2,232
Holidays	519	312	155	986
June				4,645
Weekdays	1,734	824	473	3,031
Weekends	806	532	275	1,614
Holidays	-	-	-	-
July				4,191
Weekdays	1,349	595	473	2,417
Weekends	526	437	232	1,195
Holidays	302	200	77	579
August				4,103
Weekdays	1,242	612	316	2,169
Weekends	1,029	603	301	1,934
Holidays	-	-	-	-
September				3,010
Weekdays	1,012	480	271	1,763
Weekends	434	212	129	775
Holidays	296	112	65	472
Total				
Weekdays	8,596	3,946	2,341	14,883
Weekends	4,739	2,933	1,591	9,263
Holidays	1,117	624	297	2,038
TOTAL	14,452	7,503	4,229	26,184

The predominant recreation activity on Parr Reservoir was boat fishing (75 percent), followed by bank fishing at 12 percent of visitors indicating this as their primary recreation activity (Table 16). Other secondary activities reported included tent/vehicle camping, sightseeing and pier/dock fishing. In terms of the activity by day-type, visitors interviewed indicated participation in similar type of activities during weekdays and weekend periods. For holidays, visitors reported some increased activities for tent/vehicle camping, as compared to the non-holiday periods.

TABLE 16 PRIMARY ACTIVITIES AT PARR RESERVOIR SITES

Activity	Day Type			Total
	Weekday	Weekend	Holiday	
Boat Fishing	85%	73%	64%	75%
Pier/Dock Fishing	2%	2%	0%	2%
Bank Fishing	8%	15%	11%	12%
Motor Boating	0%	0%	3%	0%
Canoeing/Kayaking	0%	2%	0%	1%
Tent/Vehicle Camping	0%	5%	11%	5%
Sightseeing	2%	2%	3%	2%
Hunting	0%	0%	3%	0%
Swimming	0%	0%	3%	0%
Picnicking	0%	1%	0%	0%
Other	2%	0%	3%	1%
None	2%	0%	0%	0%
Total	100%	100%	100%	100%
<i>N</i>	<i>61</i>	<i>130</i>	<i>36</i>	<i>227</i>

4.2.4 ENOREE RIVER BRIDGE INFORMAL ACCESS AREA

In addition to the Project public access sites, the recreation visitation was collected at the Enoree River Bridge Informal Access Area, which is located mostly outside of the Project boundary. Visitation was estimated through vehicle counters, and no interviews were conducted at this non-Project facility. For the use estimates, the vehicle counts were estimated and then the average rating of 2.15 people per vehicle was applied based on the average visitor use estimates at Cannon's and Heller's Creek Public Access Areas. The total estimated recreation use during the study season (April through September) was estimated at 1,342 visitor days with 69 percent of this use occurring during weekdays, 27 percent during weekends and the remaining use during

holiday periods. April had the greatest visitation with 370 recreation days at 28 percent, followed by May (17 percent), June (16 percent) and September (16 percent) of the total use during the study period (Table 17).

TABLE 17 ESTIMATED RECREATION DAYS FOR NON-PROJECT SITES – ENOREE RIVER BRIDGE INFORMAL ACCESS AREA

	Enoree Bridge
April	370
Weekdays	284
Weekends	86
Holidays	-
May	234
Weekdays	129
Weekends	86
Holidays	19
June	211
Weekdays	142
Weekends	69
Holidays	-
July	181
Weekdays	142
Weekends	26
Holidays	13
August	133
Weekdays	90
Weekends	43
Holidays	-
September	213
Weekdays	135
Weekends	52
Holidays	26
Total	
Weekdays	922
Weekends	361
Holidays	58
TOTAL	1,342

4.2.5 WATERFOWL MANAGEMENT AREAS

Waterfowl hunting remains an important recreation activity at the Project and was identified as a primary goal (Goal 2) of this study.

A variety of waterfowl hunting opportunities are available to Project recreators. The waters of Monticello Reservoir, excluding the Recreation Lake, are designated as a waterfowl management area under SCDNR's Waterfowl Management Area (WMA) program and are available for public waterfowl hunting to those individuals possessing a permit. Portions of Parr Reservoir are also designated under SCDNR's WMA program. The Broad River and Enoree River Waterfowl Areas, which are managed by SCDNR, are both located within the Project boundary, adjacent to Parr Reservoir and the Enoree River, respectively.

This study was constructed to gather waterfowl hunter use data by employing several different data collection methods: a waterfowl focus group; vehicle counts at recreation sites/waterfowl areas; mail-in questionnaires specific to hunting use at the Project; and, SCDNR waterfowl use data.

WATERFOWL FOCUS GROUP RESULTS

The waterfowl focus group meeting was held on December 9, 2014 and was attended by nine individuals with affiliations ranging from individual waterfowl hunters, to members of the Tyger Enoree River Alliance, to SCDNR resource managers. Information was gathered in three primary areas: personal hunting preferences, seasonal trends and distribution of activities, Project area preferences and needs. Personal hunting preferences, seasonal trends, and the distribution of activities is discussed below. Project area preferences and needs is discussed under Section 5.3 User Perceptions of Site Conditions and Needs.

Personal Hunting Preferences. Most of the focus group attendees indicated that they hunted in the Project area on a weekly basis during the hunting season. Attendees generally indicated that waterfowl hunting is more enjoyable as a group activity and that they prefer to hunt with 1 to 4 other people. Attendees noted that hunting was usually preferable in the morning; however the preferable time of day to hunt was highly weather dependent. Weekdays are preferred over Saturdays (no hunting allowable in the Project area on Sundays) due to less crowding during the weekdays. In general, all species of waterfowl are hunted, no particular species of interest is specifically sought. Attendees indicated that they hunt by both boat and by wading. Hunters generally boat in from a public launch facility and then wade to a particular hunting location. The recreation facilities most often utilized by waterfowl hunters were indicated as follows: the

Highway 99 Boat Ramp and the Highway 215 Boat Ramp on Monticello; the Highway 34 Primitive Ramp and the Enoree River Bridge Informal Access Area on Parr.

Seasonal Trends. Attendees noted that they generally begin hunting on or around Thanksgiving Day and hunt through the end of January (concurrent with the state and federal seasons). However, many indicated that they also hunt during the September teal and goose seasons and the February goose season. Holidays were indicated as being some of the best hunting days due to a lack of other hunters.

A meeting summary is included in Appendix B.

RECREATION USE ESTIMATES FOR THE ENOREE RIVER WATERFOWL MANAGEMENT AREA

Recreation days were estimated for the Enoree River Waterfowl Management Area using data from the vehicle counter placed at the site entrance, using the Parr Reservoir average of 2.15 people per vehicle.

Vehicle counter data indicated that the Enoree River Waterfowl Area supported an estimated 263 recreation days during the study period (Table 18). This total does not account for individuals who accessed the site by boat. SCDNR's use data estimated that 131 people used the site during the study season. The difference between estimated recreation days, using an average of 2.15 people per vehicle, and SCDNR data may indicate that hunters are traveling to the site individually.

TABLE 18 ESTIMATED RECREATION DAYS FOR THE ENOREE RIVER WATERFOWL MANAGEMENT AREA

	Enoree River Waterfowl Management Area
November	
Weekends	13
Holidays	39
December	
Weekends	60
Holidays	22
January	
Weekends	120
Holidays	9
Total	
Weekends	193
Holidays	70
TOTAL	263

SURVEY RESULTS

Monticello Reservoir

A total of 18 surveys were returned from those distributed on vehicles parked at the Highway 215 Boat Ramp and at the Highway 99 Boat Ramp during waterfowl study seasons. Of those surveys that were returned, six individuals indicated that they were waterfowl hunting at the time the survey was distributed. All 6 respondents indicated that they hunt with at least one other person (2.17 people average), with 5 out of the 6 respondents (83 percent) indicating that they primarily hunt on Saturdays. Most respondents indicated that they traveled from Newberry County, SC. No respondents indicated that they had traveled from out-of-state. Five of the respondents provided additional comments regarding waterfowl hunting on Monticello Reservoir. All of the comments were positive, noting that limited hunting days and Wednesday and Saturday AM hunting times were favorable to provide good hunting opportunities on Monticello.

Parr Reservoir

A total of 43 surveys were returned from those distributed on vehicles parked at the Cannon's Creek Public Access Area and at the Heller's Creek Public Access Area during waterfowl study seasons. Of those surveys that were returned, 40 individuals indicated that they were waterfowl hunting at the time the survey was distributed. Approximately 90 percent of respondents indicated that they hunt with at least one other person (1.80 people average). Ninety-five percent⁵ of respondents indicated that they hunt on Saturdays. Wednesdays (53 percent) and Fridays (48 percent) were also popular hunting days among respondents. All but one respondent indicated that they hunt in the morning (98 percent). All respondents indicated that they were from South Carolina. Forty-three percent of respondents indicated that they had traveled from Richland County. Lexington was the second highest county of origin (27 percent) and Newberry County was listed third-highest, at approximately 19 percent. Other counties of origin included: Union, Fairfield, Edgefield and Aiken. Twenty-eight of the respondents provided additional comments regarding waterfowl hunting on Parr Reservoir. Approximately one-half of respondents that commented indicated that there were too many hunters on Parr Reservoir or that waterfowl hunting days/times should be limited.

Enoree River Waterfowl Management Area

Only 1 survey was returned by a waterfowl hunter using the Enoree River Waterfowl Management Area. That individual indicated that they typically hunt with one other person and that they had traveled from Lexington County, SC.

SCDNR WATERFOWL MANAGEMENT AREA USE DATA

SCDNR provided the following use data for the Enoree River Waterfowl Management Area: 131 hunters harvested 90 ducks and 1 Canada goose and shot 839 times. The bag included 54 wood ducks, 12 hooded mergansers, 17 ring-necked ducks, 3 black ducks, 1 green-winged teal, 1 gadwall, 1 pintail and 1 mallard (personal communication with Willie Simmons, SCDNR, on April 5, 2016).

SCDNR provided the following use data for the Broad River Waterfowl Management area: 58 hunters killed 130 ducks during 7 lottery hunts. The bag included 33 mallards, 7 black ducks,

⁵ Many respondents indicated that they hunt on more than one day of the week. As such, percentages add up to be greater than 100 percent.

5 gadwall, 1 American widgeon, 15 green winged teal, 1 northern pintail, 10 wood ducks, 1 redhead, 10 scaup, 35 ring-necked ducks, 6 ruddy ducks and 6 mergansers. Additionally, SCDNR hosted 1 youth hunt on February 6, 2016. Five youths participated and harvested 7 ducks (2 ring-neck ducks, 2 scaup, and 3 wood ducks (personal communication with Sam Stokes, Wildlife Coordinator, SCDNR, on April 5, 2016).

5.0 CHARACTERIZATION OF POTENTIAL FUTURE USE AND NEEDS

The third goal of this study was to identify future recreational needs for public recreation sites on Monticello and Parr reservoirs and to assess the ability of existing access sites to accommodate that projected need. This includes estimating potential future use, assessing site capacity and crowdedness levels, and assessing whether current sites and facilities are adequate for long term management needs.

5.1 FUTURE USE

National trends in outdoor recreation between 1999 and 2009 has generally increased with activities such as viewing and photographing nature (about 20 percent increase), warmwater fishing (increase of about 17 percent), day hiking (15 percent increase) and visiting developed sites for family gatherings (10.5 percent increase) (White, et al 2014). Projected national outdoor recreation trends for the period from 2008 to 2030 provided by the U. S Forest Service as part of the 2010 Resources Planning Act Assessment estimated an increase of about 26 percent for visiting at developed sites, and about 21 percent for fishing activities, 30 percent for motorized water use, and hiking at about 33 percent (White, et al 2014).

Recreation trends in South Carolina show walking for pleasure remains a top outdoor activity at 83.2 percent participation for individuals age 12 and older (USC 2005). Picnicking and swimming remain in the top 10 activities, and along with freshwater fishing have remained fairly constant in participation rates with less than 5 percent change between the 1999 and 2005 period (USC, 2005). The top 25 recreation activities for the Central Midlands Planning District, which includes the four counties surrounding the Project (Fairfield, Newberry, Lexington, and Richland), are provided in Table 19. Of the activities rated above 50 percent, walking for pleasure, beach swimming, and sunbathing, and picnicking are all activities that are available at the Project's public recreation access sites.

TABLE 19 RECREATION PARTICIPATION (2005), AGE 12 AND OLDER, FOR THE FOUR COUNTIES SURROUNDING THE PARR PROJECT

	Activity	District	State
1.	Walking for pleasure or exercise	82.8	83.2
2.	Attending outdoor sporting events	68.7	63.4
3.	Beach swimming/sunbathing	68.5	62.5
4.	Driving for pleasure	52.8	58.2
5.	Weights or exercise machines	70.7	57.1
6.	Picnicking	54.1	53.4
7.	Pool swimming	52.6	53.2
8.	Visiting historical sites	50.1	52.1
9.	Bicycling	50.6	42.8
10.	Visiting a museum	45.4	38.4
11.	Fresh water fishing	37.6	37.2
12.	Visiting an unusual natural feature	35.3	34.7
13.	Playing basketball	44.2	34.5
14.	Visiting a zoo	60.4	34.1
15.	Motorboating	33.0	34.1
16.	Jogging/running	42.6	33.9
17.	Watching wildlife	34.3	33.4
18.	Lake/river swimming	26.8	28.0
19.	Off-road vehicle riding	22.7	23.5
20.	Camping	20.2	23.1
21.	Playing football	28.9	22.4
22.	Golf	24.7	21.1
23.	Guided nature trail/study	28.9	20.2
24.	Bird watching	17.7	20.2
25.	Hiking	19.9	18.2

Source: USC, 2005; data for the Central Midlands Planning District which includes the four counties surrounding the Project Fairfield, Newberry, Lexington, and Richland.

The population of the counties within the Central Midlands Planning District (Fairfield, Newberry, Lexington, and Richland) increased by 4.7 percent between 2010 and 2015 and is projected to increase by about 12.9 percent from 2015 to the year 2030 (SCRFA, 2016). Lexington County is projected to have the fastest population growth of the area, at an average of 6.3 percent from 2015 to 2030. And Fairfield is projected to have the slowest population growth of these counties, at 0.5 percent for the same time period. If participation in recreation increases at a similar rate, one can expect to see increased demand for recreation opportunities in the future use at the Project sites. Table 20 summarizes the estimated population projections to 2030 for the four counties surrounding the Project.

TABLE 20 POPULATION PROJECTIONS FOR THE FOUR COUNTIES SURROUNDING THE PARR PROJECT

County	2010 Census	2015 Projection	2020 Projection	2025 Projection	2030 Projection
Fairfield	23,956	24,100	24,200	24,300	24,500
Lexington	262,391	277,100	291,800	312,500	333,200
Newberry	37,508	37,900	38,200	39,000	39,800
Richland	384,504	404,400	424,300	440,100	456,000

Four County Subtotal	708,359	743,500	778,500	815,900	853,500
Percent Change	0%	4.73%	4.50%	4.58%	4.41%

South Carolina	4,625,364	4,823,200	5,020,800	5,235,500	5,451,700
Percent Change	0	4.10%	3.94%	4.10%	3.97%

Source: http://www.sccommunityprofiles.org/census/proj_c2010.html
 South Carolina Revenue and Fiscal Affairs Office, South Carolina State and County Population Projections 2000-2030. Accessed at http://www.sccommunityprofiles.org/census/proj_c2010.html on July 12, 2016.

5.1.1 PROJECT

Overall future use at the Project is estimated at 174,241 recreation days in the year 2030, based on the estimated population projections for the four county region and existing recreation use estimates at the Project. This would result in an increase of about 21,532 recreation days or about a 12.4 percent increase as compared to the 2015 estimated use. Table 21 provides a summary of projected estimated use at the Project out to year 2070. These estimates are based on applying the average population increase from 2010 to 2030 of 4.55 percent and applying this average estimate for each 5-year period. Future use estimates extending out in time beyond the 2030 period are even more subject to change as various assumptions, such assumptions about future births, deaths, net international migration, and domestic migration, affect these population trends over time.

TABLE 21 ESTIMATED FUTURE RECREATION DAYS FOR THE PARR SHOALS PROJECT, 2020-2070

Year	Population Growth Rates	Monticello Reservoir Sites	Parr Reservoir Sites	Total Project
Use Estimates (2015)		126,525	26,184	152,709
2020	4.50%	132,213	27,361	159,575
2025	4.58%	138,274	28,615	166,889
2030	4.41%	144,365	29,876	174,241
2035	4.55%	150,938	31,236	182,174
2040	4.55%	157,810	32,658	190,469
2045	4.55%	164,995	34,145	199,140
2050	4.55%	172,507	35,700	208,207
2055	4.55%	180,361	37,325	217,686
2060	4.55%	188,573	39,025	227,597
2065	4.55%	197,158	40,801	237,960
2070	4.55%	206,135	42,659	248,794

5.1.2 MONTICELLO RESERVOIR

Table 22 summarizes the projected recreation use by activity for each 5-year increment out to the year 2050 at the Monticello Reservoir sites. Fishing and boating are anticipated to remain the dominant recreation activities at Monticello Reservoir sites.

5.1.3 PARR RESERVOIR

Table 23 summarizes the projected recreation use by activity for each 5-year increment out to the year 2050 at the Parr Reservoir sites. Boat fishing and bank fishing are anticipated to remain the dominant recreation activities at the Parr Reservoir sites.

TABLE 22 PROJECTED FUTURE RECREATION DAY ESTIMATES FOR MONTICELLO RESERVOIR BY ACTIVITY, 2020-2050

	Use Estimates (2015)	2020	2025	2030	2035	2040	2045	2050
Population Growth Rates		4.50%	4.58%	4.41%	4.55%	4.55%	4.55%	4.55%
Activity								
Boat Fishing	52,789	55,162	57,690	60,232	62,974	65,841	68,839	71,973
Pier/Dock Fishing	14,245	14,885	15,567	16,253	16,993	17,767	18,576	19,421
Bank Fishing	22,624	23,641	24,724	25,814	26,989	28,218	29,502	30,846
Motor Boating	2,234	2,335	2,442	2,550	2,666	2,787	2,914	3,046
Pontoon/Party Boating	279	292	305	319	333	348	364	381
Sailing	559	584	610	637	666	697	728	762
Canoeing/Kayaking	2,514	2,627	2,747	2,868	2,999	3,135	3,278	3,427
Windsurfing	279	292	305	319	333	348	364	381
Paddleboarding	559	584	610	637	666	697	728	762
Bicycling	279	292	305	319	333	348	364	381
Tent/Vehicle Camping	4,748	4,962	5,189	5,418	5,664	5,922	6,192	6,474
Walking/Hiking/Backpacking	1,676	1,751	1,831	1,912	1,999	2,090	2,185	2,285
Sightseeing	4,469	4,670	4,884	5,099	5,331	5,574	5,828	6,093
Hunting	559	584	610	637	666	697	728	762
Swimming	9,776	10,215	10,683	11,154	11,662	12,193	12,748	13,328
Picnicking	5,307	5,545	5,800	6,055	6,331	6,619	6,920	7,235
Sunbathing	838	876	916	956	1,000	1,045	1,093	1,142
Other	2,793	2,919	3,052	3,187	3,332	3,484	3,642	3,808
Total	126,525	132,213	138,274	144,366	150,938	157,810	164,995	172,507

TABLE 23 ESTIMATED FUTURE RECREATION DAYS FOR PARR RESERVOIR BY ACTIVITY, 2020-2050

	Use Estimates (2015)	2020	2025	2030	2035	2040	2045	2050
Population Growth Rates		4.50%	4.58%	4.41%	4.55%	4.55%	4.55%	4.55%
Activity								
Boat Fishing	19,609	20,491	21,430	22,374	23,393	24,458	25,571	26,736
Pier/Dock Fishing	461	482	504	526	550	575	602	629
Bank Fishing	3,230	3,375	3,530	3,685	3,853	4,028	4,212	4,404
Motor Boating	115	121	126	132	138	144	150	157
Pontoon/Party Boating	-	-	-	-	-	-	-	-
Sailing	-	-	-	-	-	-	-	-
Canoeing/Kayaking	231	241	252	263	275	288	301	315
Windsurfing	-	-	-	-	-	-	-	-
Paddleboarding	-	-	-	-	-	-	-	-
Bicycling	-	-	-	-	-	-	-	-
Tent/Vehicle Camping	1,269	1,326	1,387	1,448	1,514	1,583	1,655	1,730
Walking/Hiking/Backpacking	-	-	-	-	-	-	-	-
Sightseeing	577	603	630	658	688	719	752	786
Hunting	115	121	126	132	138	144	150	157
Swimming	115	121	126	132	138	144	150	157
Picnicking	115	121	126	132	138	144	150	157
Sunbathing	-	-	-	-	-	-	-	-
Other	346	362	378	395	413	432	451	472
Total	26,184	27,361	28,615	29,876	31,236	32,658	34,145	35,700

5.2 RECREATION SITE USE DENSITY

Project recreation sites are well used throughout the recreation season with sites generally being used within their design capacities. For the purposes of this study, sites were considered to be utilized within their design capacities if parking areas are regularly less than 75 percent full. Use is considered to be approaching capacity if parking areas are regularly between 75 and 99 percent full. Use is considered to be exceeding capacity if parking areas are regularly greater than 99 percent full. It is important to note that high levels of use typically experienced on holidays are regarded as special circumstances, as these use levels are experienced only a few times a year. Recreation capacity should be considered for typical weekday and weekend use in management and site design decisions.

5.2.1 MONTICELLO RESERVOIR

Results suggest that 3 sites are being used within their design capacities for the typical weekdays and weekend days selected during the study season and may accommodate additional use: Scenic Overlook; Highway 99 Boat Ramp; Recreation Lake Access Area (Table 24). Estimates for the Highway 99 Informal Fishing Area are shown to be within their design capacities during weekdays, but approaching capacity on weekend days. Estimates for the Highway 215 Boat Ramp potentially exceeded capacities during peak hours on some weekend days throughout the study season.

While data suggest that public access sites on Monticello Reservoir are being very well used during the summer season, at times at rates at or above their intended capacities, additional information can help in interpreting these findings to better understand how sites are used. Traffic counter data often provide an over-estimate of site use, as it includes those individuals that drive through a site, but do not stay to recreate. Drive-through traffic was frequently observed by recreation clerks stationed at the Highway 99 Informal Fishing Area. Spot count data for this site also indicate that 0 to 1 vehicles were observed parked at the site approximately 90 percent of the time. Additionally, this recreation site has a double entrance/exit and is located directly adjacent to a main road. This allows for easy turn around/lake viewing access. The Highway 215 Boat Ramp is also located directly off of a main road and has a double entrance/exit. Spot count data alone indicate that this site may be consistently approaching design capacities during the summer season, to meeting design capacities on weekend days.

However, when combined with traffic counter data, estimated peak use is frequently above 100 percent on weekend days.

TABLE 24 MONTICELLO RESERVOIR RECREATION SITE USE PEAK DENSITY ESTIMATES

	Scenic Overlook	Highway 215 Boat Ramp	Highway 99 Boat Ramp	Recreation Lake Access Area	Highway 99 Informal Fishing Area ^a	Monticello Development Total
April						
Peak Capacity - Weekday	7%	92%	14%	7%	55%	35%
Peak Capacity - Weekend day	10%	145%	56%	20%	75%	61%
May						
Peak Capacity - Weekday	8%	80%	33%	7%	58%	37%
Peak Capacity - Weekend day	37%	235%	28%	46%	88%	87%
June						
Peak Capacity - Weekday	13%	55%	30%	45%	85%	46%
Peak Capacity - Weekend day	24%	205%	99%	95%	95%	104%
July						
Peak Capacity - Weekday	9%	32%	42%	4%	58%	29%
Peak Capacity - Weekend day	18%	87%	45%	32%	70%	50%
August						
Peak Capacity - Weekday	6%	85%	16%	2%	68%	35%
Peak Capacity - Weekend day	11%	115%	35%	26%	88%	55%
September						
Peak Capacity - Weekday	5%	25%	31%	8%	48%	23%
Peak Capacity - Weekend day	6%	40%	28%	8%	68%	30%
Total						49%
Average Peak Capacity - Weekday	8%	62%	28%	12%	62%	
Average Peak Capacity - Weekend day	17%	138%	49%	38%	81%	

^a .Drive-through traffic was frequently observed by recreation clerks stationed at the Highway 99 Informal Fishing Area. Spot count data for this site indicate that 0 to 1 vehicles were observed parked at the site approximately 90 percent of the time.

Perceptions of crowding can influence a person's enjoyment of a recreation site and can be a useful tool for managers when making decisions about whether a site can accommodate additional use. Table 25 provides a summary of user perceptions of crowding at Monticello Reservoir by access site. Crowdedness was rated on a scale from 1 (light) to 5 (heavy).

Overall, Monticello Reservoir respondents indicated generally low perceptions of crowdedness during the weekday (1.56 average). Additionally, Monticello Reservoir respondents indicated a generally moderate crowdedness rating for weekends (2.56 average weekend) and with a slightly higher average for holidays (2.93 average). The Highway 99 Boat Ramp received the highest crowdedness rating, overall. However, all of the sites received low to very moderate crowdedness ratings by interview respondents.

Fifty percent of waterfowl hunter survey respondents reported Monticello Reservoir as being moderately crowded, with other responses being distributed evenly among light to heavy.

TABLE 25 CROWDEDNESS RATINGS FOR MONTICELLO RESERVOIR RECREATION SITES ^a

Site	Crowdedness Rating	
	Average	Median
Scenic Overlook Park	2.08	2.00
Highway 215 Boat Ramp	2.42	2.50
Highway 99 Boat Ramp	2.70	3.00
Recreation Lake Access Area	2.05	1.00
Highway 99 Informal Fishing Area	1.90	1.00
Monticello Reservoir Total	2.31	2.00

^a Crowding at Project recreation sites was rated on a scale from 1 to 5, where a 1 equals “light” and a 5 equals “heavy”

5.2.2 PARR RESERVOIR

The capacity at which Parr Reservoir public access sites are being used was estimated for Cannon’s Creek and Heller’s Creek public access areas. Highway 34 primitive ramp does not have a substantial parking area and is mainly used by boaters accessing the upper portions of Parr Reservoir.

Results suggest that both Cannon’s Creek and Heller’s Creek Public Access Areas are being consistently used below their design capacities and can accommodate additional use (Table 26). An exception to this was observed for a weekend day in May where Cannon’s Creek peak estimates met design capacity.

TABLE 26 PARR RESERVOIR RECREATION SITE USE PEAK DENSITY ESTIMATES

	Cannon's Creek Public Access	Heller's Creek Public Access	Parr Development Total
April			
Peak Capacity - Weekday	30%	18%	24%
Peak Capacity - Weekend day	32%	16%	24%
May			
Peak Capacity - Weekday	45%	16%	31%
Peak Capacity - Weekend day	100%	58%	79%
June			
Peak Capacity - Weekday	35%	28%	32%
Peak Capacity - Weekend day	48%	34%	41%
July			
Peak Capacity - Weekday	18%	14%	16%
Peak Capacity - Weekend day	38%	32%	35%
August			
Peak Capacity - Weekday	27%	12%	20%
Peak Capacity - Weekend day	42%	54%	48%
September			
Peak Capacity - Weekday	10%	18%	14%
Peak Capacity - Weekend day	45%	18%	32%
TOTAL			33%
Average Peak Capacity - Weekday	28%	18%	
Average Peak Capacity - Weekend day	51%	35%	

Parr Reservoir interview respondents indicated generally low perceptions of crowdedness during the weekday (1.64 average), moderate crowdedness rating for weekends (2.25 average weekend) with slightly lower ratings for holidays (2.11 average). Lower crowdedness ratings for holidays is unusual, and could be due to the high availability of regional recreation opportunities.

Table 27 provides a summary of user perceptions of crowding at Parr Reservoir by access site. Both Cannon's Creek and Heller's Creek Public Access Areas received moderate crowdedness ratings, overall. Heller's Creek Public Access Area (2.31 average) was perceived as being slightly more crowded than Cannon's Creek Public Access Area (1.93 average).

Fifty-three percent of waterfowl survey respondents on Parr Reservoir indicated Parr Reservoir as being moderately crowded ("3" rating) for waterfowl hunting, with 33 percent of respondents

indicating a crowdedness rating of moderately heavy (“4” rating). Waterfowl focus group attendees indicated that there was over-crowding at the Enoree Waterfowl Management Area, and collectively rated that area as a “5” for crowdedness. Focus group attendees also indicated that Parr Reservoir, from the Monticello tailrace to the Hwy 34 boat ramp, was also moderately crowded (rated as a "4" on Saturday mornings).

Several options were suggested by Waterfowl Focus Group attendees to alleviate some of the crowding issues currently experienced at the Enoree Waterfowl Area. All of these options would need to be implemented by SCDNR and include: a SCDNR decision to categorize the Enoree Waterfowl Area as "Category 1" (currently "Category 2"); only allow a certain number of individuals to hunt the area at one time; require a hunting pass; only allow hunting on Wednesdays.

TABLE 27 CROWDEDNESS RATINGS FOR PARR RESERVOIR RECREATION SITES ^a

Site	Crowdedness Rating	
	Average	Median
Cannon’s Creek Public Access Area	1.93	2.00
Heller’s Creek Public Access Area	2.31	2.50
Parr Reservoir Total	2.07	2.00

^a Crowding at Project recreation sites was rated on a scale from 1 to 5, where a 1 equals “light” and a 5 equals “heavy”

5.3 USER PERCEPTIONS OF SITE CONDITIONS AND NEEDS

This section addresses user perceptions of recreation site conditions, and their recommendations for additional facilities and site improvements.

5.3.1 MONTICELLO RESERVOIR

Site Conditions. Monticello Reservoir recreation sites were considered to be in very good condition by respondents (Table 28). On a scale of 1 to 5 where a 1 is “poor” and a 5 is “excellent,” all of the recreation sites received a 4, or above. The Highway 215 Boat Ramp and Scenic Overlook Park received the highest condition ratings with scores approaching “excellent.” Overall, the sites received the highest condition ratings during weekdays, with an average of 4.44

for all of the sites. Weekends and holidays rated only slightly lower, with averages of 4.25 and 4.27, respectively.

Waterfowl hunter survey respondents⁶ considered Monticello Reservoir to be in “very good” condition, with an average condition rating of 4.17.

Need for Additional Facilities. Respondents were asked to indicate what, if any, additional facilities were needed at the site at which they were interviewed (Table 29). Approximately 57 percent of respondents indicated that the Monticello Reservoir recreation site at which they were interviewed was in need of additional facilities. Of those indicating a need for additional facilities, restrooms were identified as the most needed additional facility at Monticello Reservoir recreation sites, comprising approximately 70⁷ percent of the responses. This was particularly true for the Highway 215 Boat Ramp and the Highway 99 Informal Fishing Area, where 93 and 89 percent of respondents, respectively, indicated the need for restroom facilities. Picnic tables and shelters (18 percent of responses), lighting (16 percent of responses), and the addition of a fishing pier or dock (14 percent of responses) were also requested at Monticello Reservoir recreation sites. Individuals interviewed at the Scenic Overlook Park, the Recreation Lake Access Area and at the Highway 99 Boat Ramp had varying suggestions for additional facilities. At the Scenic Overlook Park, the addition of a fishing pier/dock and picnic tables/shelter was frequently requested. An additional parking area and picnic tables/shelter comprised many of the responses at the Recreation Lake Access Area. Additional lighting was frequently requested at the Highway 99 Boat Ramp. However, overall, the majority of respondents at the Highway 99 Boat Ramp and the Recreation Lake Access Area indicated that no additional facilities were needed. Not surprisingly, a variety of additional facilities were recommended at the Highway 99 Informal Fishing Area.

Although only 6 surveys were received from individuals who were waterfowl hunting on Monticello Reservoir, 3 of those respondents indicated that no additional facilities or improvements were needed for waterfowl hunting at Monticello Reservoir. Additional lighting, bathrooms, and a deeper boat landing was requested by the remaining three waterfowl survey

⁶ Eighteen total surveys were returned; of those, only six individuals indicated that they were waterfowl hunting.

⁷ Because many respondents provided more than one recommended facility, total responses add up to greater than 100 percent.

respondents. No improvements to Monticello Reservoir recreation sites were recommended during the Waterfowl Focus Group meeting.

Need for Improvements. Thirty-five percent of respondents indicated that additional improvements were needed at Monticello Reservoir. The Scenic Overlook Park received the highest response for additional improvement recommendations, 47 percent of respondents, and responses varied greatly (Table 30). Additional grills/tables and restroom improvements/year-round restroom access were the most frequently requested by respondents interviewed at Scenic Overlook Park. Dock/Pier improvements or repairs was the most frequently requested improvement at the Highway 215 Boat Ramp (23 percent). Respondents requesting facility improvements at the Highway 99 Boat Ramp most often indicated that restroom improvements/year-round access were needed. Benches/seating was requested most often at the Highway 99 Informal Fishing Area. Responses varied greatly for the Recreation Lake Access Area; however, most respondents (74 percent) indicated that no additional improvements were needed at this site.

As noted, 3 of the Monticello Reservoir waterfowl survey respondents indicated that no additional facilities or improvements were needed for waterfowl hunting at Monticello Reservoir. Additional lighting, bathrooms, and a deeper boat landing was requested by the remaining three waterfowl survey respondents. Additionally, no improvements to Monticello Reservoir recreation sites were recommended during the Waterfowl Focus Group meeting.

**TABLE 28 CONDITION RATINGS FOR
MONTICELLO RESERVOIR RECREATION SITES ^a**

SITE	CONDITION RATING	
	AVERAGE	MEDIAN
Scenic Overlook Park	4.42	5.00
Highway 215 Boat Ramp	4.44	5.00
Highway 99 Boat Ramp	4.17	4.00
Recreation Lake Access Area	4.00	4.00
Highway 99 Informal Fishing Area	4.24	5.00
Monticello Reservoir Total	4.30	5.00

^a Condition ratings on a scale from 1 “poor” to 5 “excellent”

TABLE 29 ADDITIONAL FACILITIES RECOMMENDED FOR MONTICELLO RESERVOIR RECREATION SITES

Site	Additional Facilities Recommended? - No	Additional Facilities Recommended? - Yes	n- Total Respondents	Bank Fishing Area	Boat Dock	Boat Launch	Camping Area	Fish Cleaning Station	Fishing Pier/Dock	Lighting	Parking Lot	Picnic Tables/Shelter	Restrooms	Signs and Information	Swimming Area	Trails	Trash Cans	RV Camping	Bilingual Signs	n – Total Respondents ^a
Scenic Overlook Park	38%	62%	132	2%	0%	2%	5%	7%	25%	12%	5%	31%	54%	2%	3%	5%	8%	2%	0%	59
Highway 215 Boat Ramp	31%	69%	134	0%	0%	2%	1%	1%	6%	15%	3%	7%	93%	0%	0%	0%	1%	0%	0%	88
Highway 99 Boat Ramp	58%	42%	106	0%	15%	9%	6%	9%	9%	24%	0%	6%	36%	0%	3%	3%	6%	3%	0%	33
Recreation Lake Access Area	70%	30%	61	8%	0%	0%	16%	8%	8%	8%	25%	33%	42%	0%	0%	8%	0%	0%	8%	12
Highway 99 Informal Fishing Area	10%	90%	21	5%	0%	0%	0%	16%	26%	21%	0%	42%	89%	5%	0%	5%	32%	0%	0%	19

^a Individuals that responded that additional facilities were needed at a particular recreation site may not have provided a recommendation on what type of facilities were needed. As such, fewer facility recommendation responses were gathered. Additionally, many individuals provided more than one recommendation. Therefore, facility recommendation percentages may equal greater than 100%.

TABLE 30 IMPROVEMENTS RECOMMENDED FOR MONTICELLO RESERVOIR SITES

Site	Improvements Recommended? - No	Improvements Recommended? - Yes	n- Total Respondents	Additional Tables/Grills	Repair/Improve Docks/Piers	Ice/Vending/Concessions	Restroom Improvements/Year-round Access	Benches/Seating	General Maintenance/Upkeep	Handicap Access	Electricity	Security	Lighting	Beach Area	Parking Area Improvements	Boat Launch Improvements	Water Fountains	Other	n - Total Respondents ^a
Scenic Overlook Park	53%	47%	132	16%	6%	2%	11%	6%	8%	2%	2%	3%	2%	5%	2%	0%	3%	21%	32
Highway 215 Boat Ramp	71%	29%	133	8%	23%	8%	5%	3%	3%	0%	0%	3%	15%	0%	3%	13%	3%	13%	39
Highway 99 Boat Ramp	69%	31%	106	3%	6%	0%	52%	0%	21%	0%	6%	3%	0%	0%	3%	0%	0%	6%	33
Recreation Lake Access Area	74%	26%	61	6%	0%	13%	19%	0%	13%	0%	6%	0%	0%	0%	0%	0%	0%	44%	16
Highway 99 Informal Fishing Area	67%	33%	21	0%	0%	0%	0%	29%	0%	0%	0%	0%	14%	0%	0%	0%	14%	43%	7

^a Individuals that responded that improvements were needed at a particular recreation site may not have provided a recommendation on what type of improvements were needed. As such, fewer improvement recommendation responses were gathered. Additionally, many individuals provided more than one recommendation. Therefore, percentages may equal greater than 100%.

5.3.2 PARR RESERVOIR

Site Conditions. In general, respondents interviewed at recreation sites on Parr Reservoir considered them to be in “good” to “very good” condition, regardless of day-type. On a scale of 1 to 5 where a 1 is “poor” and a 5 is “excellent”, Cannon’s Creek Public Access Area received a 3.95 and Heller’s Creek Public Access Area received a 3.81 (Table 31). Waterfowl hunter survey respondents⁸ considered Parr Reservoir to be in “average” condition, with an average condition rating of 2.58.

Need for Additional Facilities. Respondents were asked to indicate what, if any, additional facilities were needed at the site at which they were interviewed (Table 32). Seventy percent⁹ of respondents interviewed at Parr Reservoir recreation sites indicated that additional facilities are needed. Individuals most often requested the addition of a boat launch (37 percent of respondents). This was particularly true for Heller’s Creek Public Access Area, where 44 percent of respondents indicated the need for additional boat launching facilities. Additional restrooms (30 percent of respondents) and the addition of a boat dock (30 percent of respondents) were also commonly requested. The addition of a boat dock was most often requested at Cannon’s Creek Public Access Area.

Eighty percent of waterfowl survey respondents indicated that additional facilities or improvements are needed for waterfowl hunting at Parr Reservoir. Additional lighting (30 percent) and food for waterfowl (30 percent) were the most common requests received by waterfowl survey respondents. Other common facility requests included the addition of a dock (13 percent), the addition or repair of a boat ramp (10 percent) and the provision of stable Parr Reservoir levels (10 percent). Only one survey was received from a respondent hunting at the Enoree River Waterfowl Management Area. This respondent recommended additional trash cans at this site.

Waterfowl Focus Group attendees indicated that maintaining a Parr Reservoir level of 260’ or above would be preferable, particularly during December and January. Attendees also indicated that they would like for SCE&G to maintain the Highway 34 Ramp in a “primitive” state. The

⁸ Forty-three total surveys were returned; of those, forty individuals indicated that they were waterfowl hunting on Parr Reservoir.

⁹ Because many respondents provided more than one recommended facility, total responses add up to greater than 100 percent.

Waterfowl Focus Group attendees did not recommend any additions or improvements at Cannon’s Creek or Heller’s Creek public access areas. Focus Group attendees generally noted that waterfowl hunting opportunities could possibly be improved in the Project area through the creation of an additional waterfowl habitat/resting area (in particular, an area upstream of the Enoree Waterfowl Area, along the Enoree River).

Need for Improvements. Thirty-one percent of respondents indicated that improvements are needed at Parr Reservoir recreation sites. Boat ramp upgrades or improvements was most commonly requested by respondents (26 percent), and most often requested by those individuals interviewed at Heller’s Creek Public Access Area (Table 33). Improved or expanded restroom facilities was also commonly requested among respondents interviewed at both Cannon’s Creek and Heller’s Creek public access areas. Respondents commonly requested a courtesy dock or fishing pier at Cannon’s Creek Public Access Area.

The Enoree River Bridge informal access area (non-Project) was noted as being highly utilized by Waterfowl Focus Group attendees. Attendees noted that it is difficult to launch a boat at this site and attendees recommended gravel or other boat launching improvements.

TABLE 31 CONDITION RATINGS FOR PARR RESERVOIR RECREATION SITES ^a

Site	Condition Rating	
	Average	Median
Cannon’s Creek Public Access Area	3.95	4.00
Heller’s Creek Public Access Area	3.81	4.00
Total	3.90	4.00

^a Condition ratings on a scale from 1 “poor” to 5 “excellent”

TABLE 32 ADDITIONAL FACILITIES RECOMMENDED FOR PARR RESERVOIR ACCESS SITES

Site	Additional Facilities Recommended? - No	Additional Facilities Recommended? - Yes	n- Total Respondents	Additional Access Road	Bank Fishing Area	Boat Dock	Boat Launch	Camping Area	Fishing Pier/Dock	Lighting	Parking Lot	Picnic Tables/Shelter	Restrooms	Signs and Information	Swimming Area	Trash Cans	Other	n - Total Respondents ^a
Cannon's Creek Public Access Area	32%	68%	147	6%	8%	34%	33%	2%	23%	21%	0%	9%	29%	2%	6%	0%	3%	100
Heller's Creek Public Access Area	26%	74%	80	5%	2%	24%	44%	0%	20%	29%	2%	8%	32%	0%	3%	2%	2%	59

^a Individuals that responded that additional facilities were needed at a particular recreation site may not have provided a recommendation on what type of facilities were needed. As such, fewer facility recommendation responses were gathered. Additionally, many individuals provided more than one recommendation. Therefore, facility recommendation percentages may equal greater than 100%.

TABLE 33 IMPROVEMENTS RECOMMENDED FOR PARR RESERVOIR ACCESS SITES

Site	Improvements Recommended? - No	Improvements Recommended? - Yes	n- Total Respondents	Restroom Improvements	Repair/Improve Boat Ramps	Dredging/Low Water Level	Benches/Seating	Electricity	Lighting	Swimming/Beach Area	Courtesy dock/Fishing Piers	Grills	Other	n - Total Respondents ^a
Cannon's Creek Public Access Area	68%	32%	100	25%	25%	6%	3%	3%	3%	3%	16%	6%	9%	32
Heller's Creek Public Access Area	69%	31%	59	28%	50%	11%	0%	6%	6%	0%	0%	0%	0%	18

^a Individuals that responded that improvements were needed at a particular recreation site may not have provided a recommendation on what type of improvements were needed. As such, fewer improvement recommendation responses were gathered. Additionally, many individuals provided more than one recommendation. Therefore, percentages may equal greater than 100%.

6.0 CONCLUSIONS

The objective of this study was to identify current and potential recreational use, opportunities, and needs at the Project. This was accomplished by identifying and inventorying existing Project recreation facilities, identifying patterns of recreation use and user needs and preferences at each site, and estimating future recreational use and needs at the Project over the anticipated new license term. In the following sections, study results are summarized in the context of the overall study goals and objectives and are intended to facilitate recreation planning and management discussions.

6.1 CHARACTERIZATION OF EXISTING USE

The Project is surrounded by a number of regionally and nationally recognized recreation resources; yet, study results indicate that the Project is well used, providing an estimated 152,709 recreation days during the 2015 recreation season. This is undoubtedly due to the unique recreation atmosphere created by the Project, which includes riverine and lacustrine environments, waterfowl hunting areas, and areas that support a number of day-use activities such as picnicking, hiking and beach swimming. The Project supports eight public access sites and two waterfowl hunting areas, which are well distributed around the Project area. Survey results suggest that the sites are in good to very good condition, overall. Results specific to each development are provided below.

6.1.1 MONTICELLO RESERVOIR

Five public access sites are available on Monticello Reservoir and were included in this study. Study results indicate that site users are predominately local residents, traveling to the Project from the surrounding four counties (Fairfield, Lexington, Newberry and Richland). Visitors indicated a variety of reasons why they chose to recreate on Monticello Reservoir, with most noting that they chose it due to its proximity to their home or because it provided good fishing opportunities. It was shown that visitors tend to recreate at Monticello Reservoir in parties of between 2 and 3 people, with an average length of stay of approximately 3.5 hours.

Individuals using Monticello Reservoir recreation sites primarily engage in water-based recreation activities. Boat fishing was the most popular activity observed, followed by bank and pier fishing. Boat fishing, pier fishing and bank fishing occur fairly consistently across day types,

with bank fishing increasing slightly on weekends, and boat fishing decreasing slightly on holidays. Canoeing and kayaking was shown to increase significantly on holidays. Respondents indicating that they recreated on Monticello Reservoir islands primarily reported that they did so to bank fish, with camping also being reported as popular island activities.

All five of the Monticello Reservoir recreation sites provide angler access through boat launches or through bank or pier fishing, supporting the demand for fishing access. Not surprisingly, boat fishing was the most popular activity reported at Highway 99 and Highway 215 boat ramps, with bank fishing being the most popular activity reported at the Highway 99 Informal Fishing Area. Bank fishing and pier fishing were equally popular at the Scenic Overlook. The Highway 215 boat ramp was also shown to support a significant amount of bank fishing, at approximately 17 percent of the reported site use. The Recreation Lake primarily supports day-use activities such as swimming, picnicking, and sightseeing. However, boat fishing still accounted for approximately 30 percent of the reported use at the Recreation Lake.

Monticello Reservoir was also shown to support significant recreational use during early crappie season in 2016 (February 1 through March 31). Visitation data indicates that March weekdays comprise the greatest amount of use during this period, with visitors primarily recreating at the bank and pier fishing sites of Highway 99 Informal Fishing Area and the Scenic Overlook.

Study results indicate that recreation sites on Monticello Reservoir receive very similar levels of use, with most of the use occurring on the weekends. Data indicates that the Scenic Overlook accommodated the greatest numbers of patrons over the course of the 2015 study season, followed by the Highway 99 Informal Fishing Area. Additional data provided by spot counts and clerk observations indicates that use results for the Highway 99 Informal Fishing Area may be elevated, as this site was observed to receive a significant amount of drive-through traffic. This is also depicted through site density data which, in itself, indicates that the Highway 99 Informal Fishing Area is approaching site capacity, while this result is not supported by spot count data. Drive-through traffic also likely contributes to the high site density estimates calculated at the Highway 215 Boat Ramp. Data alone estimates peak use frequently above 100 percent capacity on weekend days. However, this site received very moderate crowdedness ratings (2.42), and also has a double entrance/exit which facilitates lake viewing and drive-through visits. The Highway 99 Boat Ramp, which received the highest crowdedness rating out of all the Monticello Reservoir sites (2.93) had low to moderate site density ratings. However, this site has one

entrance/exit road, and is not directly visible from, and adjacent to, the main road, which may otherwise facilitate a large number of drive-through visits. Site visitation during the 2015 recreation season may also be slightly elevated due to the construction of additional nuclear electric-generating units at the V.C. Summer Nuclear Station, located adjacent to Monticello Reservoir. Site expansion has resulted in the creation of an additional 3,000 to 3,500 jobs at that site.

Overall, perceptions of crowding at Monticello Reservoir sites are low to moderate and site conditions were rated very high, with no Monticello Reservoir recreation site receiving below a 4¹⁰ rating. Restrooms were indicated as being the most needed additional facility at Monticello Reservoir, which is very typical for recreation use studies. Other facility and amenity recommendations included picnic tables, shelters, lighting, and fishing piers or docks.

The five public access sites on Monticello Reservoir were surveyed for compliance with ADA guidelines. The Highway 215 Boat Ramp and Highway 99 Boat Ramp are paved; however neither site contains designated ADA compliant parking spaces. Parking areas at the Scenic Overlook Park, Recreation Lake Access Areas, and Highway 99 Informal Fishing Area are gravel. The Recreation Lake Beach Access Area contains designated ADA parking; however, as noted, neither of the two designated spaces are paved. Access trails to the facilities and amenities offered at the various Lake Monticello access sites (i.e. picnic areas, camping areas, and bank fishing areas) are unpaved. The Scenic Overlook provides ADA compliant restrooms; however no other permanent restroom facilities at the Monticello Reservoir sites are entirely ADA compliant. This is primarily due to the lack of paved access to restroom facilities. Other common deficiencies with restroom facilities include the inability to operate restroom doors with a closed fist and thresholds greater than 0.25 inches high. The general layout of restrooms and stalls are ADA compliant across all of the sites, with the exception of the Highway 99 Boat Ramp where the lavatories do not have enough clearance beneath them. Boat docks located at the Highway 215 and Highway 99 Boat Ramps are not ADA compliant due to their ramp slopes, missing transition plates between the ramp and dock, lack of two-inch curbs at the dock edges, and lack of paved access. The fishing pier at the Scenic Overlook Park would not be considered ADA compliant due to the lack of paved access, lack of sections of railing that are 34 inches in height, and lack of two-inch curbs around the outside ramp edges of the pier. While the Monticello

¹⁰ On a scale of 1 to 5 where a 1 is “poor” and a 5 is “excellent.”

Reservoir recreation sites are not entirely ADA compliant in their current state, the addition of paved surfaces to the various facilities and amenities offered would eliminate many of the current barriers.

6.1.2 PARR RESERVOIR

Two public boat launch sites, one primitive boat launch, and two waterfowl sub-impoundments are available within the Project boundary at the Parr development. Respondents interviewed at Parr sites were primarily local, with a large representation from Newberry County (over 75 percent). Over half of the individuals interviewed noted that they chose to recreate at Parr Reservoir due to the good fishing opportunities. It was shown that visitors tend to recreate at Parr Reservoir with one other person, on average, with an average length of stay of approximately 3.5 hours.

As with Monticello Reservoir, individuals recreating at Parr Reservoir recreation sites during the recreation season, from April to September, primarily engage in water-based recreation activities. Boat fishing was the most popular activity observed, accounting for 69 percent of the use at Cannon's Creek Public Access Area and 86 percent of the use at Heller's Creek Public Access Area. Bank fishing was the second most popular activity at the Parr development, accounting for 16 percent of the use at Cannon's Creek Public Access Area. Boat fishing increased slightly during weekdays as compared to weekends and holidays. Conversely, bank fishing increased on the weekends and holidays. For holidays, visitors reported some increased activities for tent/vehicle camping, as compared to the non-holiday periods.

Study results indicate that Cannon's Creek Public Access Area receives the greatest amount of use, followed by Heller's Creek Public Access Area and the Highway 34 primitive ramp. Data collected at the Enoree Bridge Informal Access Area, located outside of the Project boundary, indicates that it receives approximately 5 percent of the use experienced at the three SCE&G maintained access areas on Parr Reservoir.

Density estimates calculated for Cannon's and Heller's Creek Public Access Areas suggest that these areas are consistently being used below their design capacities and can accommodate additional use, with the exception of peak hours during the occasional weekend day. This was also reflected in the low to moderate crowdedness ratings for these sites.

User perceptions of site conditions at Cannon's and Heller's Creek Public Access Areas ranged from good to very good. Additional boat launching or docking facilities were some of the most requested additional facilities, along with lighting and additional restrooms.

The three public access on Parr Reservoir were surveyed for compliance with ADA guidelines. All three sites have gravel lots and none of the sites contain ADA compliant parking spaces. None of the sites have paved access to bathrooms, picnic areas, bank fishing areas, or camping areas. In addition to the lack of paved access, the bathrooms do not comply with ADA guidelines for toilet seat height, entrance threshold heights, or the ability to operate doors with a closed fist. While the Parr Reservoir recreation sites are not currently ADA compliant, the addition of paved surfaces at the site would eliminate many of the current barriers.

6.1.3 WATERFOWL MANAGEMENT AREAS

Goal 2 of this study is to characterize existing use of waterfowl areas and SCE&G recreation lands by hunters during designated hunting seasons. Data was gathered by employing several different data collection methods: a waterfowl focus group; vehicle counts at recreation sites/waterfowl areas; mail-in questionnaires specific to hunting use at the Project; and, SCDNR waterfowl use data. Collectively, the data helps to characterize existing use of lands and waters designated for waterfowl hunting within the Project boundary.

Results from surveys distributed on vehicles parked Monticello Reservoir recreation sites during Canada Geese hunting season indicated that the majority of hunters are local residents who prefer to hunt on Saturday mornings. Several survey respondents noted that they prefer Monticello as it is less crowded than other areas in the vicinity, although they noted that the number of people recreating on Monticello reservoir has increased in recent years.

Results from surveys distributed at Parr Reservoir indicate that the majority of hunters are residents of the surrounding counties, primarily Richland and Lexington, who hunt on Saturday mornings. Approximately one-half of the respondents cited crowding as an issue, noting that there were too many hunters on Parr Reservoir. Similarly, waterfowl focus group attendees noted that they prefer to hunt during weekday mornings, as there are less hunters on the Reservoir. Waterfowl focus group attendees also emphasized that they would prefer that the Highway 34 Boat Ramp remain a primitive site.

Data regarding recreation use at the Enoree River and Broad River Waterfowl Management Areas was primarily obtained from SCDNR and waterfowl focus group attendees. Traffic counter data from the Enoree River Waterfowl Management Area indicates that it is well used. Crowding at this site was a primary concern among waterfowl focus group attendees. Several attendees suggested that this site be re-categorized as “Category I”, or that hunting pressure be otherwise limited by SCDNR management actions. Crowding is not an issue for the Broad River Waterfowl Management Area as this site is a draw-hunt site.

6.2 CHARACTERIZATION OF FUTURE USE

As described by Cordell et al. (2004), population growth in the surrounding counties will likely be the primary contributing factor to future use of Project recreation facilities. Study data shows that site users are primarily local residents that do not have shoreline access via private residences. As such, public access areas at the Project generally serve as community parks rather than tourist destinations. It is possible that the V.C. Summer Nuclear Station expansion and associated job growth is contributing to increased recreation use of Project facilities. Once the expansion is complete, it is unknown whether any increases in recreation that may be currently taking place will subside. Waterfowl hunters, both through the focus group sessions and target surveys noted significant increases in waterfowl hunting, and associated crowding, at the Project in recent years. Interestingly, while the majority of recreators on Parr Reservoir during the 2015 peak recreation season were from Newberry County, the majority of Parr Reservoir waterfowl survey respondents were from Richland and Lexington counties. As Richland and Lexington counties are anticipated to have the greatest growth rates from 2015 to 2030, one may also surmise that waterfowl hunting in the Project area may also increase.

It is projected that the population of the surrounding counties will increase by 12.9 percent from 2015 to the year 2030. Fishing and boating are anticipated to remain the dominant recreation activities at Monticello Reservoir sites, and boat fishing and bank fishing are anticipated to remain the dominant recreation activities at Parr Reservoir sites.

There are many uncertainties when predicting future recreation use, including new technologies, shifting demographic patterns, and economic growth. Study data shows that Project facilities are well used, and in good condition. While data indicates that some sites may be used at rates approaching or at capacity during peak periods, there are alternative sites in the vicinity that

provide similar amenities with lower density ratings. Moreover, crowdedness ratings for all Project facilities were shown to be low to moderate. Data related to the need for additional facilities and amenities, as summarized in this report, will be assessed in coordination with stakeholders on the Recreation and Lake & Land Management RCG. Project stakeholders will collectively work to develop appropriate measures to enhance Project recreation resources over the anticipated license term. These measures will be included in a Settlement Agreement and proposed Recreation Management Plan to be filed with the Final License Application.

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APPENDIX A

PARR RECREATION USE AND NEEDS STUDY PLAN

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

January 2014
Revised October 2014

RECREATION USE AND NEEDS
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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

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

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.

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 whether the site provides barrier free access).
- 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

SCE&G designated recreation sites and informal recreation areas on Monticello Reservoir (Figure 1) and Parr Reservoir (Figure 2) that will be included in this assessment include the following:

TABLE 1 RECREATION SITES TO BE ASSESSED

MONTICELLO RESERVOIR RECREATION SITES & INFORMAL AREAS		PARR RESERVOIR RECREATION SITES & INFORMAL AREAS	
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 Waterfowl Area (vehicle counter only)
4.	Recreation Lake Access Area	4.	Hwy 34 Boat Ramp (vehicle counter only)
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)



FIGURE 1 MONTICELLO RESERVOIR RECREATION STUDY SITES

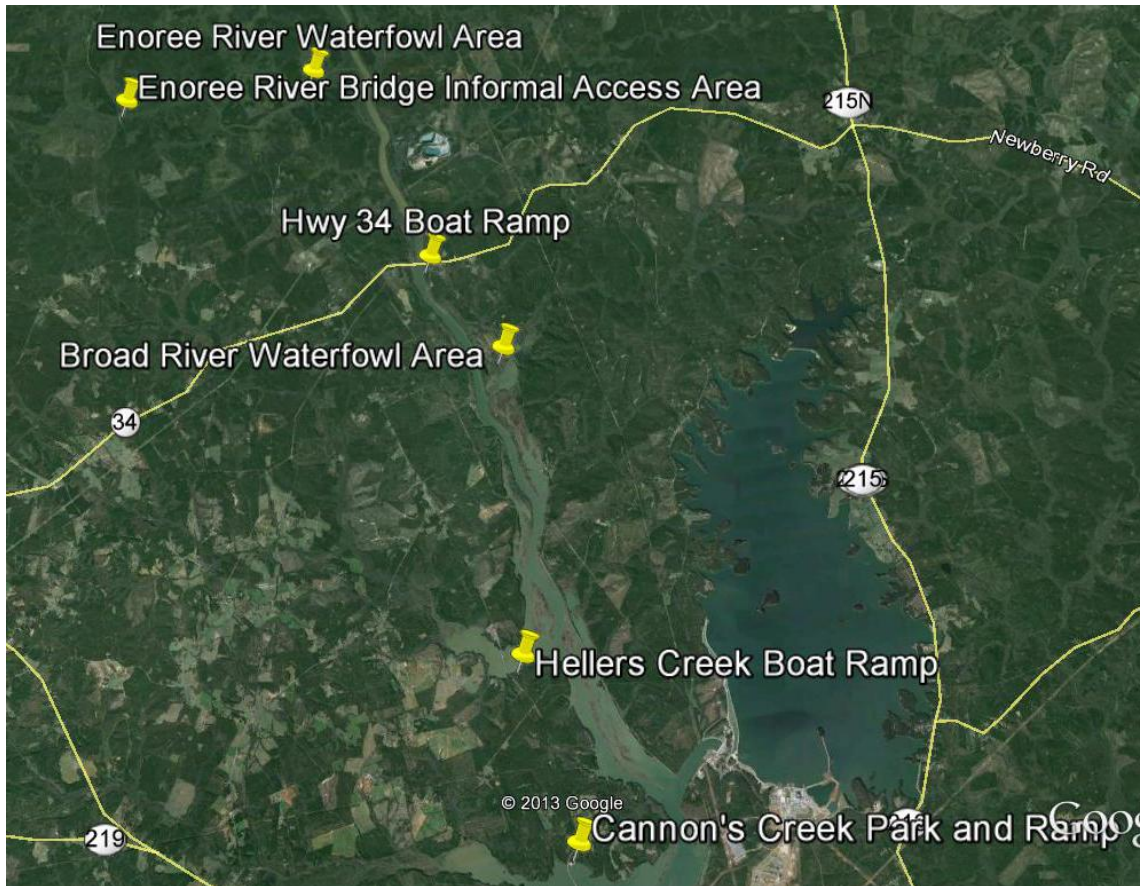


FIGURE 2 PARR RESERVOIR RECREATION STUDY SITES

4.0 STUDY SEASON

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 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, including Canada Geese hunting season (approximately September 2015 through January 2016, depending on yearly SCDNR approved seasons).

5.0 DATA COLLECTION METHODS

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"> • Physical inventory of all boat ramps, grills, shelters, restrooms, parking capacity, etc., at each site • General assessment of site condition to include maintenance, basic rehabilitation needs, etc. • Visitors' assessment of site conditions • Identification of activities that occur at each site • ADA compliance assessment 	<ul style="list-style-type: none"> • Recreation Site Inventory • Survey of Recreation Site Users
Identify the patterns of use at each site (type, volume, and daily patterns of use)	<ul style="list-style-type: none"> • Utilize vehicle counts as an estimation of people • Estimate of # people/vehicle • Estimate of # vehicles/site • Parking capacity 	<ul style="list-style-type: none"> • Traffic Counter Data • Surveyor Counts of Vehicles at Recreation Sites • Survey of Recreation Site Users - # of people per vehicle and length of visit • Recreation Site Inventory - # of parking spaces • County data from Scenic Overlook

OBJECTIVES	INFORMATION NEEDED	SOURCE
<i>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.</i>		
Identify the patterns of use within the Project boundary (type, volume, and daily/seasonal patterns of use).	<ul style="list-style-type: none"> • Estimation of # hunters/site or waterfowl area 	<ul style="list-style-type: none"> • Counts of Vehicles at Recreation Sites/waterfowl areas • Mail-in questionnaire specific to hunting use at the Project • SCDNR waterfowl use data • SCDNR hunting permit data

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"> • User preferences and opinions of needs and crowding at sites • Condition assessment 	<ul style="list-style-type: none"> • Survey of Recreation Site Users • Recreation Site Inventory
Estimate future recreational use of existing recreation sites	<ul style="list-style-type: none"> • Current inventory and use data from Goals 1 and 2 • Population projections for the project area • Recreational use trends 	<ul style="list-style-type: none"> • Results of Goals 1 and 2 • U.S. Bureau of Census Data • SC Division of Research & Statistics (Budget and Control Board) • SCORP, SC Recreation Participation & Preference Study, or other readily available literature
Identify future needs for new recreation sites and facilities	<ul style="list-style-type: none"> • Population projections • Recreation use trends • "focus group" (stakeholders) knowledge of recreation resources and needs 	<ul style="list-style-type: none"> • SC Div. of Research & Statistics • SCORP, SC Recreation Participation & Preference Study, Palmetto Conservation Foundation trail use data, or other literature • Recreation TWC and Lake and Land Management & Recreation RCG

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 will be recorded along with a qualitative assessment of whether the site is considered "barrier free". A copy of the inventory form is provided in Appendix A.

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

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.

A draft sampling plan (Appendix C) has been prepared in consultation with the TWC utilizing stratified random sampling in order to complete at least 30 days of interviewing at each recreation site. Sampling days are made up of weekends, weekdays and holidays. Weekends will be sampled at a greater rate than weekdays, to account for the heavier use that typically occurs during those periods. Moreover, all major national holidays that fall within the recreation season have been included in the sampling plan (i.e., Memorial Day weekend, July 4th weekend, and Labor Day weekend)(Table 3). Furthermore, as the sampling season approaches, the TWC will be consulted on the potential for including special event days with the holidays.

TABLE 3 LIST OF HOLIDAYS TO BE INCLUDED IN THE 2015 RUNS EXIT INTERVIEW SAMPLING PLAN

DATE	HOLIDAY
May 23, 2015	Saturday before Memorial Day
May 24, 2015	Sunday before Memorial Day
May 25, 2015	Memorial Day
July 3, 2015	Friday before Independence Day
July 4, 2015	Independence Day
July 5, 2015	Sunday after Independence Day
September 5, 2015	Saturday before Labor Day
September 6, 2015	Sunday before Labor Day
September 7, 2015	Labor Day

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. A 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 River¹ and Enoree River Waterfowl Areas, on Parr Reservoir during waterfowl hunting season. On Monticello Reservoir, mail-in surveys will be distributed on vehicles parked at the Hwy 215 boat ramp and the Hwy 99 boat ramp during Canada Geese 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.

¹ In lieu of distributing mail-in surveys on parked vehicles at the Broad River Waterfowl Area, mail-in surveys may be provided to SCDNR to distribute to hunters winning the opportunity to hunt at this site through the SCDNR Public Lottery Hunt program.

6.0 ANALYSIS

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 counties². 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.

² 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, whether a particular site provides "barrier free" access, 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

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 ³
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 ⁴
Conduct analyses	April - July 2016
Submit draft report	July 2016
Finalize report	July/August 2016

8.0 REFERENCES

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.scprt.com/files/RPE/2005%20Rec%20Study.pdf>

³ 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.

⁴ 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: _____

Facility Type:

____ Primitive Camp ____ Picnic Area ____ Day Use
____ Overlook Site ____ Informal Site ____ Launch Ramp

Road Access:

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

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	(BF*?)	Portable	(BF?)	Showers	(BF?)
Unisex	_____	(_____)	_____	(_____)	_____	(_____)
Women	_____	(_____)	_____	(_____)	_____	(_____)
Men	_____	(_____)	_____	(_____)	_____	(_____)

*BF - Barrier Free

Campground/Campsite:

	RV sites	Cabins	Tent sites	Primitive sites
# of sites	_____	_____	_____	_____
On site parking	_____	_____	_____	_____
Water front	_____	_____	_____	_____
Barrier Free	_____	_____	_____	_____

Boat Launch Facilities:

_____ Hard surface

_____ Unimproved (informal)

_____ # of Lanes

_____ Gravel

_____ Carry In

_____ Boat Prep Area?

Courtesy/Fishing Docks:

Courtesy/Fishing

Dimensions

Barrier Free

Notes:

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

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

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

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

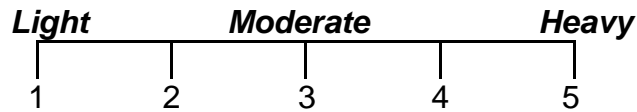
5A. Did you recreate on any of the **islands on Monticello Reservoir** today?

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

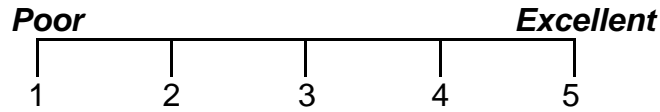
5B. What activities did you participate in **while on the island(s)**? (Do not read this list. Allow respondent to answer and check all that apply and/or fill in the blanks.)

<input type="checkbox"/> sunbathing	<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"/> 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.)

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.)*

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

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

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.)*

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

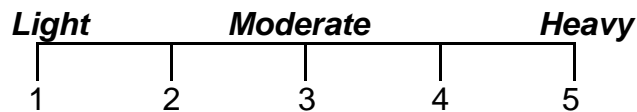
1. Including yourself, how many people are in your party today? *(Fill in blank.)*
 _____ people in party

2. What time did you arrive **at Parr Reservoir** today? *(Fill in blank.)*
 _____ am / pm

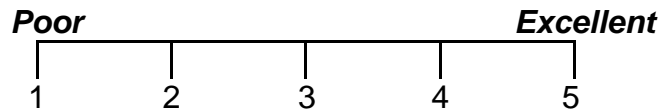
3. What is the primary recreation activity that you participated in today **at Parr Reservoir**?
(Please read the list to respondents. Check only one main activity in the first column.)
 What other activities did you participate in today **at Parr Reservoir**? *(Check all that apply in the second column.)*

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

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.)

- 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.)*

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.)*

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

APPENDIX B

2014 WATERFOWL FOCUS GROUP MEETING SUMMARY

Parr Shoals Hydroelectric Project Relicense – FERC No. 1894

Waterfowl Hunters Focus Group Meeting Summary

December 9, 2014

Kleinschmidt Offices – Lexington, SC

Waterfowl Focus Group - Purpose Statement

Waterfowl hunting is a recreation activity that occurs within the Parr Hydroelectric Project boundary. As part of the relicensing of the Parr Hydroelectric Project, stakeholders identified the need to gather information from waterfowl hunters that use the Parr Project Area for hunting in order to learn about their use and perceptions regarding the adequacy of existing resources and opportunities within the Project boundary. SCE&G, in consultation with stakeholders, has formed a Waterfowl Focus Group to aid in gathering this information. The resulting Focus Group information will be used to help SCE&G identify ways to support waterfowl hunting and balance waterfowl hunters' needs with other demands at the Project.

Session Details

Facilitators: Alison Jakupca, Henry Mealing, Kelly Miller - Kleinschmidt Associates

Date of Session: December 9, 2014

Participant Information:

<u>Organization/Affiliation</u>	<u>Number Attending</u>
• Individual Waterfowl Hunters	3
• SCDNR	3
• Tyger Enoree River Alliance (TERA) Members	3
• SCE&G Personnel	3
• Kleinschmidt Personnel	3

Results:

SCE&G conducted a focus group of waterfowl hunters in December of 2014. Information was gathered in 3 primary areas: *personal hunting preferences, seasonal trends and distribution of activities, Project Area preferences and needs*. Individual waterfowl hunters and TERA members are collectively referred to as "attendees" in the following notes.

Personal Hunting Preferences:

- Most of the focus group attendees indicated that they hunted in the Project Area on a weekly basis during the hunting season, noting that they would hunt whenever time and personal commitments allow.
- Attendees generally indicated that waterfowl hunting is more enjoyable as a group activity and that they prefer to hunt with 1 to 4 other people.
- Attendees noted that hunting was usually preferable in the morning; however the preferable time of day to hunt was highly weather dependant.
- Weekdays are preferred over Saturdays (no hunting allowable in the Project Area on Sundays) due to less crowding during the weekdays.
- In general, all species of waterfowl are hunted, no particular species of interest is specifically sought.
- Attendees indicated that they hunt by both boat and by wading. Hunters generally boat in from a public launch facility and then wade to a particular hunting location.
- The Project area launch facilities most often utilized by waterfowl hunters are as follows: Hwy 99 and the site at Hwy 215 on Monticello; Hwy 34 primitive site, the Dawkins access (primitive boat ramp and cross over RR tracks); and the Maybinton (Keitts Bridge¹) landing on Parr.

Seasonal Trends:

- Attendees noted that they generally begin hunting on or around Thanksgiving Day and hunt through the end of January (concurrent with the state and federal seasons). However, many indicated that they also hunt during the September teal and goose seasons and the February goose season.
- Holidays were indicated as being some of the best hunting days due to a lack of other hunters.
- Attendees noted an observed decrease in wood duck populations in the Project Area in the last 3 to 4 years. It was noted that snow geese are beginning to be observed in the Project Area.

¹ Please see clarification submitted subsequent to the meeting located at the end of this document.

Project Area Preferences and Needs:

- Parr Reservoir and associated waterfowl areas seems to be preferred to Monticello Reservoir. This may be due to the fact that Monticello Reservoir is only open to waterfowl hunting on Wednesday and Saturday, while Parr is open 6 days a week.
- Attendees indicated that there was over-crowding at the Enoree Waterfowl Area.
- It was noted that people drive from long distances to hunt at the Enoree Waterfowl Area due to the fact that it is a Category 2² waterfowl area (appears "attractive" on paper).
- Attendees also indicated that they have been stranded a few times on the reservoir, as lake levels drop. Additionally, attendees indicated that maintaining a Parr Reservoir level of 260' or above would be preferable, particularly during December and January.
- A bridge may be needed in the Enoree River Waterfowl Area to allow people to hunt at the far side of the area. This would, however, allow more public into this area, which may be a negative impact to serious hunters who wade to that area³.
- Attendees indicated that they would like for SCE&G to maintain Hwy 34 in a primitive state.
- The Maybinton site is difficult to get in and out of and could use some gravel or other boat launching improvements.
- No improvements were recommended at Monticello recreation sites or at Heller's or Cannon's creek sites.
- Enoree Waterfowl Area was indicated as being the most used site, being rated by attendees as a "5" (with "1" being light and "5" being heavy).
- Focus group attendees indicated that the mainstem of the Broad River, from the Monticello tailrace to the Hwy 34 boat ramp, was also fairly crowded (rated as a "4" on Saturday mornings).
- Attendees noted that hunting opportunities could possibly be improved in the Project Area through the creation of an additional waterfowl habitat/resting area (in particular, an area upstream of the Enoree Waterfowl Area, along the Enoree River)⁴.

² SCDNR defines a "Category 1" Waterfowl Area as one where hunting is permitted only by means of a special permit obtained from SCDNR through an annual drawing. Hunting is permitted on an "Category 2" Waterfowl Area only during SCDNR specified days and times during state waterfowl seasons.

³ Please see clarification submitted subsequent to the meeting located at the end of this document.

⁴ Please see clarification submitted subsequent to the meeting located at the end of this document.

Parr Shoals Hydroelectric Project Relicense – FERC No. 1894

Waterfowl Hunters Focus Group Meeting Summary

December 9, 2014

Kleinschmidt Offices – Lexington, SC

Other points and issues raised by focus group attendees:

- Attendees indicated that there are general issues regarding disrespectful and inexperienced hunters in the Project Area; however, they also noted that this seems to be an issue present at any public hunting area and has been compounded by the new-found popularity of waterfowl hunting due to a popular TV show.
- An increase in the number of private impoundments was indicated as potentially attracting ducks away from Project Area waters.
- The VC Summer nuclear station service water pond also provides a good sanctuary for waterfowl.
- Attendees indicated that they general do not experience conflicts with other types of hunting in the Project Area (small game, large game, etc.). They indicated that they occasionally experience conflicts with fisherman in the Project Area.
- Several options were suggested by attendees to alleviate some of the crowding issues currently experienced at the Enoree Waterfowl Area. All of these options would need to be implemented by S.C. Department of Natural Resources (SCDNR) and include:
 - A SCDNR decision to categorize the Enoree Waterfowl Area as "Category 1" (currently "Category 2").
 - Only allow a certain number of individuals to hunt the area at one time.
 - Require a hunting pass.
 - Only allow hunting on Wednesdays.
- SCDNR indicated the desire to work with SCE&G on an annual basis to facilitate SCDNR management of waterfowl areas during planting and hunting seasons. In particular, was the discussion of SCE&G maintaining Parr Reservoir at levels that would assist with either flooding or draining of waterfowl areas.

Conclusions:

There were many common themes expressed during the focus group meeting. Over-crowding at the Enoree Waterfowl Area was a main concern. Some improvements were suggested at the Hwy 34 boat ramp and the Maybinton Landing. However, it was emphasized that improvements/maintenance should continue to focus on keeping these areas primitive. Focus

group attendees expressed satisfaction with the Monticello Reservoir access areas as well as the developed access areas at Parr (Cannons and Hellers Creek). Attendees noted that desire to work with SCDNR to alleviate some of the crowding issues in the Project Area. Potential opportunities for SCE&G and SCDNR to work together in the future for the management of waterfowl areas were also identified.

Comments and Clarifications Submitted Subsequent to the Meeting

The following comments were provided subsequent to the focus group meeting to clarify the preceding meeting summary:

- In the "Personal Preferences" bullet points, Keitts Bridge appears to be referenced as being on Parr Reservoir. That landing is on the Enoree, upriver of the Enoree Waterfowl Area.
- In the "Project Area Preference and Needs" bullet points, there is a reference to the foot bridge in the Enoree Waterfowl Area. That bridge already exists. The conversation was about the fact that the bridge may be contributing to the over - crowding issue in the area. It does provide easier access to the far side of the area. Previously, that area was a long *walk* around the impoundment. Now wading to that area is possible because the foot bridge gets you over the creek channel out in the middle of the water.
- In the "Project Area Preference and Needs" bullet points, there is mention of "improving hunting opportunities" regarding the SCE&G property upstream of the Enoree Waterfowl Area. To be clear, the intent of the suggested enhancements to the area is to restore wetland habitat for waterfowl and other wetland dependant organisms.... critters. With its proximity to the Enoree Waterfowl Area, it is possible that the improved area would be a sanctuary. While this would contribute to overall habitat, I am not sure it directly contributes to "hunting opportunities". Waterfowl hunters have long correlated habitat conservation and restoration with sustaining populations conducive to hunting, but the two efforts are distinct.

Appendix: Focus Group Discussion Questions

1. When was the last time you hunted waterfowl in the Project Area (refer to map)?
2. When you hunt waterfowl in the Project Area, how many people do you usually hunt with?
3. What time of day do you usually hunt in the Project Area?
4. Is there a specific month that you tend to hunt most frequently? Why? Are there any months during the season that you generally avoid? Why?
5. What species or group (geese, wood ducks, puddle ducks, diving ducks) of waterfowl do you typically hunt for in these areas?
6. How many times a season do you typically hunt in these areas?
7. Do you typically hunt on weekends, weekdays or both?
8. Have you seen any changes in the species of ducks harvested over the last 5 years?
9. Looking at this map, I'd like you to show me areas where you typically hunt waterfowl in the Project Area. Why do you choose to hunt waterfowl here?
10. Do you typically hunt waterfowl by wading, from a boat, or both?
11. For those of you who typically hunt from a boat, do you usually launch from private property or a public launch facility? If either of the latter responses, which ones? (looking for specific names here)
12. I'd like to focus on the public access sites you use for launching on the lake for waterfowl hunting. Are there any additional facilities needed at these sites? [By "facilities" I mean

parking spaces, restrooms, launch lanes, lighting, etc.] Are there any improvements that you would recommend for this site?

13. On a scale from 1 to 5, with 1 being light, 3 being moderate, and 5 being heavy, how would you rate the crowdedness overall in the Project Area when you go waterfowl hunting?

14. Do you experience conflicts with other types of hunting (small game, large game, etc.) or recreation activities (fishermen) in the Project Area?

15. How do you think waterfowl hunting in the Project Area could be improved?