

**Yadkin Project Relicensing (FERC No. 2197)
Recreation, Aesthetics, and Shoreline Management IAG Meeting
February 2, 2005**

**Badin, North Carolina
Alcoa Conference Center**

Draft Meeting Summary

Meeting Attendees

See Attachment 1.

Meeting Agenda

See Attachment 2.

Review and Discuss Recreation Use Assessment Draft Study Report

Jody Cason, Long View Associates, opened the meeting with a review of the meeting agenda. She introduced David Blaha, ERM, who reviewed the results of the Recreation Use Assessment (see Attachment 3 – Meeting Presentation). After briefly reviewing the study objectives and study methodology, David presented the results of the use surveys by reservoir (see table below).

Recreational Use by Reservoir

Reservoir	Total Use (recreation days)
High Rock	1,282,743
Tuckertown	51,886
Narrows (Badin)	1,101,328
Falls	4,158

David also reviewed those issues identified by users as a “big” problem. John Ellis, US Fish and Wildlife Service, asked if it was surprising that non-waterfront residents viewed water levels at High Rock as a bigger problem (52%) than waterfront residents (46%). David responded that it was not surprising because many community facilities may be more susceptible to low water levels than individual, private piers.

Robert Petree, SaveHighRockLake.org, asked why the non-waterfront resident use at High Rock (4%) was so different from Narrows (36%). He said that High Rock is about three times as large as Narrows, and while resident use looks to be accurate, non-waterfront resident and visitor use at High Rock looks low in comparison to Narrows. David explained that responses from non-waterfront residences were low and that this use may have been under estimated.

Roy Rowe, Piedmont Boat Club, said that his organization, the boat club, did respond to the Commercial Business and Private Organization phone survey, but the boat club is not

listed in Table 2-18 of the study report. Roy was concerned that the recreational use information provided by the boat club was not accounted for. David agreed to look into this further. Larry Jones, High Rock Lake Association, stated that the Shiners Club also participated in ERM's phone survey, but they did not appear on the list in the report as a respondent.

Robert asked what campgrounds were included in the use assessment. He said that he is not aware of 10-12 campgrounds at the Project. David said that ERM included all recreation areas that provide access to the Project reservoirs (a list of commercial pier permittees was provided by Yadkin).

David Wright, US Forest Service, asked David Blaha to define "recreation day". David Blaha defined recreation day as "one or multiple recreational uses by one person within a single day". David Wright asked if the surveys asked about the general length of time that users actually used the reservoirs. David Blaha explained that the Visitor Use Survey (VUS) did ask about the length of time the user recreated, but the Resident Use Survey did not (because how it was structured i.e. monthly rather than daily). David Wright noted that while one user may be at the reservoir for 12 hours and another user may only be there for an hour, they both get counted equally as a "recreation day". David Wright thought that these differences in actual use need to be accounted for.

Continuing, David Blaha described the types of recreational activities that are predominant at each of the Project reservoirs (High Rock – boating; Tuckertown – fishing; Narrows – very diverse; and Falls – camping and fishing). David also discussed the seasonality of recreational use. Greg Scarborough, Rowan/Salisbury Association of Realtors, asked what "very diverse" at Narrows meant. David clarified that there is a diversity of recreational activities at Narrows (e.g. activities including swimming, sailing etc.).

Larry Jones asked if the seasonality of recreational use was correlated with the reservoir water elevations and the availability of water. David said that ERM did compare use at High Rock to Narrows, which fluctuates less than High Rock, and that the seasonality of use was similar. He said that although High Rock is drawn down in September the percent of recreation use for September (13%) is the same as Narrows (13%). In October, the percent of recreation use is 9% at High Rock and 7% at Narrows.

Chris Goudreau, NC Wildlife Resources Commission, suggested a comparison of the monthly distribution of recreational use to other regional reservoirs that do not have significant drawdowns. His guess was that the recreational use would not be very different. Chris suggested that such a comparison be included in the final report. David Blaha explained that this type of comparison will be made in the Recreation Economics Study. John Ellis commented that the period May through September is the peak period for recreation on reservoirs in North Carolina regardless of whether the reservoirs fluctuate.

David compared the 2003-2004 recreation use estimate to previous estimates of use in 1991, 1997, and 2002-2003. Larry Jones asked how recreational use of Narrows Reservoir could triple from 1997 to 2003-2004. David explained that the 2004-2005 study was more comprehensive than past studies and therefore, provides a better estimate of use. Wendy Bley, Long View Associates, added that the 1991 and 1997 surveys were conducted for the sole purpose of estimating recreational use at the public access areas to complete the FERC Form 80 Report and therefore, did not include an estimate of resident use.

Gerrit Jobsis, SC Coastal Conservation League and American Rivers, asked about the large discrepancies between the 2002-2003 and 2003-2004 estimates of use. David said that the 2002-2003 estimate was based on a fewer number of surveys.

Continuing, David explained that the report discusses both physical and social carrying capacity at the Project reservoirs. John Ellis asked how ERM determined the physical carrying capacity. David explained that for all the Project reservoirs, with the exception of High Rock, ERM took the total surface area of the reservoir and subtracted 100-ft along the shoreline to account for shallow water not suitable for boating and/or private piers and other facilities to get a total number of “boatable” acres. ERM then used a standard number of boats per acre based on the activity type to estimate carrying capacity. For High Rock, ERM assumed a 5-ft draw down during the summer to get a total of about 8,000 boatable acres. Robert Petree commented that this was the amount of boatable acres in the summer, but not the rest of the year. David Blaha said that he expected that peak recreation use would occur during the summer. A suggestion was made to use the prescribed water level for July 4 to calculate the peak use time carrying capacity.

David Wright questioned the application of subtracting 100-ft from around Tuckertown and Falls reservoirs where there is little shoreline development and fishermen use the shallow water areas along the shoreline. David Blaha agreed that applying this criterion uniformly among the reservoirs may underestimate the physical carrying capacity at Tuckertown and Falls. David also discussed the social carrying capacity at the Project reservoirs.

Dave Blaha reviewed the results of the Tailwater Use Surveys (TUS). He said that 93% of the respondents indicated that Project operations have either no effect or a positive effect on recreational use. Gerrit asked if “Project operations” also included times when APGI was not generating and asked if David could distinguish between positive effects during times of generation. David explained that the question about Project operations in the TUS was open-ended.

John Ellis asked if any security measures had been installed in recent years that would prevent boater use of the tailwater areas. Gene Ellis (no relation to John Ellis) responded that the tailwater areas have had sirens and lights for many years. He added that a few years ago, APGI tried to get a “safety zone” established below High Rock and Narrows for safety reasons, but was unsuccessful.

Mark Bowers, USFWS, asked how accessible (i.e. easy to get to) the tailwaters are. David Blaha explained that the access to the Narrows and Falls tailwater is much more difficult than the access to the High Rock and Tuckertown tailwaters (there are no public access areas at the Narrows and Falls tailwaters). Mark said that he wanted to understand if there was a decline in angler opportunity in the Project tailwaters.

Next, David Blaha reviewed ERM's recommendations:

- Limit drawdown of High Rock Reservoir between May and September
- Better mark boating hazards at High Rock
- Coordinate with agencies and stakeholders regarding carrying capacity issues at High Rock and Narrows
- Monitor parking capacity at designated sites
- Try to provide parking at fishing pull-off areas
- Improve trash and litter collection
- Add sanitary facilities and trash receptacles at designated sites

Robert Petree asked why ERM did not recommend a limited drawdown in April and October (the shoulder months) as well since these months also receive considerable recreational use. David Blaha agreed that recreation does occur in April and October. Bob Warren, Uwharrie Point Community Association, stated that the recommendation about limiting the drawdown at High Rock should not only be limited to High Rock, but also include Narrows.

Robert Petree asked that ERM delete the commentary about low water levels and the suggestion that some respondents completed the surveys with the drought in mind from the study report.

Gerrit Jobsis asked how use data was collected at the Project's four portage trails. David Blaha explained that a canoe portage registry box was mounted at both the put-in and take-out at each portage. Users were asked to complete a canoe registry. David said that a total of five groups signed the registries and that for the purposes of estimating use, a 20% response rate and an average of two people per group were assumed.

Dave Wright asked if ERM recommended providing toilet facilities at Falls Reservoir. David Blaha said no because the recreational use at the access areas on Falls was below the threshold that would demand toilet facilities. David Wright said that he is concerned that there are no toilet facilities anywhere on Falls Reservoir. He encouraged ERM to consider making a recommendation. David Wright also suggested that the addition of primitive campsites along the reservoir would help reduce related damage along the reservoir shorelines.

Chris Goudreau offered several comments on the draft study report for the record:

- Table 2.1 – Chris asked that ERM provide an overall confidence interval by survey instrument. He said that it is important to provide general confidence intervals by reservoir for each survey type. He also suggested that it would be good to provide, along with estimates of expanded numbers of total recreational use, an estimate of the confidence in those numbers (+ or – the confidence numbers) to help answer questions about confidences in the estimates. As you aggregate across the reservoirs and seasons, you are then able to get an aggregated confidence interval.
- Table 2.4 – Chris stated his concern about how the number of visitor use surveys dropped off from beginning to end, even during the peak use period (specifically, the March and April numbers seem low). He wondered if there was an avoidance going on by the end of the survey period and asked that the study report discuss this possibility.
- Tables 4-1 and 4-2 – title should say percentage. He suggested that the study report should explain that there is an inherent bias against picking up people less than 16 years old. Otherwise, the study results make it look as if there are no children recreating at the Project.
- Chris also wondered if there was a bias towards males (e.g. the survey form was always handed to the male in the party). This could be a possibility if it was not randomly done. He thought it hard to believe that males make up that great of a percentage of the users.
- Chris expressed concern over the definition of recreation day and specifically, considering all use times (e.g. one hour v. five hours) equal in terms of a recreation day.
- Table 5-3 – Chris commented that the “Watercraft Mix by Reservoir” is based solely on the resident use data and aerial photos. He asked why the visitor use data was not also used.
- Figure 5-2 – Chris asked if ERM made any attempt to correlate what the respondents said about crowding on the reservoirs to actual use at that time (i.e. did what they say match up with actual counts of use on that day or during those times). Chris commented that the perceptions of crowding may be wrong if they do not correlate with actual use. David Wright said that he is concerned with the user’s perception even if it is not reality. David Blaha explained that this issue was studied to understand how people perceive crowding at the reservoirs from a social perspective. He said that the results suggest that the perception of crowding is not an issue except during the summer. During the summer, some users do start to perceive crowding as an issue.

Larry Jones asked that recreation access areas that are more riverine in nature and do not provide direct access to the Project reservoirs be described as such.

Review and Discuss Regional Recreation Evaluation Draft Study Report

Wendy Bley reviewed the study objectives, methodology, and results of the Regional Recreation Evaluation Draft Study Report (see Attachment 4 – Meeting Presentation). After completing the presentation, Wendy solicited comments on the draft study report.

David Wright said he agreed with what he saw (specific to the classification of regional reservoirs in three recreation experience categories). He said that Table 87 on page 83 probably understates the issue of natural experiences in the region. He suggested that rather than just looking at total number of reservoirs within the natural category, that the report also look at the total number of acres in each category (in addition to shoreline miles).

Chris Goudreau noted that Progress Energy just completed some shoreline habitat work and that John Crutchfield, PE, may have an estimate of shoreline miles at Blewett Falls.

Chris Goudreau also explained an issue with the classification of lands around Duke's Catawba reservoirs – the 2001 data (used in this study) only considers development on the water side of the Project boundary. New estimates of the shoreline boundary will include the land side as well. Chris encouraged LVA to look into these new Catawba classifications.

Larry Jones commented that the entire shoreline along the Eagle Point Nature Preserve is posted as no-trespassing, which he considered unusual for a public park. He wondered if Rowan County did not intend for there to be water access to the Park. Andy Abramson, Land Trust, said that there is canoe access, provided by the County, to the park. Andy said that the area was designed for passive recreational use because it is a nature preserve. Gene Ellis, APGI, agreed to follow-up with Rowan County to better understand their intent.

Mark Oden, High Rock Lake Business Owners Group and Larry Jones also offered to schedule a second tour of High Rock Reservoir for any IAG members interested in participating. The second tour was scheduled for February 25, 2005.

Wrap-up and Next Steps

Wendy asked that all comments on the Recreation Use Assessment and/or Regional Recreation Evaluation Draft Study Reports be submitted to APGI no later than Friday, March 4, 2005.

Attachment 1 – Meeting Attendees

Name	Organization
Andy Abramson	Land Trust
Bob Warren	Uwharrie Point Community Association
Chip Conner	Uwharrie Point Community Association
Chris Goudreau	NC Wildlife Resources Commission
David Wright	US Forest Service
Donley Hill	US Forest Service
Gene Ellis	APGI, Yadkin Division
Gerrit Jobsis	SC Coastal Conservation League and American Rivers
Greg Scarborough	Salisbury/Rowan Association of Realtors
Jody Cason	Long View Associates
John Ellis	US Fish and Wildlife Service
Larry Jones	High Rock Lake Association
Lee Hinson	Concerned Property Owners High Rock Lake
Oliver Webster	Yadkin Pee Dee Lakes Project
Ray Johns	US Forest Service
Robert Petree	SaveHighRockLake.org
Roy Rowe	Piedmont Boat Club
Steve Reed	NC Division of Water Resources
Terry Bargy	Concerned Property Owners High Rock Lake
Wendy Bley	Long View Associates

Attachment 2 – Meeting Agenda

**Yadkin Project
(FERC No. 2197)**

Communications Enhanced Three-Stage Relicensing Process

**Recreation, Aesthetics and Shoreline Management
Issue Advisory Group Meeting**

**Wednesday, February 2, 2005
Alcoa Conference Center
Badin, North Carolina**

1:00 PM – 4:00 PM

Preliminary Agenda

1. Introductions, Review Agenda
2. Review and Discuss Recreation Use Assessment Draft Study
3. Review and Discuss Regional Recreation Evaluation
4. Wrap-up and Next Steps

Attachment 3 – Recreation Use Assessment Meeting Presentation

**Yadkin Project Recreation Use Assessment
Draft Report
February 2, 2005**



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Study Objectives

- **Estimate total annual recreational use at each of the four reservoirs**
- **Characterize type of recreational activities**
- **Evaluate recreation issues and facility condition**
- **Estimate peak recreational use and recreational carrying capacity**
- **Assess effects of Project operations on tailwater recreational use**

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Study Methodology

- **Collected recreational use data from May 10, 2003 to May 9, 2004**
- **Visitor use – spot counts, VUS, and TUS at Public Access Recreation Areas and tailwaters**
- **Waterfront Resident use – RUS**
- **Non-waterfront Resident use – PCUS**
- **Commercial and Organizational use – phone survey**
- **Canoe/kayak use – Portage registry**

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Recreation Use Survey Responses

- | | |
|-------------------------------|--------------------------------|
| • Spot Counts | 7,052 observations |
| • Visitor Use Survey | 966 responses |
| • Canoe Registry | 5 responses |
| • Tailwater Survey | 186 responses |
| • Resident Use Survey | 1,764 responses (3,729) |
| • PCUS | 125 responses (7,471) |
| • Bus/Org phone Survey | 18 responses (33) |

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High Rock Recreational Use (in recreation days)

User Groups	% of Total	Total
Public Access Recreation Use	6	82,850
Waterfront Resident Recreation Use	83	1,058,585
Private Community Recreation Use	4	56,355
Commercial and Club Recreation Use	7	84,923
Canoe Portage Use	0	30
Total		1,282,743

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High Rock Recreational Issues

- **Low water levels identified as “big” problem**
 - 46% of waterfront residents
 - 52% of non-waterfront residents
- **Trash and litter identified as a “big” problem**
 - 17% of waterfront residents
 - 13% of non-waterfront residents
- **Boating hazards identified as a “big” problem**
 - 23% of waterfront residents
 - 22% of non-waterfront residents

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Tuckertown Recreational Use (in recreation days)

User Groups	% of Total	Total
Public Access Recreation Use	95	51,886
Waterfront Resident Recreation Use	0	0
Private Community Recreation Use	0	0
Commercial and Club Recreation Use	5	2,465
Canoe Portage Use	0	0
Total		54,351

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Tuckertown Recreational Issues

- **No “big” problems identified**
- **8% of visitors identified litter and trash**
- **9% of tailwater users identified availability of sanitary facilities**

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Narrows Recreational Use (in recreation days)

User Groups	% of Total	Total
Public Access Recreation Use	12	127,567
Waterfront Resident Recreation Use	26	285,993
Private Community Recreation Use	36	401,908
Commercial and Club Recreation Use	26	285,840
Canoe Portage Use	0	20
Total		1,101,328

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Narrows Recreational Issues

- **Low Water Levels** was identified as a “big” problem
 - 22% of waterfront residents
 - 14% of non-waterfront residents
- **Trash and litter** rated as a “moderate” problem by waterfront and non-waterfront residents
- **Boating hazards** rated as a “moderate” problem by waterfront and non-waterfront residents

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Falls Recreational Use

User Groups	% of Total	Total
Public Access Recreation Use	100	4,158
Waterfront Resident Recreation Use	0	0
Private Community Recreation Use	0	0
Commercial and Club Recreation Use	0	0
Canoe Portage Use	0	0
Total		4,158

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Falls Recreational Issues

- **17% of tailwater users identified trash and litter as a “big” problem**
- **13% of visitors identified lack of sanitary facilities as a “big” problem**

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Total Project Recreational Use

Reservoir	Visitor Use	Waterfront Resident Use	Non-Waterfront Resident Use	Businesses and Organization Use	Portage Use	Total Use	% of Total
High Rock	82,850	1,058,585	56,355	84,923	30	1,282,743	53%
Tuckertown	51,886	0	0	2,465	0	54,351	2%
Narrows	127,567	285,993	401,908	285,840	20	1,101,328	45%
Falls	4,158	0	0	0	0	4,158	<1%
Total	266,461	1,344,578	458,263	373,228	50	2,442,580	100%
% of Total	11%	55%	19%	15%	<1%	100%	

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Overall Recreational Use

- **Recreational activities**
 - High Rock – primarily boating (38% of use)
 - Tuckertown – primarily fishing (95% of use)
 - Narrows – very diverse
 - Falls – primarily camping and fishing
- **Seasonality**
 - High Rock – May thru Sept = 75% of annual use
 - Narrows – May thru Sept = 68% of annual use
 - Tuckertown – April thru Aug = 81% of annual use
 - Falls – April thru Aug = 69% of annual use

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Overall Recreational Use

- **Resident vs Visitor Recreational Use**
 - Residents have strong concerns about water levels, litter and trash, and boating hazards
 - Visitors generally appear pleased with their trip to reservoirs, would like more sanitary facilities
- **Recreational facility capacity**
 - generally adequate
 - additional sanitary facilities and trash cans needed
 - approaching parking capacity at some Public Access Recreation Areas

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Comparison with Prior Study Use Estimates

Reservoir	1991	1997	2002-2003	2003-2004
High Rock	708,500	815,166	410,230	1,282,743
Tuckertown	178,000	110,856	117,476	54,351
Narrows	614,000	365,596	289,521	1,101,328
Falls	12,000	9,036	10,209	4,158
Total	1,512,500	1,302,650	829,439	2,442,580

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Comparison with Prior Studies (cont.)

- **Visitor Use - down 62% from 1991**
- **Waterfront Resident Use – up 67% from 1991**
- **Non-waterfront Resident Use – not included before (represents 19% of total use)**
- **Business and Org Use – not included before (represents 15% of total use)**
- **Canoe Portage Use – not included before (represents <1% of total use)**
- **Total Use – up 61% from 1991**

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Recreational Carrying Capacity

- **Evaluated both physical and social carrying capacity**
- **Physical carrying capacity – measures number of boats at one time (BAOT) that a reservoir can safely accommodate**
- **Social carrying capacity – measures user's perceptions of crowding**

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Social Carrying Capacity

- **High Rock Reservoir**
- rated as “quite” or “very” crowded by 21-36% of users on weekends in summer
- **Tuckertown Reservoir**
- rated as “quite” or “very” crowded by 5% of users
- **Narrows Reservoir**
- rated as “quite” or “very” crowded by 8-38% of users on weekends in summer
- **Falls Reservoir**
- rated as “quite” crowded by 6% of users

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Overall Physical Carrying Capacity

Reservoir	PCC	Existing Max BAOT	Existing % of PCC	2030 Max BAOT	2030 % of PCC
High Rock	981	641	65%	1,166	119%
Tuckertown	264	92	35%	185	70%
Narrows	494	411	83%	740	150%
Falls	18	8	44%	16	89%

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Tailwater Recreational Use

- **HR-tailwaters – heavily used for bank fishing**
- **T-tailwaters – heavily used for bank fishing**
- **N-tailwaters – lightly used for boat fishing**
- **F-tailwaters – lightly used for boat fishing**
- **No major recreational issues identified by users – concern about proximity of boating to dam**
- **93% of respondents indicated that Project operations have either no effect or positive effect on recreational use**

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ERM Recommendations

- **Limit drawdown of High Rock Reservoir between May and September**
- **Better mark boating hazards at High Rock**
- **Coordinate with agencies and stakeholders regarding carrying capacity issues at HR and N**
- **Monitoring parking capacity at designated sites**
- **Try to provide parking at fishing pull-off areas**
- **Improve trash and litter collection**
- **Add sanitary facilities and trash receptacles at designated sites**

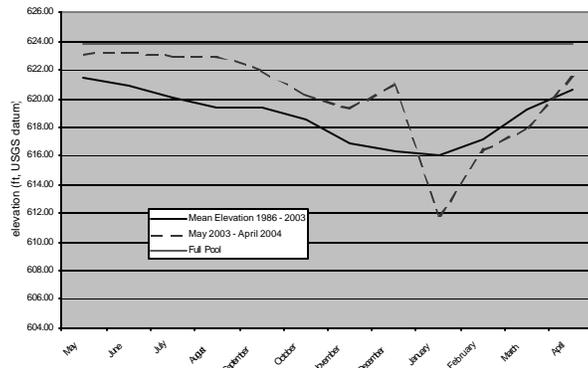
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High Rock Water Levels

FIGURE 2-3. High Rock Reservoir Water Surface Elevations
1986 to 2003
and
May 2003 to April 2004



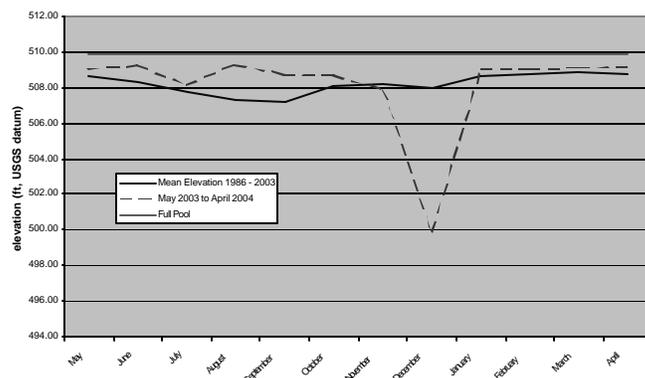
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Narrows Reservoir Water Levels

FIGURE 2-4. Narrows Reservoir Water Surface Elevation
1986 to 2003
and
May 2003 to April 2004



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Attachment 4 – Regional Recreation Evaluation Meeting Presentation

Regional Recreation Evaluation Draft Study Report

Recreation, Aesthetics, and Shoreline
Management IAG Meeting
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Study Objectives

- Inventory public recreation sites/facilities at regional reservoirs
- Characterize the recreational opportunities and experiences at the regional reservoirs
- Compare recreation opportunities available at the Yadkin Project with those available elsewhere within the study region

Methods

- 1) Data collection relied on existing information
 - Tourist guides
 - Maps
 - Brochures
 - The Internet
 - Recreation and tourism studies
 - Literature from recreation providers
 - Public documents
 - Interviews with regional recreation providers, site managers and local officials

Methods

- 2) Regional Recreation Review
 - “Study region” defined as the area within a 100-mile radius of the Yadkin Project
 - Inventory includes:
 - Major public recreation sites on reservoirs with water-based recreational opportunities
 - Commercial recreation opportunities at each reservoir
 - Other major recreation sites with non-reservoir-related outdoor recreation opportunities (e.g. state parks, national forests, trail and highway systems)

Methods

23 large reservoirs were identified within the study region

- Yadkin Project Reservoirs
 - High Rock Reservoir
 - Tuckertown Reservoir
 - Narrows Reservoir
 - Falls Reservoir
- Catawba-Wateree Project
 - Lake James
 - Lake Rhodhiss
 - Lake Hickory
 - Lookout Shoals Lake
 - Lake Norman
 - Mountain Island Lake
 - Lake Wylie
- Fishing Creek Lake
- Great Falls/Rocky Creek lakes
- Lake Wateree
- Yadkin Pee Dee River Project
 - Lake Tillery
 - Blewett Falls Lake
- USACE Projects
 - W. Kerr Scott Reservoir
 - John H. Kerr Reservoir
 - Falls Lake
 - B. Everett Jordan Lake
- Harris Lake
- Hyco Lake

Methods

3) Characterization of Regional Recreation Resources

- Types of Activities
- Recreational Experience
- Tourism

Methods

Types of Activities

- Reservoir-related recreation sites characterized by four major recreational activities: boating, fishing, camping and swimming
- Other activities characterized to the extent information was available

Methods

Recreational Experience

- Each reservoir is characterized according to the recreational experience offered based on:
 - setting of the reservoir
 - volume and types of use
 - shoreline development
 - carrying capacity
 - recreational data
- Each reservoir is classified using the following recreation experience categories: Natural, Limited Development, or Developed

Methods Recreational Experience

Developed	A considerable amount of the reservoir shoreline is developed with either private or commercial structures. The reservoir is accessible through many public and commercial access sites. Use of the reservoir by recreationists is high. A person recreating on this reservoir is very likely to encounter other people and signs of development whenever the reservoir is used.
Limited Development	Some of the reservoir shoreline is developed with private residences and small commercial establishments. The reservoir is accessible through public access sites or small commercial developments. Use of the reservoir by recreationists is moderate. A person recreating on this reservoir is somewhat likely to encounter other people using the reservoir and will have views of some man-made structures along portions of the reservoir shoreline.
Natural	There is little or no visible development along the reservoir shoreline. The reservoir is accessible only from modest public recreation access sites. There is no commercial development along the reservoir shoreline. A person recreating on this reservoir may encounter others using the reservoir, but those encounters would be relatively infrequent. Views of the shoreline from the reservoir would appear almost completely free from structures and other man-made influences.

Methods Tourism

- Local officials and recreation site operators provided a general characterization of tourism at each reservoir
 - Type of use
 - Volume of use
 - Seasonal use patterns/activities by tourists
 - Promotional efforts of reservoir-related tourism

Methods

- 4) Comparison of Yadkin Project Recreation Resources with Other Regional Resources

The types of recreation facilities, opportunities, and recreation experiences afforded by the Yadkin Project reservoirs is compared to those available elsewhere in the region

Methods

- 5) Review of Yadkin Area Recreation Plans and Future Opportunities

Each of the five counties surrounding the Yadkin Project (Davie, Rowan, Davidson, Stanly, and Montgomery counties) were interviewed to determine plans for adding recreational sites or facilities over the next 10-20 years

Results Summary

Recreation areas inventoried and characterized in the report:

- 23 major reservoirs (182 different reservoir recreation sites)
- 7 smaller reservoirs
- 3 national forests
- 5 state forests (including educational state forests)
- 16 state parks/recreation areas
- 2 local parks
- 2 wildlife refuges/nature preserves
- Additional whitewater boating, boating, fishing, and game lands
- 3 trail systems

Results Summary Reservoir-based Recreation

<i>Reservoir Name</i>	<i>Surface Area (acres)</i>	<i>Shore-line Miles</i>	<i>Recreation Sites</i>	<i>Boat Ramps</i>	<i>Fishing Piers</i>	<i>Swim Beaches</i>	<i>Camp-grounds</i>
High Rock Reservoir	15,180	360	10	11	0	2	0
Tuckertown Reservoir	2,560	75	11	7	0	0	0
Narrows Reservoir	5,355	115	17	10	2	1	3
Falls Reservoir	204	6	3	2	0	0	0
Lake Tillery	5,700	118	6	9	2	0	1
Blewett Falls Lake	2,900	NA	4	4	1	0	0
Harris Lake	4,150	40	3	3	1	0	1
Hyco Lake	3,750	160	1	4	1+	1	1
Lake James	6,500	151.1	6	13	2	1	1

Results Summary Reservoir-based Recreation

<i>Reservoir Name</i>	<i>Surface Area (acres)</i>	<i>Shore-line Miles</i>	<i>Recreation Sites</i>	<i>Boat Ramps</i>	<i>Fishing Piers</i>	<i>Swim Beaches</i>	<i>Camp-grounds</i>
Lake Rhodhiss	3,000	103.9	5	11	0	0	0
Lake Hickory	3,900	110.6	9	17	4	0	0
Lookout Shoals Lake	1,200	36.3	2	3	0	0	0
Lake Norman	32,000	591.6	15	31	2	3	2
Mountain Island Lake	2,900	86.5	5	6	3	1	0
Lake Wylie	12,100	327.51	13	25	4	2	1
Fishing Creek Lake	3,200	67.1	2	2	0	0	0

Results Summary Reservoir-based Recreation

<i>Reservoir Name</i>	<i>Surface Area (acres)</i>	<i>Shore-line Miles</i>	<i>Recreation Sites</i>	<i>Boat Ramps</i>	<i>Fishing Piers</i>	<i>Swim Beaches</i>	<i>Camp-grounds</i>
Great Falls and Rocky Creek lakes	1,020	37	2	2	0	0	0
Lake Wateree	2,560	213.1	10	20	1	0	1
W. Kerr Scott	1,500	55	12	7	3	5	3
John H. Kerr Reservoir	48,900	800	22	27	3	7	16
Falls Lake	12,400	175	13	8	1	4	4
B. Everett Jordan Lake	14,000	200	11	2	0	6	5
<i>Average</i>	8,042.57	174.03	7.91	9.74	1.30	1.43	1.70

Results Summary Reservoir-based Recreation

- More than 75% of all reservoir-based recreation sites are managed by governmental agencies
- USACE-operated reservoirs provide a greater number of recreation facilities than other reservoirs, although the types of facilities provided are comparable
- Largest reservoirs are generally comparable in the opportunities and experiences they provide

Results Summary Reservoir Experience

Natural	Limited Development	Developed
Falls Reservoir	Tuckertown	High Rock
Blewett Falls	James	Narrows
Harris	Lookout Shoals	Tillery
Rhodhiss	Mountain Island	Hyco
Fishing Creek	Wateree	Hickory
Great Falls	W. Kerr Scott	Norman
Rocky Creek	John H. Kerr	Wylie
Falls		
Jordan		

- Reservoirs classified as “Natural” tend to be much smaller in surface area than “Limited Development” and “Developed” reservoirs

Results Summary

Tourism

- Generally, tourism is more actively promoted at larger reservoirs that offer the most opportunities
- Larger reservoirs receive significant use from tourists and locals alike compared to smaller reservoirs which are predominantly used by locals
- Smaller reservoirs with limited recreation facilities receive little promotion as tourist destinations

Results Summary

Future Plans

- Davie, Stanly, and Montgomery counties currently have no specific plans to add recreation sites or facilities
- Rowan County
 - Currently developing land use plan, but the plan will not include specific plans for new recreation facilities
 - Would like to expand Eagle Point Nature Preserve, but does not currently have plans to do so
 - Has requested an additional public access area for swimming and fishing as part of relicensing
- Davidson County
 - Currently developing Tourism and Recreation Master Plan
 - Ideas for the Master Plan include adding a park, restaurants, and lodging on High Rock
 - County will wait until the Master Plan is completed before making specific plans
 - Alcoa-Yadkin is providing its recreation study results to the County

Conclusions

- Ample opportunities for water-based recreation within the study region
- Predominant types of recreation provided by reservoir sites include boating, fishing, picnicking, swimming, and camping
- Land-based recreational opportunities are provided primarily by local, federal, and state-operated parks and recreation sites
- Yadkin Project provides very similar recreational opportunities compared to other power-related reservoirs

Conclusions

- Falls and Narrows reservoirs' proximity to the Uwharrie National Forest is unique within the central part of the study region
- Recreation users seeking a "Natural" reservoir experience have fewer opportunities than those unconcerned with overall setting
- Yadkin Project reservoirs are centrally located among all of NC's metropolitan areas