

DETERMINING ACCEPTABLE CARRYING CAPACITIES FOR RECREATION USE AS IDENTIFIED BY KEY STAKEHOLDERS: A FOCUS GROUP PROCESS

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Abstract

In recent years a permit system has been in place that attempts to limit use of the Georgia Department of Natural Resource's Tallulah Gorge State Park to 100 people per day. This limit is often exceeded due to increasing large group use of the area. The purpose of this study was to determine desired future conditions (DFCs) for the Gorge in context of social-psychological/biological user carrying capacities acceptable to key stakeholders. We used a focus group method to allow for public input and included both recreation and non-recreation use stakeholders, allowing them to address concerns and identify DFCs for recreation use levels in the Gorge. Salient themes were identified through the use of constant comparative analysis. Findings are discussed in terms of their relevance to permit systems, crowding, and place attachment. Also discussed is the effectiveness of involving stakeholders in a managerial process.

1.0 Introduction

This study was funded by the State of Georgia Department of Natural Resources' (DNR) Tallulah Gorge (Gorge). The qualitative focus group portion is part of larger, mixed methods study based on the Limits of Acceptable Change framework (Stankey et al. 1985).

Tallulah Gorge State Park is located 33 miles northeast of Atlanta putting it in the center of a common urban interface park dilemma—how to allow maximum use without denigrating the park's natural resources. Complicating this dilemma is the fact that the Gorge area is relatively small, being only 2 miles long and 1000 feet deep. The Gorge was a major tourist attraction until 1912 when Georgia Power dammed it for hydro power.

Between 1912 and 1992, Georgia Power managed the Gorge solely for hydropower. During this time, the Gorge was used informally, with no government management, by camps and individuals for recreational purposes such as climbing and hiking. During this time the Gorge saw substantial user impact (e.g., erosion, litter). In 1992 Tallulah Gorge State Park was created and management was performed jointly by Georgia Department of Natural Resources (GADNR) and Georgia Power.

GADNR took over in 1992 and began to manage through two main vectors: 1) a permit system; and 2) the placement of infrastructure. The permit system was put in place in an attempt to limit use to 100 people in the Gorge floor and 20 climbers on Gorge walls per day. This limit was often exceeded, in part, due to increasing large group use of the area. The use limit numbers in this system were chosen somewhat randomly, but park management did perform a literature review on methods and numbers used in national parks to set permit limits. Initial and ongoing park management also included the development of infrastructure to offset previous (and potential) overuse issues (e.g., trail erosion, vegetation impacts) that GADNR managers inherited. Thus, park managers began building steps into the Gorge to protect sensitive and endangered species (i.e., persistent trillium, monkey faced orchid) and prevent the erosion that had occurred as a result of the pre-state park use.

Presently, recreational use of Tallulah Gorge primarily in the form of hiking, swimming, guided and non-guided nature viewing, kayaking and climbing and as individual/small group versus large group sizes. Because the permit system had been chosen "out of the air" the DNR sought research to assess whether the numbers initially proposed were satisfactory in term of social, environmental, and managerial carrying capacities. Through the focus group study two critical issues were addressed: 1) agency perceptions of crowding and management (infrastructure and permit system) in the Gorge; and 2) socio-environmental quality (aesthetics) of the gorge.

We sought to determine a range of acceptable levels of carrying capacity for the Tallulah Gorge. Our approach is based on a model developed by Tarrant and English

(1996), which recognizes that carrying capacities should reflect management objectives and evaluative standards (that are, in turn, influenced by user perceptions of crowding levels) and is based on the Limits of Acceptable Change (LAC) framework (Stankey et al. 1985). In the case of social carrying capacities for recreational hiking in the Tallulah Gorge, management objectives define the desired recreation opportunity to be provided (e.g., primitive/low density to developed/high density) and evaluative standards refer to acceptable levels of impact (i.e., desired crowding conditions).

Our approach also recognizes that recreation planners and managers require carrying capacity formulations that are flexible and that reflect the multiple influences on management decisions regarding use levels (Manning 1985). Increasing demands from outfitters for permits, political pressure from interest groups, variations in natural resource conditions, and GADNR/agency directives, as well as user preferences require that any given recreation opportunity is associated with a range of standards that are associated with each management objective so as to allow greater managerial flexibility in setting use levels.

2.0 Purpose and Objectives

The purpose of the study was to use a Focus Group approach to identify carrying capacities (i.e., limits) acceptable to large groups based on perceived crowding and environmental impacts in the Gorge. Acceptable social-psychological (e.g., crowding) and socio-environmental (e.g., perceptions of environmental quality) user carrying capacities were determined based upon key stakeholders' DFCs for the Gorge and the recommendations of Georgia Power. The objectives of the study were:

1. To determine agency perceptions of crowding in the Gorge.
2. To determine agency perceptions of the impact of past user activity on the environmental health of Tallulah Gorge.
3. To determine agency perceptions of managerial practices in the gorge, including infrastructure and the permit system.
4. To make recommendations concerning DFCs (i.e., acceptable use levels) and perceived environmental health for recreation activities in the Gorge.

3.0 Data Collection and Analysis Methods

Initially, the DNR provided a list of the key stakeholders (and contact information) that affect, or were affected by, decisions to establish acceptable use levels for recreation in the Gorge. The list included approximately 25 key stakeholders (and their contact information) that affect, or were affected by, decisions to establish acceptable use levels for recreation in the Gorge. These agencies/individuals were contacted via letter first, with a phone call in the following two weeks in which the importance of focus group to GADNR management was emphasized. The focus group consisted of 15 participants, including one Georgia Power representatives, eight camp representatives, four GADNR reps, and a town councilman.

The focus group was held because an on-site survey might only address individual recreation users of the Gorge. Thus, the public forum was held to include the DFCs of key group recreational (i.e., camps) and non-recreation use stakeholders (i.e., Georgia Power, Georgia Department of Natural Resources). The method used to guide the focus group was a semi-structured format. Pre-determined questions were used to steer the discussion toward issues of interest to both GADNR managers and researchers (e.g., perceived crowding levels, managerial conditions). This format also allowed the discussion facilitator to probe into specific areas where additional information might prove useful. The discussion data was recorded using a boom microphone and transcribed for further analysis.

Data analysis was performed using constant comparative method, in which themes are identified and coded within the data. Themes were developed initially through open coding. Open coding involves the identification and analysis of central or basic themes in the data. Later, more complex themes were identified using axial coding. Axial coding involves looking at the intersections between themes and interpreting them. The interpretations are then connected back to other theories and literature. Through the process of axial coding grounded theory began to emerge. This grounded theory is still tentative as the theoretical model is being developed and connected with other literature. This data was then used in conjunction with the social-psychological data to determine overall visitor carrying capacities of the gorge.

Table 1.—Focus Group Themes and Selected Supporting Data

Theme 1: Camp representatives were generally appreciative and supportive of DNR management efforts both within the gorge floor and outside the Gorge.

(A) Camp personal felt environmental quality had increased with general management presence, including the permit system and management placed infrastructure.

“We can change how the site is impacted, what’s built there, all those kinda things. We can stop it from being loved to death but change is inevitable”

“I think ya’ll do a pretty good job... I think what ya’ll doing now is, as good as you’re gonna get”

“I think ya know, we talked about impact on it and stuff and there was no greater impact on it then damming it and there is not greater impact than the things that have been done to past, ya know in the past to it, and at this point, I’d say we’re on an upswing ya know the gorge is definitely improving, the vegetation in it and the wildlife and everything in it are improving”

“I also know how that trail used to look and ya know climb up that other side and up that trail behind Hurricane Falls, was pretty eroded and pretty rough trying to climb out of there, and now you walked out through there and you feel like you’re in a pristine, non-touched, because you look down below that staircase and it’s just all vegetated... and so that’s ya know, that’s encouraging to me, I think that’s a good improvement and uh, I mean I know there’s a lot of people that don’t like something that’s not natural...it may not be natural but it’s definitely an improvement over the sandy eroded path that preexisted that.”

(B) Camp representatives felt the gorge was safer (e.g. fewer accidents and deaths) and cleaner than it had been prior to management as a state park.

“We’ve seen a change from...6 fatalities and 53 technical rescues in a year and a half to no fatalities in now 8 years...for what’s that worth, it’s a positive thing”

“...there is people who aren’t self preserving and they don’t ya know consider their actions, and you can’t ever get around that but I like what ya’ll’ve done.”

Theme 2: There was evidence of a willingness on the part of all agencies to cooperate with one another.

“...it’s made everybody more aware. Their more educated and they want to take care of it.”

“FERC has been unusually cooperative and let us make some decisions. They basically years ago allowed me to put my neck on the line and say ok, [FERC] approved us to allow a hundred hikers and 20 rock climbers per day in the gorge.”

“FERC has really been good working with all of us umm they’re giving us an opportunity to manage this in the right ways....FERC will work with us and they’ve been real cooperative and Georgia Power has too in working with us as long as we realize that we’ve gotta protect the environment down there and we make reasonable decisions so we don’t really see FERC as umm some organization out of Washington that’s standing over us watching...”

“...we tell em to stay on the trail and everybody walk in a single file line and you get down there and you can go swim and use a buddy system and we have life guards down there and we pick up trash when we’re down there and we always leave an area ya know, we tell em to leave it cleaner then when you found it, ya know if it’s not your trash, pick it up anyway! And uh, we try to not let em climb around on the rocks where they’re not supposed to be ya know you stay in that area and then you leave.”

Theme 3: Camp representatives were willing to share or sacrifice time in the gorge to allow individual users who had traveled from far away to experience the Gorge, especially those with fixed time commitments.

“I do think that we should look at the ya know the fact that there are people that come from a long ways to see Tallulah Gorge and we ourselves have had the privilege of enjoying it as much as we have which I personally have enjoyed it a lot.”

“...we understand it but we don’t get a 100 spots a day, we only get X amount, we leave X amount for the public...”

“If one of the camps come one day and sorry, Happy Camp beat you here, you have to take your kids to the beach. It’s not the end of the world, they still have a park experience, it’s not the end of the world for someone to walk down the staircase rather than scamper across rocks...”

Table 1.—continued.

"I would forgo my right to go down in there to keep it that way because I have enjoyed the gorge, I've had great experiences in the gorge, and um, I've, I guess you could say, I've had my fair share."

Theme 4: Camp/agency representatives exhibited a high degree of place attachment to Tallulah Gorge

"I took my honeymoon in it, spent a week down in it, climb out of it, fell off the cliff, and picked 2 boys up outta Dead Man's whole who had died in it and um now I am using a camp, I have my own camp, I'm a silent observer, I had never contributed one single thing to Tallulah Gorge and I'm dumbfounded and all at the fact that they have done what they have done with it. When I go down there and I see the staircase now and the bridge and things that ya'll have done I just, I say thank you, thank you and wow!"

"...going down Sliding Rock is a tradition of the kids in Athens."

Theme 5: Local government and camp managers were pleased with community benefits the managed park provided

"...for the community of Tallulah Falls it's our cash cow this is our golden goose and as a business person here in town and umm our livelihood depends upon the people coming up here to use and use the resource..."

"But the character that it builds in them you know, and the accomplishment that ya know that they can make it out of that the rest of the week is...hey remember when you were going up the gorge and you didn't think you could do it and you made it? Uh, there's so many other lessons that you can learn from those kind of things."

"...local people are starting to take a little more pride in ownership of the fact that the gorge is there...."

"...I had dinner over here tonight at the little café called Isabel's and um, there was a couple that sat next to me and um, I guess they thought that maybe I lived here but uh, they asked me some questions that I was able to answer for 'em, and they, they just offered to me that uh, that they lived on Lake Hartwell, they said 50 miles away and they said this was the first time that they had ever been to Tallulah Gorge. And they said they just couldn't believe it and so they were making, as they left they were making arrangements with the restaurant there, Isabel's, to bring some kind of a large group back in September..."

"...like recruiting and all. We have big pictures of a kid going down Sliding Rock getting all the parents going, hey what is that and we tell them all about it and they think it's the greatest thing they've ever heard."

4.0 Results

Three main themes (themes 1-3), with various sub-themes, were identified during open-coding analysis of the focus group discussion. An additional two themes (themes 4 and 5) were identified through the axial coding process. The data to support these themes is found in Table 1.

The first, and strongest, theme identified (theme 1) was that camp representatives were generally appreciative and supportive of DNR management efforts both within the gorge floor and outside the Gorge. DNR's management of the Gorge was linked with the idea they had positively impacted the environmental quality of the gorge, both aesthetically and socially. Thus, a sub theme identified (theme 1A) was that camp personnel felt environmental quality had increased (i.e., user impact had decreased) with general management presence, including the permit

system and management placed infrastructure (i.e., staircases, bridge). Additionally, camp representatives felt the gorge was safer (e.g. fewer accidents and deaths) and cleaner (i.e., broken glass, trash) (theme 1B) than it had been prior to management as a state park. They cited such evidence as fewer deaths and rescues occurring in the gorge, and less observation of individual users acting in a dangerous manner.

The second theme identified (theme 2) was the willingness on the part of all agencies (i.e., local government, Georgia Power, GA DNR, camp representatives) to cooperate with one another. All participants in the discussion were understanding and appreciative of each others ideas as well as the fact that managers (i.e., GADNR, GA Power) had a job to do and still considered the needs of camps. No evidence of dissention between camps/government was identified.

A third theme identified (theme 3) was that camp representatives were willing to share or sacrifice time in the gorge to allow individual users who had traveled from far away to experience the Gorge, especially those with fixed time commitments. This directly illustrates a satisfaction with the permit process, as is, on the part of camp representatives. Again, they understand that management of user volume is necessary to keep the gorge in good quality, and because they are local, they understand the importance of stepping aside where necessary to allow non-local users to enjoy the Gorge.

A fourth theme identified during axial coding, while not directly relevant the study objectives, is presented here because of its relationship to Themes 1-3. Camp/agency representatives exhibited a high degree of place attachment to Tallulah Gorge (theme 4). "Place attachment arises when settings (e.g., local parks) are imbued with meanings that create or enhance one's emotional tie to a natural resource" (Vaske and Kobrin 2001). Many of these individuals self-identified as having long term ties to the park. Many of the camps had used the Gorge for group programming before GADNR began managing it. From the Gorge's inception as a state park, they had a vested interest in how the park was managed when the GADNR took it over. Additionally, many of the focus group participants had pre-GADNR personal experience with gorge before they worked for an agency associated with the gorge.

Finally, a fifth theme identified (Theme 5) was that local government and camp managers were pleased with community benefits the managed park provided. While a minor part of the discussion, the economic benefits that the Gorge has brought to the town may be important to the camps and local government.

5.0 Discussion

5.1 Limitations

While the findings are generally positive and suggest managers of the Tallulah Gorge are doing an admirable job in responding to visitor concerns about environmental and social conditions in the Gorge, the results of this study should be interpreted with some caution for at least the following reasons. First, this study sampled only current user groups and did not survey past users, some of whom may have been dissatisfied with their experience at the Gorge and now utilize other recreation sites. Second, the presence of Georgia DNR in

the focus group process may have influenced the attitudes and comments of the agencies that use the gorge.

5.2 Conclusions

In general, one statement sums up the findings of the focus group study. The DNR should "Keep up the Good Work." Two strong concepts back this adage.

First, the numbers (100 individual users, 20 large group users) set in the initial permit system seem to be satisfactory to large group users (e.g., camps) of the Gorge. Thus, social management of the Gorge is succeeding in context of large group representatives. This is illustrated by the finding that: 1) the majority of groups using the gorge were satisfied by the number of permits issued and thought they should remain the same; 2) participants in the focus group were of the mindset that the limitation of users set in place by the permit system had increased gorge environmental quality and safety. While the DNR may try increasing numbers of permits issued in the future, it is evident from the data that no large group representatives desire permit numbers to decrease. Thus, based on these user attitudes, the DNR has succeeded in setting an appropriate number for its permit system.

Second, the concept that physical/environmental management is desired over environmental deterioration is strongly supported by the data. The focus group results indicate that the camp and government participants felt the environmental and aesthetic integrity of the Gorge had increased since the inception of the state park and DNR management. References to the difference in erosion pre and post stairs are a strong indicator of the acceptance and appreciation of physical managerial efforts by camp and government agencies. From these results, one could surmise that focus group participants would be in favor of future physical manipulation of the Gorge (e.g., stairs, bridges) where it would prevent environmental degradation. Surely, large group users are much less concerned about management (e.g., building stairs) than they are about physical conditions (e.g., erosion) of the Gorge.

5.3 Implications

A number of implications for future management and research arise from these results. First, the DNR can rest assured that, in terms of socio-environmental impacts (i.e., aesthetics, crowding), their managerial efforts (i.e.,

permit system, infrastructure) are accepted and most likely appreciated by large group users. Thus, they should continue to manage environmental conditions and use levels as they have in the past, while the possibility of future increases in numbers of permits issued exists. However, the latter should only be attempted under close scrutiny of group and individual user reactions. Second, the methods employed in this research project might provide assistance to the GADNR state park system in assessing the success of future permit systems. These methods may serve as an acceptable template for future attempts at determining and monitoring stakeholder perceptions of socio-environmental carrying capacity in other state parks. Third, an interesting consideration for future research involves the high degree of positive cooperation between government, private, and non-profit agencies that was evidenced in the focus group discussion. Future study should examine this effort to determine what factors (e.g., hiring of local managers, involvement of stakeholders in the planning process, high degree of place attachment) allowed for these three groups to work so well together in the early stages of the

parks inception and management. These findings could be highly valuable for agencies embarking on other such endeavors.

6.0 Citations

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