Study Plan Name: Recreation Use and Needs Study (RUNS) **Study Plan Designation:** Recreation 01

Study Short Description: Evaluate project-related water and land-based recreation use and needs, update the 1999 RUNS study as needed, and identify opportunities to expand the Access Area Improvement Initiative.

Applicable Hydro Projects/Developments: All hydro developments within the Project, and the regulated river sections affected by Project operations

Prerequisite Study Designation: N/A

The purpose of this document is to describe the study scope, basic methodology, and uses for the results. Previous versions of the study scope document have been reviewed and discussed by the resources agencies and other members of the Recreation and Shoreline Management Resource Committee or Study Team and based on these discussions appropriate methodologies have been added. This document is intended to be the final Study Plan for Recreation 01.

I. Study Objectives

1. To provide data and analysis sufficient to characterize present public recreation use and experience levels on project reservoirs, tailwaters, and related downstream riverine areas.
2. To provide data and analysis sufficient to estimate future demand for public recreation on project reservoirs, tailwaters, and related downstream riverine areas.
3. To provide data and analysis sufficient to estimate present and future capacity of project reservoirs, tailwaters, and related downstream riverine areas to support present and future demand for public recreation (Carrying Capacity).
4. To provide data and analysis sufficient to determine present and future public recreation facility requirements for project reservoirs, tailwaters, and related downstream riverine areas.
5. To identify opportunities to enhance and expand the current Access Area Improvement Initiative.
6. To provide data and analysis sufficient to characterize the economic value of recreation at the project.

Note: The study will evaluate both water and land-based, and night as well as day-time recreation use and needs. Land-based recreation includes camping, hiking, picnicking, wildlife viewing, bank fishing, etc.

II. Basis

The basis for the study is 18 C.F.R. 2.7 - Recreational Development at Licensed Projects.

III. Geographic and Temporal Scope

The study area will include the Catawba-Wateree reservoirs from Lake James through Lake Wateree and lands and waters affected by operation of the Project. Specifically, the study area includes the Project reservoirs (including Duke-owned islands), tailwaters, and downstream riverine areas contained within the FERC Project Boundary immediately downstream of Catawba-Wateree hydroelectric stations, regulated river sections outside the FERC Project Boundary, existing developed and undeveloped Duke Power Access Areas, and related governmental and commercial facilities located adjacent to the project that provide or affect water and land-based recreation opportunities for the general public. The study will consider data on recreation use gathered over a one-year period.

IV. Summary of Existing Data

The following existing data will support the study:

1. Shoreline Management Plan for the Catawba-Wateree Hydro Project (2001 Update), Appendix B - Recreation Use and Needs Study
2. North Carolina State Outdoor Recreation Plan, (2003)
3. North Carolina State Park Plans (NCDPR)
4. South Carolina State Outdoor Recreation Plan (2002)
5. South Carolina Recreation Participation and Preference Study (SCPRT, 1999)
6. The Vision for the 21st Century – SC State Park Service (SCPRT, 2003)
7. Existing plans for adjacent local, regional, and national parks, trails, greenways, open space, forests, refuges, etc.
8. 2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation (U.S. Fish & Wildlife Service and U.S. Census Bureau)
9. Guidelines for Understanding and Determining Optimum Recreation Carrying Capacity (Bureau of Outdoor Recreation, 1997)
10. Management of Aquatic Recreation Resources (Warren and Rea, 1989)
11. Outdoor Recreation in American Life: A National Assessment of Demand and Supply Trends (Cordell, et al, 1999)
12. Emerging Markets for Outdoor Recreation in the United States: Based on the National Survey on Recreation and the Environment (Cordell, et al, 1999)
13. “Expanding the Experience, Trails for South Carolina, the 2002 South Carolina State Trails Plan (SCPRT & PCF 2002).
14. Duke Power and State Creel Survey Data

V. Methodology

The Study Team (including study consultant) will review the 1999 Recreation Use and Needs Study to determine what types of existing data and analysis requires updating, as well as new data and analysis requirements. In addition, the team will review the recent 2003 North Carolina State

Outdoor Recreation Plan, the 2002 South Carolina State Outdoor Recreation Plan, and other existing data to support the study. These initial steps will capitalize on the technical expertise of the Study Team to refine the scope and focus of the Study.

The Study Team will develop the specific methodology, including survey techniques, survey forms, data analysis requirements, etc. to gather input from a cross section of reservoir and riverine recreation users. Study participants will include Duke public access area users; Federal, State, and local agencies and planners; public park users and managers; lake front residents and property owners; commercial recreation facility customers and managers; and the general public within the study area. Special population groups such as Lake Wateree bridge fishermen, hydro station tailrace fishermen, the Catawba Indian Tribe and children will receive consideration in survey design and implementation. The study will gather sufficient seasonal data to allow for statistical analysis. The various user segments will not be combined unless statistically similar.

Specifically, the consultant will focus on nine tasks:

Task 1: Present Recreation Use and Experience Levels

The consultant will use several approaches to collect existing and potential (future) recreational visitor and shoreline homeowner use data for the Catawba-Wateree reservoirs from Lake James through Lake Wateree and lands and waters affected by operation of the Project. The study area includes the Project reservoirs (including Duke-owned islands), tailwaters, and downstream riverine areas contained within the FERC Project Boundary immediately downstream of Catawba-Wateree hydroelectric stations, regulated river sections outside the FERC Project Boundary, existing developed and undeveloped Duke Power Access Areas, and related governmental and commercial facilities located adjacent to the Project that provide or affect water and land-based recreation opportunities for the general public. The following are descriptions of each approach for collecting data.

Existing public use, including visitors of all ages to public recreation sites will be investigated with the use of traffic counters, spot counts, and/or visitor interviews. Public recreation sites includes existing developed and undeveloped Duke Power access areas, open space, game lands, state and county parks, state boat ramps, public commercial facilities, tailrace areas, bridges and informal recreation sites throughout the vicinity of the reservoirs, tailraces, downstream river segments, and Duke-owned islands),

Shoreline resident use, including residents that own land adjacent to the project boundary and residents that have access to the Catawba-Wateree lakes via a common access lot (off-water subdivision or condominium), will be investigated using a mailed questionnaire.

Potential visitors from the surrounding communities will be surveyed with a mailed questionnaire. This will include people living in the counties where the Catawba-Wateree Project is located, including members of the Catawba Indian tribe.

Recreation providers; agency representatives and planners; and representatives of other stakeholders will be surveyed with a mailed questionnaire. Recreation providers include commercial recreation facility managers and public park managers. Agency representatives and planners include individuals from federal, state, and local resource and planning agencies. Representatives of other stakeholder groups include representatives for the Catawba Indian tribe, canoe/paddling groups or clubs, hunting groups or clubs, fishing groups or clubs, water ski

groups or clubs, the Catawba Riverkeeper Foundation, Ducks Unlimited, Trout Unlimited, and conservancy groups.

Sub-task 1.1: Existing Use Information

The consultant will work with the study team to gather existing reports and data sources. The consultant will review these reports and data sources for information on existing recreational uses, facilities, opportunities, and needs. The consultant will include relevant information from this review in its analysis of the Catawba-Wateree Project. These sources include but are not limited to the following items:

Shoreline Management Plan for the Catawba-Wateree Hydro Project (2001 Update), Appendix B - Recreation Use and Needs Study

North Carolina State Outdoor Recreation Plan, (2003)

North Carolina State Park Plans (NCDPR)

South Carolina State Outdoor Recreation Plan (2002)

South Carolina Recreation Participation and Preference Study (SCPRT, 1999)

The Vision for the 21st Century – SC State Park Service (SCPRT, 2003)

Existing plans for adjacent local, regional, and national parks, trails, greenways, open space, forests, refuges, etc.

2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation (U.S. Fish & Wildlife Service and U.S. Census Bureau)

Guidelines for Understanding and Determining Optimum Recreation Carrying Capacity (Bureau of Outdoor Recreation, 1997)

Management of Aquatic Recreation Resources (Warren and Rea, 1989)

Outdoor Recreation in American Life: A National Assessment of Demand and Supply Trends (Cordell, et al, 1999)

Emerging Markets for Outdoor Recreation in the United States: Based on the National Survey on Recreation and the Environment (Cordell, et al, 1999)

"Expanding the Experience, Trails for South Carolina, the 2002 South Carolina State Trails Plan (SCPRT & PCF 2002).

Duke Power and State Creel Survey Data

Sub-task 1.2: Existing Public Access Sites

The consultant will gather recreation information from existing public recreation sites with traffic counters, spot counts, and visitor interviews. The consultant will use these methods to collect recreation use data and information about the existing visitors to the Catawba-Wateree for a complete calendar year (March 2004 – February 2005). The consultant will identify sites where the managing entity collects use information to reduce duplication of effort. The criteria for choosing recreation sites for the study are to include all Duke Power Access Areas, and other State and local public recreation sites within the study area.

The consultant will install traffic counters at sites that are conducive to this form of data collection. The consultant uses highly sophisticated counters that electronically record traffic 24 hours per day and can store data for up to four weeks. Traffic counters are conducive at sites where there is a clearly designated entrance and exit to the recreation site. The consultant will assess all of the Catawba-Wateree Project recreation sites to determine which sites are best for traffic counters. The consultant will use spot counts at the sites that are not suited for traffic counters. It is possible that certain recreation sites could be used as surrogates for other sites. The consultant will work with Duke and the study team to determine if the use of such surrogates is appropriate and which areas are most suited to this approach.

The consultant will conduct spot counts at recreation sites where they are collecting traffic counter data and at public sites where traffic counters are not effective. The consultant will not conduct spot counts at sites where they will rely on data from secondary sources such as commercial marinas. For example, the consultant will interview marina owners and ask them to record use or estimate use at their facility. The consultant staff will count and record the number of vehicles, boat trailers, jet-ski trailers, campers, anglers, swimmers, picnickers, and other recreation users. The consultant will utilize the Palm Pilot™ technology described below to enter spot count information into a standard form.

The consultant will conduct a visitor survey to collect data on people's use of recreation sites that are adjacent to and/or provide access to the Catawba-Wateree Project, their attitudes concerning recreation needs and opportunities, safety-related issues and respondent's demographic information. The consultant will ask the visitors about items such as satisfaction, spending, and conflicts with other visitors. The consultant will use the questionnaire as an exit interview to accurately capture the visitors' perceptions of their experience. Interviews will be conducted at formal and informal public recreation areas at each of the project reservoirs, tailraces, and riverine areas. The consultant will schedule visits to recreation sites based on a stratified random sample that will include all seasons and times of day, including night use. This stratified random sampling scheme will enable the consultant to gain representative responses from the visitors, while ensuring interview coverage during key times (i.e. weekend days). The consultant will work with the study team to ensure the highest quality recreation survey that will not be biased or overly burdensome for respondents. The consultant's data collection efforts will vary according to season with the greatest effort occurring during the peak summer use time of Memorial Day weekend through Labor Day.

The consultant will conduct the surveys using Palm Pilot™ technology. The Palm Pilots™ will be programmed with the questionnaire form, which will aid in the collection of data and allow for a high number of responses per day. The Palm Pilot™ survey application system uses Palm OS Operating System and Techneos Data entry software. To develop the questionnaire, the consultant will create a master list of all questions that will be collected in the field, including any logic decisions that must be made. One advantage of the Palm Pilots is the ability to pre-program the survey form to ensure that appropriate questions are asked. For example, questions specific to boating will only be prompted for those individuals that have participated in some form of boating.

The consultant will collect the data on the Palm Pilot™ in the field using the custom-developed form application. The form allows the use of pen-based character recognition and virtual keyboard entry for text, memo, combo box, radio box, check box, and date/time stamp form elements for quick and easy entry. Once the data specified on the screen have been entered, the data collector taps a button to go to the next screen. The data are automatically saved, and when complete, the data collector inserts a new record and collects a new set of data.

The consultant will download the data daily to a secure Master Database. Using a high-speed Universal Serial Bus (USB) connection, this process will only take seconds to download. Once all of the new records have been transferred, they will be removed from the Palm PilotTM for the next collection cycle.

The consultant's data input time is reduced to near zero because the responses are easily downloaded for analysis. With the use of electronic traffic counter and Palm Pilot™ technology, the consultant is able to drastically reduce error and labor hours.

Sub-Task 1.3: Shoreline Resident Use

The consultant will use a mailed questionnaire to survey shoreline residents and residents that have access via a common dock about their uses and needs of the Catawba-Wateree Project area. The consultant will conduct the survey of shoreline residents during the late summer and early fall of 2004. The survey will be used to collect information about desired facility improvements, new recreational opportunities, and overall recreational activities in the area. The consultant's mailed questionnaire methods have been very effective in the past, with response rates ranging from 50 to 70 percent. Based upon the number of adjacent lots and prevalence of shoreline improvements, the consultant proposes utilizing a database of shoreline permit holders for the Shoreline Resident questionnaire, from Duke Power's shoreline permitting database. The greatest advantage of this database is the ease of sampling. The second option for a mailing list would be to develop a system to randomly select shoreline residents from each adjacent county's tax information. To ensure statistical accuracy, the consultant estimates that the survey will include approximately 2,000 residents stratified by reservoir. The actual number of surveys will be determined through an analysis of the approximate number of residents along the shoreline of each reservoir.

In addition to individuals that own land along the shoreline of the Project, back lot and condominium owners contribute a significant amount of recreation to the Catawba-Wateree Project. The consultant will develop a system to randomly select shoreline residents from county tax information. To ensure statistical accuracy, the consultant estimates that the survey will include approximately 1,000 of these condo/back lot residents stratified by reservoir.

Sub-Task 1.4: Potential Visitors

The consultant will use a mailed questionnaire to survey potential visitors about their potential uses and needs of the Catawba-Wateree Project area. To ensure statistical accuracy, the consultant estimates that a random sample of 2,000 residences in counties where the Catawba-Wateree Project is located will be required. The actual number of surveys mailed to each county will be determined by an analysis of the total population of the surrounding counties. The consultant will stratify the 2,000 potential visitor questionnaires by county, and the number sent to each county will be based on the proportion of the study area population in each county.The consultant will mail each of the 2,000 residences a questionnaire asking about existing and potential (future) recreation visits to the project area. The consultant will develop its database of residences using county tax office information. The consultant will make two mailings to this randomly selected sample, and based on the consultant's past efforts, we anticipate a response rate of 40 to 60 percent.

Sub-Task 1.5: Recreation Providers, Agencies and Planners, and Stakeholders

The consultant will send separate questionnaires specifically designed for each group. The consultant will send a mailed questionnaire to owners/operators of existing true public marinas and other commercial recreation facilities, managers of public parks, agency representatives and planners, and representatives of other stakeholders. Commercial facilities and public parks provide public access to the Catawba-Wateree Project and the area adjacent to the Project for a large number of individuals. At commercial facilities, the consultant will assess the number of boat slips available, percent usage of the docking facilities during peak and off-peak times, number of boats launched during peak and off-peak times, and amount of fees for public launching. At public parks, the consultant will assess the level of use, facilities available, capacity utilized, and amount of fees.

The consultant will also develop a list of representatives of federal, state, and local resource and planning agencies, and recreation stakeholder groups, including all state relicensing team and advisory group members who have an interest in the Catawba-Wateree area. The consultant will survey a representative from each entity to determine the needs of the group, desires for facility improvements, and constraints to recreation participation in the area.

Sub-Task 1.6: Data Analysis

The consultant will analyze and present the data so the recreation use and needs of the study area can be viewed aggregated and disaggregated for individual locations. The consultant will organize and present the data they collect, as part of this study, such that it is usable by Duke for its analysis and decision-making processes. For example, the consultant will consolidate information about each of the facilities to assess current condition, determine the adequacy of the facility to accommodate current use levels, along with any needs for additional facilities. The consultant will also present use and demand estimates for the various populations including existing visitors, shoreline residents, and potential (future) visitors.

Estimating recreation use at a series of hydro developments such as the Catawba-Wateree Project is similar to assembling a puzzle. The pieces of information are often different shapes and types of data. The study methods focus on collecting as many of the pieces of recreation use data as possible. The pieces of data include traffic counter data, spot counts, visitor interviews, shoreline questionnaires, use estimates from commercial recreation facility managers and park managers. The following is a brief summary of how the consultant will analyze each type of data.

Traffic counter data – The data from the traffic counters are a record of the vehicles that enter and exit a site. In order to estimate the number of people who use a site during the study year, the consultant will divide the total counts for the year for a site by two in order to account for vehicles entering and exiting the site. The consultant will then multiply this count for the year by the average party size based on the data they collect using the visitor interviews.

Spot counts – The consultant will calculate the average number of vehicles by type at each site where they record spot counts. An excellent way to specify the precision of the averages is to construct a confidence interval. For example, if the number of spot counts for a site is 10 including: 4, 4, 5, 5, 5, 6, 6, 7, 8, 9 then the average would be 5.9 and the 95% confidence interval would range from 4.71 to 7.09. The wider the interval, the more confident you are that it contains the parameter. The 99% confidence interval is therefore wider than the 95% confidence interval and extends from 4.19 to 7.61.

Visitor interviews – The consultant will calculate the averages for the responses to the visitor interview questions. As described above, the consultant will use the average party size to estimate the number of people using a site. The consultant will calculate a 95% confidence interval for each question they can calculate an average.

Shoreline questionnaires – The consultant will calculate the averages for the responses to the shoreline questionnaire. They will use the averages for annual recreational use in the study area to calculate the amount of annual use by shoreline residents. They will calculate a 95% confidence interval for each question they can calculate an average.

Use estimates from commercial recreation facility managers and park managers – The consultant will attempt to get annual recreational use estimates from all facility and park managers. If they are not able to get data from every facility or park, they will calculate average use by type of facility or park and extrapolate for the facilities and parks where use estimates are not available.

Task 2: Estimate Future Recreational Demand

The consultant will estimate future recreation demand at the Catawba-Wateree Project by assessing future demand for recreation activities and population trends. The consultant will develop growth factors for population and recreation use. Population growth factors will be based on county population increase estimates from the States of North and South Carolina. The consultant will use an average population growth rate for the counties where the Catawba-Wateree Project is located. The recreation use projections for the years 2005 through 2045 are will be from "Outdoor Recreation in American Life: A National Assessment of Demand and Supply Trends" by Cordell (1999). The consultant will multiply the population growth percentage and recreation use growth percentage by the estimated existing recreation use at the Catawba-Wateree Project. The table below shows the format for this analysis.

Projected Recreation Demand at the Catawba-Wateree Hydroelectric Project

Recreation Activity	Existing Recreational Use	Recreation Trend Changes 2005-2015	Estimated Pop Change 2005-2015	Estimated Recreational Use 2015	Recreation Trend Changes 2015-2025	Estimated Pop Change 2015-2025	Estimated Recreational Use 2025	Recreation Trend Changes 2025-2035	Estimated Pop Change 2025-2035	Estimated Recreational Use 2035	Estimated Recreation Trend Change 2035 – 2045	Estimated Pop Change 2035 - 2045	Estimated Recreational Use 2045
List of recreation activities to be determined in consultation with the study team.													
Total													
Source for population changes for 2005-2045 from North and South Carolina Office of State Planning													
Source for recreational use changes for 2005-2045 from Bower et al., “Projections of Outdoor Recreation Participation to 2050” Outdoor Recreation in American Life (Cordell, 1999)													

Task 3: Estimate Present and Future Capacity

The consultant will focus the boating carrying capacity assessment on areas that are considered to be potentially greater than 50% capacity based upon the 1999 Recreation Study and areas worthy of study based upon the professional judgment of the study team. These lakes include James, Hickory, Norman, Mountain Island, Wylie, and Wateree. The consultant will focus on the peak use period for the Catawba-Wateree Project: Memorial Day through Labor Day. The consultant will collect data on randomly selected weekdays, weekend days, and holidays between May 29, 2004 and September 6, 2004, from the hours of 10:00 a.m. and 6:00 p.m.

The consultant will analyze the physical aspect of boating carrying capacity by obtaining aerial photographs of the project area. The consultant will use a local aerial photographer with intimate knowledge of the area to take photographs on 10 randomly chosen days between Memorial Day and Labor Day. The consultant will use a stratified random sampling approach choosing 4 weekdays and 6 weekend days or holidays. The photographer will take pictures of all of the areas chosen for study. To ensure uniform data entry and the ability to compare boating use on the variety of days, the consultant will divide each lake into a number of individual cells. Using the photographs, the consultant will count the number of boats within each cell and then transfer this information into a Geographic Information System (GIS) layer for analysis. The consultant will analyze the data at the level of the individual cell, and then aggregate the data and analyze it for larger sections of each lake.

The consultant will measure the social aspect of boating carrying capacity with specific questions from the on-site interviews and mail surveys outlined in Task 1. The consultant will utilize the on-site, exit interviews conducted at public recreation sites and the mail survey of landowners along the shoreline of the Project to assess people's perception of crowding and safety.

The consultant will also assess the effects of water level fluctuations on boating carrying capacity and boating safety. The consultant will assess the available acres of water surface and the location of navigational hazards under the conditions Duke captures with its GIS mapping for different water levels.

Task 4: Determine Present and Future Public Recreation Facility Requirements

To determine present and future facility requirements, the consultant will first collect information about the recreation resources within the study area. The consultant will compare this information about existing facilities with data collected regarding existing public use and estimates of future use. In addition, the consultant will review any recreational needs identified by respondents to the surveys utilized in Task 1 and state, regional, and local plans. The consultant will also provide a regional recreation characterization to update and compare with the information contained in the 1999 recreation use study.

The consultant will discuss the potential for developing triggering mechanisms for additional recreation opportunities with the study team. The consultant will present the advantages and disadvantages of specific options for triggering mechanisms, which will allow the study team to provide input in developing specific triggering mechanisms.

Sub-Task 4.1: Recreation Facility Inventory

The consultant will develop a tailored inventory form for use at the recreation facilities in the study area. Information contained in the form will include type of facilities, services offered, parking available, etc. This inventory will also include an assessment of the facilities with regard to ADA requirements, GPS location of the facility, and representative photos of each facility. The consultant will complete the following for the study area:

- Identify and characterize all recreation sites,
- Identify amenities at developed sites and uses at undeveloped sites,
- Identify sites/facilities for people with disabilities,
- Determine adequacy and condition of existing recreation facilities,
- Identify dedicated open space and game lands.
- Identify Wild and Scenic Rivers and formal or recommended Wilderness areas,
- Identify Land and Water Conservation and other federally funded properties, and
- Identify safety features designed to protect the recreating public.

The consultant will also develop detailed map layers that meet all of Duke's GIS base map standards.

Sub-task 4.2: Recreation Needs Assessment

The consultant will review the recreation facility information, recreation use data, recreation visitor comments, and potential user comments to assess any existing recreation needs at the Catawba-Wateree Project. The consultant will meet with Duke and the study team to discuss any recreation management, access, or development improvement recommendations for the Catawba-Wateree Project area.

The consultant will assess the available capacity of recreation sites, boating capacity determinations, and future recreation use estimates to develop recommendations for any necessary mitigation and enhancement measures regarding recreation. The consultant will review existing recreation sites to determine if future demand can be met through enhancement of existing sites, the addition (and location) of new recreation sites, or changes in recreation policy at the Catawba-Wateree Project.

Task 5: Access Area Improvement Initiative Assessment

The consultant will review the locations and conditions of sites that Duke has identified as priority sites for the AAII. They will also work with the study team and potential partners for the AAII to identify enhancements to the initiative, as well as possible modifications that may make the initiative more attractive.

The study team, along with other entities, will be able to provide valuable insight into the AAII. To gain feedback from these individuals, the consultant will conduct a focus group regarding the AAII. The consultant will work with Duke to determine the make up of the focus group. The consultant will then develop two half-day sessions to identify options, including pros and cons, regarding additional opportunities to utilize the AAII, ways to restructure or enhance the AAII to make it more enticing to additional groups, and additional groups that may be able to utilize the AAII if it were open to them.

Task 6: Economic Value of Recreation Assessment

The Catawba-Wateree Project plays a significant role in the regional economics of North and South Carolina. Individuals use the Catawba-Wateree Project for recreation and access the lake from private docks, public boat launches, and marinas and utilize adjacent recreational lands, tailrace areas and riverine sections. These people make expenditures on food and beverages, lodging, entrance fees, boat rental and supplies, bait and tackle, gasoline, and other expenditures related to their activities.

The consultant will assess the socioeconomic effects of recreation associated with the Catawba-Wateree Project on the local economies of North and South Carolina. The consultant will utilize the recreation use estimates combined with expenditure information, each of which will be developed as a part of Task 1. The consultant will use the IMPLAN model (MIG, 1999) to develop multipliers to estimate the economic

effects of recreation expenditures in the study area. The IMPLAN model utilizes specific multipliers for each of the counties in the study area to assess total economic effects. The consultant will assess the value of the income, jobs, and taxes attracted to the region due to the Project-related recreation.

Task 7: Quarterly Reports and Meetings

The consultant will prepare quarterly reports for presentation to the study team, resource committee, and stakeholder groups. The reports will consist of a summary of the consultant's data collection efforts, data received to date, and preliminary analysis. The current schedule for quarterly study team and resource committee meetings is:

- May 10, 2004,
- August 11, 2004,
- November 8, 2004, and
- February 8, 2005

Task 8: Draft Recreation Resources Report

The consultant will prepare a draft study report that will incorporate the results of Tasks 1 – 7. The consultant will meet with the study team to review the results of the study and make the report available for comment by the study team. The consultant will prepare a pre-draft report for Duke Power internal review one month prior to the study team review.

Task 9: Final Recreation Resources Report

The consultant will prepare a final study report that will incorporate the comments of the study team as appropriate. The consultant will also prepare an appendix that will provide a summary of comments received on the draft report and responses to the comments as appropriate.

VI. Schedules and Required Conditions

Data collection for the study will be conducted during a full calendar year in order to capture annualized recreation use and needs data. Study data will be available in quarterly interim reports beginning in May 2004 and the draft study report will be available for review by the study team and resource committee by the end of March 2005. The final study report will be available by the end of April 2005.

Recreation Use and Needs Study Schedule

Schedule Task	Responsibility	Deliverable	Start Date	Duration	End Date
1.0	**Study Team**	**Define Scope**	**09/29/03**	3 month	**12/26/03**
2.0	**Study Team**	**Develop Methodology and Questionnaires**	**12/26/03**	2 months	**02/29/04**
3.0	**Consultant**	**Conduct Study**	**03/01/04**	12 months	**02/28/05**
3.1	Consultant	Present Recreation Use and Experience Levels			
3.2	Consultant	Estimate Future Recreation Demand			
3.3	Consultant	Estimate Present and Future Capacity			
3.4	Consultant	Determine Present and Future Facility Requirements			
3.5	Consultant	Assess AAII Opportunities			
3.6	Consultant	Assess Economic Value			
3.7	Consultant	Quarterly Reports and Meetings			
4.0	**Consultant**	**Prepare Draft Report**	**02/28/05**	**3 weeks**	**03/18/05**
5.0		**Review Draft Report**	**03/21/05**	3 weeks	**04/08/05**
5.1	Study Team	Review and recommend revisions	03/21/05	3 weeks	04/08/05
5.2	Resource Committee	Review and recommend revisions	03/21/05	3 weeks	04/08/05
6.0	**Consultant**	**Finalize Study Report**	**04/11/05**	**3weeks**	**04/29/05**

VII. Use of Study Results

The consultant will analyze the recreation data and information it collects, and will develop:

- A study area recreation facility inventory,
- Visitor profile information including results of interviews and mailings,
- Data tables including information gathered via spot counts and traffic counters,
- Annual total recreation use estimates for the project, with breakdowns for each reservoir, tailrace, and riverine segment,
- Detailed results on recreation demand, and
- A site-specific and study area recreation needs assessment.

These results will characterize the types and amounts of existing and estimated future recreation use within the study area, and the ability of the Project to accommodate future increases in use. They will provide information on the quantity and quality of existing and proposed recreation facilities available at and adjacent to the Project and their ability to support existing and estimated future demand. The results will provide a prioritization of the types of, and locations for, additional facilities that may be needed, and identify enhancements to the Access Area Improvement Initiative to assist in developing successful partnerships with State and local government, non-government organizations, and the private sector.

VIII. Study Team Participants

	Organization	Name	Phone #	E-Mail
Duke Power Lead	Duke Power	Bill Ambrose	704-382-8587	wsambrose@duke-energy.com
Agencies	NCWRC	Chris Goudreau	828-652-4360	Goudrecj@wnclink.com
	NC PRT/DEHNR	Dwayne Stutzman	828-251-6208	dwayne.stutzman@ncmail.net
	SCPRT	Tony Bebber	803-734-0168	tbebber@scprt.com
	SCDNR	Barry Beasley	803-734-9095	Beasley@water.dnr.state.sc.us
	SCDNR	Dick Christie	803-289-7022	dchristie@infoave.net
Supporting Consultants	Duke Power TBD	Bunny Johns	828-488-8539	bunnyjohns@yahoo.com
Other Participants	Burke County	Judy Francis	828-439-4362	jmfrancis@hci.net
	Harbortown Marina	John Maxwell	704-347-4224	maxdevco@earthlink.net
	The Masters Construction Co.	Bill McGinn	803-547-2306	themasters@comporium.net
	NC Marine Trade Services	Mike Bradley	252-728-2144	MBradley@sbtdc,org
	Carolina Canoe Club	Maurice Blackburn	704-394-8780	mblackburn1@carolina.rr.com

IX. List of Attachments

If needed

X. List of References

If needed