Recreation Resource Conservation Group

Working Documents

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Recreation Resource Conservation Group Work Plan

FINAL

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Mission Statement

The mission of the Recreation RCG is to ensure adequate and environmentally-balanced public recreational access and opportunities related to the Saluda Hydroelectric Project for the term of the new license. The objective is to assess the recreational needs associated with the lower Saluda River and Lake Murray and to develop a comprehensive recreation plan to address the recreation needs of the public for the term of the new license. This will be accomplished by collecting and developing necessary information, understanding interests and issues, and developing consensus-based recommendations.

Identified Issues

- ensure that recreational facilities and opportunities are protected and enhanced for current and future users, on and near the lake and river
    - boating access, including future access on Lexington side of lake
    - non-boating access
    - paddling access
    - security at recreation facilities
    - sufficient egress points on lower Saluda River
    - fishing opportunities for non-boaters
- conservation of lands
    - protect the scenic integrity of the Project
    - provide wildlife habitat areas
    - provide formal and informal (impromptu areas) recreational opportunities
        - consideration of special recreation designation areas classification (e.g., Two Bird Cove and Hurricane Hole)
- using the concept of adaptive management in future recreation planning
- river flows
    - safe recreational opportunities should be available on the lower Saluda River through daily flow release schedules and consensus-based flow rates
    - lack of scheduled recreation flows for the lower Saluda River
    - management of river flows to improve safety for river users (coordinate with Safety RCG)
    - minimum flows to provide for recreational navigation and to protect and enhance aquatic life in river (coordinate with Fish and Wildlife RCG)
- lack of a communication system that would encompass information to better inform the public of existing and projected conditions regarding lake levels and river flows as related to anticipated hydro operations and maintenance
- protection of the cold water fishery on the lower Saluda River
- impacts of lake level on recreational use of the lake
- consideration of The Lower Saluda River Corridor Plan and the Lower Saluda Scenic River Corridor Plan Update and their related public access sites and greenway-trail concepts

RCG Responsibilities

- Utilizing and modifying the Standard Process for evaluating and addressing recreation management and access issues specific to the Saluda Project, including developing a vision statement for the Project.
- Identifying specific areas where lake and river levels, river flows, and/or lake and river level fluctuations may be adversely affecting recreation including the nature and timing of the effect (e.g., access to sections of water, access to facilities, and aesthetics).
- Working with the Operations Resource Conservation Group to identify "reasonable" (based on hydrologic, structural, and other limitations identified) changes in Project operations that would benefit recreation.
- Working with appropriate RCGs to coordinate actions on issues of mutual interests such as river flows, lake levels, conservation of lands, and the siting and management of recreational facilities.
- Identifying any studies, if applicable, that need to be performed for identifying and/or evaluating (1) changes to Project operations, (2) enhancements to existing facilities, and (3) creation of new facilities to provide for public recreational access and opportunities.
- Presenting a range of reasonable alternatives or recommendations to the Saluda Hydro Relicensing Group (SHRG) regarding modifications to facilities or current Project operations, and provide recommendations for future recreation access and facilities.

Tasks and Products

- **Task 1** – Utilize the stepwise process diagram and solution principles to guide the planning process for addressing recreation management issues at the Saluda Project.
    - Final Process Diagram and Solution Principles
- **Task 2** – Develop a Vision Statement for the Saluda Project.
    - Final Vision Statement
- **Task 3** – Review the operational constraints and current operations of the Saluda Project (see Initial Consultation Document).
- **Task 4** – Answer the list of questions on the Standard Process Form in order to characterize the existing and potential future condition of access and lake levels and river flows – from a recreation setting perspective.
    - Final Standard Process Form
- **Task 5** – Review stakeholder requests for particular studies and/or enhancement measures to ensure that these are incorporated into study planning, if applicable
    - Final Study Plans and Possible Mitigation Measures
- **Task 6** – Develop and recommend operation scenarios to the Operations RCG for analysis. These scenarios should reflect initial thinking on potential solutions and be designed to narrow the focus of Task 10 below. Analysis by the Operations RCG will focus on an assessment of potential recreational impacts associated with any suggested changes to operations.
    - RCG Recommendations
- **Task 7** – Discuss results of the Operations RCG analyses.

- **Task 8** – Develop study designs/methods/plans and review agreed upon studies, literature reviews, etc.
    - Final Study Plans
- **Task 9** – Check the solution principles to ensure proposed study plans are consistent.
    - Final Study Plans
- **Task 10** – Provide recommendations for Project operations and recreation access and facilities to be considered in conjunction with all ecological (including water quality), recreational, and safety issues.
    - RCG Recommendations
- **Task 11** – Develop a consensus based Recreation Plan for the Saluda Project that addresses all of the issues and tasks identified above.
    - Final Recreation Plan

Schedule

Late 2005/Early 2006—Finalize Mission Statement, Standard Process Form, Solution Principles, and Work Plan
Mid-2006—Complete identification of studies, literature reviews, etc. that need to be completed to address issues and tasks identified in the Work Plan
Late 2006—Begin compilation of existing information, review preliminary study results, and draft an outline of the Recreation Plan
2007—Complete any studies identified in Task 8 and review results; draft recommendations to SHRG, complete draft Recreation Plan
2008—Finalize Recreation Plan and provide comments on Draft License Application

Possible Mitigation Measures to be Considered

- creation of public access sites and greenway-trail concepts as proposed in the Lower Saluda River Corridor Plans of 1990 and 2000, which include a linear park and trail system on the north bank of the river connecting Saluda Shoals Park to Gardendale Landing and Riverbanks Zoo; and a park/preserve on the south side of river at Twelve-mile Creek
- creation of a state park on the south side of the reservoir
- creation of a multi-lane boating facility that can accommodate large tournaments
- consideration of a boat ramp for small trailered boats at Gardendale or further downstream, but above I26, to allow safer upstream motoring towards Hopes Ferry. Many boaters have carried in their heavy rigs for years at the Gardendale 'throw-in' to be able to more safely boat the Saluda.
- consideration of conservation easements on large tracts of land within the PBL

Recreation Vision Statement for the Saluda Project

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The long-term vision for the Saluda Project is to recognize, protect, and enhance the fishery, water quality, aesthetic values, cultural resources, and public recreational opportunities on the reservoir and the lower Saluda River, while recognizing the need to protect habitat supporting threatened, endangered, and sensitive species of Lake Murray and the lower Saluda River, and ensure adequate facilities and public access are provided. Given the size of the reservoir/hydro-project area, it is felt that it can continue to support a diversity of recreation opportunities. Recognizing that needs and demands will change, recreational uses will be monitored and managed to balance access/uses with the protection of natural resources and environmental quality; and planning for new facilities and management schemes will remain adaptive to changes.

Recreational opportunities for Lake Murray and the lower Saluda River over the next 30 to 50 years of the pending new FERC license for SCE&G should incorporate the following attributes:

- Recreational sites and access areas on the lake and the river should be adequate to allow for the continued rapid population growth in the Midlands over the term of the new license based on surveys of the public and input from the stakeholders and public.

- Sites should be spaced around the lake and along the river corridor to provide legal public access to the different geographic sections of both.

- Uncrowded conditions should be available most of the time at the sites, with natural viewscapes and provisions for most of the current and anticipated popular recreational activities incorporated into the overall provisions.

- Patrols and/or assistance for emergencies should be provided, though not necessarily manned, such as adequate phone boxes.

- Safe recreational opportunities should be available for boaters on the lake with adequate lake levels for the navigational markers, and on the river with release levels that are not life-threatening to the average person.

- The recommendations of the Lower Saluda Scenic River Advisory Council should be implemented to reflect the broad community-based consensus for river access, with consideration of additional river access to areas where trespassing is now the only way to enter an area.

Improvements to be considered at the Saluda Project include:

- Evaluation of SCE&G-owned Project lands for possible reclassification for recreation activities.

- Providing appropriate operations and maintenance of public recreation facilities.

- Optimizing the capacity of existing public recreation facilities to accommodate existing and future demand.

- Improving access and safety in the public waters below the dam and minimizing impacts of project operations on downstream recreation, recognizing the need to meet power generation, and downstream flow responsibilities of Saluda.

- Managing lake level drawdowns so as to optimize safety and recreational opportunities.

- Managing river flows so as to optimize safety and recreational opportunities.

- Ensuring public access areas for the non-boating public remain available along the lake and river shorelines.

- Development of new facilities in accordance with the comprehensive plan as the need arises.

- Evaluation of other properties and potential partnerships as needed to meet the mission statement.

Stepwise Process Diagram

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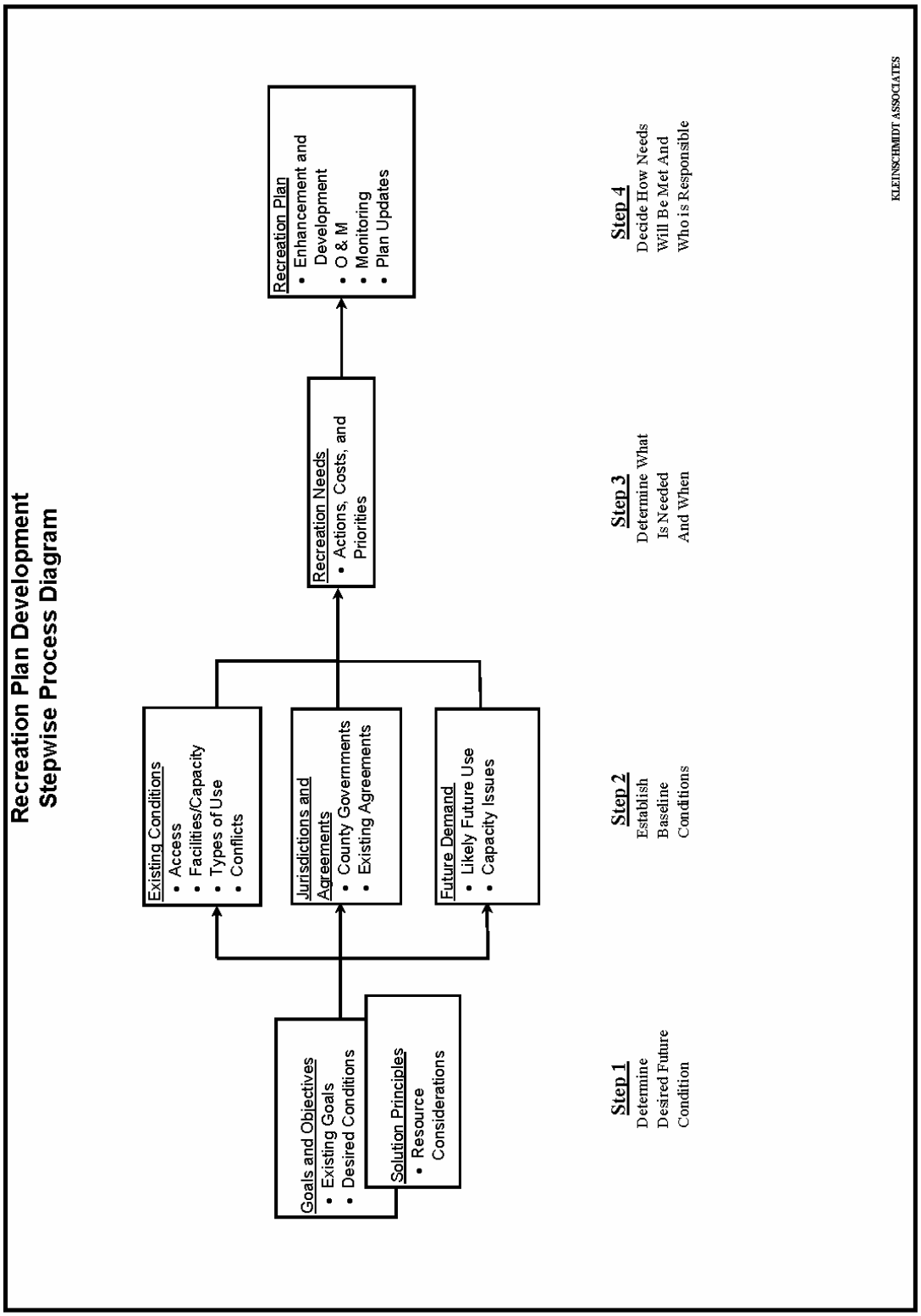

Solution Principles

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Consideration of new recreational facilities should be based on demonstrated need and the potential impact on existing facilities.

1. Priority should be given to demonstrated need within the FERC project boundary.
2. Priority should be given to recreational proposals where multiple stakeholders offer significant participation.
3. Recreational facilities should appeal to a broad public.
4. Reasonable access for the disabled should be provided.
5. Recreational needs should be prioritized for the project including a schedule of proposed improvements so that all costs are not in the first few years of the new license.
6. The improvement or expansion of existing recreational facilities should be considered first.
7. Additional recreational studies (if needed) should be only of sufficient scope and duration to provide necessary information to develop issue solutions.
8. Consensus based solutions are preferred over studies, unless solutions cannot be developed with existing information.
9. A process should be developed to adjust proposed improvements over the 30+ year time frame approximately every 7 to 10 years to account for changing needs. This should include the ability to trade a new needed facility for a proposed (but not built) facility of approximately the same cost.
10. Sufficient “future recreational” land should be set aside now to handle the recreational needs of 30+ years.

Preferred consideration will be given to ideas that:

- do not promote facilities that would adversely impact existing commercial operations;
- identify actual recreational needs that are not filled by existing facilities;
- receive broad public support;
- expand existing recreational facilities prior to developing green field sites;
- require doing recreational studies only if consensus cannot be reached with existing information (It is preferred to put financial resources into recreational facilities and opportunities that benefit the overall Project, rather than fund unnecessary/subjective studies).

Standard Process Form

DRAFT

The following is a list of standard questions designed to help characterize existing recreation resources and aid in development of an appropriate recreation plan for the Saluda Project. Questions pertaining to recreation management are categorized according to the four-step recreation plan stepwise process diagram developed for the project. Questions pertaining to reservoir levels and downstream flows are listed following the facility management material.

STEP 1 – DETERMINE DESIRED FUTURE CONDITION

1. Identify Lake Murray and/or Lower Saluda River (LSR) qualities important to keep and any qualities that need changes.

Qualities to keep include the fishing, hunting, and wildlife watching opportunities associated with the Project. The presence of natural shoreline, islands, and riverbanks are aesthetically pleasing and promote a sense of solitude. The balance between public/private recreational access to the project should be maintained. The shoreline management program is an important means of protecting these qualities and should continue for the term of the new license. The safety and security of recreational users should also be preserved as part of the overall recreational experience. While the lake has good water quality at the present time, we should strive to maintain and improve the water quality of the lake.

There are other qualities that some stakeholders would like to change. These include the water level stability on the lake to provide year-round access to a majority of shoreline property owners. The quality of amenities and access should be improved for recreational users. The recreational experience on the lower Saluda River could also be enhanced by providing minimum flows to protect the health of the river. These flows should be targeted at meeting state standards for dissolved oxygen in the tailrace and river and providing aquatic habitat. The impacts of unscheduled releases from the Project should also be addressed through some combination of providing more predictable flows, managing the rate of water level rise, and/or improving the warning system on the river.

The Project should also continue to provide reasonably affordable, reliable energy to SCE&G's service area.

2. Are there unique characteristics of Lake Murray and/or the LSR relative to other reservoirs/tailraces in the area?

The location of Lake Murray and the lower Saluda River near the metropolitan area of Columbia, SC is a unique characteristic of the Project. Due to the extensive shoreline of the reservoir and the amount of Project lands, the Shoreline Management Plan provides a variety of recreational access. The reservoir is also relatively uninterrupted by bridges, unlike other lakes in the vicinity.

Other distinguishing characteristics of the Project include the purple martin habitat on Lunch Island and the trout and striped bass fishery and whitewater paddling opportunities in the lower Saluda River.

3. What is the overall vision for Lake Murray and/or the LSR, in terms of recreation experiences and opportunities?

The long-term vision for the Saluda Project is to recognize, protect, and enhance the fishery, water quality, aesthetic values, cultural resources, and public recreational opportunities on the reservoir and the lower Saluda River, while recognizing the need to protect habitat supporting threatened, endangered, and sensitive species of Lake Murray and the lower Saluda River, and ensure adequate facilities and public access are provided. Given the size of the reservoir/hydro-project area, it is felt that it can continue to support a diversity of recreation opportunities. Recognizing that needs and demands will change, recreational uses will be monitored and managed to balance access/uses with the protection of natural resources and environmental quality; and planning for new facilities and management schemes will remain adaptive to changes.

4. Are there sensitive biological or cultural resources associated with the Project that need to be considered? Where are these resources located and are there seasonal sensitivities (e.g., nesting or spawning times, etc.)?

There lands in environmentally sensitive areas that have been identified in the current shoreline management plans. There are also natural/undeveloped lands that provide valuable wildlife habitat.

There is some concern over migrating fish on the lower Saluda and Congaree Rivers. A unique cold water fishery also exists in the lower Saluda River. Rocky shoals spider lilies have also been located in the confluence area. There are also bald eagles, woodstorks, and purple martins in the vicinity of the Project.

Numerous cultural resources also exist in the Project vicinity.

Details about these resources will be described in the various resource conservation groups.

5. Identify specific goals and objectives for managing recreation at Lake Murray and/or in the LSR.

Recreational sites and access areas on the lake and the river should be adequate to allow for the continued rapid population growth in the Midlands over the term of the new license based on surveys of the public and input from the stakeholders and public.

Sites should be spaced around the lake and along the river corridor to provide legal public access to the different geographic sections of both.

Uncrowded conditions should be available most of the time at the sites, with natural viewscapes and provisions for most of the current and anticipated popular recreational activities incorporated into the overall provisions.

Patrols and/or assistance for emergencies should be provided, though not necessarily manned, such as adequate phone boxes.

Safe recreational opportunities should be available for boaters on the lake with adequate lake levels for the navigational markers, and on the river with release levels that are not life-threatening to the average person.

The recommendations of the Lower Saluda Scenic River Advisory Council should be implemented to reflect the broad community-based consensus for river access, with consideration of additional river access to areas where trespassing is now the only way to enter an area.

STEP 2 – ESTABLISH BASELINE CONDITIONS

6. What is the nature of existing recreational access to Lake Murray and the LSR?
    a. How many public accessible, developed recreation sites are there?

15 SCE&G owned sites on Lake Murray; 3 on the lower Saluda River
31 public marinas on Lake Murray

    b. Where are they located/how are they distributed around the Project?

See the Saluda Recreation Map

    c. Of these publicly accessible access sites how many are owned and operated by public versus private entities and how are they supervised?

2 of the SCE&G owned sites on Lake Murray are managed by other entities: Dreher Island State Parks is managed by South Carolina Parks, Recreation and Tourism and Larry L. Koon Boat Landing is managed by South Carolina Department of Natural Resources.

1 of the SCE&G owned sites on the LSR (Saluda Shoals Regional Park) is managed by the Irmo-Chapin Recreation Commission.

The 31 public marinas are managed by various commercial entities.

    d. How many sites, open to the public, provide boat access to the reservoir and the LSR?

12 of the SCE&G owned sites on Lake Murray provide boat access; 21 of the public marinas provide boat access.

3 of the sites on the LSR provide boat access.

e. How many provide shoreline fishing?

6 of the SCE&G owned sites on Lake Murray have formal fishing docks/piers.

1 of the SCE&G owned sites on the LSR has a formal fishing dock/pier.

f. Identify the most heavily used facilities.

The most used Lake Murray sites during the 2006 recreation season were Dreher Island State Park (116,680 recreation days or 25 percent of total use), Bundrick Island (94,580 recreation days or 20 percent of total use), Dam Site (54,460 recreation days or 12 percent of total use), and Larry Koon (54,080 recreation days or 12 percent of total use).

The most used LSR sites were Saluda Shoals Park (135,050 recreation days or 58 percent of total use on the lower Saluda River), Mill Race B (37,950 recreation days or 16 percent of total use), Metts Landing (24,520 recreation days or 11 percent of total use) and Mill Race A (22,980 recreation days or 10 percent of total use).

g. Are there informal, undeveloped use areas? Where are they?

There are 23 informal sites on Lake Murray. Their locations are shown on the Saluda Recreation Map.

There are 2 informal access areas on the LSR, but they are located outside the project boundary. They are located upstream of the Riverbanks Zoo (Mill Race A) and downstream of the Zoo (Mill Race B).

7. What types of existing developed facilities are there?
   a. Enumerate boat ramps, restrooms, docks, and other facilities.

There are a total of: 351 picnic tables, 201 grills, 55 shelters, 44 trash cans, 38 restrooms (34 permanent), 12 boat launches (with 23 lanes), 10 courtesy docks and 6 fishing piers on Lake Murray.

There are a total of: 50 picnic tables, 6 grills, 4 shelters, 27 trash cans, 3 restrooms (3 permanent), 2 boat launches (with 3 lanes), 3 carry-in launches, and 1 fishing pier on the LSR.

b. What is the existing capacity at each site?

Public Access Sites	Vehicle Spaces	Vehicle/Trailer Spaces	ADA Spaces	Total Number of Parking Spaces
Dam	72	106	3	181
Parksite	339	0	4	343
Larry Koon	8	39	2	49
Shull Island	0	8	0	8
Murray Shores	26	24	0	50
Riverbend	49	35	0	84
Higgins Bridge	0	8	0	8
Kempson Bridge	16	16	0	16
Lake Murray Estates Park	0	22	0	22
Macedonia Church	12	0	0	12
Sunset	12	14	0	28
Rocky Point	2	1	0	3
Dreher Island State Park	418	177	14	619
Hilton	8	27	2	37
Saluda Shoals Park	435	10	18	463
Mett's Landing	5	18	2	25
Gardendale	40	0	0	40
Millrace A	45	0	0	45
Millrace B	64	0	0	64

c. What is the general condition of each site and its facilities?

Condition at SCE&G owned sites were rated on a scale from 1 to 5 where 1 equals “poor” and 5 equals “excellent”.

Public Access Sites	Poor	2	3	4	Excellent
Dam	2%	3%	29%	31%	35%
Parksite	5%	5%	22%	36%	31%
Larry Koon	4%	2%	17%	28%	50%
Shull Island	8%	5%	10%	29%	48%
Bundrick Island	6%	12%	33%	28%	22%
Murray Shores	1%	6%	25%	39%	30%
Riverbend	5%	7%	25%	35%	29%
Higgins Bridge	3%	11%	49%	24%	14%
Kempson Bridge	0%	0%	0%	18%	82%
Lake Murray Estates Park	0%	0%	6%	51%	43%
Macedonia Church	0%	0%	17%	8%	75%
Sunset	0%	0%	5%	32%	63%

Public Access Sites	Poor	2	3	4	Excellent
Rocky Point	0%	0%	0%	100%	0%
Dreher Island State Park	1%	3%	6%	20%	71%
Hilton	0%	1%	0%	11%	88%
Saluda Shoals Park	0%	0%	5%	17%	78%
Mett's Landing	0%	1%	17%	48%	34%
Gardendale	3%	7%	34%	38%	17%
Millrace A	17%	8%	43%	19%	13%
Millrace B	6%	13%	40%	27%	14%

d. Ideas for improving existing facilities.

To be determined

8. Describe notable recreation activities on Lake Murray and/or the LSR.
    a. List recreation activities currently occurring and identify most prominent activities.

Lake Murray:

Activity	% of Use
Water-Based Activities	
Bank Fishing	14%
Boat Fishing	37%
Pier/Dock Fishing	2%
Canoeing/Kayaking	0%
Jet Skiing	3%
Motor Boating	8%
Pontoon/Party Boating	6%
Sailing	0%
Waterskiing/Tubing/Tow	2%
Swimming	8%
Water-Based Activities Total	***80%***
Land-Based Activities	
Bicycling	0%
Camping	3%
Event	0%
Picnicking	5%
Playground	0%
Sightseeing	3%
Sunbathing	1%
Walking/Hiking/Backpacking	2%
Other	4%

Activity	% of Use
Land-Based Activities Total	***20%***

Other activities that were not seen at public recreation sites, but occur on the reservoir include sailing and waterfowl hunting.

Lower Saluda River (does not include Mill Race A and Mill Race B, which are outside the project boundary):

Activity	% of Use
Water-Based Activities	
Bank Fishing	9%
Boat Fishing	11%
Pier/Dock Fishing	1%
Wading Fishing	0%
Flatwater Canoe/Kayak	13%
Rafting	0%
Tubing/Floating	5%
Whitewater Canoe/Kayak	7%
Swimming	4%
Water-Based Activities Total	***51%***
Land-Based Activities	
Bicycling	3%
Camping	0%
Dog Walking	7%
Event	3%
Nature Study/Wildlife	1%
Picnicking	1%
Playground/Spraypark	6%
Sightseeing	12%
Sunbathing	0%
Walking/Hiking/Backpacking	5%
Other	9%
Land-Based Activities Total	***49%***

~~Greatest activity is independent family recreation, including many forms of boating, waterskiing, swimming/sunbathing, fishing, picnicking, and camping.~~
~~Solitary wade fishing in river.~~
~~Bank fishing at public sites and impromptu sites in the lake and river.~~
~~Small and large bass tournaments.~~
~~Motor boating~~
~~Sailing~~
~~Fishing from boats~~
~~Fishing from banks~~

~~Wade fishing~~
~~Swimming and sunning~~
~~Picnicking~~
~~Canoeing and kayaking (flatwater and whitewater)~~
~~Floating with tubes and rafts~~
~~Waterfowl hunting~~
~~Walking, biking, skating, wildlife watching at Saluda Shoals Park and soon to be developed Three Rivers Greenway.~~

b. Where are these uses occurring, and are they concentrated in certain areas?

See Table D-1 and Table E-1 in the Recreation Assessment Study Report.

There are some unique activities that were not captured in the surveys of public site users. These include waterfowl hunting, which takes place mostly in the upper reservoir due to legislative restrictions regarding hunting near residential development, and wade fishing, which is concentrated at Sandy Beach, Corley Island, and the Oh Brother/Ocean Boulevard rapids section below the I-26 bridge.

~~Lower Saluda River supports all above activities except sailing~~
~~Whitewater boating concentrated on Saluda River below I-26 Bridge~~
~~Swimming and sunning on Lower Saluda concentrated at Riverbanks Zoo area; and will expand upriver when greenway trail opens in 2007~~
~~Wade fishing concentrated at shoal areas of lower River: at least four areas along river~~
~~Waterfowl hunting – mostly in the upper lake due to legislative restrictions regarding residential development.~~

c. Identify existing impediments to these activities, if any.

Dramatic river fluctuations are impediments to water-based recreational activities along the lower Saluda River.
~~Proposed barriers near dam may limit fishing/boating in river.~~

9. Are there known management issues associated with use?
   a. Are there areas of congestion, and if so where?

   b. Are there known conflicts between users, and if so where and when?

Fishing tournaments are disruptive to other boaters and residents. There needs to be an established, enforced protocol for organizes fishing tournaments.
Jet skis and large motorboats are disruptive to anglers, other boaters, and residents.
Kayakers are often called upon to rescue rock people near Zoo.

   c. Are there other known management issues, such as littering, trespassing, etc.?

Enforcement of established rules are ~~excellent but~~ limited by funding, staffing, and political boundaries.

d. Are there known issues regarding recreational safety?

Wade fishing, canoeing/kayaking, and other water contact and bank use is often dangerous due to river fluctuations in water levels on the Lower Saluda River.

10. What is the expected future demand for recreation activities at Lake Murray?
    a. Will existing facility capacity likely be exceeded, and if so where and when?
    b. Would accommodating this demand be consistent with the long-term vision for the reservoir?
    c. Will demand introduce new or additional congestion, conflicts, or other management issues?

11. Identify current local benefits from recreation and any local detriments.

Better quality of life, outdoor experiences, physical fitness, and mental health benefits. Commercial enterprises rent and/or sell boating, fishing, and other equipment, provide services, and stimulate the local/regional economy.

STEP 3 – DETERMINE WHAT IS NEEDED AND WHEN

12. Ideas for better or different access, consistent with Step 2 above.

13. Potential facility enhancements or upgrades, consistent with Step 2 above.

14. Potential new facilities, or other management actions, consistent with Step 2 above.

15. What are the priorities regarding identified needs both in terms of resources and time? How do priorities compare across the entire Project?

STEP 4 – DECIDE HOW NEEDS WILL BE MET AND WHO IS RESPONSIBLE

QUESTIONS REGARDING RESERVOIR LEVELS

16. How is the Project currently operated and what are the typical reservoir levels during key recreation seasons?

- SCE&G operates Saluda Hydroelectric Project as a multi-purpose project. The seasonal changes in elevations provide hydroelectric generation, maintenance of downstream water quality, a unique tailrace fishery, and municipal/industrial water supply.
- SCE&G has a verbal agreement with SCDHEC for a minimum flow of 180 cfs.

- During the low DO season which generally runs from late June to early December, SCE&G will try to maintain a minimum flow of 400 – 500 cfs to help maintain a higher level of DO in the ~~L~~lower Saluda River.
- From April through the end of August the lake is operated near the normal operating high water level of el. 358 ft Plant Datum (PD). Maximum full pool is el. 360 PD.
- Drawdown begins near the end of August or early September and ends in late December near the winter pool level of 350 - 352 ft PD. This allows additional storage capacity in anticipation of the late winter and early spring rainy season. In recent years, the lake has been managed ~~to~~for a minimum winter pool level of approximately 354' ft PD in response to the requests of stakeholder groups.
- At the beginning of January the lake is allowed to refill ~~during the rainy season~~ so it will be at the normal operating high water level of 358 ft. PD by April.
- The plant normally ~~schedules power~~ operat~~ions~~es for contingency reserve to meet our obligation to the Virginia/Carolinas Reserve Sharing Group (VACAR), a member of the Southeastern Electric Reliability Council (SERC), which is governed by the North American Electric Reliability Council (NERC).
- ~~During the fall, and i~~In anticipation of heavy rains from a tropical storm or hurricane, the plant will generate as necessary to manage the lake level~~, system reserve, and emergency generation requirements~~. Power generation is increased to provide lake level management normally from September through December.
- ~~Power generation may beis increased to allow SCE&G to meet their obligations of contingency reserve responsibility as part of our VACAR agreement with neighboring utilities and provide lake level management normally from September through December.~~
- ~~Low water levels (below ____ ft.) causes concern by many lake residents, commercial establishments, and boaters year round but especially during peak season.~~Low lake levels can cause concern for lake residents, commercial establishments, and boaters due to their impacts on recreation. As the lake levels drop, more impacts are recognizable. A lake elevation of 356' ft PD was recognized as optimal in the Lake Murray Association September 2005 Lake Murray User Survey and in Lake Murray Homeowners Coalition surveys. According to these surveys, when the lake drops below elevation 352' ft PD more serious impacts to recreation occur.

17. Are there changes to Project operations that you would like to see addressed to improve the overall value of the reservoir, and how specifically would such changes benefit recreation?

~~What minimum lake elevation will provide recreational benefits during each season of the year?~~

- Current reservoir level operations balance the multi-purpose use of the reservoir. Maintaining the existing reservoir level fluctuations would allow for continued water level management through daily and weekly power generation operations however recreation would see no additional benefits. Conversely, limiting the seasonal fluctuation may have recreational benefits but other project purposes would be compromised (power generation, water level management, water quality maintenance, and aquatic weed control).
- Higher lake levels will increase, improve and enhance recreational opportunities.

18. What are the impacts of ~~Are there~~ seasonal and/or daily variations in reservoir level ~~that can occur without adversely affecting the overall value of the project (including impoundment objectives such as recreation, fish and wildlife, flood control, generation, navigation, etc.)~~?

- There are no large daily fluctuations in reservoir levels at the Saluda Hydroelectric Project (there are large fluctuations in the ~~L~~lower Saluda River water level). However, daily fluctuations in lake level could create a potential safety issue.
- Weekly and seasonal fluctuations in lake level may have an effect on recreation access.

19. What are the reservoir levels at which recreation problems tend to occur (may be different for different locations or problems)?

~~There appears to be a potential impact to recreational resources when the lake level is lower (below ____ ft.).~~

- SCE&G already extended boat ramps at several of their public access parks to accommodate a water level down to el. 345 ft PD.
- Buoys function more appropriately when lake levels are at 354[2] ft PD or higher.

~~Some navigational hazards (unmarked) occur when levels drop below ____ ft.~~

20. When (i.e., what time of year) and how frequently do recreational problems occur related to reservoir levels?

- In general, the operation of Saluda Hydroelectric Project has been consistent throughout the years except for 1990, 1996, 2002 – 2004, and 2006. During those years the lake level was lowered to around el. 345 – 348 ft PD for the following project maintenance requirements:
  1990 – Intake towers maintenance
  1996 – Hydrilla control as requested by SCDNR
  2002 – 2004 – FERC Order for safety during dam remediation project
  2006 – Upstream riprap repair
- It ~~will~~may be necessary to lower the lake level to around el. 345 ft PD in the future for maintenance of project structures , managing lake resources, ~~and~~ installing new recreational access, or other extraordinary circumstances.
- Seasonal variations occur depending on rainfall and upstream water flow.

21. Why are ~~the current~~ operating water levels important to the operation of the project and the overall system?

- The Saluda Hydroelectric Project is a multi-purpose reservoir. ~~The current operating water levels are critical for the project to meet its required purposes.~~ The changes in water level have many beneficial impacts both upstream and downstream of the dam~~:~~.
- The project is used to meet our contingency reserve capacity obligation as part of the VACAR agreement. This is for a loss on our own system or by one of our neighboring Reserve Sharing Group utilities.
- Electricity (inexpensive, clean, renewable)
- Electric system ancillary services (transmission line maintenance & overload protection, security resource for VCS Nuclear Station)

- Navigation support
- Boating opportunities

~~Trout fishery~~

~~Downstream water quality and aquatic habitat~~

- Municipal and industrial water supply

~~Downstream recreation.~~

22. Are there state or federal operating requirements that stipulate specific operating goals?

- SCE&G and SCDHEC have an agreement to discharge a minimum flow or 180 cfs from the project.
- Article 12 of the FERC license requires that reservoir levels and discharge from storage be controlled by reasonable rules and regulations of the Commission for the protection of life, health, and property and for other beneficial public uses including recreational purposes.
- Exhibit H of the latest FERC license application identifies the lower lake level to be Elev. 350 ft PD during normal flow years and ~~Elev.~~ 345 ft PD during low flow years.
- Our McMeekin Generating Station NPDES permit requires a minimum of 2,500 cfs discharge from Saluda Hydro prior to discharging the fossil plant circulating water return directly into the Lower Saluda River.
- NERC/SERC/VACAR Agreements – SCE&G primarily uses Saluda to meet its reserve capacity requirements.

QUESTIONS REGARDING DOWNSTREAM FLOWS

23. Are there riverine recreation opportunities below the dam? If yes, move to additional questions, if not, stop.

Yes, trout fishing (wading, bank, boat), striper fishing (wading, bank, boat), canoeing/kayaking, tubing, sunbathing/swimming/rock hopping, picnicking, walking/hiking, bicycling, wildlife watching.

24. Do we know how different flow levels affect recreation opportunities and specific recreation activities?

25. Can opportunities be enhanced by modifying releases, and in what way?

Predictable flows would make it safer, easier to fish/boat/swim in the river. It would also enhance the commercial aspects of boating/fishing in the river (allow outfitters/guides known times they could take paying customers into the water safely).

26. How would modified releases affect upstream lake levels?

27. How would suggested modified downstream flows affect project operations at the project and at upstream and downstream projects?

28. Are there additional concerns with regard to state and federal requirements or existing ecological issues that limit suggested changes to downstream flows?

There are concerns about bank erosion due to high flows.
There are concerns about water quality/habitat for aquatic organisms due to low flows or continuous flows.

29. How binding is the VACAR agreement and when does it expire? (I notice that it is not listed in the state/federal operating requirements in Question 22).