

DOWNSTREAM RECREATIONAL FLOW ASSESSMENT STUDY PLAN

PARR HYDROELECTRIC PROJECT (FERC No. 1894)

Prepared for:

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

Prepared by:

Kleinschmidt

Lexington, South Carolina
www.KleinschmidtUSA.com

October 2013

DOWNSTREAM RECREATIONAL FLOW ASSESSMENT
STUDY PLAN

PARR HYDROELECTRIC PROJECT
(FERC No. 1894)

Prepared for:

South Carolina Electric & Gas Company
Cayce, South Carolina

Prepared by:

Kleinschmidt

Lexington, South Carolina
www.KleinschmidtUSA.com

October 2013

DOWNSTREAM RECREATIONAL FLOW ASSESSMENT STUDY PLAN

PARR HYDROELECTRIC PROJECT (FERC No. 1894)

SOUTH CAROLINA ELECTRIC & GAS COMPANY

TABLE OF CONTENTS

1.0	INTRODUCTION	1
2.0	PURPOSE OF THE STUDY	3
3.0	STUDY AREA	4
4.0	METHODOLOGY	5
4.1	PHASE 1 - FOCUS GROUP AND EXISTING INFORMATION REVIEW	5
4.2	PHASE 2 - SITE RECONNAISSANCE	6
5.0	DELIVERABLES	7
6.0	SCHEDULE.....	8
7.0	USE OF STUDY RESULTS	9
8.0	REFERENCES	10
FIGURE 1	DOWNSTREAM RECREATIONAL FLOW ASSESSMENT STUDY REACH.....	4

\\Eagle\Jobs\455\076\Docs\Study Plans\Final Study Plans\
001-Final Parr Downstream Recreation Flow Assessment Study Plan.docx

DOWNSTREAM RECREATIONAL FLOW ASSESSMENT STUDY PLAN

PARR HYDROELECTRIC PROJECT (FERC No. 1894)

SOUTH CAROLINA ELECTRIC & GAS COMPANY

1.0 INTRODUCTION

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

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

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

Accordingly, SCE&G organized a Recreation TWC (Appendix A), comprised of interested stakeholders who will collaborate with SCE&G to identify and make recommendations related to recreational needs and opportunities in the Project area. The TWC has requested that a study be designed and implemented that would assess flows downstream of the Parr Shoals Dam (Parr Dam) that provide quality recreational experiences and identify preferred flows for recreational activities, primarily as they relate to wade-angling, canoeing and kayaking.

2.0 PURPOSE OF THE STUDY

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

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

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

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

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

3.0 STUDY AREA

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

For this study, the geographic scope will begin at the base of the Parr Dam and encompass limited downstream areas of the Broad River (Figure 1). Focus group discussions will be directed toward recreational wading and boating flow opportunities as they relate to representative hydraulic conditions (i.e. runs, pools, and rapids) in identified reaches of the Broad River. Should Phase 2 be implemented, as discussed below, the specific areas of any on-water evaluations/verifications within the study reach will be chosen with regards to access and in consultation with the TWC/focus group.

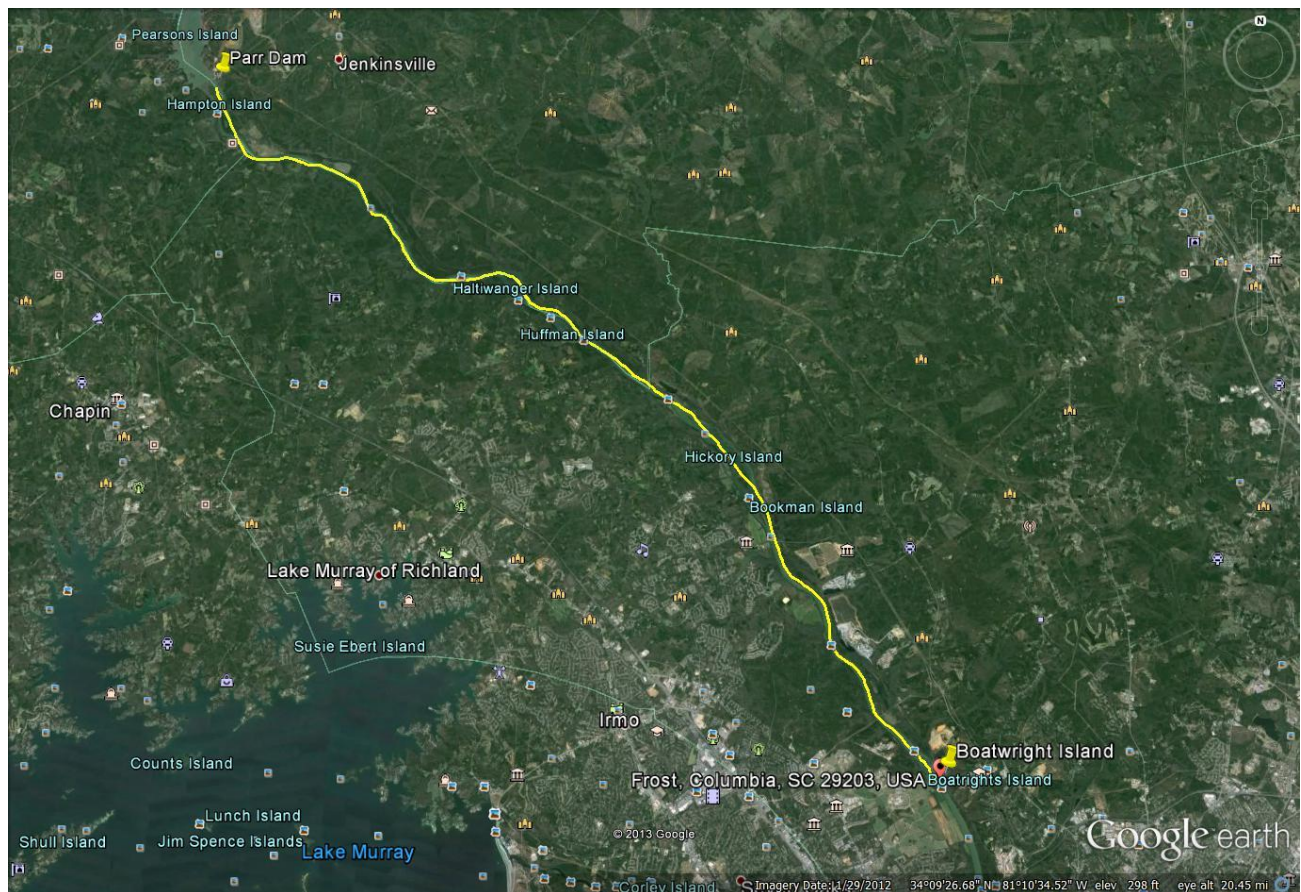


FIGURE 1 DOWNSTREAM RECREATIONAL FLOW ASSESSMENT STUDY REACH

4.0 METHODOLOGY

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

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

4.1 PHASE 1 - FOCUS GROUP AND EXISTING INFORMATION REVIEW

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

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

4.2 PHASE 2 - SITE RECONNAISSANCE

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

5.0 DELIVERABLES

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

6.0 SCHEDULE

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

TASK	DATE
Focus Group Meeting 1 and Literature Review	September – October 2014
Focus Group Meeting 2	September 2015
Phase 2 Panel Reconnaissance	October - November 2015
Submit Draft Report	2016
TWC Review	2016
Submit Final Report	2016

7.0 USE OF STUDY RESULTS

Study results will be used as an information resource during discussion of relicensing issues and developing potential Protection, Mitigation and Enhancement measures with the South Carolina Department of Natural Resources, USFWS, RT&E TWC, and other relicensing stakeholders.

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>

Whitaker, Doug, Bo Shelby, and John Gangemi. 2005. Flows and Recreation: A Guide to Studies for River Professionals. October 2005.