

# Applying the Nominal Group Technique to Recreation Planning on Public Natural Areas

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**ABSTRACT:** Throughout the United States, there is a general consensus that public land management agencies need to involve their constituents and stakeholders in the planning and management of public natural areas (Schuett, Selin, & Carr, 2001; Webler, Tuler, & Krueger, 2001). However, exactly what that role should be and how to best involve the public remain controversial (Webler et al., 2001). Despite the uncertainty, there are a variety of approaches available to public land planners and managers to help incorporate stakeholders into recreation decision-making; and depending on the planning objectives, different techniques are appropriate at different times.

The purpose of this paper is to describe and demonstrate the value of the nominal group technique as a means to effectively and efficiently incorporate stakeholders into a public land management agency's recreation planning process. The technique is especially useful for idea generation and is often applied during exploratory phases of research, helping planners, managers, and researchers engage selected stakeholders in productive dialogue (Meffe, Nielsen, Knight, & Schenborn, 2002) to generate ideas to help guide future recreation management decisions and program development (Delbecq, Van de Ven, & Gustafson, 1975).

Similar in format to a focus group, the nominal group technique is essentially an organized discussion with a small group of participants (9-12) designed to generate and prioritize ideas about a particular topic (Siemer, Connelly, Brown, & Decker, 2001). However, the meeting results in a prioritized list of meeting participants' preferred alternatives. Compared with other stakeholder involvement methods (e.g., focus groups, surveys), the nominal group technique requires little financial and staff resources. It also allows planners to work with a larger, more diverse group of stakeholders than focus groups. However, as with other qualitative methods, one of the biggest limitations of the technique is that it is not designed to be representative of a larger community or population (Delbecq et al., 1975; Siemer et al., 2001). Furthermore, due to the meeting's rather rigid structure, a trained and competent facilitator is needed to effectively implement the technique (Delbecq et al., 1975).

To provide public land planners and managers with a practical example of implementing nominal groups in a recreation planning process, the paper details the use of the nominal group technique as an aid in recreation planning for public lands in Florida. In an attempt to better integrate recreation into its planning process, the Florida Fish and Wildlife Conservation Commission wanted input from community stakeholders, and the nominal group technique was used to gather this input. Stakeholders included both traditional and potential user and interest groups of seven wildlife management areas across the state. Results from each of the seven

nominal group meetings were used to help establish a direction for planning and identify potential recreation opportunities stakeholders desired and believed were appropriate for the area. As an example, results from an individual meeting are discussed to show how individual land managers can obtain specific information about their stakeholders' recreation priorities. Also, the results of the seven meetings were combined, and those results are discussed to highlight how nominal group meetings can be used to provide an overall direction for agency planning.

**KEYWORDS:** nominal group technique, collaborative planning, stakeholder involvement, recreation planning, public natural areas

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## Introduction

Involving stakeholders in land management decision-making is common practice for many public land management agencies across the United States (Schuett, Selin, & Carr, 2001). In many instances, public participation is required by law. Perhaps more important, management efforts are often considered more effective and credible if the public plays an active role in planning design and development (Decker & Chase, 2001; Glass, 1979; McCool, Guthrie, & Kapler Smith, 2000). As public priorities and perceptions regarding the use of public natural areas have shifted over the past several decades, public land management agencies have experienced increasing pressure to identify and account for the needs of diverse groups of stakeholders (Decker & Brown, 2001). These stakeholders bring with them new ideas, values, and behaviors that agency leaders need to better understand. Public land management agencies must develop working relationships with these stakeholders in order to ensure public support for management decisions and encourage future political support (Shindler & Neburka, 1997; Wondolleck & Yaffee, 2000).

There are numerous ways to incorporate stakeholders into recreation management planning on public natural areas, from traditional methods such as surveys and public hearings to more interactive, non-traditional approaches including focus groups, open-houses, and citizen advisory committees (Glass, 1979; Meffe, Nielsen, Knight, & Schenborn, 2002). Depending on an agency's planning objectives, different stakeholder involvement techniques are appropriate. Moreover, the combination of several methods, both qualitative and quantitative, give public land planners the ability to make informed decisions that account for diverse groups' needs and desires (Siemer et al., 2001).

The purpose of this paper is to describe the nominal group technique and familiarize natural area managers with its potential application in

recreation planning. Despite its popularity in other fields, there is little documentation of the nominal group technique within the recreation literature. Nominal group meetings allow for individual brainstorming as well as group dynamics to generate rich, qualitative information, which is then prioritized by meeting participants into easier to analyze and understand quantitative information. Like focus groups and other qualitative methods, the nominal group technique provides a more in-depth understanding of stakeholders' preferences and concerns regarding recreation than traditional quantitative survey methods. However, because the meeting participants generate a prioritized list of alternatives to a question posed, the technique also provides planners with a quantitative understanding of meeting participants' recreation preferences.

This paper emphasizes the general need to include stakeholders in public lands decision-making, and, specifically, recreation planning. It then presents the nominal group technique as one tool managers can use to actively engage stakeholders. To provide public land planners and managers with a practical example of implementing nominal groups in a recreation planning process, the paper then details the use of the nominal group technique as an aid in recreation planning for public lands in Florida. Finally, a discussion of the technique's advantages and limitations is presented to help managers decide if the technique might be appropriate for their needs.

### **Need for Public Input**

The vast majority of nature-based recreation in the U.S. occurs on public lands (Cordell, 1999; Fennell, 2001). However, these lands are often managed for a diversity of uses beyond recreation. Furthermore, public land managers increasingly find themselves managing public natural areas in a politically-charged atmosphere. Without the support and active cooperation of stakeholders, managers would be unable to successfully implement their plans (Wondolleck & Yaffee, 2000).

Planners and managers of public land management agencies have found that the public expects a voice in the decision-making processes regarding the use and management of public natural areas (Jacobson, 1999; Jubenville & Twight, 1993; Schuett et al., 2001; Tipple & Wellman, 1989). The public's strong desire to be involved in land management decision-making encouraged the passage of legislative initiatives such as the National Environmental Policy Act (NEPA), as well as other federal laws that mandated government agencies incorporate public opinion into the planning process (Jubenville & Twight, 1993; Tipple & Wellman, 1989; Wondolleck & Yaffee, 2000). Wondolleck and Yaffee (2000, p. 25) argue that "changes in law and regulations require expanded understanding of human values and attitudes; research and common sense suggest the only way to achieve that understanding is through communication with stakeholders and other individuals." Although there is recognition that public participation is important, both agency decision-makers and the public

have struggled over how to best work together (Webler et al., 2001) and to what extent stakeholders' involvement should influence agency decision-making (McCool et al., 2000).

The consequences of not actively involving stakeholders in agency decision-making can be severe. McCool et al. (2000, p. 1) stress that "plans that do not meet interest group expectations can be effectively 'vetoed' in the political market place." Many public land management agencies are all too familiar with a disgruntled public that expresses distrust in management decisions or even goes so far as to take legislative action against the agency (Wondolleck & Yaffee, 2000). Alternatively, Decker and Chase (2001, p. 134) emphasize "research has shown that stakeholders are more likely to consider a public issue or problem acceptably solved when they have had a voice in the decision-making process."

*Collaborative Planning Approach: Benefits of Involving Stakeholders*

People who use public natural areas for recreation purposes likely bring diverse values and emotions to the table; therefore, collaborative planning is a helpful framework to incorporate recreation into natural resource management decision-making (Jubenville & Twight, 1993). In its most basic form, collaborative planning is the integration of various stakeholders into the decision-making process. According to Brunson (2002, p. 240), collaborative planning is a "cooperative effort among multiple landowners and stakeholders to achieve goals that are thought to be infeasible using traditional means."

In the past, the involvement of the public in management decision-making largely consisted of a top-down, one-way communication approach, where the public was presented with what land managers felt was the "best" solution. Wondolleck and Yaffee (2000, p. 23) argue that in contrast to this one-way communication, "collaboration can lead to better decisions that are more likely to be implemented and, at the same time, better prepare agencies and communities for future challenges." Engaging stakeholders in collaborative recreation planning efforts on public natural areas can potentially benefit the public land management agencies responsible for the natural areas, communities nearby the natural areas, and visitors to the natural areas. By involving stakeholders in planning efforts, agency leaders can share information and help inform stakeholders about the rationale behind decisions. Better informed stakeholders may be more supportive of decisions if they understand the reasoning behind them (Daniels & Walker, 1996; Wondolleck & Yaffee, 2000). Research also indicates that stakeholder participation increases agency credibility (Decker & Brown, 2001) by removing the veil of secrecy that often surrounds land management decision-making (Wondolleck & Yaffee, 2000; Yaffee et al., 1996). Agency decision-makers encourage a sense of ownership in the decision-making process by allowing the public to take a meaningful role in helping shape management decisions (Backman et al., 2001; Wondolleck & Yaffee, 2000); and "experience has shown over and over that stakehold-

ers accept responsibility – and act responsibly – in proportion to how much authority they have” (Meffe et al., 2002, p. 238). In addition to a more informed and involved stakeholder base, increased collaboration between stakeholders and management agencies allows the agency to learn from its stakeholders about their issues and concerns. This two-way communication can result in planning efforts that better incorporate visitors’ and community residents’ attitudes, beliefs, values, and concerns into planning (Stein & Anderson, 2002).

#### *Collaborative Planning Techniques*

While there may be agreement that “more and better public participation is needed to resolve resource management issues” (Schuett et al., 2001, p. 587.), there is no precise formula detailing how to involve stakeholders (Jubenville & Twight, 1993; Meffe et al., 2002; Steiner, 1991). Jubenville and Twight (1993, p. 75) argue “there is no single guaranteed, foolproof technique for assessing public opinion and incorporating it into decision-making.” Instead, collaborative approaches use a variety of techniques and strive to involve the public throughout the entire process. Collaborative techniques include both qualitative and quantitative methods which may be varied throughout the planning process.

Research consistently indicates the earlier stakeholders are incorporated into the planning process, the better the chances for the successful implementation of the plan (Meffe et al., 2002; Schuett et al., 2001; Steiner, 1991; Wondolleck & Yaffee, 2000). Furthermore, using stakeholder involvement techniques early in the recreation planning process gives planners and managers the ability to detect potential conflicts between users and identify solutions, allowing a proactive approach to planning efforts, rather than a reactive response (Backman et al., 2001). In the early stages of planning, researchers suggest using “scoping techniques” (Jubenville & Twight, 1993, p. 78) to help agencies identify recreation issues and establish goals. Such techniques include nominal groups, task forces, citizens and technical advisory committees, and Delphi studies (Jubenville & Twight, 1993; Steiner, 1991). These techniques rely on collecting qualitative information, which is helpful in identifying and describing new issues. Qualitative methods are particularly effective when information about a group or issue is limited or previously unexplored and provides a rich data set of stakeholders’ values and preferences (Creswell, 1994; Knap & Propst, 2001). Although these types of techniques provide useful information about a specific group of people, these methods usually do not provide findings that can be inferred to larger populations.

Once initial recreation and natural resource management goals are set, public opinion polls and surveys are useful measures to systematically and scientifically gather people’s attitudes about specific issues that can then be used to infer to larger populations (Decker & Chase, 2001; Steiner, 1991). Telephone and mail surveys are examples of quantitative methods used to collect information from large numbers of people and can provide feedback from a representative sample of the population in question.

After the goals and objectives have been identified and a more comprehensive understanding of stakeholders' preferences is established, town meetings or public hearings are tools that can be used to present and discuss developing recreation plans (Steiner, 1991). Task forces and advisory committees can be used throughout the process, and these same groups are effective ways to share information with the general public (Steiner, 1991).

Both quantitative and qualitative public participation techniques can provide useful data for appropriate stages of a collaborative planning process, but mixed method techniques also serve an important role in collaborative planning. This paper focuses on the nominal group technique, which is designed to provide both qualitative and quantitative data. Although nominal groups should be used in coordination with other public participation techniques, the flexibility in the type of data generated can prove to be particularly helpful throughout a collaborative planning process (Ritchie, 1985). The nominal group technique provides rich, qualitative data important for understanding stakeholder values and attitudes, while at the same time, produces quantitative results that are less cumbersome than traditional qualitative data. Furthermore, the technique actively engages stakeholders and provides them with opportunities for direct input into the planning process.

### **Nominal Group Technique**

Similar to the focus group, the nominal group technique is a meeting with a small group of participants (9-12) designed to generate and prioritize ideas about a particular topic (Siemer et al., 2001). However, discussion in a nominal group is more structured than a focus group, with the final outcome of a meeting resulting in a list of participants' preferred alternatives to the issue presented (Delbecq et al., 1975). The technique is useful for idea generation and is often applied during exploratory phases of research (Delbecq et al., 1975). The technique helps planners and managers engage selected stakeholders in productive dialogue and generate ideas before decisions are made or programs are developed (Chase, Lauber, & Decker, 2001; Delbecq et al., 1975).

Developed by Andre Delbecq and Andrew Van de Ven in 1968, the nominal group technique evolved from organizational planning research and is used extensively for program planning and evaluation in education and health organizations (Delbecq et al., 1975). The technique has gained some popularity within the natural areas management literature (Meffe et al., 2002; Siemer et al., 2001) as well as within the tourism literature (Ritchie 1985, 1994).

Nominal group meetings usually revolve around a single topic and consist of six stages:

- 1) presentation of issue,
- 2) individual brainstorming,
- 3) documentation,

- 4) consolidation and review of ideas,
- 5) ranking, and
- 6) compilation of results.

Figure 1 briefly describes and outlines the goals of each step of the nominal group technique. After completing the six steps, meeting organizers end up with a prioritized list of meeting participants' preferred ideas or issues. With this list, decision-makers have a tangible product that clearly enumerates participants' priorities for a given issue. In addition, the entire list of ideas and the discussion within the meeting provides planners and managers with insight into meeting participants' attitudes and beliefs.

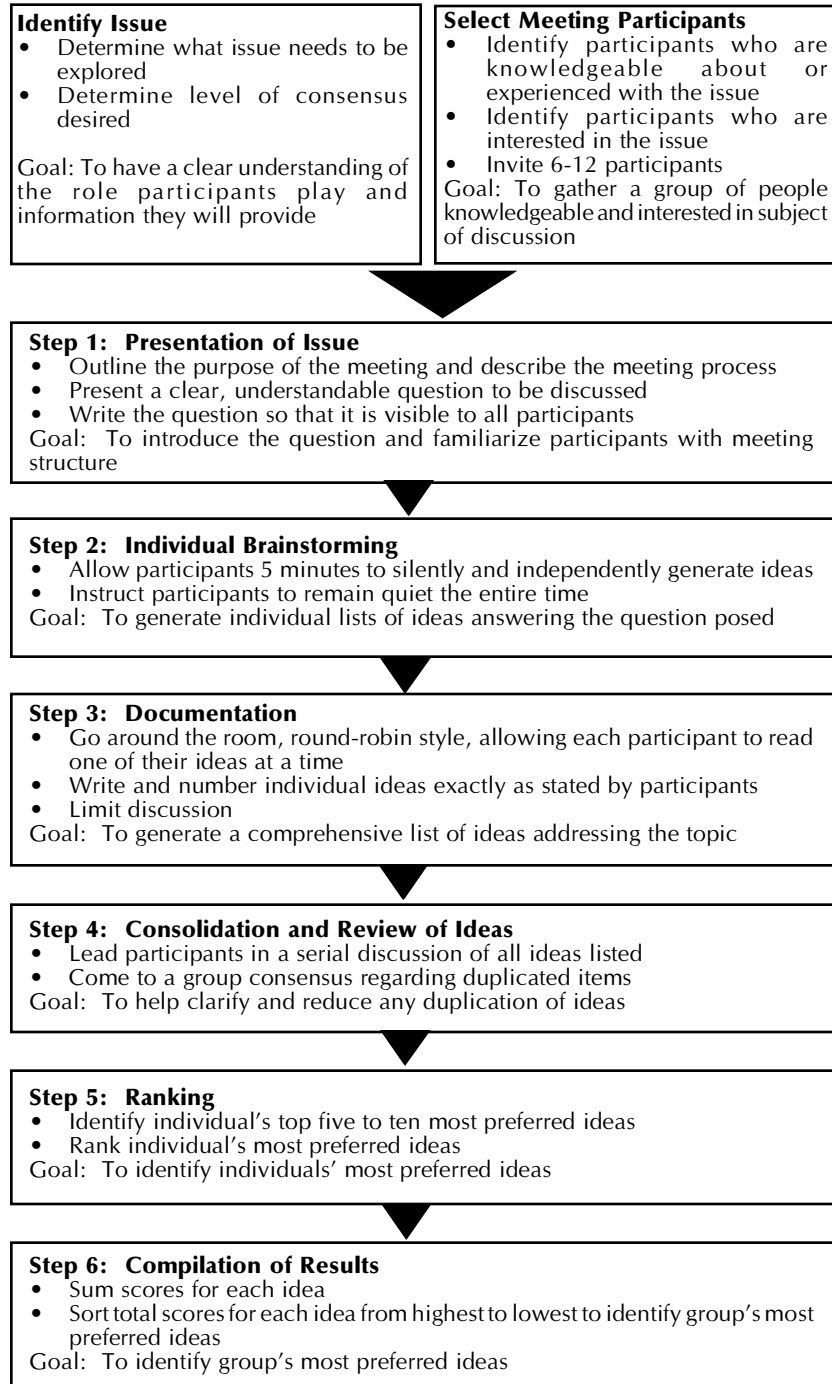
To illustrate how the nominal group technique may be applied in a recreation planning context, the following section describes how researchers used the technique in the early stages of recreation planning for a wildlife management agency in Florida. The paper will conclude with a discussion of the strengths and weaknesses of the nominal group technique based on the research conducted.

### **Application of the Nominal Group Technique**

Like many other states, an increasing number of Florida tourists are coming to see the state's natural areas (Florida Department of Environmental Protection, 2001). These tourists include wildlife watchers, kayakers, and bikers, among others; and they are looking to Florida's diverse public natural areas to participate in nature-based recreation activities. In addition to the increasing numbers of tourists, research indicates local community residents are frequent visitors of nearby natural areas, and their visitation rates are expected to increase (Cordell & Overdevest, 2001).

This growing trend in nature-based recreation and tourism has encouraged public land management agencies like the Florida Fish and Wildlife Conservation Commission (FWC) to investigate stakeholders' perceptions of increased nature-based recreation and tourism development on nearby public natural areas. Before implementing a new recreation program, the FWC wanted to first gather input from local stakeholders to help establish a direction for planning and identify potential recreation opportunities stakeholders' desired and believed were appropriate for the area. Researchers with the University of Florida used the nominal group technique to investigate stakeholders' perspectives regarding opportunities for improved and expanded nature-based recreation. Researchers chose to use the technique specifically because FWC decision-makers wanted to know what recreation opportunities traditional and potential user groups most desired. The technique not only allowed meeting participants to brainstorm ideas and generate a comprehensive list of possible recreation opportunities, but also led them through a process of reaching a consensus on what the most desirable opportunities might be. The following section describes the steps involved in implementing the nominal group technique.

**Figure 1**  
**The nominal group technique process**



### *Study Areas and Selection of Participants*

The selection of meeting participants is an important part of the nominal group technique. Meeting organizers must have a clear understanding of the role they expect meeting participants to play and then select participants who can best answer the question posed at the meeting. For this study, agency planners were interested in introducing and expanding nature-based recreation opportunities on seven Wildlife Management Areas (WMAs) across the state. To help identify recreation opportunities that might meet current and potential stakeholder needs and be acceptable and beneficial to surrounding communities, FWC planners wanted input from local stakeholders. In collaboration with FWC staff, researchers defined stakeholders as people who lived close to the study areas, knew about the study areas, and were concerned about the management of FWC lands or other nearby public natural areas (Stein, Anderson, & Kelly, 1999). Seven stakeholder groups were identified and invited to each of the seven nominal group meetings: 1) recreation user groups (e.g., hikers, bikers, hunters, and anglers), 2) conservation groups, 3) local government decision-makers, 4) local landowners, 5) active/concerned citizens, 6) tourism development officials, and 7) local business owners. The seven groups were chosen based on the existing use and potential interest in recreation on FWC lands. Although not statistically representative of stakeholder groups, each meeting participant was selected because he or she was actively involved in an organization fitting one of the seven stakeholder groups. Because each of the seven study areas offered unique opportunities for particular recreation activities (due to site conditions, current regulations, etc.), specific recreation user groups were different for each of the seven areas. Participants representing the stakeholder group “active/concerned citizens” were included to capture those individuals who frequently interact with the area managers, but did not necessarily fall into one of the other six specific categories.

A total of 111 people attended all seven meetings – 74 males and 37 females. The size of the groups ranged from 9 to 26, with the average number of meeting participants per meeting being 15. Besides gender, no other socio-demographic information was systematically collected during the meeting.

### *Meeting Procedures*

A single, two-hour nominal group meeting was held for each of the seven study areas between December 1999 and February 2000. The same two researchers ran each of the seven meetings and maintained the same roles as facilitator and notetaker. In an effort to minimize bias in the meetings, university researchers who held no positions of power within the FWC and were trained in conducting nominal group meetings led each meeting. Also, FWC managers were asked to not attend the meetings in order to keep participants' attention on the questions posed by the researchers and not get distracted by issues directly related to the manager. For each meeting, the following supplies were available:

- 1) notepads and pens for participants,
- 2) flipcharts and markers for the notetaker,
- 3) tape recorder and tapes, and
- 4) food and drink for participants.

At the beginning of each meeting, the facilitator outlined the purpose of the meeting: *to seek input from participants regarding opportunities for increased nature-based recreation and tourism on the Wildlife Management Area*. Participants were then asked to state their name and connection to the study site. After participants introduced themselves, the facilitator turned on the tape recorder and proceeded with the meeting.

*Step 1: Presentation of Issue*

The facilitator first described how the meeting would be conducted and what was expected of the participants. The topic of discussion was then presented: *What recreational opportunities would you like to see offered on the Wildlife/Environmental Area? Specify any services or facilities*. The facilitator defined a recreational opportunity as more than just an activity but also included the biophysical environment, visitor and site management, and social conflicts involved with the activity (Driver, Brown, Stankey, & Gregoire, 1987). The facilitator made sure participants clearly understood the question before moving on to the second step.

*Step 2: Individual Brainstorming*

Participants were given five minutes to individually and silently write down all of their ideas for recreation opportunities on the notepaper provided. Participants were encouraged to be creative with their answers and not be restricted by budgetary constraints or current regulations of the site. The facilitator reminded participants that this was a time for individual brainstorming and instructed everyone to remain quiet the entire time.

*Step 3: Documentation*

After the brainstorming session, each participant was asked to explain one of the opportunities on his or her list. As the participant read his or her opportunity, the notetaker wrote down the opportunity exactly as stated. Statements were recorded and assigned an individual number by the notetaker on flipchart paper in front of the room. During this step, extensive discussion of an idea was discouraged unless further clarification was necessary. Participants were encouraged to build upon each other's ideas and write down any new ideas as the meeting progressed. The facilitator went around the room in a round-robin style until all participants' lists were exhausted.

*Step 4: Consolidation and Review of Ideas*

To help clarify and reduce any duplication of ideas, participants were asked to look over all the statements listed on the flip chart paper posted around the room. In a serialized fashion, each idea was discussed. If all participants agreed to combine or delete any opportunities, the notetaker combined or crossed out those items.

### *Step 5: Ranking*

Participants were directed to look at the flip chart papers posted around the room and asked to select and score their ten most preferred opportunities (a score of 10 being most preferred, and a score of 1 being the 10<sup>th</sup> most preferred). After individually listing and ranking their top ten opportunities, each participant then marked his or her scores next to the numbered opportunity on the flipchart.

Instead of marking scores directly onto the flipchart, a number of different methods may be used, including filling out worksheets or index cards with the statement and importance score identified (see Delbecq et al., 1975 for suggestions on other ranking procedures). Similarly, the exact number of preferred ideas participants select is flexible and depends upon several factors, including the amount of ideas generated and the level of consensus needed. For example, if participants only generate 15 ideas, then the top five is probably sufficient. For this study, the purpose of the meeting was to generate a list of new recreation opportunities; agency leaders were interested more in the quality and number of ideas, rather than the exact level of consensus. Therefore, in addition to participants' top ten recreation opportunities, all opportunities and associated scores were reported to the FWC.

### *Step 6: Compilation of Results*

To identify each group's top ten most preferred opportunities for each meeting, the individual scores participants assigned to each statement were summed, and then statements were sorted from highest to lowest. In other words, the group's most preferred recreation opportunity received the highest score, and their tenth most preferred opportunity received the tenth highest score.

### **Data Analysis for Multiple Meetings**

In many cases, reporting meeting participants' top ten list and a discussion of methods, limitations, and overall impressions is sufficient, but, often, planners conduct more than one meeting. As was the case in Florida, the nominal group meetings were designed to help the FWC develop new nature-based recreation and tourism agendas not only for individual study sites, but also for the entire agency; therefore, seven meetings were held throughout the state to get a breadth of stakeholders' opinions. The individual meeting results specifically helped managers of the seven study areas identify recreation priorities, and results from all seven meetings were combined to develop over-arching themes found across meetings. Again, these results cannot be generalized to a larger population, but they do present recreation priorities on a larger scale using a variety of stakeholders' input.

Modifying data analysis methods outlined by Ritchie (1985, 1994), University of Florida researchers used a combination of qualitative and quantitative procedures to analyze all seven groups' entire lists of recreation

opportunities. The following steps outline the initial qualitative steps of the procedure:

- 1) The entire lists of recreation opportunities generated at each of the seven meetings were compiled. Using a basic form of content analysis, recreation opportunities were grouped into general themes; and
- 2) Within each theme, if appropriate, individual recreation opportunities were further grouped into specific categories. The overall themes and categories identified were reviewed by an additional researcher and FWC decision-makers.

Once the themes were identified, researchers modified Ritchie's index score calculation to quantitatively measure the relative importance of each theme. The number of times a theme was mentioned across the seven meetings and the importance it was afforded (by way of individual opportunity statement rankings within a meeting) are both reflected in the theme's index score. Table 1 provides an example of how a theme index score was calculated.

The theme index score was calculated using the following process:

- 1) For each of the recreation opportunities within a theme, original overall group rankings for the opportunity were transcribed;
- 2) Original group rankings for individual recreation opportunities were recalculated based on the following scale:

Rank of

1-4	=	5 points
5-8	=	3 points
9-12	=	2 points
13 or more	=	1 point

- 3) The recalculated points for all the recreation opportunities within a theme were then summed to create the index score for that theme. Scores for categories within the theme were also calculated and ranked.

### **Products of the Nominal Group Technique**

The purpose of conducting nominal group meetings for the FWC was to obtain information from FWC stakeholders regarding the introduction and expansion of nature-based recreation on WMAs. For individual meetings, the results point to specific priorities land managers at each of the seven study sites can further investigate to potentially expand the recreation opportunities offered in those areas. Although the meeting participants were purposively selected and results are therefore not generalizable, the compilation of results from all seven meetings gave FWC decision-makers their first list of recreation priorities for nature-based recreation on a state-wide level. The list of priorities generated at each meeting point planners in a direction to further examine how to diversify the FWC's recreation program for individual study sites, as well as for the agency as a whole. Results from one of the nominal group meetings and results from the

**Table 1**  
**Example of theme and calculation of theme index score**

<b>Theme: Build Facilities and Structures to Accommodate Recreation</b>	
<b>Original Group Ranking</b>	<b>Points assigned</b>
7	3
11	2
12	2
13	1
14	1
15	1
16	1
17	1
17	1
18	1
19	1
19	1
20	1
20	1
22	1
22	1
24	1
27	1
27	1
18 mentions	
	3 x 1 = 3
	2 x 2 = 4
	1 x 15 = 15
<b>Theme Index Score</b>	<b>22</b>

Original Group Ranking

Points assigned

Recreation Opportunities

- 7 Structured interper center at Webb instead of Three Lakes because more people, access, traffic
- 11 Birding sites enhanced with viewing stands
- 12 Elevated platforms for rest stops along paddle trails
- 13 Scenic overlooks in association with observation towers off of major access roads
- 14 Visitor Center can serve as place to get permits (fishing, camping, etc.)
- 15 Look at possibilities for rails-to-trails opportunities
- 16 Educational kiosks at entrance areas – information on habitat, wildlife, hunting seasons
- 17 Educational nature center (south end) – programs for children
- 17 Education facility – area or building
- 18 Temporary blinds for nature photography
- 19 Observation towers
- 19 Photo platform
- 20 Feeding stations and stands for watchable wildlife opportunities
- 20 Paved biking trail . . . seasonal
- 22 Scout, 4-H youth camp facilities and activities
- 22 Observation platforms
- 24 Bike/pedestrian bridge over Weeki Wachee River. Connect with Chass preserve
- 27 Multi-functional nature center to serve as trailhead

18 mentions

3 x 1 = 3

2 x 2 = 4

1 x 15 = 15

Theme Index Score

22

combined meeting analysis are described below as examples of how nominal groups provide direction for recreation planners.

#### *Individual Meeting Results*

Table 2 provides an example of the top 11 recreation opportunities generated from the nominal group meeting conducted for the J.W. Corbett Wildlife Management Area in southeastern Florida (11 opportunities are listed here instead of 10 because two opportunities received the same score). With 26 people attending the meeting (11 female and 15 male), Corbett had the highest attendance of all seven meetings.

The Corbett meeting was attended by diverse stakeholders, including hunters, local government officials, equestrian groups, birders, and hikers; and many of the meeting participants held markedly different beliefs. For example, meeting participants included hunters who had used the WMA for generations, as well as environmental activists who had spent little time on-site. Even with the seemingly conflicting opinions among meeting participants regarding recreation and natural resource management in Corbett, the meeting resulted in a list of 44 recreation opportunities, and the group's top eleven opportunities reflected a diversity of desired recreation opportunities. The recreation opportunity *Maintain traditional hunting uses* received the highest score. This illustrates that even though some of the participants did not approve of hunting, many meeting participants wanted to maintain these traditional recreation opportunities. In fact, hunting and fishing opportunities were listed in three of the eleven most preferred opportunities. New recreation opportunities also emerged as priorities for

**Table 2**  
**Top 10 most preferred recreation opportunities for the**  
**J.W. Corbett Wildlife Management Area**

Rank	Score <sup>1</sup>	Opportunity
1	115	Maintain traditional hunting uses: buggies, archery, muzzle gun, general gun, small game, field trials
2	82	More emphasis on passive camping opportunities for children (including wildlife instruction and value of native habitat. More on weekends in fall, winter, and spring)
3	74	Dredge ditches for fishing
4	69	Camping area near youth camp expanded
5	67	Open Youth Camp range to public range
6	61	Environmental education
7	54	Hiking and hiking trail
8	47	Access canals for canoeing
8	47	Establish youth hunt
9	42	Encourage and expand youth camp activities. Priority for kids
10	41	Designate trails for offroad vehicle during and after hunting season

<sup>1</sup> Participants were asked to vote on their ten most preferred opportunities. A score of 10 = most preferred opportunity; a score of 1 = 10<sup>th</sup> most preferred opportunity. To identify the top ten opportunities, researchers added the scores for each opportunity and then sorted them from highest to lowest.

the area. For example, the second highest rated opportunity addressed opportunities for passive (i.e., primitive) camping. Environmental education, hiking, and canoeing were also listed as desired recreation opportunities. Finally, recreation opportunities for children were mentioned as five of participants' eleven most preferred recreation opportunities.

The focus on maintaining traditional hunting opportunities was likely not a surprise for Corbett managers. However, participants' prioritization of recreation opportunities for youth might have been an unexpected result of the nominal group meeting. Based on this new information, Corbett managers could further investigate the needs and desires for youth recreation in the area. For example, managers could work with schools, scout groups, and youth hunting groups to further investigate if specific youth recreation opportunities are really desired in Corbett and how they might best be provided.

#### *Combined Meeting Results*

Since the seven nominal group meetings took place throughout the state on a diversity of areas, meeting results provided information on a state-wide level about recreation preferences for selected FWC stakeholders. For the seven FWC nominal group meetings, a total of 236 opportunities were listed, with meetings resulting in a minimum of 26 to a maximum of 44 listed recreation opportunities. To analyze this wealth of data, researchers identified 11 themes that best captured all seven groups' lists of opportunities. To more precisely describe these themes, 14 sub-themes were identified (Table 3).

Results of the seven meeting analysis indicate the FWC should take a conservative approach to recreation planning and development. Overall, meeting participants did not indicate a strong desire for increased development of nature-based recreation on FWC lands. The highest rated theme, *investigate opportunities for introduction of specific, non-motorized recreation activities, emphasis on minimal environmental disturbance*, encompassed low-impact recreation opportunities that do not require much infrastructure. This theme's high index score (109) reflects the fact that items within this theme were frequently discussed and rated high at all seven meetings. The next highest index score emphasized participants' desires to avoid major changes; *Maintain and/or expand traditional hunting and fishing recreation opportunities* received an index score of 75.

The list of themes also provides decision-makers with recreation opportunities that were considered low priorities by meeting participants. For example, *provide opportunities for motorized recreation* was mentioned only four times and received the lowest index score (5). Identifying low priority themes, like motorized recreation opportunities, can help improve the efficiency of planning by alerting agency decision-makers to issues a majority of stakeholders either do not value or might be strongly against. The identification of unpopular issues can help planners avoid unpleasant surprises (i.e., planning for low priority recreation opportunities) and

**Table 3**  
**Overall themes and categories generated in the**  
**seven nominal group meetings**

Theme	Number of times mentioned	Index Score
<b>Investigate opportunities for the introduction of specific, non-motorized recreation activities, emphasis on minimal environmental disturbance</b>	<b>58</b>	<b>109</b>
Camping	10	28
Non-Motorized Trails	14	24
Paddling	9	24
Wildlife Observation	6	12
Horseback Riding		
Non-Traditional		
Mountain Biking		
<b>Maintain and/or expand traditional hunting and fishing recreation opportunities</b>	<b>33</b>	<b>75</b>
<b>Use visitor management strategies to enhance overall recreation experiences</b>	<b>38</b>	<b>75</b>
Zoning	13	29
Rules and Regulations	10	19
On-Site Information	10	17
Publicity	5	10
<b>Focus efforts on land management and preservation of areas' natural qualities</b>	<b>26</b>	<b>65</b>
<b>Provide for learning opportunities</b>	<b>23</b>	<b>40</b>
Ecological	16	24
Historical	3	9
Programs and Events		
<b>Build facilities and structures to accommodate recreation</b>	<b>18</b>	<b>22</b>
<b>Miscellaneous</b>	<b>18</b>	<b>21</b>
<b>Involve appropriate stakeholders</b>	<b>7</b>	<b>14</b>
<b>Ensure appropriate resources (i.e., staff, budget, time) devoted to recreation management</b>	<b>4</b>	<b>13</b>
<b>Prohibit any kind of recreation on-site</b>	<b>4</b>	<b>11</b>
<b>Provide opportunities for motorized recreation</b>	<b>4</b>	<b>5</b>

allows them to investigate and potentially plan for recreation opportunities receiving substantial support (e.g., high priority recreation opportunities). At the same time, even though low scoring items were not popular among all groups, they may reflect a particular group's preferences and might alert managers of potential conflicts between groups.

### **Advantages and Limitations of the Nominal Group Technique**

The goal of this paper was to highlight the use of the nominal group technique as a method of incorporating stakeholders into recreation planning. To help achieve this goal, the following section provides an assessment of the advantages and limitations of using the nominal group technique as a part of recreation planning efforts.

#### *Advantages of the Nominal Group Technique*

Public land management agencies have a wealth of public involvement techniques available to help them incorporate public opinion into the planning process (see Siemer et al., 2001 and Steiner, 1991 for more techniques). This manuscript was written to introduce the nominal group technique as one tool managers might be able to use to effectively and efficiently engage stakeholders in the recreation planning process. By giving all meeting participants an equal voice, the nominal group technique helps foster a sense of ownership and encourages dissenting groups to find common ground (Yaffee et al., 1996). The technique, however, is not meant to replace all other public involvement methods. In fact, the nominal group technique is not designed to gather information about a population (e.g., surveys) or to present information to the general public (e.g., public meetings). However, nominal group meetings are comparable in approach to focus groups and might often be more appropriate to gather both qualitative and quantitative information about a particular topic.

The structure of the nominal group technique enables it to overcome many of the obstacles facing focus groups and similar qualitative methods. With its focused discussion and individual brainstorming, the technique is better suited than focus groups for large (up to 12), heterogeneous groups (Delbecq et al., 1975). For this study, researchers felt 15 was a comfortable group number to work with. For example, 26 people attended the Corbett WMA nominal group meeting. Although all participants participated in the meeting, researchers found it difficult to move through the nominal group process within two hours without feeling rushed.

The silent and independent generation of ideas and round-robin style of listing alternatives encourages a high level of individual participation, discourages the domination of more vocal individuals, and gives everyone's ideas equal weight, making the process less personal (Delbecq et al., 1975). These are benefits difficult to realize in focus groups due to the method's more open-ended discussion format (Krueger, 1994). Furthermore, the nominal group technique allows seemingly contrasting groups to come together to discuss their ideas and find common ground. In the FWC study, traditional users such as hunters and anglers and non-traditional users (e.g., hikers, wildlife watchers, and conservationists) all came together to discuss new recreation opportunities. The structure of the meeting lent itself to stakeholders sharing their ideas for new recreation opportunities. As found in the Corbett WMA meeting, researchers found that despite participants' differences, these diverse groups of stakeholders worked well together,

were able to generate lists of unique recreation opportunities for the management areas, and were able to find opportunities agreeable to almost every stakeholder group.

In addition to providing managers with a prioritized list of alternatives to the question posed, the tangible end product of a nominal group also benefits meeting participants. Research indicates nominal group participants achieve a higher level of satisfaction and sense of accomplishment than focus group participants because of the creation of an end product (Delbecq et al., 1975). To help further promote this sense of accomplishment, FWC meeting participants were sent the same reports the agency received and were encouraged to review the results and continue working with the area manager as the planning process continued. In addition, meeting representatives were included in a larger community survey effort.

#### *Limitations of the Nominal Group Technique*

Because of its straightforward approach, the nominal group technique is seemingly simple to implement. However, a meeting does require time (i.e., organizing, hosting, data compilation) and money (i.e., food and drink), as well as a significant commitment by participants to come together in one location for two hours. Furthermore, the technique requires a competent leader to make a group feel comfortable and still conform to a rather structured meeting style (Delbecq et al., 1975).

Similar to other qualitative methods, the nominal group technique is limited in sample size. Meeting participants are selected purposively, and therefore, results are not generalizable to, or representative of specific stakeholder groups or the larger community (Glass, 1979). Results can only be inferred to the people who participated in the meetings, underscoring the importance of carefully selecting meeting participants who are willing and able to provide information regarding the question being addressed.

Another limitation is the time involved in the selection of stakeholders. For this study, researchers spent much time and effort working with FWC managers to identify meeting participants. Managers and planners might find it difficult to dedicate the time necessary to select appropriate meeting participants. Also, managers must be careful to invite a diverse group of stakeholders – not just people who agree with the agency. By making sure both “enemies” and “friends” were among the stakeholders, researchers made sure the meetings included groups’ viewpoints that might otherwise have been excluded.

There is almost an impulsive reaction to use the lists generated at the meetings as a stopping point for decision-making. Because a meeting ends with a list of prioritized opportunities, it is easy to assume a higher level of consensus than what may have actually been achieved (Siemer et al., 2001). For example, in one nominal group meeting “Opportunities for youth and disabled fishing” was rated as the eighth most preferred recreation opportunity because three out of the nine people ranked it relatively high, although no other participants listed it in their top ten. Therefore, simply looking at the quantitative results (i.e., top ten lists) might not reflect the overall results of the meeting.

Although consensus-building approaches like the nominal group technique are an important tool for public land planners, there is a concern that such approaches can be used to “force out the minority opinion and push a group agreement to the lowest common denominator” (Richardson, 2000, p. 104). To avoid marginalizing the minority voice, decision-makers must put the results within an appropriate context and integrate the prioritized list with other pieces of information, as well as with the agency mission to finalize management plans.

### **Conclusions and Future Research**

Successful management of public natural areas is dependent upon community support and cooperation (Harris, Shaw, & Shelhas, 1997; Jacobson, 1999). Although public land planners might recognize the need for community support, efforts to include stakeholders are oftentimes little more than window dressing (Delbecq et al., 1975). This superficial interaction can be frustrating for both agency personnel and stakeholders. The proper use of the nominal group technique helps alleviate some of this frustration, in that the technique promotes effective participation and provides stakeholders with “a direct voice in the planning process” (Glass, 1979, p.187). Referring to the involvement of stakeholders in wildlife management decision-making, Decker & Chase (2001, p. 148) conclude, “Stakeholder satisfaction with wildlife management is as much related to the process by which wildlife managers gain stakeholder input and involvement, as it is to the actual decision that results.” If implemented correctly and followed through, the nominal group technique encourages a meaningful role for stakeholders and provides an important tool for agency decision-making.

Since nominal group meetings are a relatively new technique to public land management decision-making, their effectiveness requires evaluation. First, participants’ satisfaction with nominal group meetings will provide information on the value the participants place in the technique. Did they find the meeting useful? Do they believe it provided productive results? Would they participate in future nominal group meetings? Questions like these would help to improve the development and implementation of nominal group meetings from the perspective of the people who participate in the meetings.

Second, the perspective of people who plan and carry out public participation techniques, including nominal groups, should be examined to identify where and how nominal group meetings can improve collaborative planning. As collaborative planning becomes a more popular exercise, public land management agency personnel, environmental consultants, and conflict mediation experts are becoming well versed in the various ways to work with diverse stakeholders. Future research should tap into that knowledge, specifically focusing on the potential costs and benefits of nominal groups as a planning technique.

Finally, results of nominal group meetings could be compared to the results of other collaborative planning approaches. For example, how does

the prioritized list of issues generated from the nominal group meeting compare with results generated from public meetings or surveys? Due to the wide array of public participation approaches available to managers, a comparison of nominal group results with other techniques would help identify where nominal group meetings can best fit into the planning process.

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