

# RECREATION-RELATED PERCEPTIONS OF NATURAL RESOURCE MANAGERS IN THE SARANAC LAKES WILD FOREST AREA

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**Abstract.**—Public forest managers often work with diverse stakeholder groups as they implement forest management policies. Within the Saranac Lakes Wild Forest area of New York State's Adirondack Park, stakeholder groups such as visitors, business owners, and landowners often have conflicting perceptions about issues related to water-based recreation in the region's public forest areas. The main objective of this study is to identify the beliefs and attitudes of managers in the Saranac Lakes Wild Forest area regarding issues related to boat use. The Theory of Planned Behavior (Ajzen 1991), which illustrates the relationships among beliefs, attitudes, intended behaviors, and behaviors, provides the theoretical basis for the study. Fifteen managers of public and private properties within the region were interviewed in 2005. Interview data were recorded (with the permission of interviewees), transcribed, and qualitatively analyzed using N6 qualitative software. The interviews reveal basic issues perceived by managers concerning boat use, including environmental impacts from motorboat use (e.g., invasive species introductions) and noise generated by motorboats. Managers' beliefs concerning these issues and attitudes towards boat use are identified. Distinctions between public agency managers and managers of shoreline associations and other organizations are made.

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## 1.0 INTRODUCTION

The Saranac Lakes Wild Forest (SLWF) comprises 67,000 acres of public forest lands and water bodies within New York State's Adirondack Park. The 142 water bodies in the area provide recreational opportunities for

local landowners and attract many visitors to the area, contributing to the local economy and profitability of recreation-related businesses. Many stakeholder groups such as business owners, visitors, and local landowners have a long-standing tradition of using the public forest lands throughout this area as access for water-based recreation. However, because of differences in the recreation- and resource-related interests of these groups, a lack of consensus concerning management strategies often exists among managers and stakeholder groups.

This study seeks to identify the perspectives of land managers, visitors, landowners, and business owners in the SLWF area concerning water-based recreational activities. The study consists of two phases: (1) interviews with 15 land managers, and (2) quantitative surveys of three stakeholder groups (i.e., visitors, landowners, and business owners). This manuscript focuses on the results of the qualitative interviews with managers. The objective of these interviews was to identify the beliefs and attitudes of land managers in the SLWF area concerning water-based recreation. Managers' perceptions of the beliefs of the three stakeholder groups were identified from the interviews, but are not included in this manuscript. Results from the interviews were used to develop the questionnaires for the second phase of the study.

The Theory of Planned Behavior (Ajzen 1991) provides the framework in this study for understanding the relationship among beliefs and attitudes towards participation in water-based recreation (specifically, boating). *Beliefs* are an individual's conceptions about a specific behavior. Ajzen (1991) describes three basic types of beliefs: behavioral (i.e., beliefs about the likely consequences of a certain behavior), normative (i.e., beliefs about the expectations of others concerning a certain behavior), and control (i.e., beliefs about factors that may limit or enable a certain behavior). Beliefs influence *attitudes*, defined by Ajzen and Fishbein (1980) as an individual's positive or negative evaluations of performing specific behaviors. For example, an individual's beliefs about the consequences of a specific

behavior (i.e., behavioral beliefs) will influence his or her attitudes towards the behavior. Likewise, normative beliefs influence an individual's perceptions concerning the social pressure for or against a specific behavior (i.e., subjective norms) (Hrubeset al. 2001), and control beliefs influence the individual's perceptions concerning the ease or difficulty of performing a specific behavior (i.e., perceived behavioral control) (Ajzen & Driver 1992). These attitudes and perceptions (herein called "attitudes") concerning a behavior influence an individual's *intention* to carry out that behavior. Intention directly influences carrying out the actual *behavior* (Ajzen 1991). Results of the manager interviews were used to focus the second phase of this study (i.e., the surveys) on attitudes and beliefs related to the specific behaviors of participation in non-motorized boating, motorized boating, and personal watercraft use in the Saranac Lakes Wild Forest.

## 2.0 METHODS

During 2005 and 2006, 15 qualitative telephone interviews of land managers (eight state agency managers and seven shoreline association/non-governmental organization [NGO] directors) in the SLWF area were conducted by the second author. The interviews were tape-recorded for accuracy with the permission of interviewees. Interview length ranged from 30 to 120 minutes. Managers were asked to identify and describe the issues that they thought were most important concerning water-based recreation in the SLWF area and for their perspectives on these issues. Open-ended questions were used.

Following their completion, the interviews were transcribed by the second author and imported into QSR N6 software for qualitative analysis by the first author. Interviewee quotes were coded by issue, as well as manager beliefs and attitudes. Data were summarized to identify the number of managers indicating each issue, belief, and attitude.

## 3.0 RESULTS

The following issues were identified by managers as being important to water-based recreation in the SLWF:

- Sustaining the local economy.
- Water quality (boating & septic systems).

- Spread of invasive aquatic species by boats.
- Noise associated with motorboats.
- Conflicts between motorized and non-motorized boat users.
- Enforcement of boating regulations.
- Boating access.

Managers were asked to identify their perspectives concerning each of the issues that they identified. Their beliefs and attitudes concerning these issues were identified from their comments. Table 1 summarizes managers' beliefs according to the number of managers indicating each belief identified.

The belief that "boating is important to the local economy" was identified by ten of the managers (four state agency managers and six NGO directors). These managers indicated the importance of boating to local businesses such as stores, restaurants, accommodations, marinas, and campgrounds. One manager indicated this belief by stating:

*"I think that there's a growing number of... retail stores in the area -- the facilities that provide canoes and guide boats and, and camping and boating equipment in general and there's a lot of those. They all depend on the tourism."*

The belief that "gas-powered boats negatively affect water quality" was mentioned by nine managers (four state agency managers and five NGO directors). Leakage of gas and oil from motorboat engines into water bodies was mentioned as the main concern. Several managers distinguished between 2-cycle and 4-cycle engines, indicating that 2-cycle engines were the main source of boat-related pollutants.

*"...but there certainly is a water quality impact from two-cycle motors. They dump a lot of oil and unburned fuel into water bodies."*

The belief that boating spreads aquatic invasive species was mentioned by nine managers, and was almost equally split between state agency managers and NGO directors.

**Table 1.—Number of managers indicating specific beliefs concerning water-based recreation (n = 15)**

Belief	Total Number of Managers Indicating Belief	Number of State Agency Managers Indicating Belief	Number of NGO Directors Indicating Belief
Boating is important to the local economy.	10	4	6
Gas-powered boats negatively affect water quality.	9	4	5
Boating spreads invasive aquatic species.	9	4	5
Gas-powered boats negatively affect the tranquility of the natural setting.	7	3	4
A balance between motorized and non-motorized boat use is needed to prevent conflicts between users.	8	7	1
A balance between recreation and natural resource protection is needed to maintain resource quality.	7	5	2
Responsible (safe) use of water resources by all boaters is needed.	8	2	6
Recreational choice on state lands and water bodies is the right of all SLWF users.	5	1	4
Having access to water resources is a public right.	5	4	1
Existing low levels of boat access prevent crowding of boats on water bodies.	3	3	0
Access is adequate at the current level.	2	2	0

*“...looking at it from the standpoint of invasive species coming in -- the plants ... are transferred from lake to lake through boating and the movement of boats between lakes.”*

Seven of the managers (nearly equally split between state agency and NGO managers) also indicated the belief that “gas-powered boats negatively affect the tranquility of the natural setting.” Noise levels and the desire for maintaining a “quiet lake” were mentioned often.

*“In some of the older two cycle engines ... noise pollution is a huge issue.”*

*“I can live without jetskis personally for the ... quiet lake we have.”*

Achieving balance in the SLWF area was mentioned frequently by state agency managers. For example, eight managers (seven of which were state agency staff) indicated that a balance between motorized and non-motorized boat use is needed to prevent conflicts between users.

*“The more people you have there, the more you have the interface of paddling people, who are taking long distance canoe trips through Upper Saranac for example, encountering jet skis and motorboats going at high rates of speed. That becomes an issue.”*

Seven managers (five state agency managers and two NGO directors) indicated that a balance between recreation and natural resource protection is needed to maintain resource quality.

*“Our responsibility is both the protection of the natural resource and ...the provision of access to recreational opportunities for the public. It’s a double-edged sword where you got two things that intuitively conflict with each other. We need to figure out where the balancing point is...”*

The belief that “responsible (safe) use of water resources by all boaters is needed” was mentioned primarily by the NGO directors (six NGO directors and two state agency managers indicated this belief).

**Table 2.—Number of managers indicating positive, negative, and neutral attitudes towards different types of boats (n = 15)**

Types of boats	Positive	Negative	Neutral
Non-motorized	12	0	0
Electric engines	0	0	0
Gas-powered (general)	8	4	2
2-stroke engines	0	5	0
4-stroke engines	2	0	0
Personal watercraft	0	7	3

*“I don’t own a jet ski. I’m not a real fan of jet skis, but I can understand how people would enjoy them and I have no problem with them when they’re used responsibly.”*

Five managers (four of whom were NGO directors) indicated the belief that “recreational choice on state lands and water bodies is the right of all SLWF users.” The following quote by one manager indicates an internal conflict between beliefs concerning recreational freedom and resource protection.

*“... is anybody wrong? No. Nobody’s wrong. I mean they have the right to do that and people are having a lot of fun water skiing. In the meantime the loon beds are being destroyed and a lot of private shoreline, incidentally, which is used to having no wakes, is being destroyed.”*

Beliefs concerning access for boating varied somewhat among managers. Four state agency managers indicated that “having access to water resources is a public right.” Three state agency managers indicated that “existing low levels of boat access prevent crowding of boats on water bodies” and two that access is adequate at existing levels. Several NGO directors indicated that boating access in general was an issue in the SLWF area, but did not indicate any personal beliefs about this issue.

Data were also analyzed for attitudes concerning different types of boats used in the SLWF area (Table 2). Non-motorized boats were viewed as positive by 12 out of the 15 managers. Eight managers had a positive attitude towards gas-powered motorized boats (excluding personal watercraft) in general; four had a negative attitude

towards this type of boat. Five managers had a negative attitude specifically towards boats having 2-cycle engines. Seven managers had a negative attitude towards personal watercraft; three showed a neutral attitude by indicating that they did not like the noise associated with personal watercraft but would not want to see them banned from the area.

#### 4.0 DISCUSSION

State agency managers and association directors both agreed and disagreed on their perceptions of several issues. Agreement was identified for four issues in particular. First, both types of managers indicated that boating is an important part of the economy of the Saranac Lakes area. Second, managers appeared to agree that gas-powered boats negatively affect water quality. Third, managers indicated that boating spreads invasive aquatic species. Finally, both types of managers indicated that gas-powered boats negatively affect the tranquility of the natural setting. This consensus between state agency managers and NGO directors may be useful in future discussions related to the management of water-based recreation in the Saranac Lakes Wild Forest area.

A slight difference appears to exist, however, between the state agency managers and NGO directors concerning management styles. For example, several state agency managers stated that balance among recreational activities and/or between recreation and resource protection is needed. To achieve this balance, it is likely that both direct and indirect management strategies would be needed. NGO directors indicated that they would rather enable visitors to choose the recreational activities in which they wish to participate, while encouraging

the safe and responsible use of boats. Offering visitors a choice indicates that NGO managers may favor indirect management strategies such as visitor education. However, it is important to note that several NGO directors indicated that the increased enforcement of existing water-based recreation regulations on water bodies within the SLWF (i.e., a direct management strategy) is needed.

In addition to these similarities and differences in beliefs, internal conflicts within individual managers appear to exist. For example, several managers indicated that they believe that individuals have a right to recreate as they choose on state lands. However, these same individuals also expressed concern about environmental impacts related to this recreational use. This conflict in personal perspectives may be difficult for managers to resolve satisfactorily since it seems likely that some management decisions will be needed either to achieve balance between the resource and recreation, or to manage for one above the other.

## 5.0 CONCLUSION

Public forest managers today are challenged with preserving natural resources and providing recreational opportunities for visitors and residents. This study shows that both similarities and differences exist between the two types of managers interviewed. Identifying similarities can provide an important baseline of consensus for discussion between state agency and NGO managers concerning management strategies. Management of the Saranac Lakes Wild Forest for water-based recreation, however, will also require that managers understand differences among themselves.

State agency managers may seek to balance recreation and natural resource protection through diverse management strategies, including access considerations and regulations. NGO directors may seek to encourage the responsible use of natural resources at existing levels of recreational activity through strategies that enable visitor choice. Perhaps through the combination of both direct and indirect management strategies, satisfying the recreational and economic needs of landowners and preserving the pristine natural resources of the SLWF area can be accomplished.

## 6.0 ACKNOWLEDGMENTS

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## 7.0 CITATIONS

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