

The University of Maine

DigitalCommons@UMaine

---

Miscellaneous Reports

Maine Agricultural and Forest Experiment  
Station

---

9-2021

## MR449: Allagash Wilderness Waterway Visitor Survey 2019

John J. Daigle

Ashley Cooper

Follow this and additional works at: [https://digitalcommons.library.umaine.edu/aes\\_miscreports](https://digitalcommons.library.umaine.edu/aes_miscreports)



Part of the [Agriculture Commons](#), and the [Forest Management Commons](#)

---

This Miscellaneous Report is brought to you for free and open access by DigitalCommons@UMaine. It has been accepted for inclusion in Miscellaneous Reports by an authorized administrator of DigitalCommons@UMaine. For more information, please contact [um.library.technical.services@maine.edu](mailto:um.library.technical.services@maine.edu).

*Allagash Falls photo taken by Steve Day*

# **Allagash Wilderness Waterway Visitor Survey 2019**

**John J. Daigle, Professor, Parks, Recreation and Tourism Program,  
School of Forest Resources**

**Ashley Cooper, Graduate Student, Parks, Recreation and Tourism Program,  
School of Forest Resources**



# Allagash Wilderness Waterway Visitor Survey 2019

John J. Daigle

Professor, Parks, Recreation and Tourism Program, School of Forest Resources

Ashley Cooper

Graduate Student, Parks, Recreation and Tourism Program, School of Forest Resources

Contact Information: John J. Daigle, Professor of Forest Recreation Management, School of Forest Resources, University of Maine, 221 Nutting Hall, Orono, ME 04469, [jdaigle@maine.edu](mailto:jdaigle@maine.edu)

Maine Agricultural and Forest Experiment Station Miscellaneous Report 449 • September 2021

College of Natural Sciences, Forestry, and Agriculture

5782 Winslow Hall

University of Maine

Orono, ME 04469-5782



## ACKNOWLEDGMENTS

The authors acknowledge the many people and organizations who contributed to this research project. We thank Albro Cowperthwaite and staff at the North Maine Woods, Inc., for their assistance in contacting Allagash Wilderness Waterway visitors. Rangers Kevin Brown, Trevor O’Leary, and Jay Young were all essential for recruitment of visitors as well as collecting visitor survey cards from the checkpoint stations. They also entered data from the visitor survey cards that was shared with the University of Maine to send invitations to visitors to participate in the online visitor survey. We offer special thanks to now-retired Superintendent Matt LaRoche of the Allagash Wilderness Waterway for his substantial assistance in all phases of this research project from design of survey and questions, providing feedback to drafts of the online survey, and review of this final report. The peer reviewers provided helpful comments and suggestions to this report and we thank Sandra De Urioste-Stone, Robert Dvorak, Jessica Leahy, Ashley Martone, Carly Sponarski, and Rex Turner. This study was funded in part by a grant from the Allagash Wilderness Waterway Foundation and the Maine Agricultural and Forest Experiment Station. It was also supported by the USDA National Institute of Food and Agriculture, McIntire-Stennis projects 1003180 Protecting cultural resources with rapid environmental change: A community based participatory approach and utilization of biophysical decision tools and 1019853 Socio-ecological Model (SEM) as a Conceptual Framework for Improving Forest Planning and Management.

Front cover: The 30-foot drop of Allagash Falls is one of the most spectacular sights and sounds within the Allagash Wilderness Waterway. This photo was taken by Steve Day.



United States  
Department of  
Agriculture

National Institute  
of Food and  
Agriculture

The University of Maine is an EEO/AA employer and does not discriminate on the grounds of race, color, religion, sex, sexual orientation, transgender status, gender expression, national origin, citizenship status, age, disability, genetic information or veteran’s status in employment, education, and all other programs and activities. The following person has been designated to handle inquiries regarding non-discrimination policies: Director of Equal Opportunity, 101 North Stevens Hall, University of Maine, Orono, ME 04469-5754, 207.581.1226, TTY 711 (Maine Relay System).

## Contents

EXECUTIVE SUMMARY .....	1
INTRODUCTION .....	5
SURVEY METHODS .....	7
Season of Use .....	7
Sources of Samples .....	7
Onsite Interview .....	7
Online Questionnaire Procedures .....	8
Recruitment and Participation .....	9
RESULTS .....	9
Visitor Use Characteristics .....	9
Visitor Experiences .....	19
Visitor Preferences for Resource and Social Conditions on the Allagash Wilderness Waterway .....	32
Travel Modes to the Allagash Wilderness Waterway and Experiences .....	37
Visitor Trip Expenses for the Allagash Wilderness Waterway .....	38
MANAGEMENT IMPLICATIONS .....	40
RESEARCH IMPLICATIONS .....	42
VISITOR COMMENTS .....	43
REFERENCES .....	47
APPENDIX A: SURVEY INSTRUMENT .....	49
APPENDIX B: CONTACT CARD .....	67
APPENDIX C: RAFFLE PICTURE IMAGE .....	68

## Tables

1. Visitors who completed on-site cards by sample location .....	9
2. Number and percentage total of visitors .....	11
3. Visitor Activities.....	12
4. Types of wildlife seen by visitors .....	12
5. Sources of information used for trip planning and access point selection. Visitors used multiple sources.....	15
6. Reasons for choosing an access point .....	15
7. Reasons for not choosing other access points .....	15
8. Visitor use of campsites at the AWW .....	17
9. Key experiences that contributed to a positive evaluation.....	19
10. Key experiences that contributed to a negative evaluation.....	20
11. The list of attributes shown to visitors for the importance and satisfaction questions.....	21
12. Conditions that caused the rejection of a campsite.....	30
13. Location conditions that caused the rejection of a campsite.....	30
14. Modes of transportation used by respondents.....	37
15. Type of automobiles used by visitors to the Allagash Wilderness Waterway.....	37

## Figures

1. The proportion of visitors by time of year that agreed to participate in the study and returned their questionnaires .....	10
2. Visitor group sizes.....	10
3. Did you have children under the age of 16 in your visitor party?.....	10
4. The number of children in each visitor party.....	10
5. Visitor party types.....	10
6. Proportion of visitor parties by place of residence within the U.S. and International locations.....	10
7. Did you stay overnight on the Allagash Wilderness Waterway?.....	11
8. Number of nights spent at the Allagash Wilderness Waterway.....	11
9. Mode of aquatic transportation at the AWW.....	13
10. Did you hire an outfitter to provide transportation or vehicle shuttle?.....	13

11. Did you hire an outfitter to provide equipment?.....	13
12. Did you hire a guide to lead you down the watercourse?.....	13
13. Was this your first visit to a remote or undeveloped river area?.....	13
14. Have you ever visited the Allagash Wilderness Waterway before?.....	13
15. Reason for choosing access point on the Allagash Wilderness Waterway.....	13
16. Access Points to the Allagash Wilderness Waterway and the number of people that selected each point.....	16
17. Exit Points out of the Allagash Wilderness Waterway and the number of people that selected each point.....	19
18. Visitor trip experience ratings.....	19
19a. Level of importance of the natural environment.....	21
19b. Level of satisfaction with the natural environment.....	22
20a. Level of importance of physical activity.....	22
20b. Level of satisfaction with physical activity.....	22
21a. Level of importance with personal and social experiences.....	22
21b. Level of satisfaction with personal and social experiences.....	22
22a. Level of importance of exploration and remoteness.....	22
22b. Level of satisfaction of exploration and remoteness.....	22
23a. Level of importance of solitude.....	22
23b. Level of satisfaction of solitude.....	23
24a. Level of importance of connection with nature.....	23
24b. Level of satisfaction of connection with nature.....	23
25a. Level of importance of connection with special places/traditions.....	23
25b. Level of satisfaction of connection with special places/traditions.....	23
26a. Level of importance of wilderness or backcountry skills.....	23
26b. Level of satisfaction of wilderness or backcountry skills.....	23
27a. Level of importance of no litter or waste.....	23
27b. Level of satisfaction of no litter or waste.....	24
28a. Level of importance of management conditions.....	24
28b. Level of satisfaction of management conditions.....	24

29a. Level of importance of information on watercourse .....	24
29b. Level of satisfaction of information on watercourse .....	24
30a. Level of importance of numbers of users .....	24
30b. Level of satisfaction of numbers of users .....	24
31a. Level of importance of hunting, fishing, and gathering .....	24
31b. Level of satisfaction of hunting, fishing, and gathering .....	25
32. Importance-Performance Analysis framework derived from Azzopardi & Nash, 2013 .....	26
33. Importance-Performance Analysis Grid for the Allagash Wilderness Waterway. Letters line up with attributes listed in Table 11 .....	27
34a. Level of importance of hunting, fishing, and gathering related to recreational opportunities and conditions on the Allagash Wilderness Waterway. N stands for all the visitors who selected fishing as an activity in Table 3 .....	27
34b. Level of importance of hunting, fishing, and gathering related to recreational opportunities and conditions on the Allagash Wilderness Waterway. N stands for all the visitors who selected fishing as an activity in Table 3 .....	27
35. Number of other parties on average that camped within sight or sound of my campsite .....	28
36. Ability to find a campsite that was acceptable in terms of other parties being camped within sight or sound .....	28
37. Feeling about the number of other people you saw at the campsites on the Allagash Wilderness Waterway .....	28
38. Availability of a campsite where you planned to stop each night .....	29
39. Did you take the first available campsite you found where you intended to stop? .....	29
40. Did you reject an available campsite because of its condition? .....	29
41. Did you reject an available campsite because of its location? .....	29
42. Number of other parties seen per day while traveling the watercourse .....	31
43. Number of large parties (12+) seen while traveling on the watercourse .....	31
44. Feeling about the number of people seen while paddling or boating .....	31
45. Importance of the Allagash Wilderness Waterway experience .....	31
46. The number of respondents based on the number of visitors they saw per day while traveling on the watercourse and how they felt about seeing visitors .....	32
47. Amount of vegetation ground cover at campsite .....	33



48. Dry ground at campsite.....	33
49. Rustic improvements at campsite.....	33
50. Amount of litter present at campsite.....	33
51. Letter/numbers carved on picnic table/ridge pole at campsite.....	34
52. Ridgepoles attached to picnic tables at campsite.....	34
53. Number of trees with exposed root at campsite.....	34
54. Number of trees with nails, hooks, ax marks, etc., at campsite.....	34
55. Amount of vegetation screening between campsites.....	34
56. Out of sight or sound of other campers.....	34
57. Good fishing nearby campsite.....	35
58. Good place to tie up boat or land canoe.....	35
59. Level ground for tent.....	35
60. Shade at campsite.....	35
61. Number of trails/paths to other than to privy and water access at campsite.....	35
62. Good swimming nearby the campsite.....	35
63. Ability to locate an available campsite when ready to stop.....	36
64. Erosion at campsite.....	36
65. Easy access to boat or canoe at campsite.....	36
66. Amount of vegetation for screening between water and campsite.....	36
67. Cross-breeze at campsite.....	36
68. Visitor preparedness with traveling on gravel roads.....	38
69. Respondent comfort levels for driving to the Allagash Wilderness Waterway.....	38
70. Visitors that had vehicle problems.....	38
71. Reported expenses per visitor group for camping, and access fee with range, line in colored box is the median and X in colored box is the mean.....	39
72. Reported expenses per visitor group for food and restaurants/bar, gas and groceries with range, line in colored box is the median and X in colored box is the mean.....	39
73. Reported expenses per visitor group for rental equipment with range, line in colored box is the median and X in the colored box is the mean.....	39

74. Reported expenses per visitor group for outfitter transportation with range, line in colored box is the median and X in the colored box is the mean.....	40
75. Reported expenses per visitor group for recreational gear, clothing, and permits with range, line in the colored box is the median and X in the colored box the mean.....	40
76. Word cloud of elements associated with reasons for a quality visitor experience.....	44
77. Word cloud associated with positive visitor experiences with controllable and uncontrollable aspects of management.....	44
78. Word cloud associated with negative visitor experiences with controllable and uncontrollable aspects of management.....	45
79. Word cloud associated with campsite conditions.....	45
80. Word cloud associated with visitor interactions with rangers on the watercourse.....	46

## EXECUTIVE SUMMARY

The goal of this report is to present findings of visitor use and experiences on the Allagash to better understand the social and resource conditions important to the visitor experience. This research was designed to re-assess the visitor experiences identified as being important in the previous 2003 visitor survey but was also built to collect new information such as trip expenses as well as transportation information from visitors.

During the late spring, summer, and fall seasons of 2019, visitors to the Allagash Wilderness Waterway (AWW) were asked to participate in a visitor survey. The visitor survey was designed to elicit information from respondents on a variety of variables to determine characteristics of the visit. Characteristics detailed in the survey included activities, method of travel on the waterway, length of stay, camping conditions encountered, as well as visitor preferences, including satisfaction with resources and social conditions encountered at campsites and while traveling on the watercourse, travel experiences to the watercourse, and trip expenses associated with visiting the AWW. Information was collected from visitors using two survey instruments, a short visitor survey card and a more extensive online questionnaire. A total of 304 visitors were given access to the online instrument. One hundred and ninety-four visitor questionnaires were received for a 71% response rate.

### Visitor Use Characteristics

- The largest proportion of visitors was from Maine (49%), followed by Massachusetts (12%), Connecticut (7%), New Hampshire (5%), New York (4%) and Vermont (4%). International visitors came from countries including Canada, Switzerland, and England.
- Most visitors stayed one or more nights (96%). Forty-six percent stayed three to four nights. Twenty-nine percent indicated that they spent five to six nights. Approximately thirteen percent of visitors stayed a week or more.
- The most common wildlife seen was bald eagles (94%). Eighty-four percent of visitors reported seeing a moose and a loon. Visitors also saw blue heron (44%), osprey (37%), and deer (33%).
- Most visitors used a canoe without a motor (82%) followed by a canoe with a motor (11%). Approximately 11% of visitors used a kayak and four percent used a boat with a motor.
- Sixty-six percent of visitors used an outfitter for transportation and/or parking services and 70% for equipment rentals. Two percent of visitors participated in a guided trip on the Watercourse.
- Most visitors (84%) had previously visited a remote or undeveloped river area before this trip to the AWW. Approximately 22% of visitors reported this was their first trip to the AWW.
- Visitors were asked a number of questions in order to better understand travel patterns and use of campsites.
- More than one reason was given for most respondents in choosing a particular access point. The most frequently given answer was familiarity with the access point (40%). A number of respondents (27%) indicated “other” and the reasons given in this category ranged from trip length (shorter or longer), preference for river or lake paddling, recommendations from outfitters, guides, and previous travel, and desire to fish or water level, among many others.

- Among the top reason for not choosing other access points were time constraints (37%) and lack of interest in another access point (26%). Possibly related to time constraints was another stated reason, “too far to destination from access point” (16%).
- Over half of the respondents identified the entry point of their trip as either Churchill Dam (41%) or Chamberlain Thoroughfare (18%). Approximately fifteen percent of visitors indicated Indian Stream as their access point.
- All campsites recorded some level of use except for Telos Landing, F. W. Ayer, H. W. Marsh, Island, and Cove. Certain campsites received much more use than others, for example, five campsites had a total of 170 overnight stays.
- Most visitors (61%) identified the exit point of their trip as Allagash Village. Approximately 21% of visitors indicated Churchill Dam (15%) and Michaud Farm (6%).

### **Visitor Experiences**

- Most visitors (86%) reported their experience as “very good” among response options of very good, good, fair, poor, or very poor. Thirteen percent of the visitors rated their trip good. Only 1% of visitors rated their trip as fair. None of the visitors said that their trip was poor or very poor. The most frequently mentioned experiences associated with a positive evaluation was clean sites, solitude and remoteness, scenic and natural beauty, peace and quiet, and good weather. The most frequently mentioned experience associated with a negative evaluation was bad fishing, the bugs are bad, lack of information/poor guidance, bad weather, and lack of wildlife.
- Those experiences or conditions receiving the highest proportion of “very important” ratings amongst visitors include the natural environment (90%), exploration and remoteness (82%), no litter or waste (77%), personal and social experiences (66%), and solitude (64%).
- The data collected suggests that the Allagash Wilderness Waterway serves visitors who have diverse interests and abilities. The highest proportion of “slightly important” or “not at all important” ratings by visitors were hunting, fishing and gathering (52%), and number of users (33%). However, other visitors rated these same experiences as “very important”: for example, hunting, fishing and gathering (21%) and number of users (26%).
- Forty-four percent of visitors reported that they rejected the first available campsite. Twenty-one percent of visitors rejected a campsite due to condition, with site considered too wet (38%) and site judged too buggy (33%) as the most reported answers by visitors. Twenty-six percent of visitors rejected a campsite due to location. Too close to another campsite (35%), poor view of water (35%) and no breeze to diminish insects (31%) were the most reported answers by visitors.
- Most visitors (79%) indicated that recreational experiences like the Allagash Wilderness Waterway are “extremely important” (79%) or “very important” (18%) to them.

### **Visitor Preferences for Resource and Social Conditions**

- Those campsite attributes or conditions receiving the highest proportion of “very important” or “important” ratings by visitors included amount of litter (96%), dry ground (92%), level ground for a tent (89%), out of sight or sound of other campers (88%), and locating an available campsite when ready to stop (84%) were also important attributes.

- There is variability in the importance of other campsite attributes and conditions. Some of the variability appears to be related to the types of activities pursued nearby the campsite. For example, good fishing nearby campsite was rated by 39% of visitors as being “very important” or “important” as compared to 33% of visitors who rated it “not at all important.” Also, good swimming nearby campsite was rated by 48% of visitors as being “very important” or “important” and 52% of visitors rated this item as being “slightly important” or “not at all important.”
- Naturalness conditions at a campsite varied in importance to visitors. For example, some visitors rated “not at all important” the number of trees with exposed roots at campsite (45%), number of trails/paths other than to privy and water access (32%), and number of trees with nails, hooks, ax marks, etc. (28%). In contrast other visitors rated these same items as being “very important” or “important” such as number of trees with exposed roots at campsite (18%), number of trails/paths other than to privy and water access (30%), and number of trees with nails, hooks, ax marks, etc. (45%). Thirty-eight percent of visitors rated “very important” or important” for rustic improvements at campsite as compared to 29% that rated this item “slightly important” or “not at all important.”
- Most visitors (71%) indicated that the number of other people they saw at campsites was “about right.” However, there were approximately 11% of visitors who felt that they “saw too many” and 4% reported “saw way too many.” In contrast, there were a few visitors who felt the opposite reporting that they felt the number of other people as “saw too few” (3%) or “saw way too few” (3%).
- Most visitors (70%) indicated that the number of other people they saw while traveling on the watercourse was “about right.” However, there were approximately 13% of visitors who felt that they “saw too many” and 2% reported “saw way too many.” In contrast, there were a few visitors who felt the opposite reporting that they felt the number of other people as “saw too few” (2%) or “saw way too few” (2%).

#### **Travel modes to the Allagash Wilderness Waterway and experiences**

- Seventy-four percent of visitors reported driving their personal vehicle. Thirty-six percent of visitors indicated using an outfitter shuttle. Other travel modes reported included airplane, rental car, and by canoe entering the waterway from a nearby waterbody.
- Out of the personal and rental vehicles, 54% of visitors drove a 4WD/AWD truck. SUVs (17%) and minivan/vans (13%) are the second and third most reported answer, while 4WD/AWD sedan (6%), 2WD sedan (3%), and 2WD (1%) account for the rest of the vehicle usage.
- Ninety-seven percent of visitors felt like their vehicle was appropriate and handled the roads for the trip. Visitors have varying comfort levels driving in the North Maine Woods; very comfortable (52%), comfortable (42%) and not comfortable (6%).
- Twenty visitors (13%) faced vehicle problems on their trip that included flat tires (46%), muffler issues (8%), brakes (4%), emission issues (4%), problems with the shocks (4%), and 38% other.



**Visitor Trip Expenses for the Allagash Wilderness Waterway**

- Seventy-eight percent of visitors spent between \$15-\$300 for camping and access fees per group depending on number of days of the trip and party size. Of those reporting camping and access fee expenses the median cost was \$150.00 per group and the average cost was \$235.00 per group.
- More than half of the visitors reported expenses such as food at restaurant/bar with a median cost of \$96.00 per group and average cost of \$136.00 per group on this trip. Visitors reported an estimated median cost of gas of \$100.00 per group and the average cost of gas was \$135.00 per group. Also, in terms of groceries purchased for the trip the median was cost was \$140.00 per group and the average cost was \$205.00 per group.

**Conclusions**

This research is intended to help the Bureau of Parks and Lands and others interested in the management of the Allagash Wilderness Waterway. Quality in outdoor recreation can be defined as the degree to which recreation opportunities provide the experiences for which they are designed and managed. Key to protecting the backcountry experiences is an understanding of the different types of visitors to the Allagash Wilderness Waterway, each one with different needs and expectations, and the different levels of importance they place on recreation opportunities and conditions. In this report, visitor management implications and suggested further research focus on the diversity of use of the Allagash Wilderness Waterway in order to maximize the quality of the visitor experiences while protecting the unique natural setting.

## INTRODUCTION

The Allagash Wilderness Waterway (AWW) is a state-administered waterway federally designated as a wild river in the National Wild and Scenic Rivers System. This 92-mile long ribbon of lakes, ponds and river is surrounded by a vast, privately-owned commercial forest in northern Maine. While designated as wild, the AWW still contains three of the dams used during the time of log drives in the area. Along with these dams, the AWW also protects artifacts of steam trains and a tramway as well as an early period mechanized log hauler. There is a rich Native American history from which originates the name Allagash. The Waterway was established in 1966 and became the first state-administered component of the National Wild and Scenic Rivers System in 1970.

The management of the waterway is conducted by the Bureau of Parks and Lands within the Department of Agriculture, Conservation and Forestry. In 2012, a management plan was approved for the AWW that updated policy and management guidance. As stated in the plan, the AWW strategic plan mission statement is to “Preserve, protect and develop the maximum wilderness character of the AWW by ensuring its ecological integrity and optimum public use through careful management as a wilderness area in the historic and modern context of a working forest.” The plan identifies five strategic plan guiding principles to guide the Bureau, landowners, and other natural resource management agency activities. Also, the plan helps to define the “wilderness character” concept that includes a mix of physical, social, managerial, and symbolic aspects to guide management decisions and showcase the vision of the wilderness character in the above mission statement (MDACF, 2012).

Quality of the visitor experience in outdoor recreation can be defined as the degree to which recreation opportunities provide the experiences for which they are designed and managed (Daigle 2020). Therefore, key to protecting the recreation experiences of the AWW is an understanding of the different aspects of the visitor experience and recognizing which of these are important to visitors. These indicators of visitor experience are measurable variables that help define the quality of the recreation experiences and standards that define minimum acceptable conditions (Manning, 1999). Good indicators are practical to measure

quantitatively, sensitive to the type and amount of use, and potential responsive management control (Lucas and Stankey, 1985; Watson et al., 1992). Indicators are used in managerial planning frameworks such as the Visitor Use Management Framework along with thresholds to guide the implementation of management strategies and monitoring efforts (Cahill et al., 2018).

When visiting a wilderness area, visitors have different expectations than if they were to visit more developed and high-use sites. Several studies examining indicators of quality visitor experiences have revealed some variables to be more important than others (Manning, 2013). Visitor use impacts such as litter appear to be more important than the management control of using signs and presence of rangers. Previous studies have documented visitors place a higher importance on social indicators, such as visitor behaviors or types of groups they interact with, than ecological impacts.

Outdoor recreation studies in Maine on the St. Croix International Waterway, AWW Visitor Survey in 2003, Maine Coastal Islands Trail, and wilderness use on private forest lands provide some useful illustrations as to the indicators of quality that may be important for visitors (Daigle et al., 2003; Hannon 2004; Daigle 2005; Ednie et al., 2010). The indicators of quality from these studies are described in terms of environmental, social, and management conditions given that multiple facets influence the quality of the visitor experience.

Environmental indicators influencing the quality of experience (being rated high or very high) for visitors on the Maine Coastal Islands Trail included “amount of litter around a campsite” (90%) and “amount of litter/trash along the shore” (91%). Similarly, St. Croix International Waterway visitors tended to rate higher (very much or extremely important) site conditions such as “the amount of litter I see around the campsite” (86%); “the number of wild animals I see” (76%); as compared to “visibility of camps and homes along the shore” (24%) and “visibility of lights originating outside the waterway” (35%). AWW visitors similarly rated (very important) the natural environment such as “enjoy the view from the lake or river” (83%) and “amount of litter along the watercourse and at campsites” (79%). Also, campsite attributes were rated highly (important or very important): level ground for tent at campsite (94%); and dry ground at campsite (91%). Hannon (2004) found considerable diversity

in the importance placed on environmental indicators such as size of the area where the program takes place, forest condition, and campsite condition based upon orientation of the adventure-prone versus adventure-averse wilderness experience programs.

Social indicators influencing recreation experience quality for many visitors on the St. Croix International Waterway tended to be rated slightly higher (very much or extremely important) for conditions at the campsite and encounters with large groups and “the number of other groups that camp within sight or sound of my campsite” and “the number of large recreation groups I see (more than 6 boats) that I see along the waterway” both (35%) as compared to “the total number of boats I see along the waterway” (33%) and “the percent of time other people are in sight while I am boating along the waterway” (26%). Rated higher were activities associated with human noises “the amount of noise associated with human activity along the waterway” and “the amount of manmade noise originating away from the waterway,” both (55%). AWW visitors similarly rated (very important) the “exploration and remoteness such as an area free of man-made or very limited man-made noises; remote from cities and people; and adventure and travel” (73%). Also, social attributes were rated highly (important or very important) for “campsite conditions being out of sight or sound of other campers” (84%). Similarly, Hannon (2004) found considerable agreement on preferred social conditions among wilderness experience programs in Maine. In most cases, an ideal place for realizing the best outcomes is a place that offers a freedom from distractions from an internal focus on self, group, nature and the interrelationship between the three.

Managerial indicators of recreation experience quality for St. Croix International Waterway visitors rated higher (very much or extremely important) aspects related to “the water level for boat conditions” (74%) and “the availability of a toilet, picnic table, and fire pit at a campsite” (51%) as compared to “the opportunity to visit cultural and historic sites along the waterway” (25%) and “the opportunity to see interpretation signs along the waterway” (17%). The AWW rated similarly high (very important or important) amenities found at campsites such as ridge poles attached to picnic tables at campsite (80%). Hannon (2004) has identified managerial concerns related to the wilderness experience programs and

they focus more on the type and styles of different management practices rather than on the presence of management itself.

As illustrated above, there are multiple factors contributing to quality visitor experiences. For example, the studies indicate that even those seeking a primitive recreational opportunity value campsite improvements or total isolation on waterways. These different indicators of experience quality can be used to describe a diverse group of visitors who have different interests and abilities. For example, in the AWW the highest proportion of “slightly important” or “not at all important” ratings by visitors were hunting, fishing, and gathering (experiences associated with doing these activities in a remote area) 40% and number of users (you saw while traveling; in groups that camped next to you; large groups of users) (36%). However, other visitors rated these same experiences “very important” for example, hunting, fishing, and gathering (31%) and number of users (24%). Also, 35% of visitors indicated that physical activity was “slightly important” or “not at all important” but 23% indicated that physical activity was “very important.” This research conducted in 2003 suggests that there are different types of visitors to the Allagash and they place different levels of importance on recreational opportunities and conditions. Similarly, the St. Croix study identified five distinct types of users, each of whom sought a different type of experience (ranging from the very primitive to motorized water use). Visitors to both areas sought a variety of recreational opportunities and had different frameworks through which they measured the quality of their experience.

Visitor surveys help provide an assessment to confirm the success of recreation management and identify areas that may need attention to improve the quality of the experience. Monitoring with re-assessments are critical to help predict, evaluate, and monitor the long-term impacts of management prescriptions so that adjustments can be made if progress is not being achieved towards those objectives (Daigle 2020). The goal of this report is to present findings of visitor use and experiences on the Allagash to better understand the social and resource conditions important to the visitor experience. This research was designed to re-assess the visitor experiences identified as being important in the previous 2003 visitor survey but was also built to collect new information such as

trip expenses as well as transportation information from visitors.

The research report here is intended to help the Bureau of Parks and Lands and others interested in the management of the AWW:

1. understand who visits the watercourse, including activities, method of travel, length of stay, types of groups, previous experience, and place of residence;
2. understand visitor experiences and levels of importance as well as levels of satisfaction;
3. determine importance of campsite attributes, including preferences for resource and social conditions encountered at campsites and while traveling on the watercourse;
4. identify trip expenses associated with visiting as well as travel experience to the watercourse.

## SURVEY METHODS

Information was collected from visitors using two survey instruments: a short visitor survey card and a more extensive self-administered online questionnaire. Visitors were greeted in person upon obtaining a use permit at one of three checkpoints near the AWW. Rangers also mentioned the study upon meeting visitors and if they learned the survey was not mentioned at the checkpoint inquired about interest in participating. If the response was yes, visitors completed the short visitor survey card.

### Season of Use

The AWW exhibits a use season typical of remote backcountry areas in Maine. There is use of the watercourse in the winter for snowmobiling and ice fishing activities. Fishing using motorboats and canoes attracts spring visitors. Summer use is the most popular period, particularly in the late summer months after fly season. Canoeing and camping use continue well into the autumn. Temperatures are still relatively warm then, and leaves are changing colors. Hunting season for deer, moose, and bear extends use until late November. Our visitor contacts were from June to October.

### Sources of Samples

While sampling consistency is desirable, some variations occurred. Most contacts were made at the Telos, Six Mile, and the Allagash checkpoints by employees for North Maine Woods (NMW), a non-profit

company that manages public use of private lands in northern Maine. Most access to the AWW is gained over roads traversing these private lands. Over the course of the spring, summer, and fall sample period, there were staff changes at checkpoints for NMW. During these personnel changes, protocols for contacting visitors about the study needed to be re-initiated and meanwhile visitors were missed and not asked to participate in the study. Also, a limited number of visitors enter the watercourse through other water-entry points and would not have gone through the three primary NMW checkpoints. Rangers initiating contact with visitors about the study enabled those missed at checkpoints to be sampled for this study. Rangers, however, do not connect with all visitors, and for the reasons listed above, some visitors were missed during the study period.

### Onsite Interview

Visitors were introduced to the study and handed an AWW Visitor Study card (Appendix B). If users agreed to participate, the back side of the card was completed by one person from the party, taking approximately two to four minutes, requesting intended access and exit point, length of visit, type of group, size of group, whether they had previously visited the AWW or not, and email addresses. The intent was to keep on-site visitor burden at a minimum, concentrating on obtaining enough information to allow some conclusions about users and to allow testing for differences between response and non-response groups on a self-administered online questionnaire.

When individuals were contacted at the NMW checkpoints or by rangers, they were asked to participate in the study if they were staying 4 or more hours. They were told that participation was completely voluntary and that all responses made would be confidential. A copy of the statement below was handed to them at the point of contact:

Your participation in this survey is voluntary. The answers you provide will be confidential. The email address you provide to receive the survey is for sending the questionnaire only. Your name and email address will not be given to any other group or used by us beyond the purposes of this study.



The AWW Visitor Survey cards were collected by three rangers who could visit and give additional needed cards to the different NMW checkpoint stations. These rangers also entered the first name, last name, trip dates, and email address from the cards into an Excel database and emailed the Excel file to the University of Maine. The University of Maine would contact the rangers if any corrections were needed for emails that came back undeliverable for the online survey invitations. At the end of the survey period, all cards were delivered to the University of Maine and the rest of the information provided by visitors on the card was entered into an Excel database.

### Online Questionnaire Procedures

An online survey platform of Qualtrics was used to conduct the self-administered questionnaire to the sample of AWW users (Qualtrics, 2019). The total design method as well as the latest version of “Internet, phone, mail and mixed-mode surveys the tailored design method” was used as a guide for email content and contact timing (Dillman, 2014). Below is a description of the email survey components including (1) the questionnaire, (2) introductory statement explaining the purpose of the study with an incentive to win an AWW portrait scene, and (3) organization of sending the email survey.

The questionnaire was designed to elicit information from respondents on a variety of variables to determine characteristics of the visit, including activities, method of travel on the waterway, length of stay, camping conditions encountered, determine visitor preferences, including satisfactions with resource and social conditions encountered at campsites and while traveling on the watercourse (Appendix A). Many of the questions were identical to a previous visitor survey conducted in 2003 in order to assess trends in use and user characteristics as well as visitor preferences and satisfactions (Daigle, 2005). Technical review was given by the supervisor Matt LaRoche of the AWW. Importantly, new information was requested and added to this visitor survey to assess economic impacts and travel experiences related to their trip as well as assessing traveler experiences coming to and from the Allagash.

An invitation and code to access the online questionnaire was sent by the Parks, Recreation and Tourism program with University of Maine. The

invitation contained the following: (1) identification of the organization conducting the study, (2) an explanation of the purpose of the study including access code and web link to survey, (3) the importance of why the respondent needed to answer the questionnaire, (4) an explanation to the respondent that the information provided would be held in the strictest confidence, and (5) participation was voluntary and that they could choose not to answer any questions. Finally, an incentive was introduced to encourage a high response rate. Any visitor that made it to the end of the questionnaire had the option to be entered into a raffle to be selected for a 20” x 24” limited addition AWW print (Appendix C).

A system was created to monitor completed online surveys and to facilitate additional reminders to complete the self-administered online questionnaire. A master data table contained the following: (1) unique respondent ID number, (2) name and email address, (3) invite, (4) reminder #1, (5) reminder #2, (6) reminder #3 and (7) notes and the non-deliverable email addresses. A unique ID number was permanently assigned to the respondent for the duration of the email survey. Each email was addressed with the visitor’s first and last name, their own personal code, and an image of the researcher’s signatures. The emails were set up the night before using Gmail’s scheduling system and distributed at 8am the following morning. According to Dillman, this is the most effective time because a person will see the survey either during breakfast time or lunch time and will end up completing the survey depending on their time allowance during the day. Any surveys sent after lunch tend to get ignored and lost in the day’s online communication and busy inboxes (Dillman, 2014). A date was recorded when the survey was completed and taken off the list to send email reminders. Notes were recorded on data sheets describing outcomes such as non-deliverables of the email addresses.

The methodological literature on follow-up reminders suggests that it is an effective method for increasing return rates in email surveys (Babbie 2016). The timing sending surveys and follow-up reminders are important and the Total Design Method was used as a guide for sending communications and sequencing follow-up reminders (Dillman 2014). The online survey was kept open until December 31, 2019 to allow all visitors plenty of time to take the survey.



A codebook was produced for each data collection instrument. The codebook defined variables in terms of type and description of variable. The data was electronically entered or downloaded from Qualtrics into an Excel spreadsheet. The Excel variables were examined for acceptable ranges and all errors or questions were flagged and researched to correct answers entered into a database suitable for analysis. The resulting data was analyzed using the Statistical Package for the Social Sciences (SPSS) (2020).

### Recruitment and Participation

More than 300 visitor groups to the AWW were contacted in the field and asked to participate in the study. A total of 304 survey contact cards were fully completed and given to the checkpoint station person or ranger (Table 1). As long as a card contained an email address, the visitor party was contacted to participate. Of the 304, twenty-four were non-deliverable and six were missed due to communication errors. A total of 194 respondents completed the online self-administered questionnaire, contributing to an overall response rate of 71%. Figure 1 shows the division of visitor parties by the month of their visit for people who completed the online survey.

Visitors who returned their questionnaires were compared to those who did not return their email questionnaires on several onsite interview questions to check for non-response bias. No significant differences were found between visitors who responded and those who did not. Respondents did not differ from nonrespondents on whether they were day users or overnight users ( $\chi^2 = .285$ , 1 dF,  $P = .594$ ), size of group ( $\chi^2 = 18.437$ , 15 dF,  $P = .240$ ), whether or not it was their first time visiting the AWW ( $\chi^2 = .733$ , 1 dF,  $P = .392$ ), or length of stay (ANOVA,  $F = 1.269$ ,  $P = .261$ ).

**Table 1.** Visitors who completed on-site cards by sample location.

Sample Location	Completed Survey Cards	Distribution
Telos Checkpoint	80	26%
Churchill Dam	60	20%
Allagash Checkpoint	69	23%
Six Mile Checkpoint	34	11%
Bissonette Bridge	9	3%
Other	22	7%
Checkpoint not listed	30	10%
Grand Total	304	100%

## RESULTS

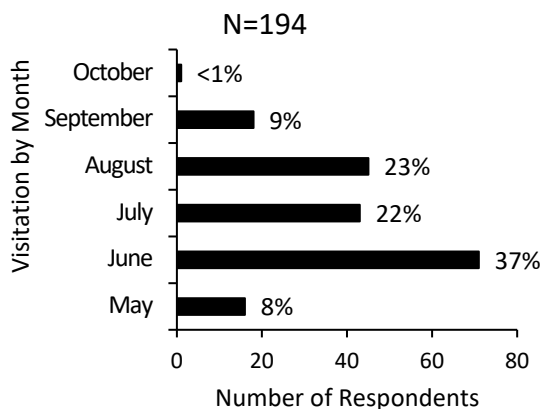
The information from the contact cards and the online questionnaire was merged into one data file and analysis and tables created using Microsoft Excel and SPSS. Frequency distributions and cross-tabulations were calculated for coded data, and responses to open-ended questions were thematically coded and summarized. This report is organized into five broad categories involving (1) visitor use characteristics, (2) visitor experiences, (3) visitor preferences for resource and social conditions, (4) travel modes and experiences; and (5) visitor trip expenses.

### Visitor Use Characteristics

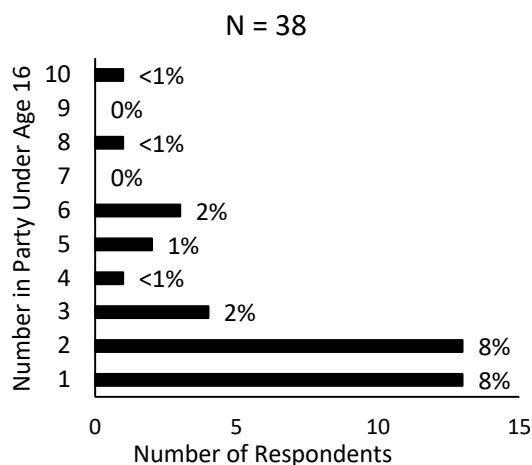
Figure 2 displays the visitor group sizes, which ranged from 1 person to 19 people. The survey participant with a group of 19 was accompanied by a scout organization. The mean, median, and mode are 4.6, 4, and 2, respectively. Single person parties made up 4% of the 194 visitor groups surveyed. Two-person parties made up 39%, three to four-person parties made up 25%, five to seven-person parties made up 13%, and eight or more person parties made up 19% of the total visitor groups surveyed. Twenty-two percent of the groups had at least one child under the age of 16 (Figure 3).

Approximately 40% of the visitors were traveling with family, 15% with friends and family, 32% with friends and acquaintances, 8% with an organization such as scouts or an outfitter group, and other group types made up 5% (Figure 5). Groups listing themselves as “other” included church youth group, summer camp, guided trips, and boyfriend and girlfriend pairings.

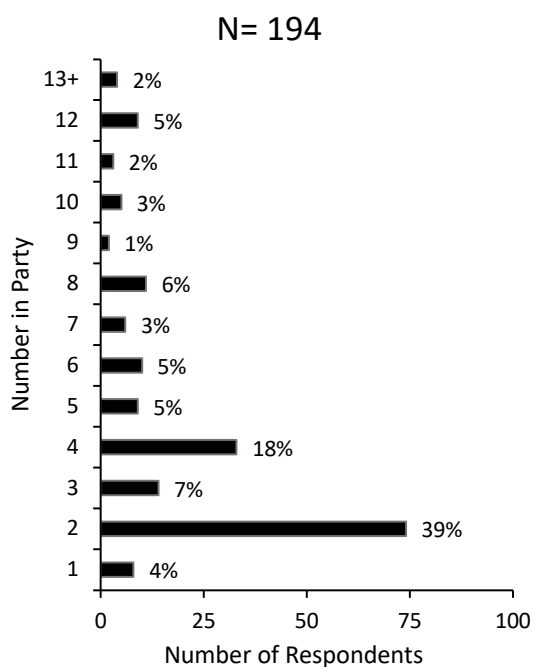
Altogether the largest proportion of visitors was from Maine at 49% followed by the other New England states: Massachusetts (12%), Connecticut (7%), New Hampshire (5%), and Vermont (4%) (Figure 6). Another 4% of visitors were from New York. Smaller proportion of visitors came from other states such as Pennsylvania, New Jersey, and North Carolina (Table 2). International visitors comprised 2% of the total number of respondents and they came from Canada, England, and Switzerland.



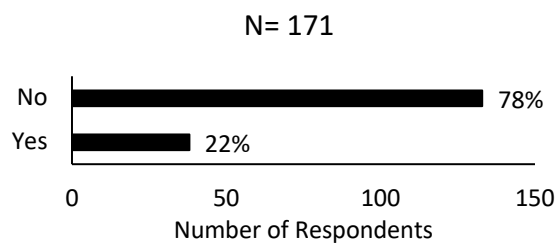
**Figure 1.** The proportion of visitors by time of year that agreed to participate in the study and returned their questionnaires.



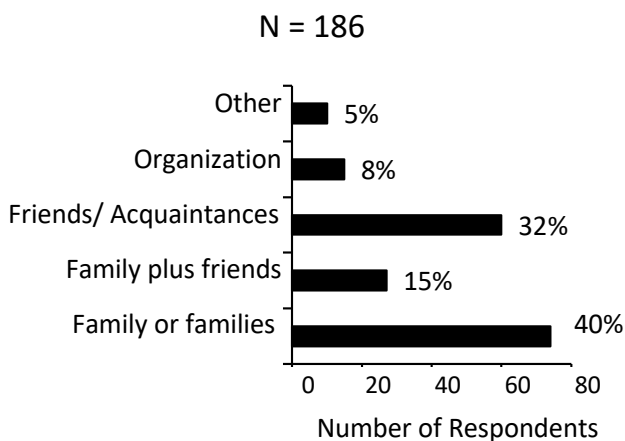
**Figure 4.** The number of children in each visitor party.



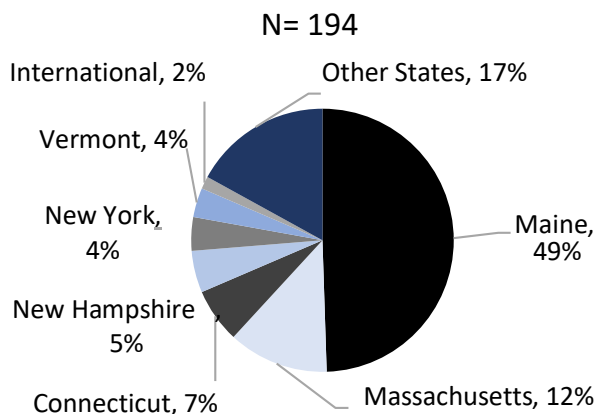
**Figure 2.** Visitor group sizes.



**Figure 3.** Did you have children under the age of 16 in your visitor party?



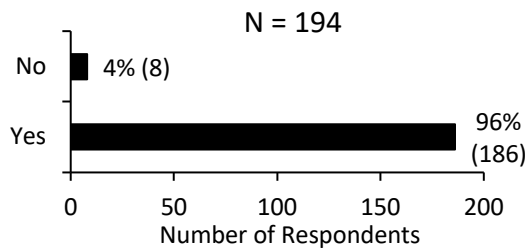
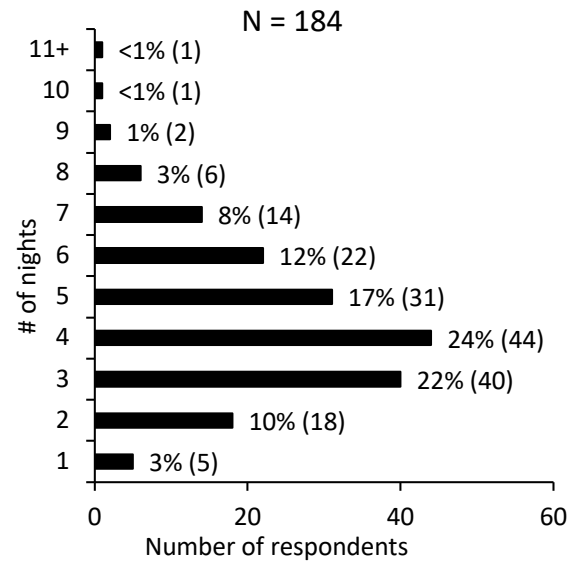
**Figure 5.** Visitor party types. Percentages do not equal 100% due to rounding.



**Figure 6.** Proportion of visitor parties by place of residence within the U.S. and International locations.

**Table 2.** Number and percentage total of visitors. Percentages do not equal 100% due to rounding.

Residence	Number of visitor parties	% of total visitors
Maine	96	49%
Massachusetts	24	12%
Connecticut	13	7%
New Hampshire	10	5%
New York	8	4%
Vermont	7	4%
Pennsylvania	5	3%
North Carolina	5	3%
New Jersey	3	2%
Virginia	2	1%
International	3	2%
Other States	18	9%
Total	194	101%

**Figure 7.** Did you stay overnight on the Allagash Wilderness Waterway?**Figure 8.** Number of nights spent at the Allagash Wilderness Waterway.

Visitors were asked how much time they spent at the AWW. The majority of visitors indicated staying one or more nights (Figure 7). The average number of nights stayed was approximately 4 nights. Figure 8 shows approximately 13% of visitors staying for one or two nights. The highest proportion of visitors stayed three nights (22%) and four nights (24%). Twenty-nine percent indicated that they spent five to six nights. Approximately 13% of visitors stayed a week or more.

Table 3 shows the proportion of visitors per recreation activity that they participated in at the AWW. Most visitors indicated participating in multiple activities with an average of six activities but as high as eleven activities during their trip to AWW. The most common activity was camping (90%). Eighty-six percent of visitors indicated canoeing and 12% boating. Taking pictures was a popular activity (75%). More than half of the visitors indicated that they participated in swimming (59%) and fishing (55%). Other popular activities included learning more about local history (42%), nature study (42%), talking to people in other groups (41%), and visiting local history sites (40%). Approximately a third of visitors indicated that they simply wanted to spend some time alone (30%). Twenty-seven percent reported hiking (27%) and 24% picnicking. Only 4% of the visitors in the study reported collecting fiddleheads, berries, and etc. and none reported hunting. The timing of the study contacting visitors likely influenced those who would

be participating in these identified activities. Visitors indicated a number of “other” activities that included among others chatting with rangers and wardens, cooking, enjoying time with dog, and scouting for a future hunting trip.

Visitors were asked to indicate wildlife observed while visiting the AWW (Table 4). The most common wildlife sighting was bald eagles (94%). Other very common sightings reported were moose (84%) and loon (84%). Nearly half of the visitors reported seeing blue heron (44%) and one-third of visitors saw osprey (37%). Visitors also saw beaver (20%), river otter (11%), black bear (9%), and fox (7%). Wildlife observed and listed by respondents included different birds (Arctic tern, mergansers, duck, Canadian geese, herring gull, common tern, turkey vultures, hawks, seagulls, woodpeckers, yellow-throated warbler, brown creepers, fox sparrows, partridge, kingfishers, and great horned owl), fish, rabbits, snowshoe hare, woodchucks, squirrel, pine marten, otters, coyote, lynx, bobcat, wood turtles, snakes, and bull frogs.

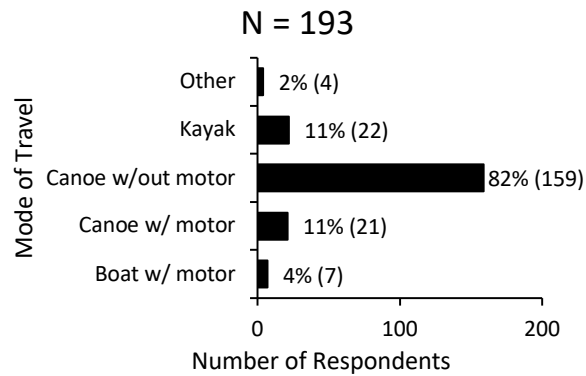
Figure 9 shows the proportion of visitors who used various modes of travel while visiting the Allagash Wilderness Waterway. The most common mode of travel was canoe without a motor (82%). Smaller proportions of visitors used a canoe with motor (11%) and kayak (11%). Four percent of visitors used a boat with a motor. The “other” included visitors who indicated they just waded in the water or drove to their campsite.

**Table 3. Visitor Activities**

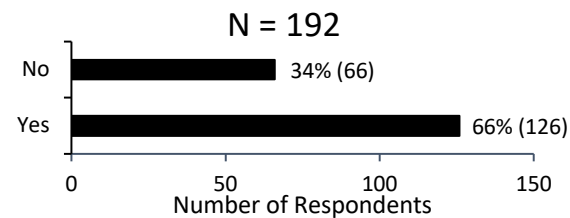
Activity	Number of visitors	% of total visitors
Camping	175	90%
Canoeing	167	86%
Taking pictures	146	75%
Swimming	114	59%
Fishing	106	55%
Learning more about local history	81	42%
Nature study	81	42%
Talking to people in other groups	79	41%
Visiting local history sites	78	40%
Spending time all alone	58	30%
Hiking	53	27%
Picnicking	46	24%
Boating	24	12%
Collecting fiddleheads, berries, etc.	8	4%
Hunting	0	0%
Other	13	7%

**Table 4. Types of wildlife seen by visitors.**

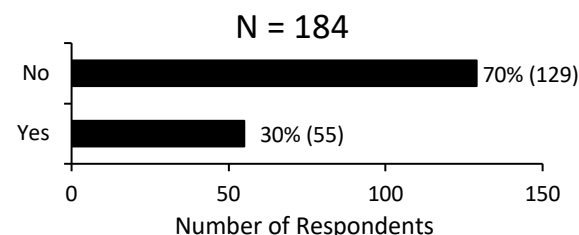
Type of wildlife	Number of visitors	% of total visitors
Bald eagle	183	94%
Moose	163	84%
Loon	162	84%
Blue heron	86	44%
Osprey	71	37%
Deer	64	33%
Beaver	39	20%
River otter	22	11%
Black bear	17	9%
Fox	14	7%
Muskrat	7	4%
Other	41	21%



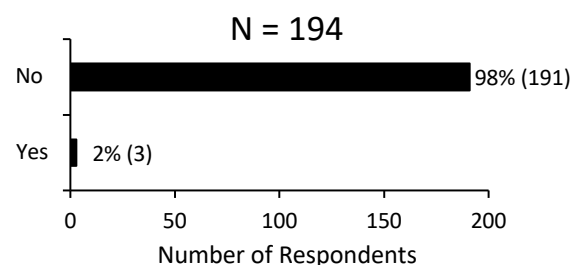
**Figure 9.** Mode of aquatic transportation at the AWW. Percentages do not equal to 100 because visitors could indicate more than one mode of travel.



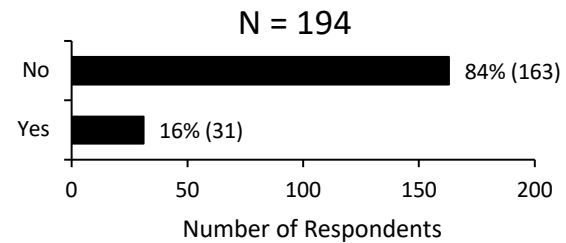
**Figure 10.** Did you hire an outfitter to provide transportation or vehicle shuttle?



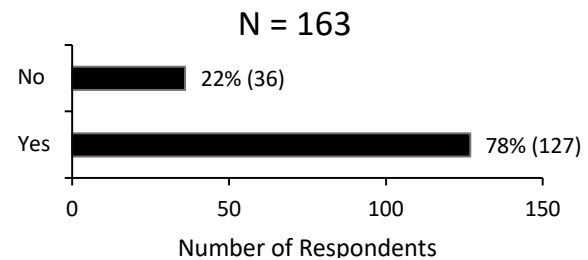
**Figure 11.** Did you hire an outfitter to provide equipment?



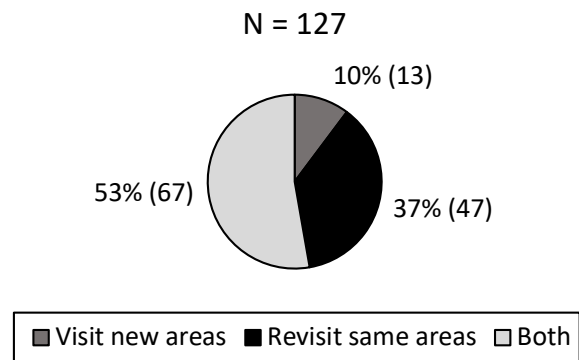
**Figure 12.** Did you hire a guide to lead you down the watercourse?



**Figure 13.** Was this your first visit to a remote or undeveloped river area?



**Figure 14.** Have you ever visited the AWW before?



**Figure 15.** Reason for choosing access point on the AWW.

Visitors were asked if they hired an outfitter to either provide transportation or rent equipment. Approximately 66% of visitors hired an outfitter to help with transportation and 30% for equipment such as canoes (Figure 10 and 11). Two percent of visitors hired a guide to lead them down the watercourse (Figure 12).

Figure 13 shows that for most visitors to the Allagash Wilderness Waterway (84%) it was not their first time being on a remote or undeveloped river. However, 16% indicated it was their first time. Over three-quarters of the respondents (78%) indicated that they had previously visited the AWW (Figure 14).

Visitors were asked several questions in order to better understand trip characteristics and use of campsites. Visitors were asked about their preferences when deciding upon the entry point to the AWW. Fifty-three percent of the visitors preferred to visit both new areas and same areas as compared to 37% that preferred to revisit familiar areas (Figure 15). Ten percent of visitors preferred exploring new areas.

Visitors were asked if they requested information about access points on the watercourse from the Department of Agriculture, Conservation, and Forestry before their trip. Approximately 15% indicated that they had requested information from this agency prior to the trip. Visitors were also asked about different sources of information they used to learn about access points and trip planning. The most frequent responses by visitors were the AWW map (66%) and their prior experience (52%) (Table 5). As reported above, over three quarters of respondents reported that they had previously visited the watercourse. However, numerous other sources were used such as the internet (38%), guidebooks (32%), topographical maps (24%), friends (20%), NMW check stations staff (20%), and Bureau of Parks and Lands staff (19%). Visitors also mentioned the DeLorme Gazetteer, their guide outfitter and other local guides as well as trip leaders.

There were a number of reasons that factored into a visitor's decision to choose a particular access point (Table 6). The most frequent reason given was familiarity with a particular access point (40%). Thirty-seven percent of visitors indicated the access point was easy. Other reasons focused on the ability to plan for longer (20%) and shorter distance one-way canoe trips (15%). Some visitors indicated the reason for choosing the access point was for the quality of the fishing or hunting (14%), or to experience new (9%) or less crowded areas (9%). Four percent of visitors selected an access point based on its closeness to home. Finally, a number of respondents (27%) indicated "other" and the reasons given in this category ranged from fitting the number of days they needed, avoiding wind, access from the Northern Forest Canoe Trail, guides made a suggestion, shorter drive, picking rivers over flat water, wanting to do rapids, Churchill Dam closure, no motors are allowed in certain areas, picking safer places for kids, vehicle access, less time on dirt roads, wanted to see the museum, a test run, and water levels.

Visitors were also asked reasons for not choosing other access points (Table 7). Again, multiple reasons could have been given but among the top reasons given by visitors were time constraints (37%) and not interested in other access points (26%). Possibly related to time constraints for some visitors was the reason "too far to destination from access point" (16%) and "too long of a drive to get to the access point" (10%). For some visitors, other access points were associated with places that were "too difficult or challenging" (9%) and "wanting to visit a new area" (6%). A few visitors indicated they did not choose certain access points because of the weather (4%), too crowded (3%), water was too shallow for boating (2%), road conditions are too poor (1%), and lack of fishing and hunting (1%). A number respondents (16%) indicated "other," and the reasons given in this category ranged from desire to fish, avoiding Chamberlain due to wind, not interested in lakes, avoiding motors, there was only one access point where they wanted to go, child-friendly trips, wanted to see the trains, wanted to get a general fee for the AWW, didn't want to portage, wanted to explore a more remote area, access points were not recommended, and they would have had to use a shuttle.

Visitors were asked to identify the starting point of their trip on the AWW visitor survey contact card and they also indicated on an AWW map where they camped when completing the self-administered online survey. Most of the entry points listed on the initial contact cards corresponded with the map locations where they reported camping on the online survey. Most of the respondents (41%) entered the watercourse at the Churchill Dam location (Figure 16). Other visitors entered at the Chamberlain Thoroughfare (18%) and Indian Stream (15%) locations. Smaller proportions of visitors entered via Allagash Lake (7%) and Bissonette Bridge (5%). Most of the other entry points were authorized access points.

**Table 5.** Sources of information used for trip planning and access point selection. Visitors used multiple sources.

Information Source	Number of Respondents	% of Total Respondents
Bureau of Parks and Land Staff	36	19%
North Maine Woods Check Stations	38	20%
Been there before	100	52%
Told by friends	39	20%
Don't remember	2	1%
Topographical Maps	47	24%
Allagash Wilderness Waterway map	129	66%
Guidebooks	62	32%
Internet/website	74	38%
Newspaper	0	0%
Other	25	13%

N=194. Percentages do not equal 100 because some respondents used more than one information source.

**Table 6.** Reasons for choosing an access point.

Reason	Number of Respondents	% of respondents
Been there before, familiarity	78	40%
Easy Access	71	37%
Able to travel more distance for one-way canoe trip	39	20%
Able to travel less distance for one-way canoe trip	30	15%
Access to good fishing or hunting	28	14%
A new area, variety	18	9%
Less Crowded	18	9%
Close to home	7	4%
Other	52	27%

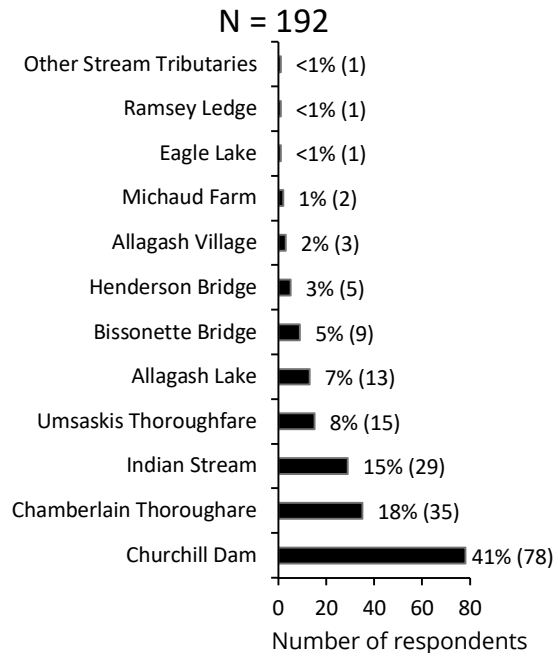
N= 194. Percentages do not equal 100 because respondents could choose more than one option.

**Table 7.** Reasons for not choosing other access points.

Reason	Number of Respondents	% of Total Respondents
Time constraints	71	37%
Not interested in other access points	50	26%
Too far to destination from access point	31	16%
Too long a drive to access point	19	10%
Watercourse travel too difficult or challenging	17	9%
Wanted to visit new area	12	6%
Weather	7	4%
Too crowded	6	3%
Water too shallow for boating/canoeing	3	2%
Lack of fishing and hunting	1	1%
Road Conditions too poor	1	1%
<u>Other</u>	<u>31</u>	<u>16%</u>

N = 194. Percentages do not equal 100 because respondents could select more than one option.





**Figure 16.** Access Points to the Allagash Wilderness Waterway and the number of people that selected each point. Percentages do not equal 100% due to rounding.

As noted earlier in this report, most visitors in this study (96%) reported staying at least one or more nights at a campsite location (see Figure 7). Table 8 shows 84 designated campsite locations by their approximate south to north location. For each campsite, the total number of respondents who indicated staying is reported, total number of nights, as well as the range of number of nights. Visitors reported some level of use at all designated campsite locations with the exception of Telos Landing at the south end of Telos Lake, F.W. Ayer, H.W. Marsh on Chamberlain Lake, and Island on Allagash Lake (Table 8). However, use patterns varied by campsites ranging from 31 respondents staying at Churchill Dam campsite to one respondent staying overnight at the Ede's campsite. The most popular campsites besides Churchill Dam were Allagash Falls, Inlet, Scofield Point with more than 20 respondents reporting use at these campsites and consequently a total for all being 130 overnight stays. The popular campsites are located near portages that connect visitors to another lake or around impassable sections such as the falls on the Allagash River.

Generally, the popular campsites represented by the number of respondents reporting use of a campsite also resulted in higher total number of nights. However,

Round Pond Rips had 17 respondents indicating use and the reported number of nights was 17 suggesting this campsite may be used for transitions between points. In contrast, Pump Handle campsite had 12 respondents and the total number of nights of 40 suggesting this is a multi-night campsite destination. Most of the campsites had an average number of 1-2 nights stayed. The range of nights visitors stayed at the Sandy Point campsite was between one and 8 nights. Pump Handle campsite nights stayed ranged from one to six nights, but half of the respondents indicated staying four to six nights.

The number of nights at a campsite location may depend on visitor intentions such as staying at a certain lake for camping and fishing as compared to fulfilling a desire to traverse the length of the watercourse. There were "other" locations where in one instance the visitor reported staying at Jalbert's camp.

**Table 8.** Visitor use of campsites at the AWW.

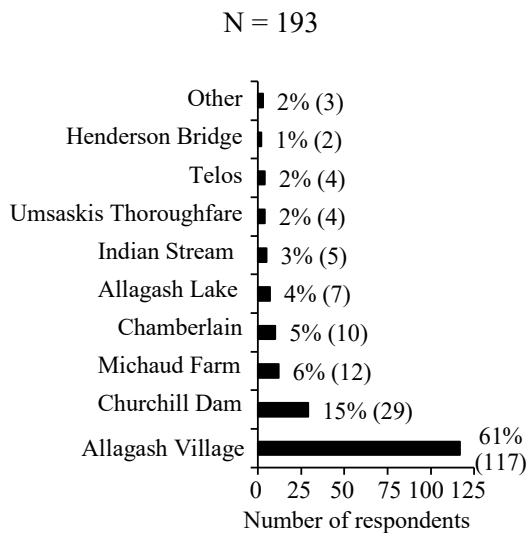
Campsite	Number of respondents	Number of nights	Mean number of nights	Range
1. Telos Landing	0	0	0.00	0
2. Murphy's Field	1	1	1.00	1
3. High Bank	5	9	1.80	1-5
4. F. W. Ayer	0	0	0.00	0
5. H. W. Marsh	0	0	0.00	0
6. Thoroughfare	2	2	1.00	1
7. Boy Scout	1	1	1.00	1
8. The Arm	1	1	1.00	1
9. Ledge Point	5	5	1.00	1
10. Rocky Cove	2	2	1.00	1
11. Gravel Beach	9	10	1.11	1-2
12. Mud Brook	6	9	1.50	1-3
13. Donnelly Point	4	4	1.00	1
14. Shady	0	0	0.00	0
15. Ellis Brook	6	6	1.00	1
16. Little Allagash Falls	3	3	1.00	1
17. Outlet	4	5	1.25	1-2
18. Island	0	0	0.00	0
19. Ede's	1	2	2.00	2
20. Carry Trail	1	1	1.00	1
21. Cove	0	2	0.00	0
22. Ice Cave	5	5	1.00	1
23. Ledge Point	6	15	2.50	1-4
24. Sandy Point	5	18	3.60	1-8
25. Lock Dam	6	6	1.00	1
26. Lost Spring	7	8	1.14	1-2
27. McCarren	3	6	2.00	1-2
28. Crow's Nest	2	2	1.00	1
29. Breezy Point	4	4	1.00	1
30. Pillsbury Island	5	6	1.20	1-2
31. Thoreau	14	17	1.21	1-3
32. Smith Brook	3	6	2.00	1-3
33. Farm Island	13	16	1.23	1-3
34. Lone Pine	2	2	1.00	1
35. Priestly Point	6	6	1.00	1
36. Pump Handle	12	40	3.33	1-6
37. Ziegler	8	11	1.38	1-3
38. Fred King	2	11	1.00	1
39. Little Eagle	7	9	1.29	1-3
40. Scofield Cove	8	14	1.75	1-5
41. Scofield Point	21	33	1.57	1-3
42. High Bank	8	10	1.25	1-2
43. Churchill Ridge	1	1	1.00	1

---

44. Jaws	16	20	1.25	1-3
45. Churchill Dam	31	34	1.10	1-2
46. Meadows	5	6	1.20	1-2
47. Chisholm Brook	13	15	1.15	1-2
48. Ledges	15	15	1.00	1
49. Sandy Point	12	12	1.00	1
50. Pine	6	7	1.17	1-2
51. Grey Brook	17	21	1.24	1-3
52. Jalbert	19	20	1.05	1-2
53. Sam's	16	17	1.06	1-2
54. Lost Popple	13	13	1.00	1
55. Long Lake Dam	14	14	1.00	1
56. Cunliffe Island	11	11	1.00	1
57. Sweeney Brook	8	8	1.00	1
58. Back Channel	7	7	1.00	1
59. Squirrel Pocket	8	11	1.38	1-2
60. Inlet	26	31	1.19	1-2
61. Tower Trail	5	5	1.00	1
62. Round Pond Rips	17	17	1.00	1
63. Outlet	11	11	1.00	1
64. Turk Island	11	11	1.00	1
65. Croque Brook	3	3	1.00	1
66. Hosea B	8	8	1.00	1
67. Five Finger Brook West	10	10	1.00	1
68. Five Finger Brook South	9	9	1.00	1
69. Five Finger Brook North	13	13	1.08	1-2
70. Deadwater South	3	3	1.00	1
71. Deadwater North	10	10	1.00	1
72. Bass Brook	1	1	1.00	1
73. Cunliffe	11	11	1.00	1
74. Cunliffe Depot	12	12	1.00	1
75. Ramsay Ledge	6	6	1.00	1
76. Michaud Farm	5	5	1.00	1
77. Taylor Landing	5	5	1.00	1
78. Allagash Falls	28	32	1.14	1-2
79. Falls Bank	3	3	1.00	1
80. McKeen Brook	8	8	1.00	1
81. Big Brook South	12	12	1.00	1
82. Big Brook East	16	16	1.00	1
83. Big Brook North	11	13	1.18	1-2
84. East Twin Brook	12	14	1.17	1-2

---

Visitors were asked to identify the exit point of their trip on the AWW visitor survey contact card and they also completed where they camped when completing the self-administered online survey. Most of the exit points listed on the initial contact cards corresponded with the map locations they reported in the online survey. As Figure 17 shows, approximately 61% of respondents identified the exit point of their trip being outside the north end of the watercourse at the Allagash Village/ St. John area. Approximately 15% of visitors indicated the exit point was Churchill Dam. Other exit locations listed included Michaud farm (6%), Chamberlain (5%), and Allagash Lake (4%). There were a few other exit locations that are authorized access points such as Telos Landing and Umsaskis Thoroughfare.

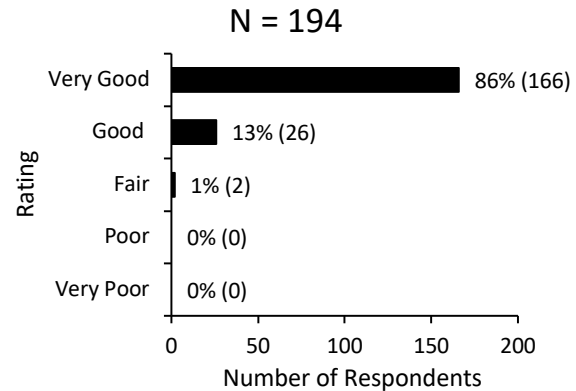


**Figure 17.** Exit Points out of the AWW and the number of people that selected each point. Percentages do not equal 100% due to rounding.

### Visitor Experiences

Visitors were asked to rate their trip based upon a grade system of A, very good; B, good; C, fair; D, poor; and E, very poor. Figure 18 shows that most visitors (86%) rated their trip as an A, very good. Thirteen percent of visitors rated their trip a B, good. Two visitors (1%) rated their trip as C, fair. Visitors were asked to identify key experiences that contributed to their overall experience. Many visitors indicated several experiences that contributed to their overall evaluation of their trip. Table 9 shows the key experiences that contributed to

their overall positive evaluations. The most frequently mentioned experience by visitors related to clean sites, scenic and natural beauty, solitude and remoteness, and wildlife. Table 10 shows the key experiences that likely contributed to less positive evaluations. The most frequently mentioned experiences that related to those respondents not giving a top grade was bad fishing, number of bugs and black flies, and bad weather.



**Figure 18.** Visitor trip experience ratings.

**Table 9.** Key experiences that contributed to a positive evaluation.

Key experiences	Number of times mentioned
Clean sites	42
Scenic/natural beauty	36
Solitude/remote	36
Wildlife	30
Peace and quiet	29
Good weather	28
Good water conditions	24
Not crowded	21
Wilderness	19
Friends/family	17
Friendly rangers/ people	16
Other	13
Challenge	10
Bugs not bad	4

N = 194. Some visitors mentioned more than one key experience.

**Table 10.** Key experiences that contributed to a negative evaluation.

Key Experiences	Number of times mentioned
Bad fishing	5
Other	5
Bugs bad	4
Bad weather	2
Lack of wildlife	2
Poor water	1
Too crowded	1
Bad site	1
Motors present	1

N = 194. Some visitors mentioned more than one key experience

Figures 19a through 31a show the degree of importance for experiences related to recreation and conditions on the AWW. Table 11 shows a list of the attributes visitors were asked to rate. Those experiences or conditions receiving the highest proportion of “very important” ratings included the natural environment (enjoy the view from the lake or river, etc.) (90%), exploration and remoteness from cities and people, etc. (82%), no litter or waste (amount of litter along the watercourse and at campsites) (77%), personal and social experiences (get away from daily routine; develop a sense of self-confidence; chance to think and reflect; simplify daily needs) (65%), solitude (small, intimate group experience; isolated from other groups; privacy) (64%), and connection with nature (learn about nature; opportunity for self-discovery) (58%).

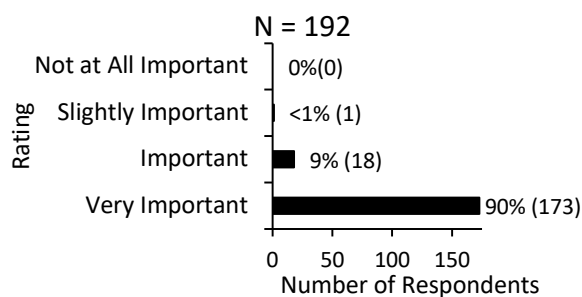
Other experiences receiving a high proportion of “important” ratings included information on watercourse (finding suitable campsites, information on where other users are likely to be; finding an unoccupied campsite) (41%), number of other users (others seen while traveling; in groups that camped nearby; large groups of users) (41%), and physical activity (physical exercise and health; physical challenge) (40%).

The highest proportion of “slightly important” or “not at all important” ratings by visitors were hunting, fishing, and gathering (experience associated with doing these activities in a remote area) (52%) and number of users (you saw while traveling; in groups that camped near you; large groups of users) (33%). It should be noted other visitors rated these experiences “very important” for example, hunting, fishing, and gathering

(21%) and number of users (25%). On the other hand, 22% of visitors indicated that physical activity was “slightly important” or “not at all important,” but others (38%) indicated that physical activity was “very important.”

These findings suggest the need for further analysis to identify possible combinations of important experiences for certain user groups related to recreational opportunities and conditions on the Allagash Wilderness Waterway. For example, one user group may place more importance on experiences involving the natural environment, personal and social experiences, and hunting, fishing, and gathering while another group may place more importance on natural environment, exploration and remoteness, solitude, and number of other users. Finally, we need to recognize the results portrayed for our period of study and the likelihood of not fully representing the importance of visitor experiences such as hunting, fishing, and gathering during the late fall, winter, and early spring.

Figures 19b through 31b show the degree of satisfaction for experiences related to recreational opportunities and conditions on the AWW. Manning (1999) defines satisfaction as the congruence between expectations and outcomes. Answers given by respondents indicate a relatively high level of satisfaction reported for several of the experiences rated as being “very important.” As reported earlier, 90% of visitors rated natural environment as “very important,” and 99% of visitors reported being “very satisfied” or “satisfied” with the natural environment (Figure 19b). For experiences of exploration and remoteness, 82% of visitors rated this as “very important” and 16% as “important.” Ninety-four percent of visitors reported being “very satisfied” or “satisfied” with the experience of exploration and remoteness (Figure 27b).

**Figure 19a.** Level of importance of the natural environment.

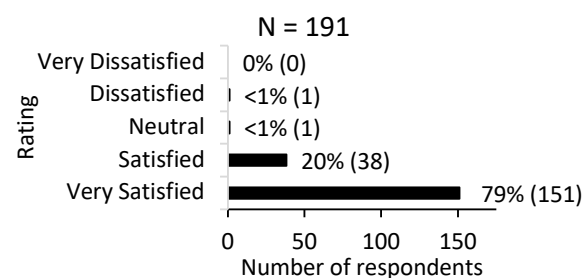
**Table 11.** The list of attributes shown to visitors for the importance and satisfaction questions.

Letter	Attribute	Explanation
A	Natural environment	Enjoy the view from lake or river; the scenic quality of nature; observe and hear wildlife; the peace and quiet of a remote area.
B	Physical activity	Physical exercise and health; physical challenge.
C	Personal and social experiences	Get away from daily routine; develop a sense of self-confidence; chance to think and reflect; simplify daily needs.
D	Exploration and remoteness	An area free of man-made or very limited man-made noises; remoteness from cities and people; an adventure and challenge.
E	Solitude	A small, intimate group experience; isolated from other groups; privacy.
F	Connection with nature	Learn about nature; opportunity for self-discovery.
G	Connection with special place/tradition	Feel connected to a natural place that is important to me; feel a sense of an earlier rugged time in history.
H	Wilderness or backcountry skills	Improve backcountry travel skills; learn to travel to a remote destination and return successfully; a sense of self-sufficiency; recreation in a primitive environment.
I	No litter and waste	Amount of litter along the watercourse and at campsites.
J	Management control	Condition of the watercourse including the campsites and portage trails; publicized rules and regulations; extent of naturalness conditions at the designated campsites.
K	Information on watercourse	Finding suitable campsites, information on where others are likely to be; finding an unoccupied campsite.
L	Number of users	You saw while traveling; in groups that camped near you; large groups of users.
M	Hunting, fishing, gathering	Experiences associated with doing these activities in a remote area.

Some experiences related to recreational opportunities and conditions on the Allagash Wilderness Waterway were rated “neutral” in terms of the level of satisfaction. For example, 38% of the visitors reported “neutral” for the level of satisfaction associated with hunting, fishing, and gathering (Figure 31a). Similarly, 23% of visitors who rated “neutral” for the level of satisfaction associated with number of users (Figure 30b) also indicated “slightly important” or “not at all important” for level of importance of the number of users (Figure 30a). Other experiences rated neutral in the 12% range such as connection with special places/traditions and information on watercourse (finding suitable campsites, information on where other users are likely to be; finding an unoccupied campsite) had visitors that also reported that these particular experiences were either “slightly important” or “not at all important” (See Figures 24a and 24b, 28a and 28b).

In general, most visitors reported no dissatisfaction with experiences related to recreational opportunities and conditions on the Allagash Wilderness Waterway.

The highest proportion of dissatisfaction was with the number of users (you saw while traveling; in groups that camped near you; large groups of users) with approximately 3% reporting being “dissatisfied” and less than 1% being “very dissatisfied” with this experience (Figure 30b). This aspect of the visitor experience may warrant more investigation by management especially if these same visitors rate the experience as being “very important.”

**Figure 19b.** Level of satisfaction with the natural environment. Percentages do not equal 100 due to rounding.

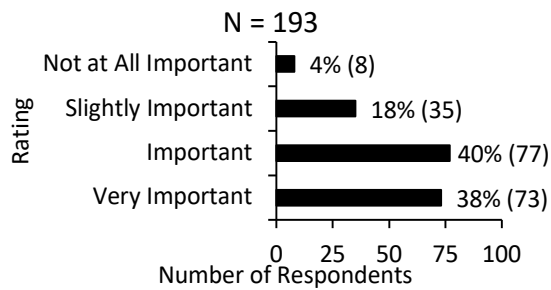


Figure 20a. Level of importance of physical activity.

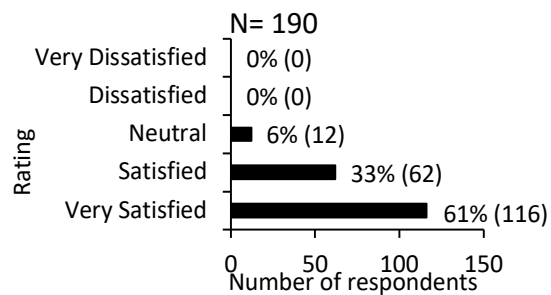


Figure 20b. Level of satisfaction with the physical activity.

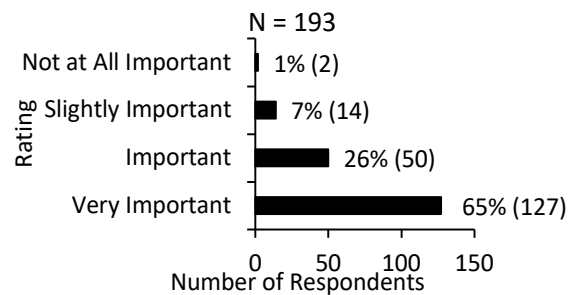


Figure 21a. Level of importance with personal and social experiences. Percentages do not equal 100 due to rounding.

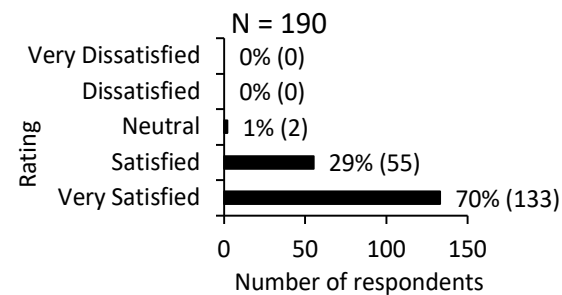


Figure 21b. Level of satisfaction with personal and social experience.

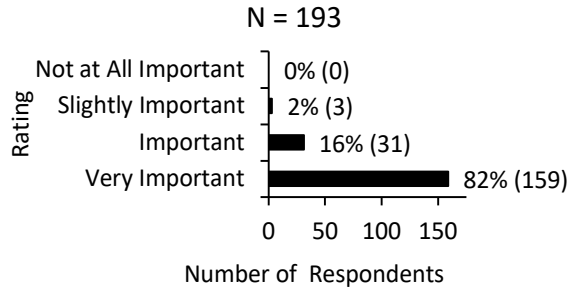


Figure 22a. Level of importance of exploration and remoteness.

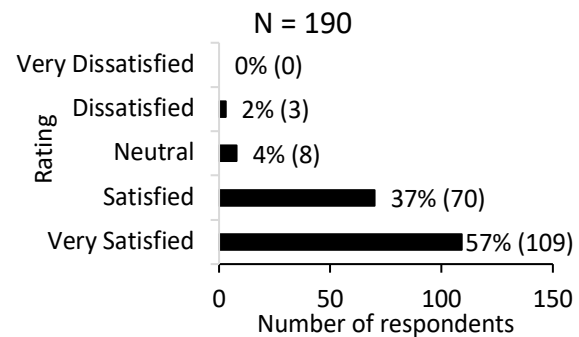


Figure 22b. Level of satisfaction of exploration and remoteness.

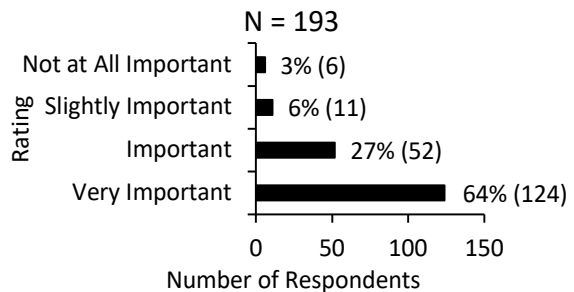


Figure 23a. Level of importance of solitude.

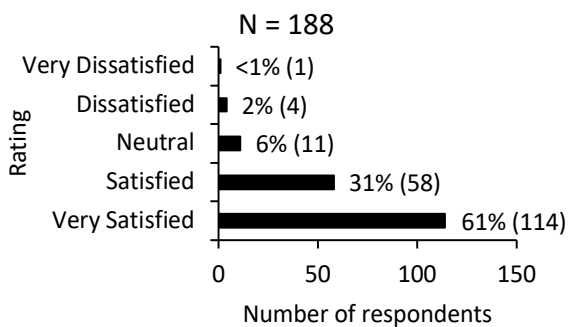
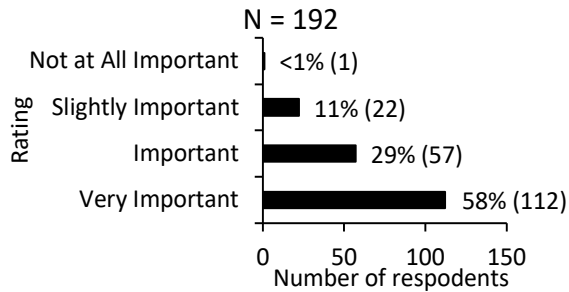
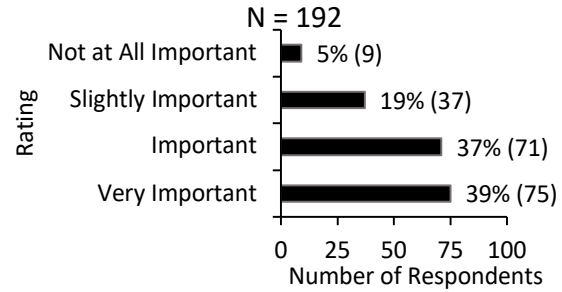


Figure 23b. Level of satisfaction of solitude. Percentages do not equal 100 due to rounding.

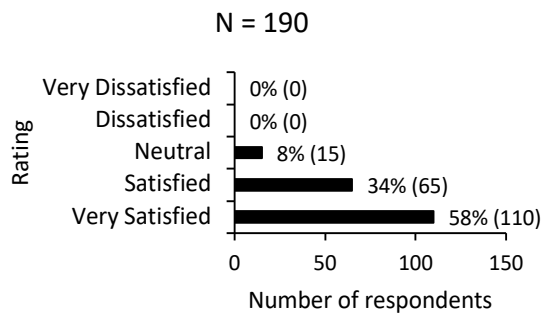




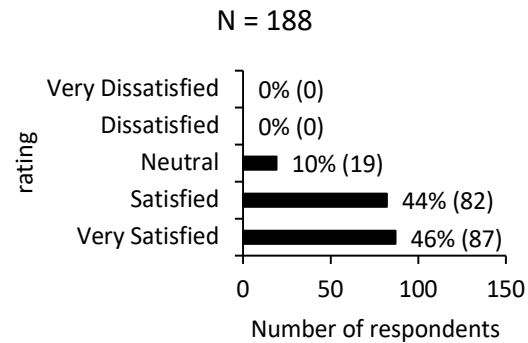
**Figure 24a.** Level of importance of connection with nature. Percentages do not equal 100 due to rounding.



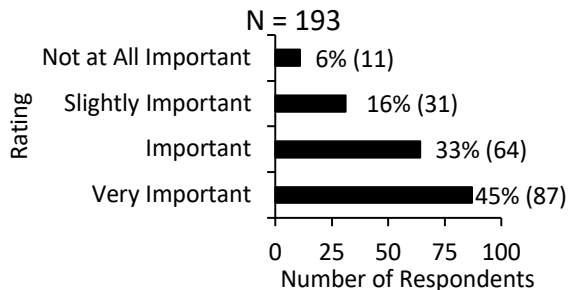
**Figure 26a.** Level of importance of wilderness or backcountry skills.



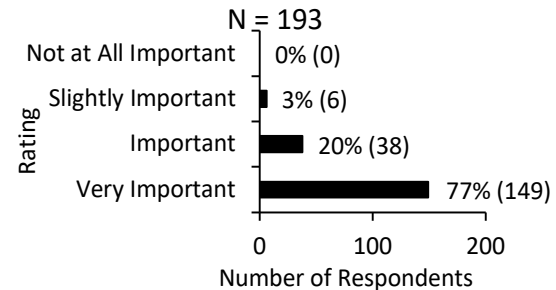
**Figure 24b.** Level of satisfaction of connection with nature.



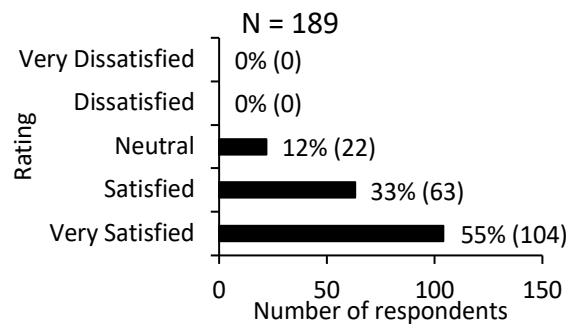
**Figure 26b.** Level of satisfaction with wilderness or backcountry skill.



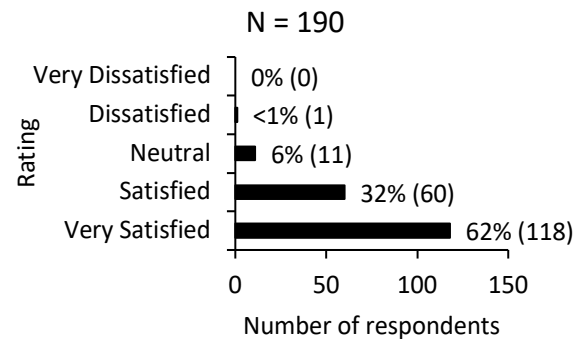
**Figure 25a.** Level of importance of connection with special places/traditions.



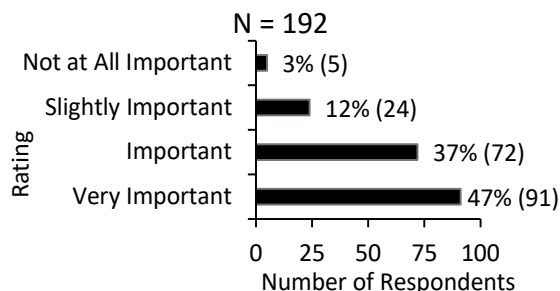
**Figure 27a.** Level of importance of no litter or waste.



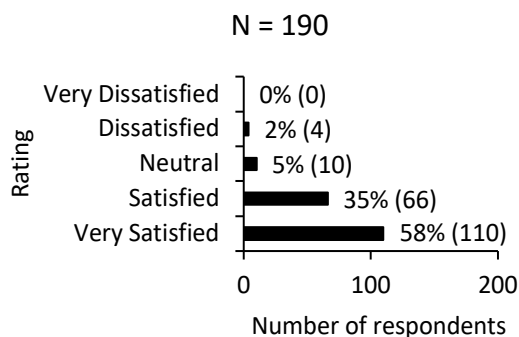
**Figure 25b.** Level of satisfaction of connection with special places/tradition.



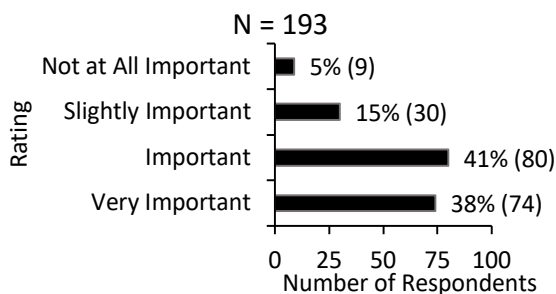
**Figure 27b.** Level of satisfaction of no litter or waste. Percentages do not equal 100 due to rounding.



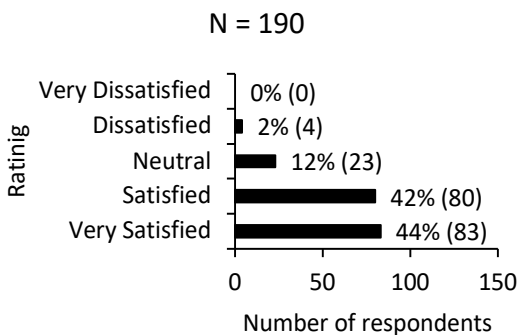
**Figure 28a.** Level of importance of management conditions. Percentages do not equal 100 due to rounding.



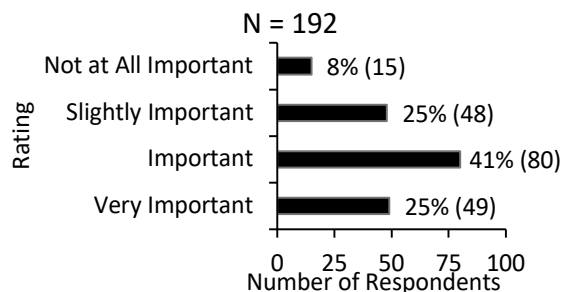
**Figure 28b.** Level of satisfaction of management conditions.



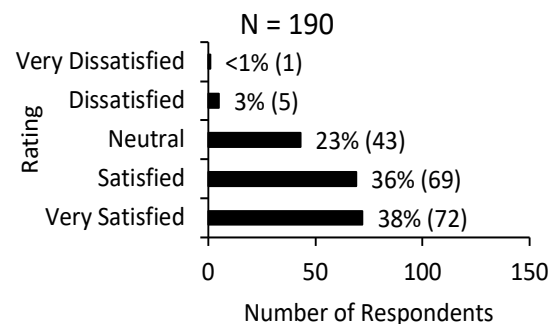
**Figure 29a.** Level of importance of information on watercourse. Percentages do not equal 100 due to rounding.



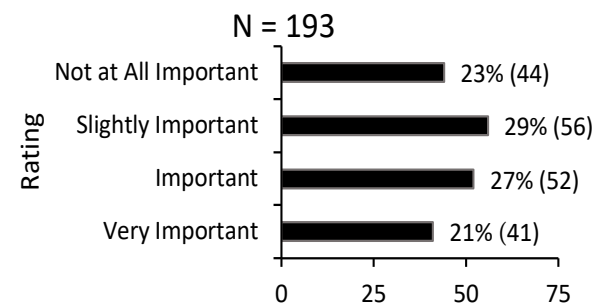
**Figure 29b.** Level of satisfaction of information on watercourse.



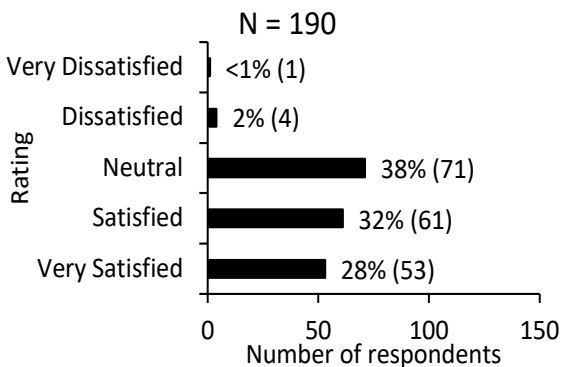
**Figure 30a.** Level of importance of numbers of users. Percentages do not equal 100 due to rounding.



**Figure 30b.** Level of satisfaction of number of users. Percentages do not equal 100 due to rounding.



**Figure 31a.** Level of importance of hunting, fishing, and gathering. Percentages do not equal 100 due to rounding.



**Figure 31b.** Level of satisfaction of hunting, fishing, and gathering. Percentages do not equal 100 due to rounding.

The Importance Performance Analysis (IPA) has been used in many non-tourism industries such as hospitals, automotive, banking, food-service, and in many different tourism- and recreation-related industry sectors (Azzopardi and Nash, 2013). IPA uses a four-quadrant grid to graph attribute averages to show which attributes need work, which ones do not, and which ones might be getting more attention than they need (Figure 32) (Martilla and James, 1977).

The first quadrant is the concentrate here quadrant. This section is where an attribute has a high importance rating, but a low satisfaction rating. Managers should put resources into the attributes in this quadrant to improve the satisfaction rating because it is important to the visitor. The second quadrant is where everything is going well. The importance level and the satisfaction level are high. In order to sustain this rating, managers need to continue committing the same amount of resources. Taking away resources from attributes in this quadrant could reduce satisfaction levels. The third quadrant contains attributes that are not very important to the visitor, but they also do not have a high satisfaction average either. The manager should not focus their attention here unless the needs for attributes in quadrants 1 and 2 are being met. This can be a place for management to expand or start to diversify to a new market segment. Quadrant 4 is the overkill quadrant. Attributes in this category have a low importance rating to visitors and a high satisfaction level. Managers should strongly consider moving resources from these attributes to use resources more efficiently (Martilla & James, 1977).

Importance	High	Quadrant 1 A. Concentrate Here High Importance Average Low Satisfaction Average (Increased Resources)	Quadrant 2 B. Keep Up the Good Work High Importance Average High Satisfaction Average (Sustain Resources)
	Low	Quadrant 3 C. Low Priority Low Importance Average Low Satisfaction Average (No change in resources)	Quadrant 4 D. Possible Overkill Low Importance Average High Satisfaction Average (Curtail Resources)
		Low	High
		Satisfaction	

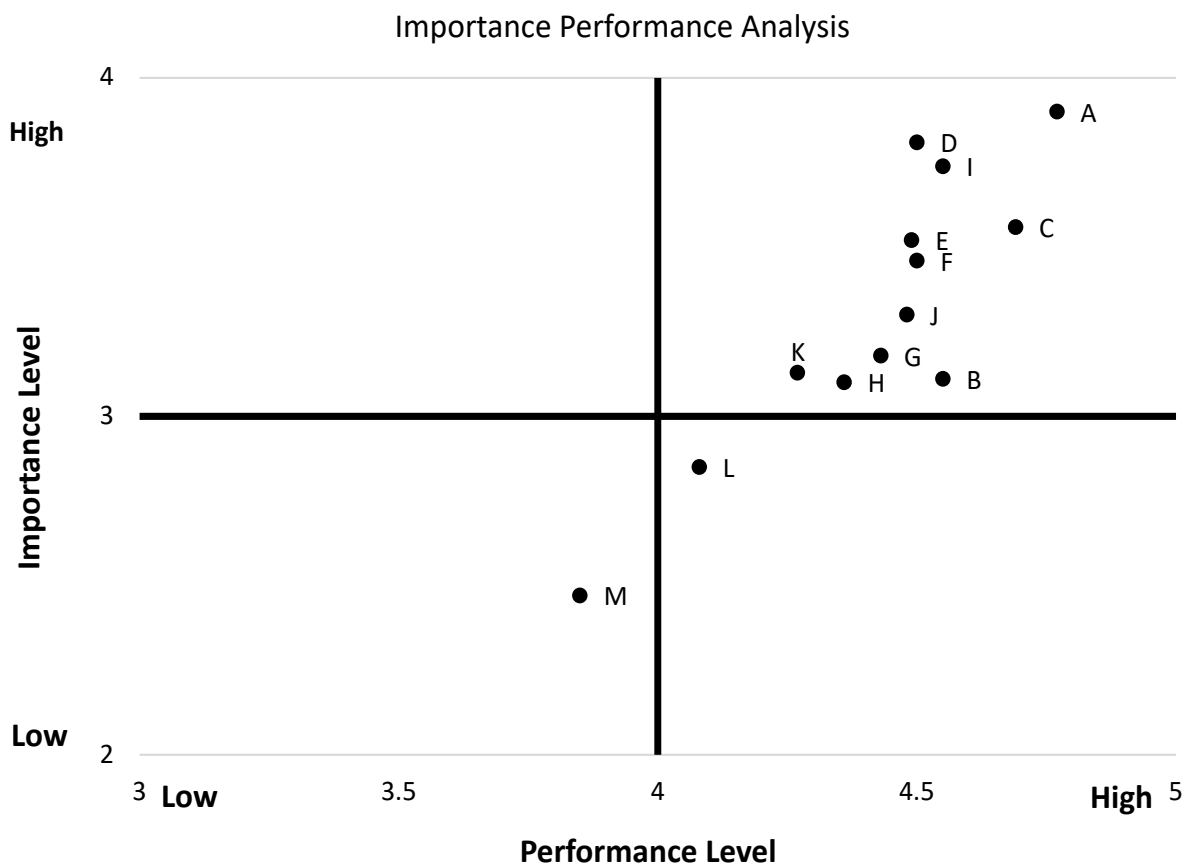
**Figure 32.** Importance-Performance Analysis framework derived from Azzopardi & Nash, 2013

The crosshairs in an IPA analysis are placed based on scale means or medians, data means or medians, or based off of management objectives and goals. For the Allagash Wilderness Waterway (Figure 33), the

importance crosshair was set at important (3) on a four-point scale from not at all important (1), slightly important (2), important (3), and very important (4). The satisfaction or performance crosshair was set at satisfied (4) on a five-point scale from very dissatisfied (1), dissatisfied (2), neutral (3), satisfied (4), and very satisfied (5).

The IPA grid for the Allagash Wilderness Waterway shows that nearly all the attributes are in the “keep up the good work” quadrant (See Table 11 for letters that correspond to attributes). The attributes that stand out are number of users (L) and hunting, fishing, and gathering (M). The number of users falls into the possible overkill category. We are a little skeptical to agree with this rating because of the differences reported by visitors with 33% “not at all important” or slightly important but on the other hand 25% reported “very important.” Also noted above this experience had some reported dissatisfaction (3%) so again we suggest further investigation and not necessarily treat as overkill if this is an important experience for some visitors. Hunting, fishing, and gathering falls into the “low priority” quadrant. This seems to match with both our survey data and other research done on the topic.

Previous studies conducting IPA analyses recommend importance and satisfactions ratings be aligned to users tied to those recreational experiences. For example, in Western Australia, visitors who did not participate in kitesurfing, windsurfing, or cycling rated the activity with low importance and low satisfaction, however when the users were segmented, their averages were much higher than the overall average (Tonge and Moore, 2007). Likewise, adjusting the values of the importance average and satisfaction average to only reflect visitors who participated in fishing finds that this attribute if revised would fall into the second quadrant keep up the good work. The importance average would be three (Figure 34a) and the satisfaction average would be 4.14 (Figure 34b). Overall, the IPA grid suggests that the Allagash Wilderness Waterway is doing a very good job satisfying its visitors.

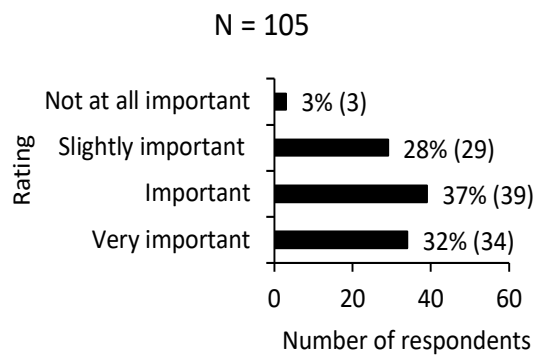


**Figure 33.** Importance-Performance Analysis Grid for the Allagash Wilderness Waterway. Letters line up with attributes listed in Table 11.

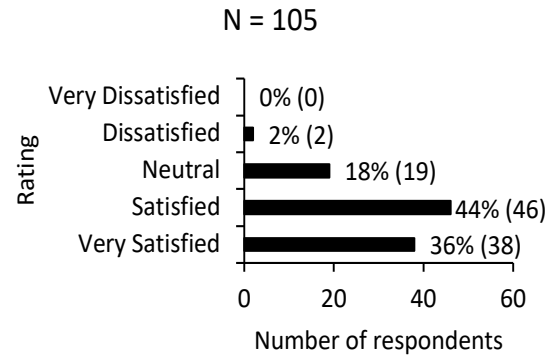


Photo by Steve Day





**Figure 34a.** Level of importance of hunting, fishing, and gathering. N=106 are visitors who selected fishing as an activity in Table 3.

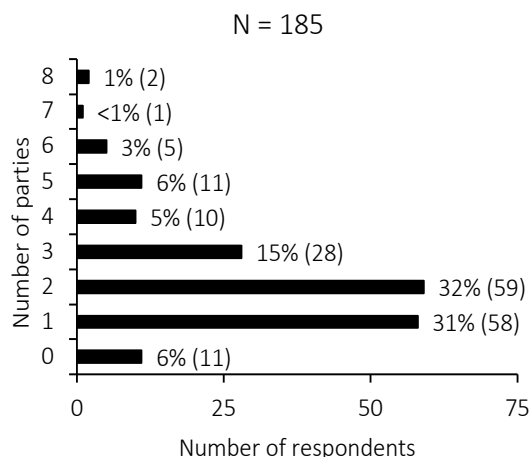


**Figure 34b.** Level of satisfaction of hunting, fishing, and gathering. N=106 are visitors who selected fishing as an activity in Table 3.

Visitors who answered “yes” to staying overnight in the Allagash Wilderness Waterway were asked questions about their camping experiences. As reported in Figure 7, the vast majority of visitors (96%) reported staying for at least one overnight. Visitors were asked how many parties on average camped within sight or sound of their campsite (Figure 35). The highest proportion of visitors (32%) reported 2 parties on average camped within sight or sound of their campsite. Thirty-one percent of visitors reported that one party on average camped within sight or sound of their campsite.'

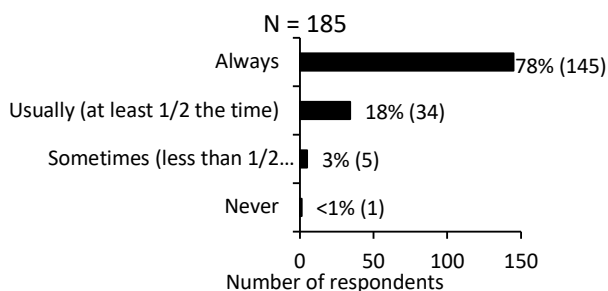


Photo by Steve Day



**Figure 35.** Number of other parties on average that camped within sight or sound of my campsite.

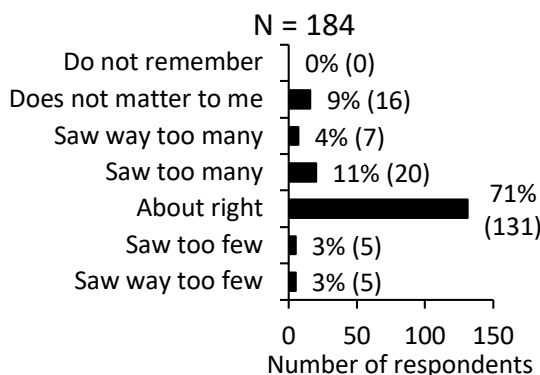
Visitors were asked how often they were able to find a campsite that was acceptable in terms of other parties being camped within site or sound (Figure 36). Seventy-eight percent of visitors reported they always were able to find a campsite that was acceptable and 18% of visitors reported they were usually (more than half the time) able to locate an acceptable campsite in terms of other parties being camped within site or sound. There were some visitors who had difficulty finding an acceptable campsite. Three percent of visitors reported that only sometimes (less than half the time) that they were able to find a campsite that was acceptable. Finally, only one visitor recorded never finding an acceptable campsite in terms of parties camped within site or sound.



**Figure 36.** Ability to find a campsite that was acceptable in terms of other parties being camped within sight or sound.

Figure 37 shows how visitors felt in terms of the number of other people they saw at campsites on the AWW. As reported earlier, solitude is an important experience with 64% reporting “very important” and 27% “important” (Figure 23a). Most visitors (71%)

indicated that the number of other people they saw at campsites was “about right.” However, there were approximately 11% of visitors who felt that they “saw too many” and 4% felt “way too many.” In contrast, there were a few visitors that felt the opposite reporting that they felt the number of other people as “saw too few” (3%) or “saw way too few” (3%). Nine percent of visitors indicated that it did not matter to them one way or another in terms of the number of other people at the campsites.



**Figure 37.** Feeling about the number of other people you saw at the campsites on the AWW. Percentages do not equal 100 due to rounding.

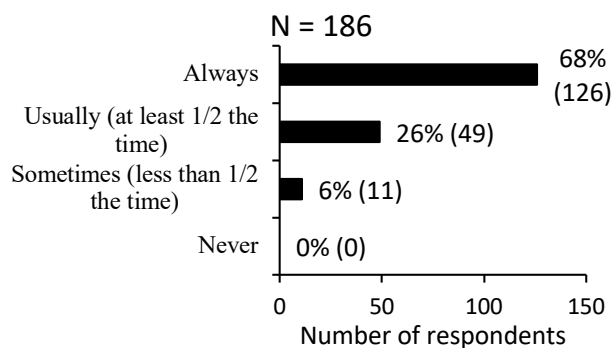
Visitors were asked about the availability of campsites where they intended to stop (Figure 38). Sixty-eight percent of visitors reported “always” and 26% reported “usually (at least half of the time).” A small percentage of reported only “sometimes (less than ½ the time)” (6%). Despite the apparent availability of campsites, a large number of visitors (44%) reported not choosing the first available campsite (Figure 39).

Visitors were asked if, on this trip, an available campsite was rejected because of its condition (Figure 40). Approximately 21% of the visitors had rejected a campsite because of its condition. Visitors who reported rejecting a campsite were asked for specific reasons why they did not choose the campsite based upon a list of conditions (Table 12). Multiple reasons could have been given. Among the top reasons given by visitors were site too wet (38%), site too buggy (33%), and not enough tent sites (28%). For some visitors, the reasons more related to aesthetics such as erosion from use (23%) and exposure of roots (18%) and damaged trees (8%). A few visitors indicated they did not choose

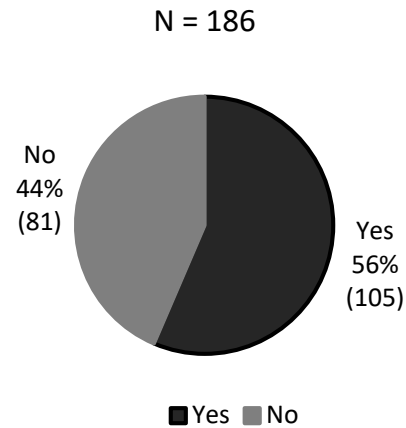


certain campsites because of the scarcity of firewood, condition of firepit (8%) and table (8%).

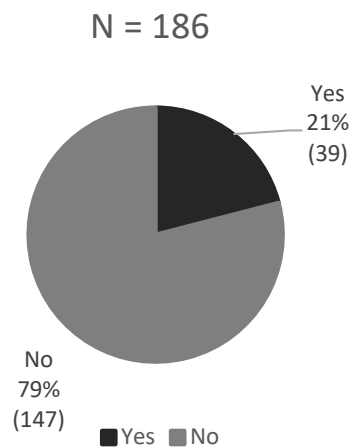
Similarly, visitors were asked if, on this trip, an available campsite was rejected because of its location (Figure 41). Approximately one-quarter of visitors (26%) reported rejecting an available campsite because of its location (shallow boat landing; poor view, too close to another occupied camp). Again, in some cases multiple reasons were given by visitors in terms of location characteristics of a campsite (Table 13). The most frequently reported reasons included too close to another occupied campsite (35%) and poor view of water (35%). Thirty-one percent of visitors reported no breeze for insects and 27% indicated no level ground for tents. Possibly related to the first reason or potential for occupation was the fact that the campsite was a multi-cell site (16%). Some reasons were associated with the inability to do other activities near the campsite such as swimming or fishing. Some visitors (20%) indicated “other” and provided specific reasons such as too wide open in case of a storm, too windy, not enough sun, no swimming nearby, general aesthetic, and landing too steep or difficult.



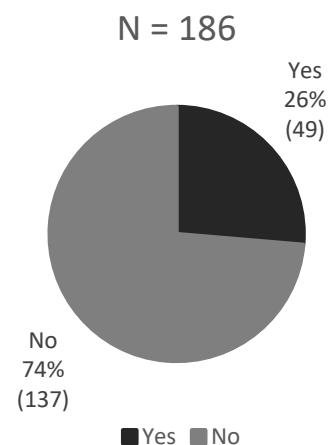
**Figure 38.** Availability of a campsite where you planned to stop each night.



**Figure 39.** Did you take the first available campsite you found where you intended to stop?



**Figure 40.** Did you reject an available campsite because of its condition?



**Figure 41.** Did you reject an available campsite because of its location?

**Table 12.** Conditions that caused the rejection of a campsite.

Condition	Number of visitors	% of visitors
Site too wet	15	38%
Site too buggy	13	33%
Not enough tent sites	11	28%
Erosion at campsite	9	23%
Trees with exposed roots	7	18%
Firewood scarce	6	15%
Too many damaged trees	3	8%
Condition of fire pit	3	8%
Scarce vegetation for screening other campers	3	8%
Ridge pole or table in poor condition	3	8%
Lack of vegetation ground cover	2	5%
Litter	1	3%
Human waste	1	3%
Other (Describe)	11	28%

Percentages do not equal 100 due to potential multiple answers.

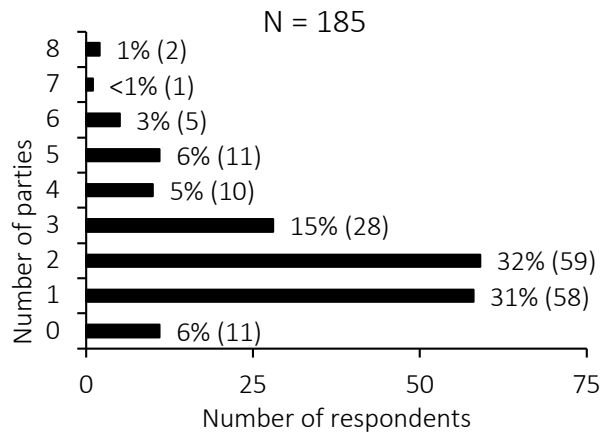
Conditions	Number of visitors	% of visitors
Too close to another occupied campsite	17	35%
Poor view of water	17	35%
No breeze for insects	15	31%
No level ground for tent	13	27%
Multi-cell campsite	8	16%
Not enough shade	7	14%
Too far away from boat	5	10%
Lack of good swimming area	5	10%
Shallow water for landing boat	4	8%
Size too small for our group	3	6%
Lack of good fishing	2	4%
Too close to water	1	2%
Other (describe)	10	20%

**Table 13.** Location conditions that caused the rejection of a campsite.  
Percentages do not equal 100 due to potential multiple answers.

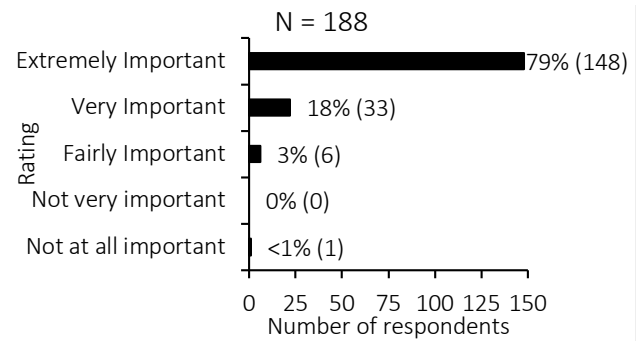
Visitors were asked about how many other parties they saw while traveling the watercourse per day. The highest proportion of visitors (63%) reported seeing one (31%) and two (32%) parties per day on the watercourse (Figure 42). Fifteen percent of visitors reported 3 parties were seen per day on the watercourse. Figure 43 shows most visitors (62%) did not see large groups (12 or more people). However, one-third of visitors (33%) reported seeing either one or two large groups. The reader should note in some cases visitors may have perceived two or more parties traveling together for a limited period of time to be one large group.

Figure 44 shows how visitors felt in terms of the number of other people they saw while paddling or boating on the AWW. Most visitors (70%) indicated that the number of other people they saw while traveling on the watercourse was “about right.” However, there were approximately 13% of visitors who felt that they “saw too many” and 2% reported “saw way too many.” In contrast, there were a few visitors that felt the opposite reporting that they felt the number of other people as “saw too few” (2%) or “saw way too few” (2%). Twelve percent of visitors indicated that it did not matter to them. Figure 46 shows the reported number of people seen while paddling or boating per day and we compared with how they felt about seeing others. Most visitors that answered “about right” saw 1-3 parties per day on the watercourse. Most visitors that answered “too many” or “way too many” saw 3-6 parties per day.

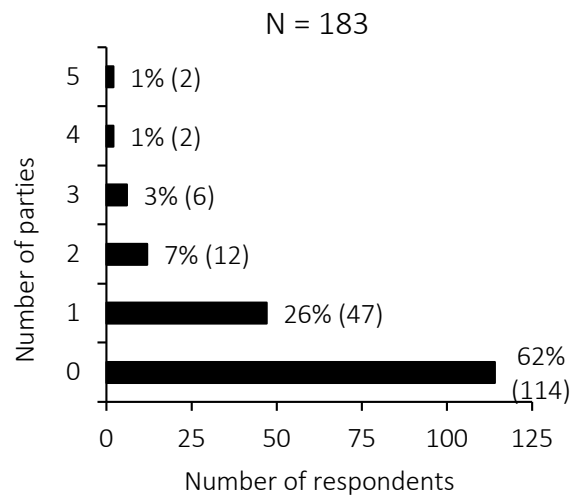
Visitors were asked how important or valuable recreation experiences like the AWW is to them personally on a five-point scale ranging from not at all important to extremely important. As Figure 45 shows, most visitors (97%) indicated the experience was extremely important (79%) or very important (18%). Three percent of visitors reported the experience was fairly important. One visitor reported the experience as being not at all important.



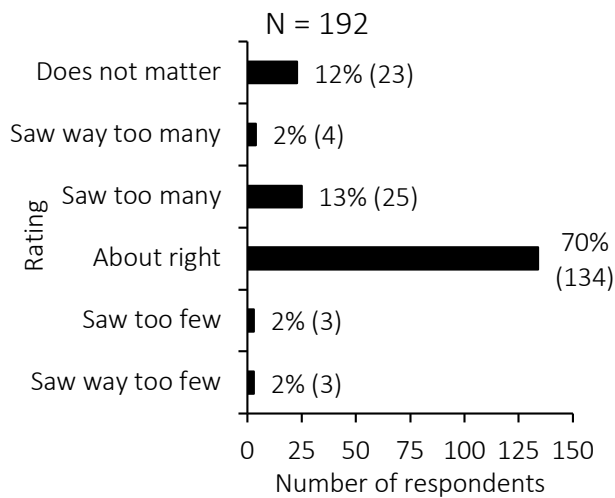
**Figure 42.** Number of other parties seen per day while traveling the watercourse.



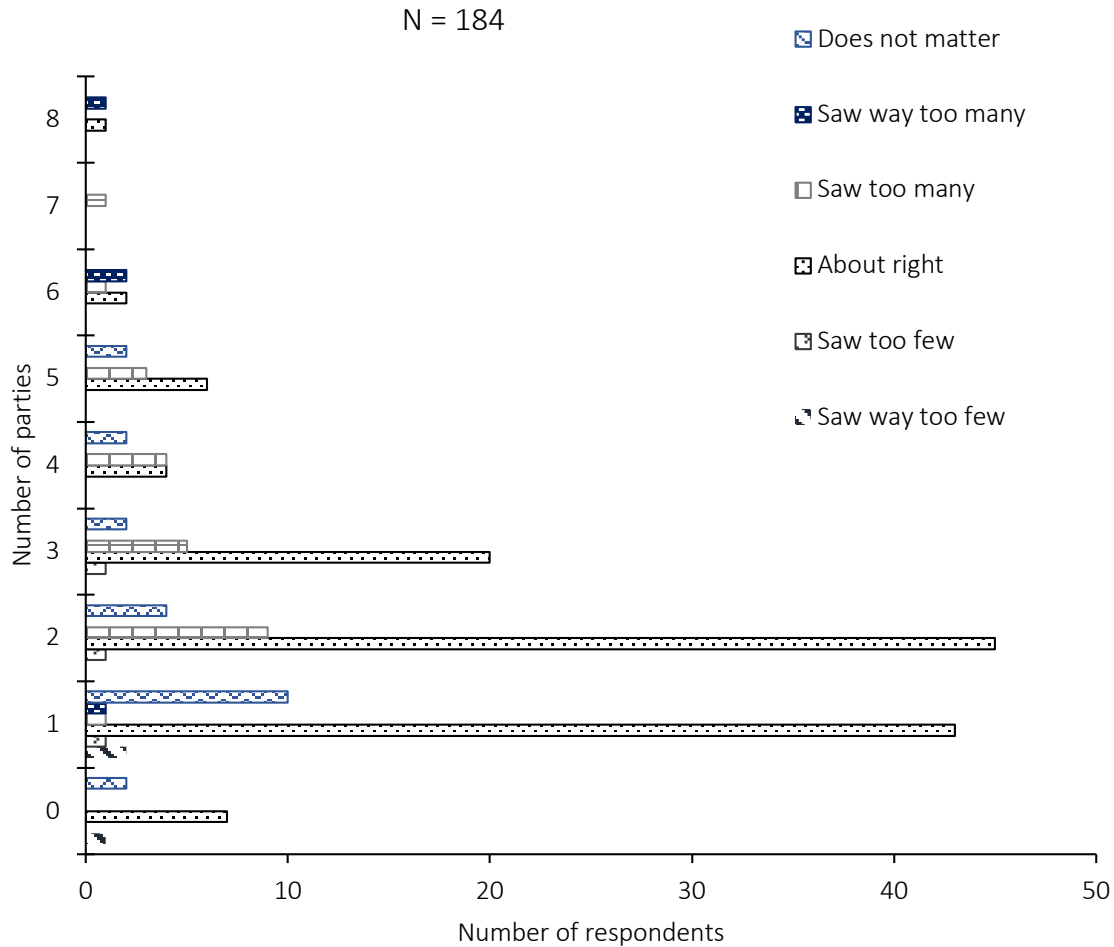
**Figure 45.** Importance of the Allagash Wilderness Waterway experience. Percentages do not equal 100 due to rounding.



**Figure 43.** Number of large parties (12+) seen while traveling on the watercourse.



**Figure 44.** Feeling about the number of people seen while paddling or boating in the Allagash Wilderness Waterway. Percentages do not equal 100 due to rounding.



**Figure 46.** The number of respondents based on the number of visitors they saw per day while traveling on the watercourse and how they felt about seeing visitors on the Allagash Wilderness Waterway.

### Visitor Preferences for Resource and Social Conditions on the Allagash Wilderness Waterway

Figures 47-67 show visitors' preferences of campsite conditions on the watercourse. Visitors rated the importance from "not at all important" to "very important" for attributes of a campsite. Those attributes or conditions receiving the highest proportion of "very important" or "important" ratings by visitors included amount of litter present at a campsite (96%) (Figure 50), dry ground at a campsite (92%) (Figure 48), level ground for tent at campsite (89%) (Figure 59), being out of sight and sound of other campers (88%) (Figure 56), and locating an available campsite when ready to stop (84%) (Figure 63). Those attributes or conditions receiving the highest proportion of "slightly important" and "not at all important" ratings by visitors included

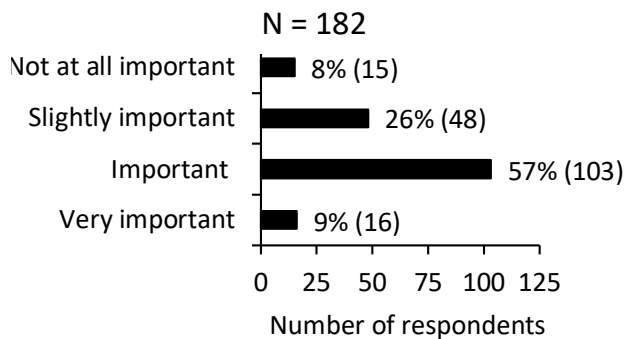
the number of trees with exposed roots (82%) (Figure 53), and letters/ numbers carved on picnic table/ridge pole (79%) (Figure 51).

A noteworthy aspect of the data includes the variability in importance for some attributes preferred at a campsite. Some of the variability appears to be related to the types of activities pursued nearby the campsite. For example, good fishing nearby campsite was rated by 39% of visitors as being "very important" or "important" as compared to 33% of visitors who rated it "not at all important" (Figure 57). Also, good swimming nearby campsite was rated by 48% of visitors as being "very important" or "important" and 52% of visitors rated this item as being "slightly important" or "not at all important" (Figure 62).

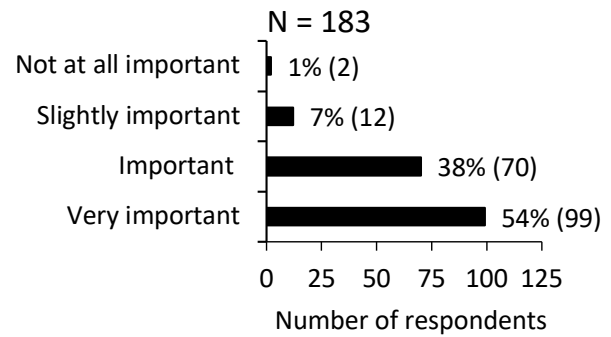
Naturalness conditions at a campsite varied in importance to visitors. For example, the number of trails/paths other than leading to access to water and privy was rated by 30% of visitors as being "very

important” or “important” as compared to 32% of visitors who rated it “not at all important” (Figure 61). Thirty-eight percent of visitors rated “very important” or “important” rustic improvements at campsites as compared to 62% that rated “slightly important” or “not at all important” (Figure 49).

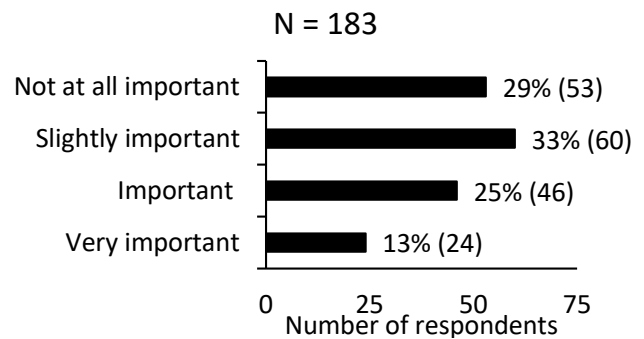
On one hand visitors rated vegetation screening between campsites as “very important” (27%) or “important” (43%) (Figure 55), but on the other hand vegetation screening between the water and campsite was rated as being “slightly important” (39%) or “not at all important” (20%) (Figure 66). Possible explanations for this difference may relate to other attributes being “very important” or “important” such as easy access to boat or canoe at campsite (75%) (Figure 58) and ability to have a cross-breeze at campsite (59%) (Figure 67). Finally, visitors also may not desire vegetation screening between the water and campsite in order that they may enjoy views from the campsite. However, as mentioned earlier in this section of the report with the desire for campers to be out of sight and sound of other campers the vegetation screening between campsites and especially multi-cell campsites is likely very important.



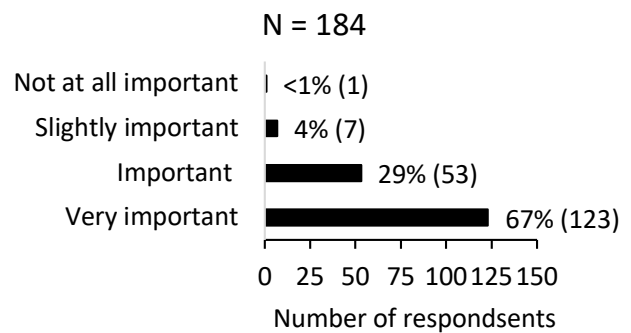
**Figure 47.** Amount of vegetation ground cover at campsite.



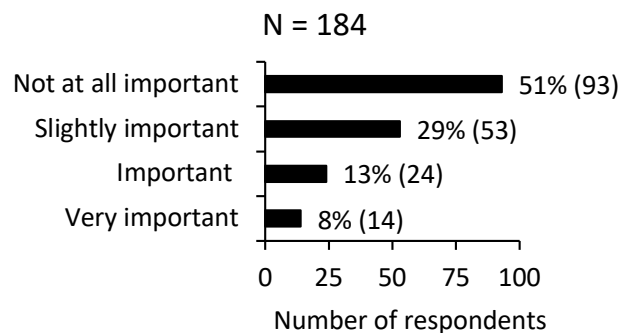
**Figure 48.** Dry ground at campsite.



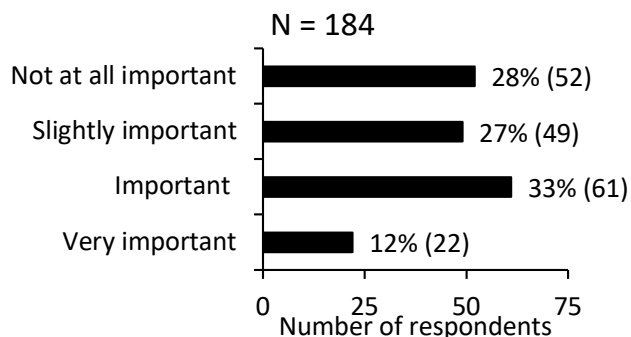
**Figure 49.** Rustic improvements at campsite.



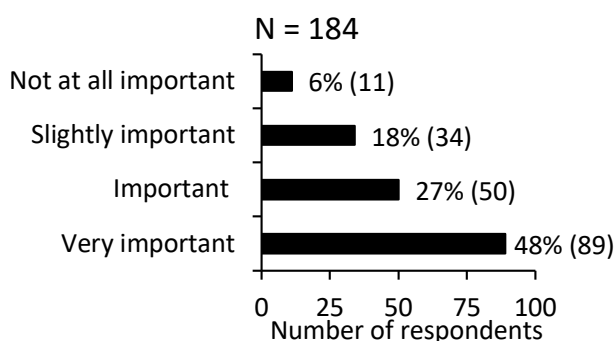
**Figure 50.** Amount of litter present at campsite. Percentages do not equal 100 due to rounding.



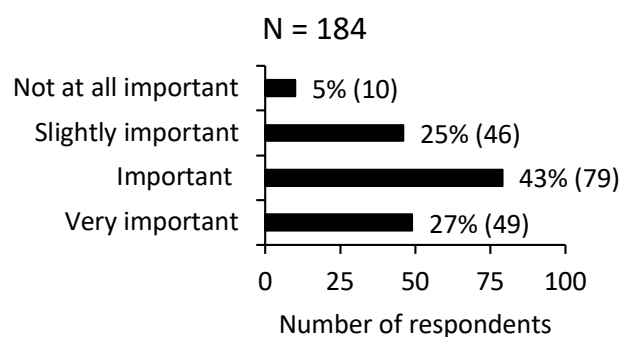
**Figure 51.** Letter/numbers carved on picnic table/ridge pole at campsite. Percentages do not equal 100 due to rounding.



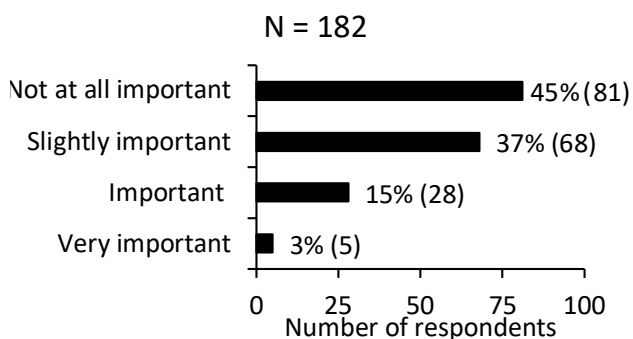
**Figure 54.** Number of trees with nails, hooks, ax marks, etc., at campsite.



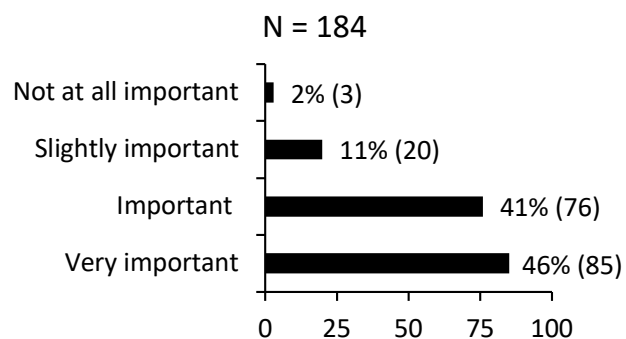
**Figure 52.** Ridgepoles attached to picnic tables at campsite. Percentages do not equal 100 due to rounding.



**Figure 55.** Amount of vegetation screening between campsites.



**Figure 53.** Number of trees with exposed roots at campsite.



**Figure 56.** Out of sight or sound of other campers.



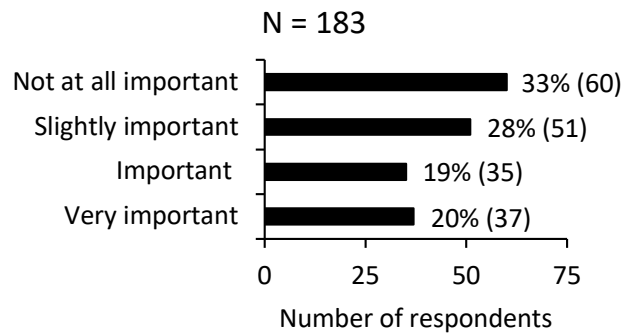


Figure 57. Good fishing nearby campsite.

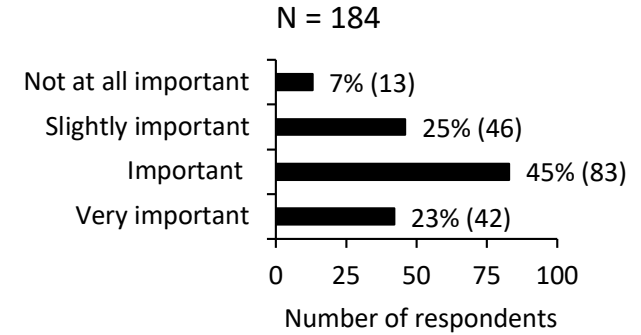


Figure 60. Shade at campsite.

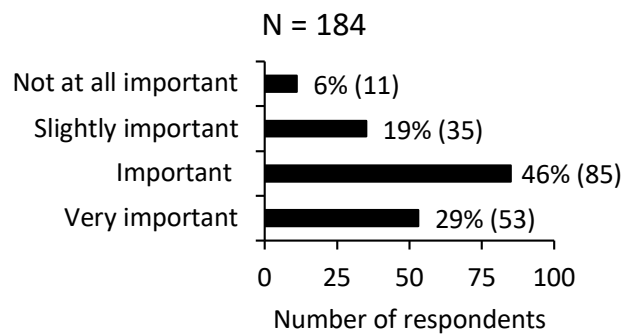


Figure 58. Good place to tie up boat or land canoe.

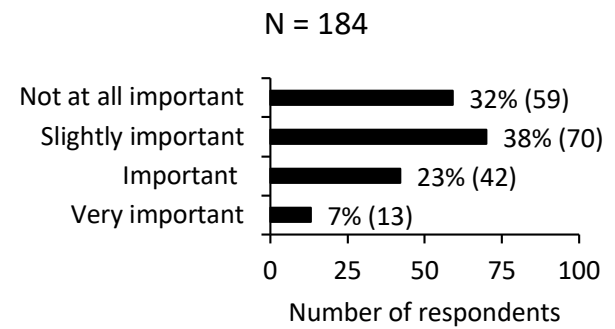


Figure 61. Number of trails/paths to other than to privy and water access at campsite.

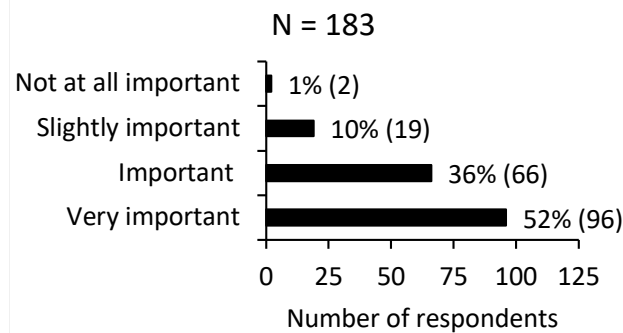


Figure 59. Level ground for tent. Percentages do not equal 100 due to rounding.

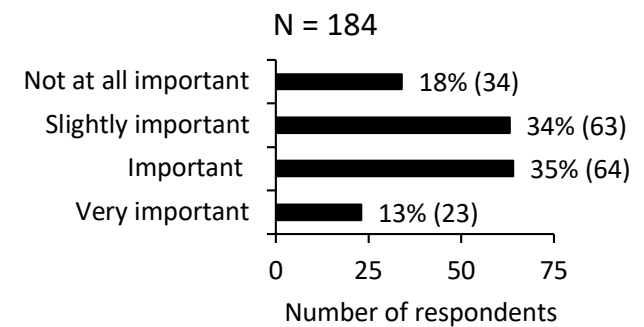
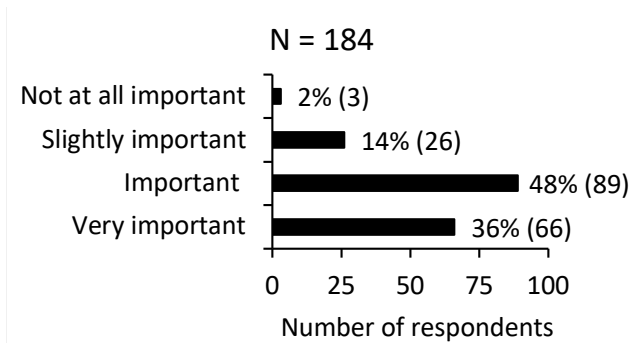
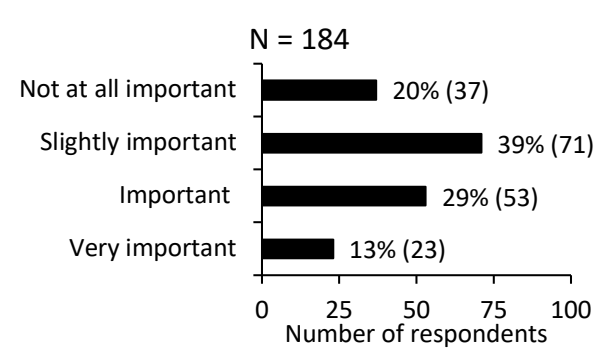


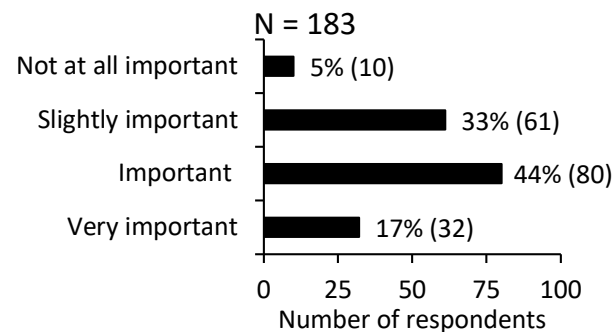
Figure 62. Good swimming nearby the campsite.



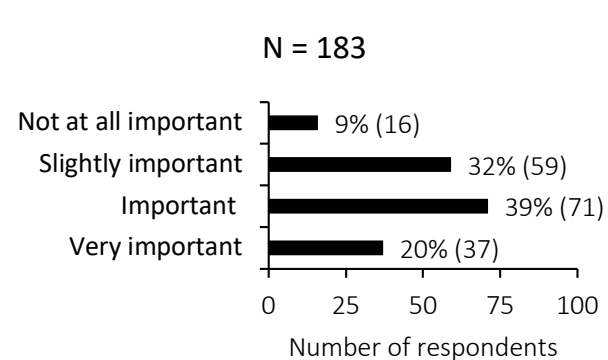
**Figure 63.** Ability to locate an available campsite when ready to stop.



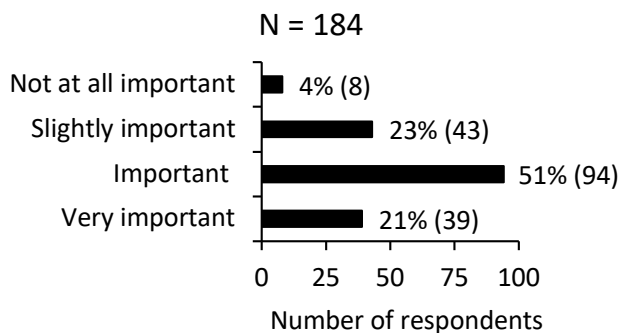
**Figure 66.** Amount of vegetation for screening between water and campsite. Percentages do not equal 100 due to rounding.



**Figure 64.** Erosion at campsite. Percentages do not equal 100 due to rounding.



**Figure 67.** Cross-breeze at campsite.



**Figure 65.** Easy access to boat or canoe at campsite. Percentages do not equal 100 due to rounding.

The Allagash Wilderness Waterway provides features at campsites that may be unique as compared to other areas in the National Wild and Scenic Rivers system with a wild designation, such as campsite tables with ridgepoles and firepit. These features have long been associated with the area and are rated by visitors as being “very important” or “important.” As an example, 75% of visitors rated that a ridge pole attached to a picnic table as being “very important” or “important” (Figure 52).

These findings suggest the need for further analyses to link important campsite attributes with different types of visitor groups based upon preferred activities such as fishing or recreational experiences identified as being important to their visit at the Allagash Wilderness Waterway. For example, one segment of visitors may place more importance on experiences involving the natural environment, exploration and remoteness, and solitude, and these visitors may prefer a campsite with little evidence of human use such as rustic improvements, exposed roots, trees with nails, and multiple paths leading into and out of the campsite location. Another segment of visitors traveling in

a larger group may prefer campsites that offer good swimming nearby as well as campsites that do not have much vegetation between campsites. Knowing more about the visitor segments would assist in suggesting possible campsite locations.

### Travel Modes to the Allagash Wilderness Waterway and Experiences

In general, visitors need to travel over many miles of gravel roads to access the Allagash Wilderness Waterway. These roads are maintained by private landowners primarily for the use of logging trucks in the North Maine Woods. Roads can vary in terms of condition by time of year and with grading done regularly to re-surface gravel on the roads. Visitors can also access via floatplane services to designated areas within the waterway. Table 14 shows that seventy-four percent of visitors recorded that they used their personal vehicle. Thirty-six percent of visitors used an outfitter shuttle. As reported earlier, 66% of visitors reported that they hired an outfitter to provide transportation or vehicle shuttle so some visitors included this mode as well as personal vehicle but in many other cases visitors only indicated one travel mode. Other selected modes of transportation reported by visitors included rental vehicle (4%) and airplane (4%). Of those who indicated a plane it is not known if a sea plane was used to access the waterway. Finally, a number of respondents (4%) indicated “other” and some of these cases included those using canoes coming from other lakes and streams into the Allagash Wilderness Waterway.

**Table 14.** Modes of transportation used by respondents.

Transportation type	Number of respondents	% of total respondents
Personal Vehicle	144	74%
Rental Vehicle	7	4%
Outfitter Shuttle	70	36%
Airplane	7	4%
Other	8	4%

Percentages do not equal 100 due to potential multiple answers.

Visitors that selected that they used a personal vehicle or rental vehicle were then asked to select the type of the automobile they used (Table 15). Over

half of the respondents answered that they used a 4WD or AWD truck (54%). The second and third most selected automobiles are SUVs (17%) and minivans/vans (13%). Visitors also responded 4WD/AWD sedan (6%), 2WD sedan (3%), and 2WD truck (1%). A number of respondents (5%) indicated “other” and these types of vehicles included 2WD sedan, outfitters car, bus, canoe, and bus.

**Table 15.** Type of automobiles used by visitors to the Allagash Wilderness Waterway.

Automobile Type	Number of respondents	% of total respondents
4WD/AWD Truck	81	55%
SUV	25	17%
Minivan/van	20	13%
4WD/AWD Sedan	9	6%
2WD Sedan	4	3%
2WD Truck	2	1%
Other	7	5%

Visitors who selected that they used either a personal vehicle or rental vehicle were also asked about their preparedness for the gravel roads of the North Maine Woods. Only three percent of visitors stated that they were unprepared (Figure 68). Visitors were asked about their comfort level for driving to the AWW. Ninety-four percent of visitors stated that they were either very comfortable or comfortable (Figure 69). As one visitor stated, “In my opinion this [flat tire] is part of the adventure and part of the fun.” Since vehicle problems can be a major setback for a trip, visitors were asked if they had any issues and if so, what issues did they end up having. Sixteen percent of visitors stated that they had vehicle problems, but according to the answers they listed in the description, this is closer to 12% (Figure 70). The majority of issues surrounded flat tires, but others stated muffler separation, brake issues, almost running out of gas, and an outfitter van breakdown.

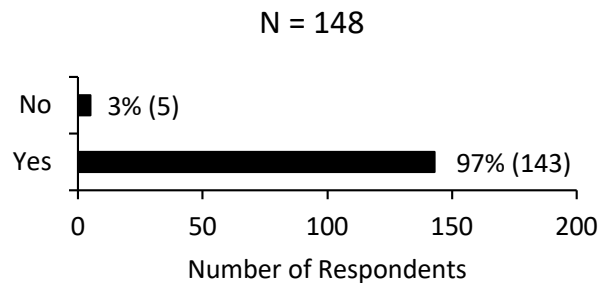


Figure 68. Visitor preparedness with traveling on gravel roads.

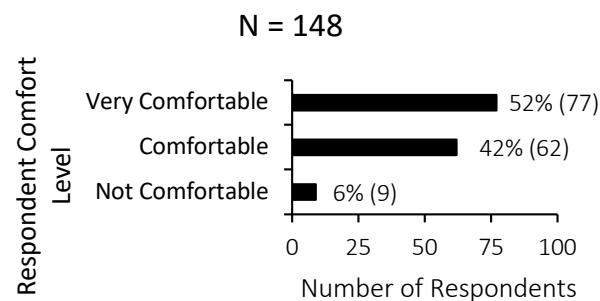


Figure 69. Respondent comfort levels for driving to the Allagash Wilderness Waterway.

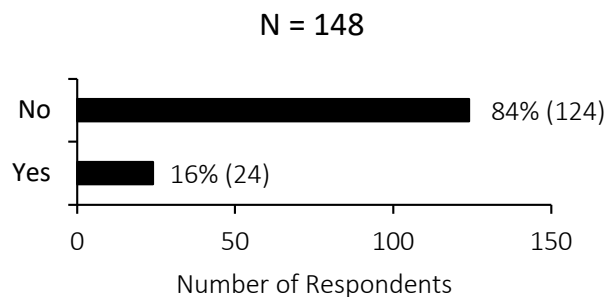


Figure 70. Visitors that had vehicle problems.

### Visitor Trip Expenses for the Allagash Wilderness Waterway

Respondents were asked to report expenses associated with their trip to the AWW. Questions were devised to assess trip expenses and these included expenses while at the waterway and traveling to and from the waterway. Visitors listed their expenses for many categories including guide and outfitter expenses, camping and access fees, groceries, gas, and other expenses. As might be expected, a large range in total expenses were reported based upon if visitors were coming from places other than Maine and the length of stay for visits. The

range as well as other information such as median and mean are identified for reported expenses.

Visitors were asked to report for themselves as well as others in their group the camping and access fees (Figure 71). Of those reporting expenses the median cost was \$150.00 per group and the average cost was \$235.00 per group. Seventy-eight percent of visitors spent between \$15-\$300 for camping and access fees per group depending on number of days of the trip and party size.

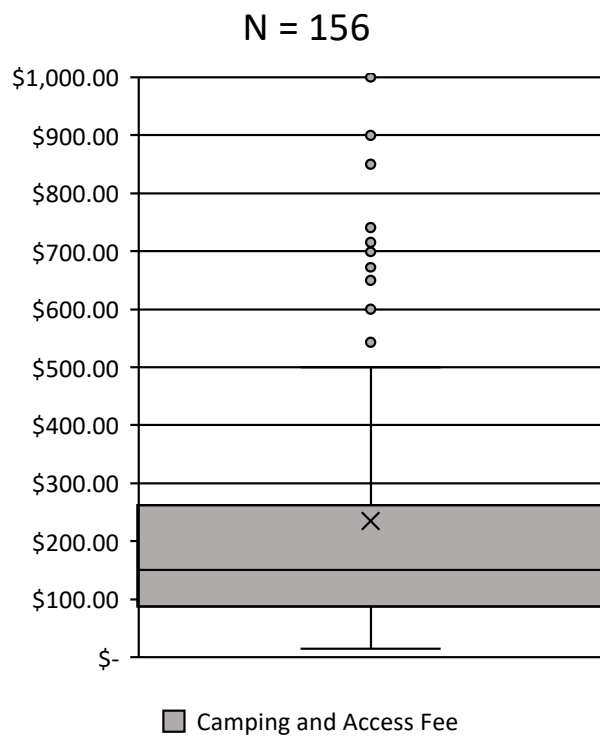
As reported earlier, 66% visitors reported that they hired an outfitter to provide transportation or vehicle shuttle (Figure 10). In addition, 30% of visitors reported that they hired an outfitter to provide equipment (Figure 11). Visitors were asked to report for themselves as well as others in their group the expenses paid for transportation as well as canoe rental and equipment (Figures 73 and 74). Of the visitors reporting expenses for the outfitter vehicle transportation, the median cost was \$250.00 per group and the average cost was \$301.00 per group. For the outfitter-hired canoe and equipment rentals, the median cost was \$355.00 per group and average cost was \$509.00 per group.

Visitors were also asked for estimating expenses for items purchased in preparation for the trip as well as expenses going to and from the Allagash Wilderness Waterway. More than half of the respondents in the study reported expenses such as food at restaurant/bar with a median cost of \$96.00 per group and average cost of \$136.00. Respondents reported an estimated median cost of gas of \$100.00 per group and the average cost of gas was \$135.00 per group. Also, in terms of groceries purchased for the trip the median cost was \$140.00 per group and the average cost was \$205.00 per group (Figure 72).

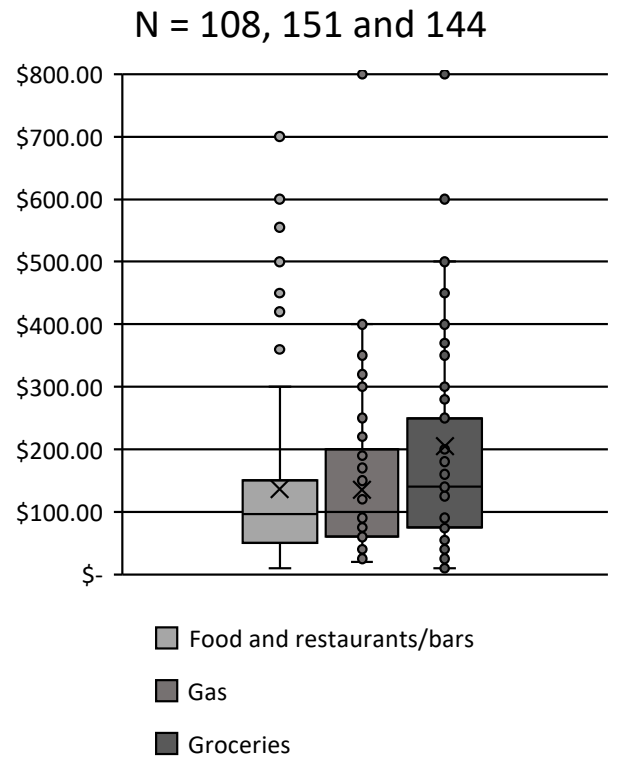
Visitors also reported expenditures for themselves and associated with the trip including recreational gear with a median cost of \$200.00 and average cost of \$275.00 (Figure 75). Visitors reported expenditures associated with clothing purchased for the trip with a median of \$100.00 and average cost of \$115.00. Also, visitors reported expenditures associated with permits and we assume these to include fishing. The median expense was \$55.00 and average cost of \$80.00.

Finally, other trip expenses were reported and among those included repairs to vehicles. As reported above, "Did you have an issue with your vehicle?" and 16% of those visitors who responded to the question

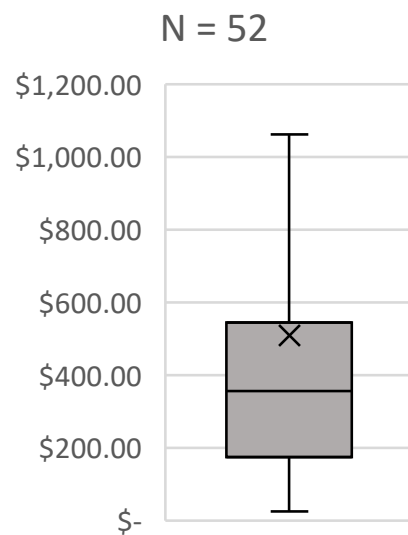
indicated that they did have a vehicle issue (Figure 70). Thirteen visitors reported costs associated with vehicle repairs and the median cost was \$125.00 and mean of \$221.00 to repair vehicles.



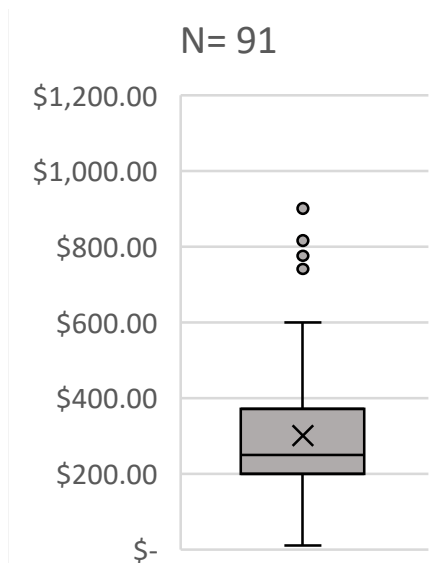
**Figure 71.** Reported expenses per visitor group for camping, and access fee with range, line in colored box the median and X in colored box the mean.



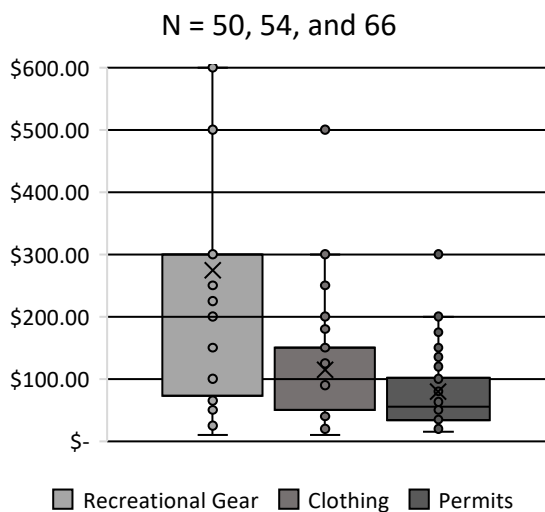
**Figure 72.** Reported expenses per visitor group for food and restaurants/bar, gas, and groceries with range, line in colored box the median and X in colored box the mean.



**Figure 73.** Reported expenses per visitor group for rental equipment with range, line in colored box is the median and X in colored box is the mean.



**Figure 74.** Reported expenses per visitor group for outfitter transportation with range, line in colored box is the median and X in colored box is the mean.



**Figure 75.** Reported expenses per visitor group for recreational gear, clothing, and permits with range, line in colored box is the median and X in colored box the mean.

## Management Implications

The continued high percentage of visitors rating their overall trip experience on the Allagash Wilderness Waterway as “very good” (86%) or “good” (13%) should be encouraging to management and the Maine Department of Agriculture, Conservation, and Forestry. In fact, an improvement is observed in reported levels of satisfaction from the 2003 visitor survey when respondents rated their overall trip experience as “very good” (74%) and “good” (23%) (Daigle 2005). Most visitors consider the recreational experiences like the Allagash Wilderness Waterway as being “extremely important” (79%) or “very important” (18%) and this level of satisfaction supports the importance of stewardship in protecting this valuable resource for the people of Maine and many who come from away to visit.

The Allagash Wilderness Waterway serves a diverse group of visitors who have different interests and abilities. Perhaps not surprising many of the recreational experiences and their levels of importance reported were similar to the respondents in the 2003 visitor survey. Most visitors rated natural environment “very important” (90%) and exploration and remoteness as “very important” (82%). The highest proportion of “slightly important” or “not at all important” ratings by visitors were hunting, fishing, and gathering (experience associated with doing these activities in a remote area) (52%) and number of users (you saw while traveling; in groups that camped near you; large groups of users) (33%). However, other visitors rated these experiences “very important” for example, hunting, fishing, and gathering (21%) and number of users (25%). Similarly, 22% of visitors indicated that physical activity was “slightly important” or “not at all important,” but other visitors indicated that physical activity was “very important” (38%).

Some visitor groups place more importance on experiences involving natural environment, personal and social experiences, and hunting, fishing, and gathering while other visitor groups place more importance on natural environment, exploration and remoteness, solitude, and seeing other users. Manning (1999) defines satisfaction as the congruence between expectations and outcomes. The “importance-performance” analysis reveals a high level of satisfaction reported for many of the key experiences rated as being “very important.” Management appears to be providing



a good mix of recreational experiences to accommodate different interests and abilities.

The current management plan lists as a policy objective to increase visitation to the Allagash Wilderness Waterway (MDACF, 2012). While visitation has seen a slight decline, our study suggests quality of recreational experiences are not contributing to declines in visitation. In addition, most respondents in our study are returning customers (78%). An aspect that may address decreasing number of visitors are current efforts to build interpretation of the environment and human history associated with the Allagash Wilderness Waterway. An increase was observed with the level of “very important” with connection with special places/tradition related to recreational opportunities and conditions on the Allagash Wilderness Waterway as compared to the 2003 visitor study. Also, interest in learning about local history increased 25% from the previous study period. Forty percent of visitors in this study visited local history sites and 42% of visitors reported that they learned about local history as part of their trip. Efforts currently underway to develop interpretive programming and the new release of an Allagash Explorer visitor pocket guide will likely be desirable for visitors and may attract new visitors to the Allagash Wilderness Waterway (MDACF 2020). Transportation to the Allagash requires some logistical planning and perhaps more options for access utilizing guides may also assist with more recruitment of visitors.

Some specific management implications have already been pointed out for monitoring and improving the visitor experience at campsite locations. An improvement was reported in fewer visitors rejecting their first available campsite. However, forty-four percent of visitors still reported that they rejected an available campsite where they intended to stop. Approximately 21% reported rejecting the site because of its condition, for example, too wet, too buggy, or erosion. A campsite condition study completed in the early 2000’s (Daigle, Speirs, and Wallace, 2002) and re-examined in 2014 found the condition of campsites improved rather than getting worse in condition (Daigle, Opusznski, and LaRoche, 2017). Also encouraging is that 21% of respondents reported rejecting a site because of its condition as compared to 33% of respondents in the 2003 visitor survey. Management must continue rehabilitating campsites. One strategy might be to utilize visitor survey data of those reporting

rejecting a campsite because of its condition and then examine the campsites in proximity to where they reported staying each night during their visit.

In addition to the condition of the campsite, approximately 33% of visitors indicated they rejected a site because of its location. Many reasons were given, but most focused on being too close to another occupied campsite or the site being a multi-cell campsite. The amount of vegetation screening between sites may help alleviate this problem at a multi-cell campsite, especially those sites at remote locations or transition sites where many visitors tend to camp to portage to other locations. However, to avoid having to visit multiple campsites to make an acceptable selection visitors concerned about the solitude at the campsite could plan ahead to avoid camping at these transition sites or be directed to less visited areas in the watercourse. Given the desirability of different campsite attributes, such as enough water for landing a boat, additional information about campsite features may help visitors who had difficulty locating an acceptable campsite.

Some visitors will accept more departure from pristine and natural conditions than others. Clearly, most visitors prefer the amenities available at campsites such as the picnic table with ridgepole and fire pit. There is more disparity among visitors with importance of naturalness conditions at campsites and some prefer more rustic amenities at campsites. Given the important management objective of maximizing wilderness character some efforts may be required to help protect the naturalness of campsites and associated health of vegetation and soils. In addition, some visitors desired more rustic amenities at campsites, and this should be discouraged and if discovered to be removed with only approved structures such as table and fire pit. Management currently endorses many low-impact camping practices available in the AWW Guide and Map. Additional Leave No Trace (LNT) tips might help to protect naturalness conditions such as recommendations to select campsites that fit the size of their group and adopting behaviors that limit impact to vegetation at the campsite.

Visitor information obtained from this survey revealed most visitors felt prepared for traveling on long stretches of gravel roads. However, some visitors felt unprepared and a few experienced issues that required vehicle repairs. Information is provided in the North Maine Woods booklet such as using caution on

freshly graded roads. Information is also provided in the Allagash Wilderness Waterway Map and Guide but limited in terms of precautions that might be taken to prepare to travel on the watercourse. Additional information might be considered beyond items needed for traveling on the watercourse such as type of vehicle appropriate to travel on gravel roads including full size spare tire. Some visitors recorded that they drove their car to the outfitter shuttle and did not have to drive any of the dirt roads themselves. Importantly, travel options to access the Allagash Wilderness Waterway could be identified such as guide services that currently assist many visitors with transportation.

A noticeable increase has been observed in the use of the Internet to help visitors plan for their trip to the Allagash Wilderness Waterway. In this study, 38% of respondents reported the use of the Internet as compared 17% respondents in the 2003 study. In 2003, 70 million American households (62%) had one or more computers. Nearly 55% had Internet access (Day et al., n.d.). In 2012, 79% of American households had one or more computers at home and 75% had Internet access (Bureau, n.d.). Some visitors in their closing comments suggested that more information be provided about trip distances and associated take out locations, black fly season and precautions, water levels, fishing, wildlife, information about NMW dirt roads and restrictions, and sources to learn more about the natural environment and history of AWW information provided on the Internet might help supplement information available with the AWW Guide and Map. Importantly, management recommendations involving information that might help visitors achieve desired campsite attributes could be provided with sources of information on the Internet.

Finally, 22% of visitors traveled with children under the age of 16. Visitors reported a total of 101 minors between 38 visitor parties. One respondent commented on the joy he had for rangers who deputized his son as a junior waterway ranger. Two other respondents commented on the importance of teaching their children about their routes and the importance of keeping a father and son tradition alive. Acadia National Park and other National Parks have junior ranger program books full of activities and information for children. Creating a resource, whether online or in print, for children to have as a learning activity on their trip can

give their parents or guardians a way to engage with their children.

## Research Implications

The major research implication of this study is the value of having baseline data and ability to monitor stewardship efforts in protecting high-quality visitor experiences on the AWW. Periodic visitor surveys help provide an assessment to confirm the success of recreational management and identify areas that may need attention to improve the quality of the visitor experience. This research also reveals new trends that have implications to management and approaches to improve recreational experiences.

Comparing the types of experiences and recreational opportunities that are important to different visitors with desired attributes of campsites provides particularly promising future research opportunities. Factor analysis is a mathematical technique to reduce a large number of interrelated variables to a number of latent dimensions or factors (Kass and Tinsley 1979). Another method, cluster analysis could identify experience dimensions or use the set of factor scores associated with reasons for visiting into statistically homogenous segments. Knowing what different visitor groups value about visiting the area can help to explain much about their trip planning, preferences for management, and other characteristics that can help managers understand and plan for their clientele (Collum and Daigle, 2015).

As indicated above, a campsite condition assessment has been completed, as well as a fairly recent reassessment that identified areas of the waterway where campsites conditions have improved and those few areas where conditions got worse in terms of vegetation loss and expansion of the campsite. These areas might be compared to visitor assessments where they indicated problems with the campsite in terms of condition or location. The visitor assessments might help to prioritize areas for rehabilitating campsites as well campsites that have a high occupancy rate during the season. The results of this study will help refine the concepts of acceptable variations with efforts of maximizing the “wilderness character” of AWW.

The information obtained from visitors on expenses related to visiting the AWW provides helpful insights and merits further analysis to delineate economic expenditures from those who live in Maine as compared

to those traveling great distances to visit the Allagash region. There are clearly economic benefits associated with visitors coming to the region paying for access and camping fees, guide services for transportation, and these benefits extend into nearby communities for visitors purchasing gas, eating at restaurants, and shopping at stores. The economic impacts provided in this report are likely underestimated as we suspect in some cases visitors reported individual expenses instead of requested expenses for their group. Future analyses may be able to tease out and adjust data based on visitor responses as well as guide additional questions used to obtain economic data.

The tourism industry has been resilient when faced with major disruptive events, but COVID-19 is predicted to set unprecedented effects on impact and recovery of the tourism industry (Gössling, Scott, and Hall, 2020). Research is in the early stages of forecasting the effects of COVID-19 but emphasis by states and national health agencies such as the Center for Disease Control have called for limiting travel and to practice social distancing in outdoor recreation settings. Staycations are becoming more and more popular as states require tests for COVID-19 as well as mandatory self-quarantines for travelers that may pose a high risk to others. Forty-nine percent of visitors that completed this survey were from Maine and this proportion may grow given the current situation with COVID-19. Given the above circumstance canoeing and boating as well as opportunities for isolated camping may become more desired by individuals if given a choice among various outdoor recreation activities. Management may need to adjust the time interval conducting visitor surveys to assess possible visitor behaviors for safety reasons as well as protect experiences and resource conditions.

## VISITOR COMMENTS

The visitor survey included several open-ended questions for visitors to share additional information about their trip experiences. Given the high number of comments shared we attempt to capture the major themes and utilize quotes that represent major elements within each theme. Utilizing software to analyze comments we created “word clouds” to give a sense of different elements within five different themes. The larger the word or phrase within the word cloud

represents frequency or magnitude of the element shared by visitors within the theme.

Figure 76 is the first word cloud that represents the majority of visitors who shared additional information on the visitor survey labeled reasons for a quality visitor experience. What is unique with the elements within the word cloud associated with solitude is the aspect of being disconnected from cell phones and technology. Many visitors mentioned this visitor experience aspect in contrast to the visitor survey conducted a few decades ago in 2003. Some representative quotes shared by visitors include the following:

“The trip was challenging at times but overall it was outstanding. I enjoyed spending so much time outdoors. Lack of connectivity was such a wonderful bonus. The AWW is beautiful.”

“I’ve done roughly 30 trips in the Allagash over 35 years. I appreciate the fact that the experience hasn’t changed dramatically in that time. It is wonderful to still be able to go to a place that is remote but easily accessible from home and that provides the same experiences and challenges for my kids as it provided me as a kid.”

“No cell phone coverage and love the area.”

“Fishing, seeing old friends, remote, history, tradition!”

“Remote, peaceful, beautiful scenery with plenty of moose.”

“Good to get away from people and enjoy the solitude.”

“Not having cell reception for the duration of the trip - solitude. The remoteness together with the challenge of the journey. Also, beautiful mountains, lakes, wildlife, etc.”

“The peace and solitude, above all. Part of that was the beautiful, undisturbed riparian lands and the encounters with wildlife (more common than encounters with people.)”

“Seclusion and being “disconnected”.”

“Total isolation, no cell or other communication, foliage, hail, no mosquitos.”

“Love how it is quiet, remote and uncrowded. It is awesome to be away from everything!”

“It is an important asset to Maine and New England. It is increasingly difficult to find remote waterways.”

“Class 1&2 rapids were exciting/challenging.”

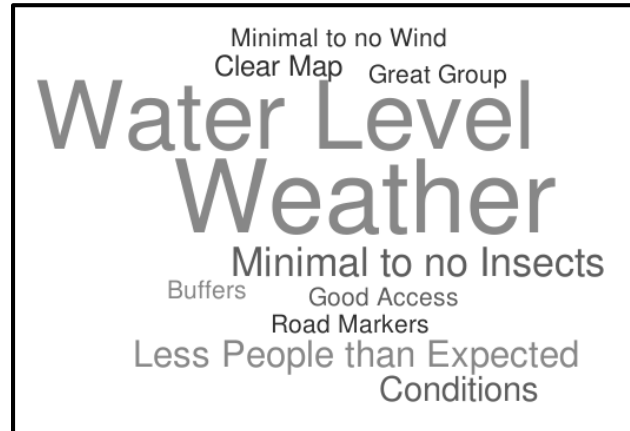
“Being with family and watching them enjoy what we love to do. Being on that river and sharing the family history and connections to the river with the next generation and watching them grow in their skillset of navigating the river.”

“Campsites were all well-kept. The natural beauty and intriguing human history along the waterway are what make it so special.”

“I always wanted to paddle the famous Allagash River. [Its] remote wilderness was exactly what I envisioned. All was great!!”



**Figure 76.** Word cloud of elements associated with reasons for a quality visitor experience.



**Figure 77.** Word cloud associated with positive visitor experiences with controllable and uncontrollable aspects of management.

Figure 77 is the second word cloud, and this focuses again on positive aspects of the visitor experience with controllable and uncontrollable aspects by management. Some representative quotes shared by visitors include the following:

“We had beautiful weather, the river was not low so there was no dragging on bottom and the day was spent with family.”

“The weather cooperated and our group was completely unplugged; no cell phones or internet-everyone was forced to spend time together without screens.”

“It was a lot more quiet than I expected. The campsites were set up perfectly. We had nearly perfect weather. We arrived just in time with the water levels to finish the last section past Michaud Farms.”

“Good weather, better than expected river conditions, helpful outfitter, great campsites, easier trip than expected.”

“Excellent maintenance on campsites (High Bank and Lone Pine) and a full panoply of weather conditions. Sun, heat, wind, rain, thunderstorms. The true Allagash experience.”





**Figure 78.** Word cloud associated with negative visitor experiences with controllable and uncontrollable aspects of management.

The third word cloud focuses on the negative aspects of the visitor experience with controllable and uncontrollable aspects by management (Figure 78). Some of these comments around finding limited information online about the Allagash Wilderness Waterway is notable given the use of this information source by visitors (Table 5). Some representative quotes shared by visitors include the following:

“Bugs, wind, and time limitations (based upon our schedule) kept it from being very good.”

“This was my 6th time on the AWW. This was the first time we were literally scared not to get a camping site each day. Normally I would say very good, but someone needs to start policing the quantity of people on the AWW in any one week. It was very disappointing to see so many other parties during our trip. If I wanted that, I'd canoe the Saco.”

“The trip down river was great though after the falls the river was very shallow and our canoes got hung up on multiple occasions. The day we started the trip there was an extremely large group of 37 boy scouts starting down river, this caused us to alter our plans due to the number of campsites they were taking.”

“Information or lack of is what I found to be troubling.....”

“You should include information on black fly season as a precaution on maps.”

“It's difficult to get reading material that helps planning a trip without getting a book like the Allagash Guide from the library or a store. Some of this could easily be online. Also, I printed maps, not knowing this would be given to me. Some effort should be made to alert people doing a web search that the general guide and

other information will be available at check in. Rangers and staff were great and very helpful. They are a strong asset to the AWW experience.”

“The roads need better signage. Extremely difficult to find.”



**Figure 79.** Word cloud associated with the condition of campsites.

The fourth word cloud focuses on the campsite conditions (Figure 79). Some representative quotes shared by visitors include the following:

“The campsites were as described, and it was a great vacation to get away from mobile phone service.”

“Campsites were excellent.”

“Clean campsites, Friendly and helpful Rangers, Plenty of wildlife.”

“Excellent campsites. Nice, helpful rangers. Good mix of flat water and fast water.”

“Peace and tranquility and very well-maintained sites.”

“Outhouses were a luxury. Good balance of remoteness and encountering other campers. Camp sites were clean and well-marked.”

“Well maintained campsites (and outhouses), beautiful scenery, remote location.”

“The rangers were helpful and friendly. The waterway is in good shape, we appreciate all of the work that is done to the campsites. The area is free of trash and offers a wonderful camping experience. I love the waterway. The

table at 5 Finger South has a big hole all around it that needs to be filled in to keep people from slipping into it during high rain and muddy conditions."

"I was very impressed with the conditions of the campsites. That makes a great positive difference to the quality of the trip."

"Thank you for providing access to such a wonderful place! Things like the privy and the ridge pole over the picnic table were small but important extra's in place that made the camps cozy and have everything we needed. The rangers we spoke with were friendly and helpful. The AWW is such a wonderful place, and I am so thankful I got to experience it."



**Figure 80.** Word cloud associated with visitor interactions with rangers on the watercourse.

The final word cloud focuses on the interactions with rangers at the Allagash Wilderness Waterway (Figure 80). Clearly, there is an appreciation of the efforts being made by rangers with protecting the area as well as positive interactions contributing to the visitor experience. Some representative quotes shared by visitors include the following:

"The river was quiet and peaceful. All of the campsites were maintained very well. All of the rangers we met were helpful and friendly."

"Excellent campsites. Nice, helpful rangers. Good mix of flat water and fast water."

"All experiences involving personnel were positive and friendly. The campsites were in excellent condition, and everyone on the water understood and practice common courtesy and enjoyment of being on the water."

"My family lived and worked on the Allagash Wilderness Waterway back in 1973/74. It was wonderful to come back (although not the first time) and know that the personnel are still as enthusiastic about serving the visitors and knowledgeable about the area, especially the history. It's been many years since I've made the waterway trip, but I am convinced that it would still be the pleasure that it was at those times."

"Rangers were great in terms of offering advice on how to navigate the river and our overall trip. They also were able to offer additional information on the natural and non-natural history of the area. Campsites were well maintained. Bugs were barely present, water was at a nice high level, weather cooperated. The trip was nearly perfect."

"The rangers were very friendly and helpful. The campsite was in excellent shape. In regard to satisfaction with the location, we come back as a family one to two times each summer."

"Rangers were courteous and extremely helpful. Encountered some rather obnoxious other parties on the water, especially on Eagle Lake."

"The Outstanding quality of the rangers, everything was well-cared-for and ranger and partner seemed very pleased to see my eight-year-old son. They went out of their way to show him a great time, including helping him become a junior waterway ranger. As a registered guide, this was hardly my first time in the Allagash but still came away impressed by what an amazing place this is."

"Rangers were terrific. They took us in when we were obviously cold / shivering and gave us an opportunity to warm up while listening to their stories and history of the area."



In sum, the comments shared by visitors are extremely helpful and add important information to their experience visiting the Allagash Wilderness Waterway.

The output for this report was generated using the 2019 version of Qualtrics software. Copyright © 2019 Qualtrics. Qualtrics and all other Qualtrics product or service names are registered trademarks or trademarks of Qualtrics, Provo, UT, USA. <https://www.qualtrics.com>

## References

- Azzopardi, E., & Nash, R. 2013. A critical evaluation of importance-performance analysis. *Tourism Management* 35:222-233.
- Babbie, E. 2016. *The Basics of Social Research*. 7th Edition. Cengage Learning 560 p.
- Bureau, U. C. (n.d.). *Computer and Internet Access in the United States: 2012*. The United States Census Bureau. Retrieved August 3, 2020 from <https://www.census.gov/data/tables/2012/demo/computer-internet/computer-use-2012.html>.
- Cahill, D.G., Collins, R.H., McPartland, S., Pitt, A. N. and Verbos, R.I. 2018. Overview of the interagency visitor use management framework and the uses of social science in its implementation in the National Park Service. *The George Wright Forum: The GWS Journal of Parks, Protected Areas and Cultural Sites* 35 (1).
- Collum, K. K., & Daigle, J. J. 2015. Combining attitude theory and segmentation analysis to understand travel mode choice at a national park. *Journal of Outdoor Recreation and Tourism* 9:17-25.
- Daigle, J.J., J.C. Speirs, and B.M. Wallace. 2002. Monitoring the Condition of Campsites in the Allagash Wilderness Waterway – Summers 1999–2001. Technical Report submitted to the Maine Department of Conservation and Bureau of Parks and Lands, Augusta, ME.
- Daigle, J.J., J. Hannon, and C. Stacey. 2003. Factors influencing experience quality: Comparing user groups and place attachment to the St. Croix International Waterway. In: *Seventh World Wilderness Congress Symposium: Science and Stewardship to Protect and Sustain Wilderness Values*, A. Watson and J. Sproull, comps. pp. 133– 141. 2001 November 2–8; Port Elizabeth, South Africa. Proc. RMRS-P-27. USDA, Forest Service, Rocky Mountain Research Station, Ogden, UT.
- Daigle, J. J., 2005. Allagash Wilderness Waterway Visitor Survey – 2003. Maine Agric. For. Exp. Sta. Misc. Rep. 2436. Maine Agricultural and Forest Experiment Station, Orono, ME, 53pp.
- Daigle, J. J., Opuszynski, W., & LaRoche, M. 2015. Fifteen years of change: Campsites in the Allagash Wilderness Waterway. *International Journal of Wilderness* 23(1):18-24.
- Daigle, J. J., 2020. Developing forestry recreation services. In Stanturf, J. A. (Ed.), *Achieving sustainable management of boreal and temperate forests* (pp. 807-830). Burleigh Dodds Science Publishing, Cambridge, UK.
- Day, J. C., Janus, A., & Davis, J. (n.d.). *Current Population Reports*. 15.
- Dillman, D. A., Smyth, J. D., & Christian, L. M. 2014. *Internet, phone, mail, and mixed-mode surveys the tailored design method* (Vol. 4). New Jersey: Wiley.
- Ednie, A., Daigle, J. and Leahy, J. 2010. The construction of sense of place on the Maine coast. *Journal of Park and Recreation Administration* 28(1):36-51.

- Gössling, S., Scott, D., & Hall, C. M. (2020). Pandemics, tourism and global change: a rapid assessment of COVID-19. *Journal of Sustainable Tourism* 1-20.
- Hannon, J. G. 2004. Place needs and client outcomes of wilderness experience programs in Maine: a descriptive-interpretive approach. M.S. Thesis. University of Maine, Orono, 165pp.
- IBM Corp. Released 2020. IBM SPSS Statistics for Windows, Version 26.0. Armonk, NY: IBM Corp.
- Kass, R.A., and H.A. Tinsley. 1979. Factor analysis. *Journal of Leisure Research* 11:120–138.
- Lucas, R.C.; and G.H. Stankey. 1985. Role of research in applying the limits of acceptable change system. In *Proceedings: southeastern recreation research conference 1985 February–March 1, Myrtle Beach, SC*, ed. A.E. Watson, pp. 1–15. Georgia Southern College, Department of Recreation and Leisure Services Statesboro, GA.
- Maine Department of Agriculture, Conservation, and Forestry. 2012. Allagash Wilderness Waterway Management Plan. 222 pgs.
- Maine Department of Agriculture, Conservation and Forestry. (n.d.). News: Newsroom: Retrieved August 3, 2020, from <https://www.maine.gov/dacf/about/news/news.shtml?id=2641333>.
- Manning, R.E. 1999. *Studies in outdoor recreation: Search and research for satisfaction*. 2nd ed. Oregon State University Press, Corvallis, OR.
- Manning, R. E. 2013. *Studies in Outdoor Recreation: Search and Research for Satisfaction* (3rd ed.). Oregon State University, Corvallis, Or.
- Martilla, J. A., & James, J. C. 1977. Importance-performance analysis. *Journal of Marketing* 41(1): 77-79.
- Tonge, J., and S.A. Moore. 2007. Importance-satisfaction analysis for marine-park hinterlands: A Western Australian case study. *Tourism Management* 28(3):768-776.
- Watson, A.E., D.R. Williams, J.W. Roggenbuck, and J.J. Daigle. 1992. Visitor characteristics and preferences for three National Forest Wildernesses in the South. Res. Pap. INT-455. USDA, Forest Service, Intermountain Research Station, Ogden, UT.

## APPENDIX A: SURVEY INSTRUMENT

### Start of Block: Consent Form

Please enter the code given to you on the email. \_\_\_\_\_

Dear Allagash Wilderness Waterway (AWW) Visitor,

You are invited to participate in a research project being conducted by Ashley Cooper, a graduate student and supervised by Dr. John Daigle, a professor in the School of Forest Resources at the University of Maine along with the Maine Bureau of Parks and Lands. The purpose of this study is to better understand your use, expectations, and satisfaction levels of the AWW. You must be at least 18 years of age to participate.

#### What will you be asked to do?

If you decide to participate, you will be asked to fill out the following questionnaire, which will take approximately twenty minutes.

#### Risks

Except for your time and inconvenience, there are no risks to participating in this study.

#### Benefits

While this study may have no direct benefit to you, this research will help us understand the values important to visitors like yourself in order to better advise management decisions.

#### Compensation

At the end of this survey, you will have the opportunity to enter your name into a raffle for one 20"x24" limited edition print of the AWW. You must reach the end of this survey in order to be entered into the raffle.

#### Confidentiality

Your responses for the survey will be confidential. A key will be used to keep track of who has responded to the survey so that reminders are not sent unnecessarily. Please do not type your name anywhere on the questionnaire. The data will be stored on a secure electronic database and the key will be stored using software that provides additional security. The key will be kept until January 1, 2020. The data will be deleted from Qualtrics in May 2020. The downloaded data will be cleaned to remove any identifying information and kept, by the researchers, indefinitely to compare with future surveys.

#### Voluntary

Participation is voluntary. You may stop at any time and skip questions.

#### Contact Information

If you have any questions about this study, please contact:

Ashley Cooper  
Graduate Student  
School of Forest Resources  
University of Maine  
ashley.cooper1@maine.edu

Dr. John Daigle  
Professor  
School of Forest Resources  
University of Maine  
(207) 581-2850  
jdaigle@maine.edu

If you have any questions about your right as a research participant, please contact:

Office of Research Compliance  
University of Maine  
(207) 581- 2657  
umric@maine.edu

Thank you for taking the time to complete this questionnaire!

If you consent to taking part in this study, please select I consent below. If you select, I do not consent, you will be sent to the end of the survey.

- I give my consent.
- I do not give my consent.

### End of Block: Consent Form

### Start of Block: Introduction Questions

All of the following questions refer to the visit you made to the AWW on the date selected below.

Please select the month and day of your arrival to the AWW.

	Month			Day		
Arrival	• May	• June	• July	Answers: 1-31		
	• August	• September	• October			

How many people were in your party on this visit, including yourself?

Answers: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, & 12+

How many people, in your party, were under 16?

Answers: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, & 12+

What is the makeup of your travel party?

- Family of families
- Family plus friends
- Other (describe) \_\_\_\_\_
- Family and acquaintances
- From an organization (Scouts, Club, etc.)

How did you travel on the watercourse? (*Check all that apply*)

- Boat with motor
- Canoe with motor
- Other (describe) \_\_\_\_\_
- Canoe without motor
- Kayak

Which of the following activities did you engage in on this visit? (*Check only those things that you personally engaged in*)

- Boating
- Camping
- Canoeing
- Collecting fiddleheads, berries, etc.
- Fishing
- Hiking
- Hunting
- Other (describe) \_\_\_\_\_
- Learning about history
- Nature study (bird watching, identifying wildflowers, etc.)
- Picnicking
- Spending time all alone
- Taking pictures
- Talking to people in other groups
- Visiting local history

Which of the following wildlife did you see? (*Check all that you saw*)

- Bald eagle
- Beaver
- Black bear
- Blue heron
- Deer
- Fox
- Loon
- Moose
- Muskrat
- Osprey
- River otter
- Other \_\_\_\_\_

Was this your first visit to a remote or undeveloped river area?

- Yes
- No

Have you ever visited the AWW before?

- Yes
- No

Did you hire an outfitter?

	Yes	No
A. To provide transportation or vehicle shuttle?		
B. To provide equipment?		

Did you hire a guide to lead you down the watercourse?

- Yes
- No

How would you rate this trip on the AWW? (*Check one*)

- A. Very good
- B. Good
- C. Fair
- D. Poor
- E. Very poor

Given your rating above, what was it about this trip that made you feel this way?

---



---



---



---

### End of Block: Introduction Questions

### Start of Block: Transportation Questions

Q69 What mode(s) of travel did you use to get to the AWW? (*Check all that apply*)

- Personal vehicle
- Rental vehicle
- Outfitter shuttle
- Airplane
- Train/Bus
- Other (Please describe)

Q70 What kind of automobile did you use? \*

- 2WD sedan
- 4WD/AWD sedan
- SUV
- 2WD Truck
- 4WD/AWD Truck
- Minivan/Van
- Other (Please specify)

\*Only visitors that selected personal vehicle or rental vehicle were shown this and the following questions about transportation.

Q74 Do you feel your vehicle was well prepared for the trip? (i.e. spare tires, extra gas, proper lights)

- Yes
- No

Q71 How comfortable were you driving on the dirt roads to the AWW?

- Not Comfortable
- Comfortable
- Very Comfortable

Q72 Did your vehicle have trouble at any point during your trip? If so, please tell us what happened.

- Yes \_\_\_\_\_
- No

### End of Block: Transportation

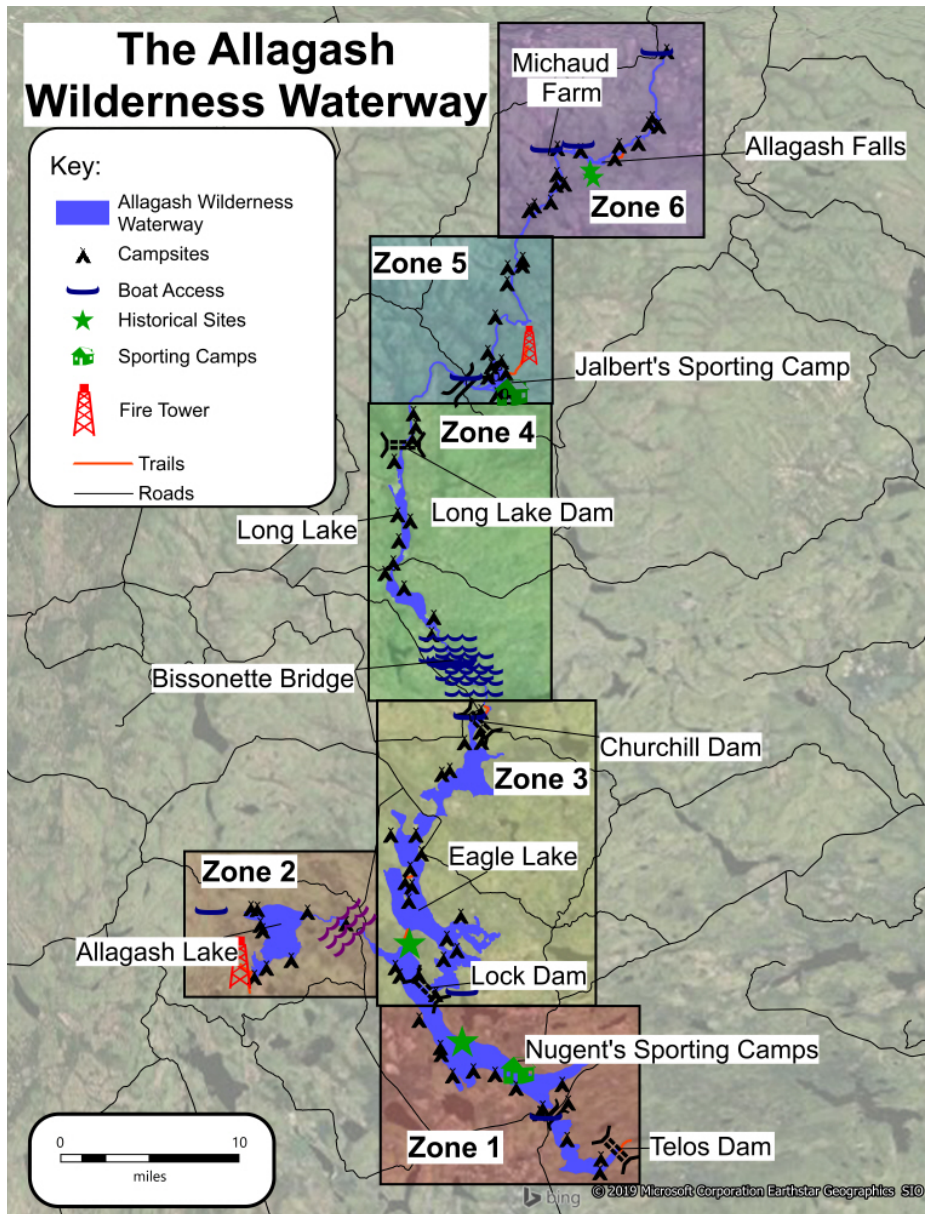
## Start of Block: Trip Mapping

Did your party camp overnight? \*

- Yes
- No

\*If a visitor selected no, they would be sent to a bank of questions for Daytrippers.

The map below displays the entire Allagash Wilderness Waterway (AWW) separated into zones by color. The next set of questions will ask you about where you camped on your trip in each zone. Please refer back to this map if you are confused about where a zone or campsite is located.

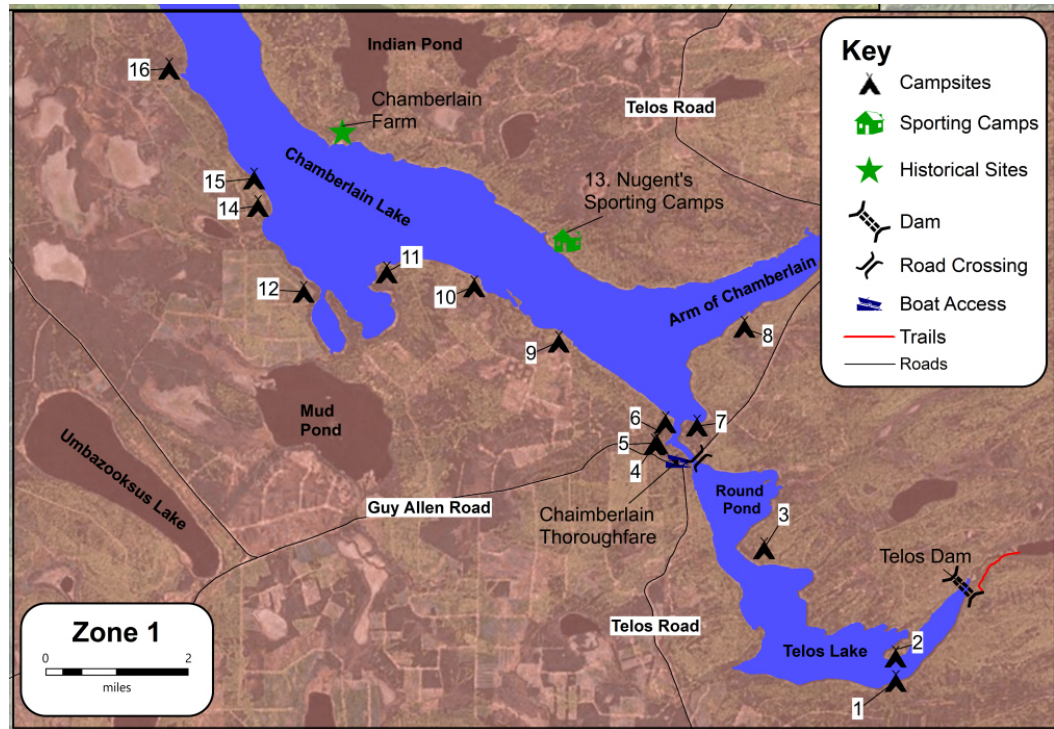


Please indicate the first zone in which you entered the AWW. \*

- |          |          |          |
|----------|----------|----------|
| • Zone 1 | • Zone 2 | • Zone 3 |
| • Zone 4 | • Zone 5 | • Zone 6 |

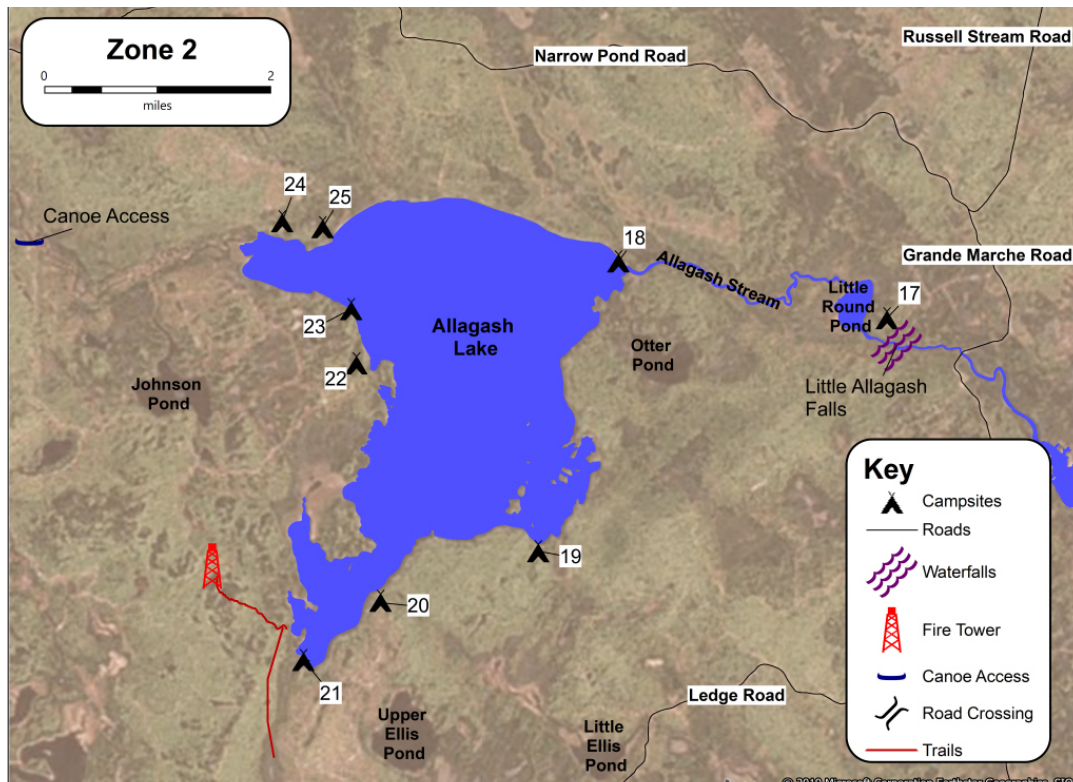
\*Visitors skip to the zone they selected that they started in.





Zone 1: For each campsite you stayed at, please enter the number of nights in the

- |                  |                              |                                    |
|------------------|------------------------------|------------------------------------|
| 1. Telos Landing | 2. Murphy's Field            | 3. High Bank                       |
| 4. F.W. Ayer     | 5. H. W. Marsh               | 6. Thoroughfare                    |
| 7. Boy Scout     | 8. The Arm                   | 9. Ledge Point                     |
| 10. Rocky Cove   | 11. Gravel Beach             | 12. Mud Brook                      |
| 13. Nugent's     | 14. Donnelly Point           | 15. Shady                          |
| Sporting Camps   |                              |                                    |
| 16. Ellis Brook  | I did not stay in this zone. | This is the last zone I stayed in. |

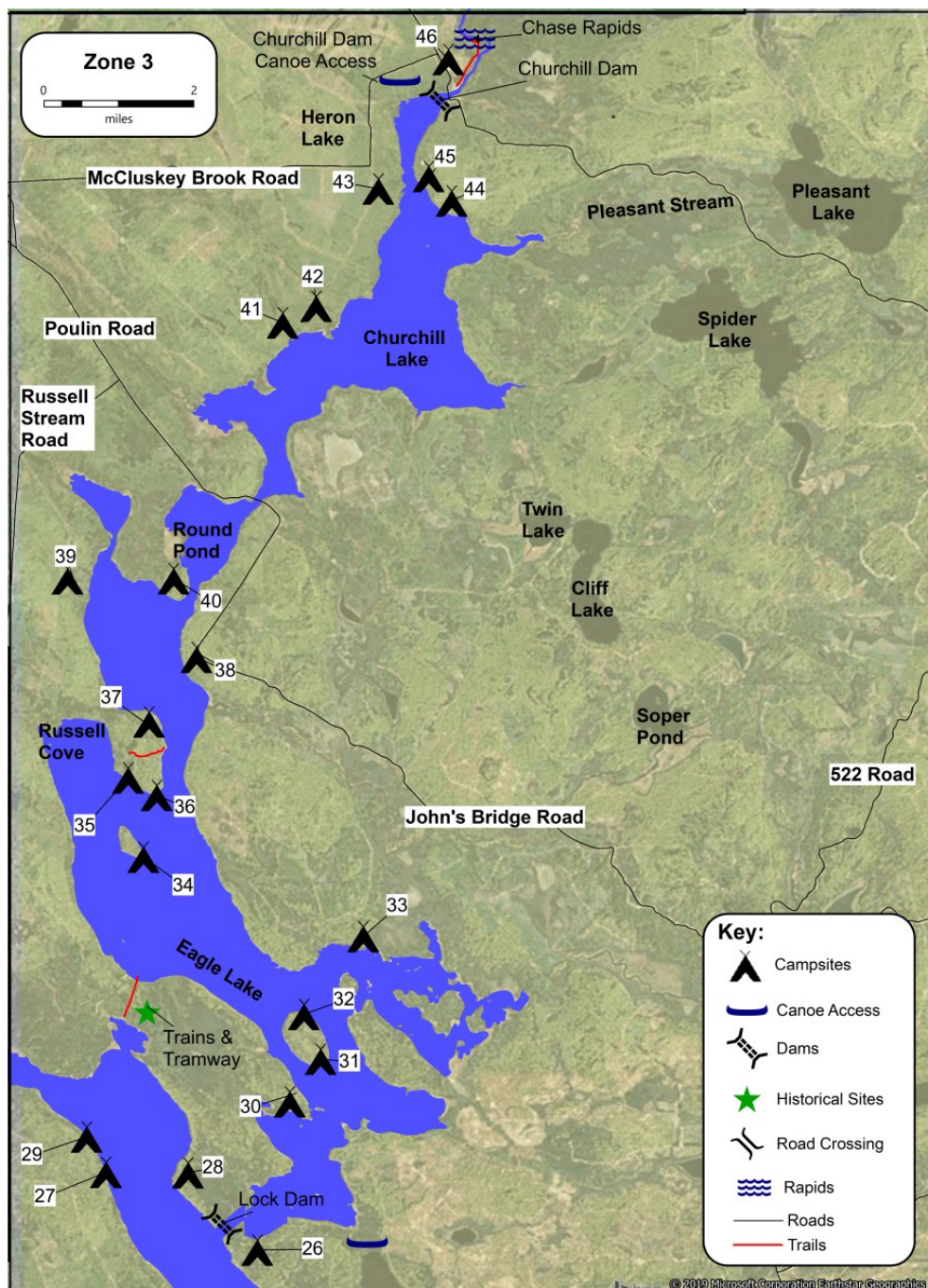


Zone 2: Select the campsites used on this trip and enter the number of nights you spent at each campsite.

- |     |                |     |             |     |             |
|-----|----------------|-----|-------------|-----|-------------|
| 17. | Allagash Falls | 18. | Outlet      | 19. | Island      |
| 20. | Ede's          | 21. | Carry Trail | 22. | Cove        |
| 23. | Ice Cave       | 24. | Ledge Point | 25. | Sandy Point |

I did not stay in this zone.

This is the last zone I stayed in.



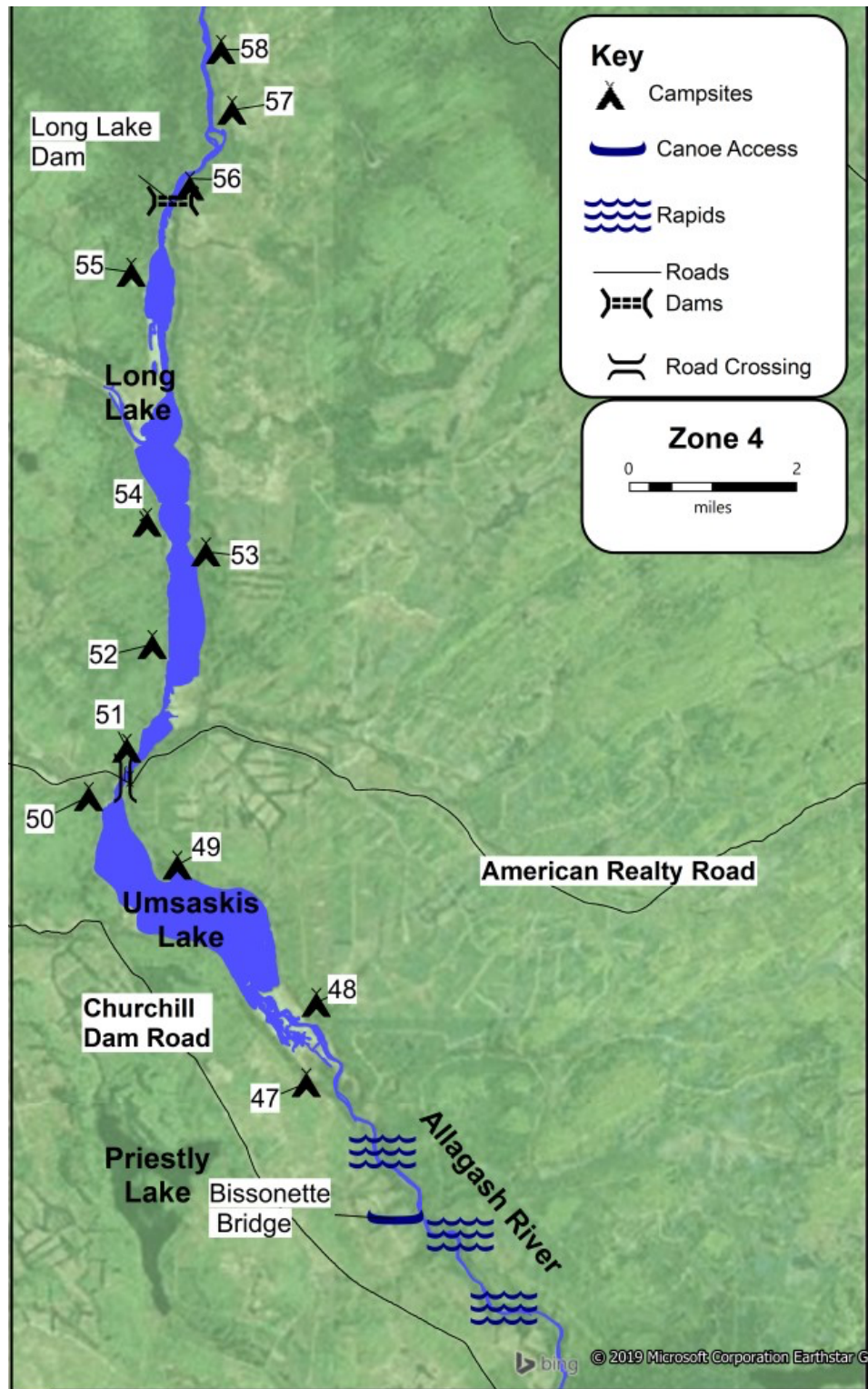
Zone 3: Select the campsites used on this trip and enter the number of nights you spent at each campsite.

- |                     |                    |                      |
|---------------------|--------------------|----------------------|
| 26. Lock Dam        | 27. Lost Spring    | 28. McCarren         |
| 29. Crow's Nest     | 30. Breezy Point   | 31. Pillsbury Island |
| 32. Thoreau         | 33. Smith Brook    | 34. Farm Island      |
| 35. Lone Pine       | 36. Priestly Point | 37. Pump Handle      |
| 38. Ziegler         | 39. Fred King      | 40. Little Eagle     |
| 41. Scofield Cove   | 42. Scofield Point | 43. High Bank        |
| 44. Churchill Ridge | 45. Jaws           | 46. Churchill Dam    |

I did not stay in this zone.

This is the last zone I stayed in.

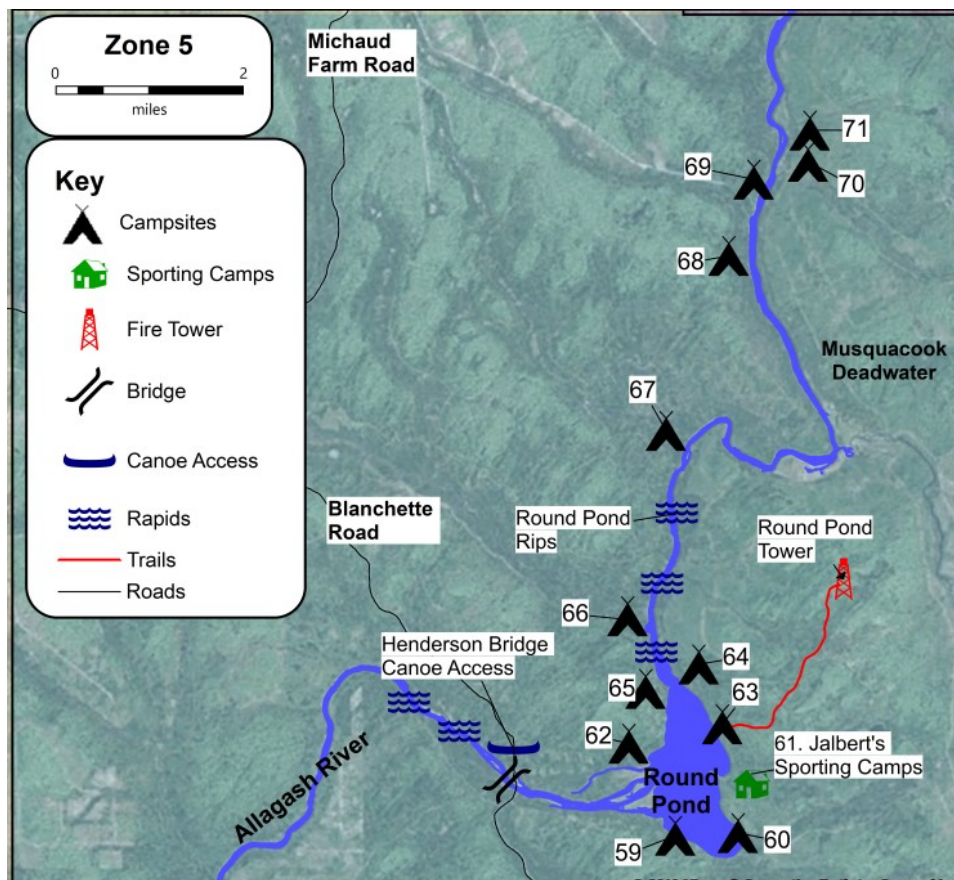




Zone 4: Select the campsites used on this trip and enter the number of nights you spent at each campsite.

- |                   |                     |                              |
|-------------------|---------------------|------------------------------|
| 47. Meadows       | 48. Chisholm Brook  | 49. Ledges                   |
| 50. Sandy Point   | 51. Pine            | 52. Grey Brook               |
| 53. Jalbert       | 54. Sam's           | 55. Lost Popple              |
| 56. Long Lake Dam | 57. Cunliffe Island | I did not stay in this zone. |

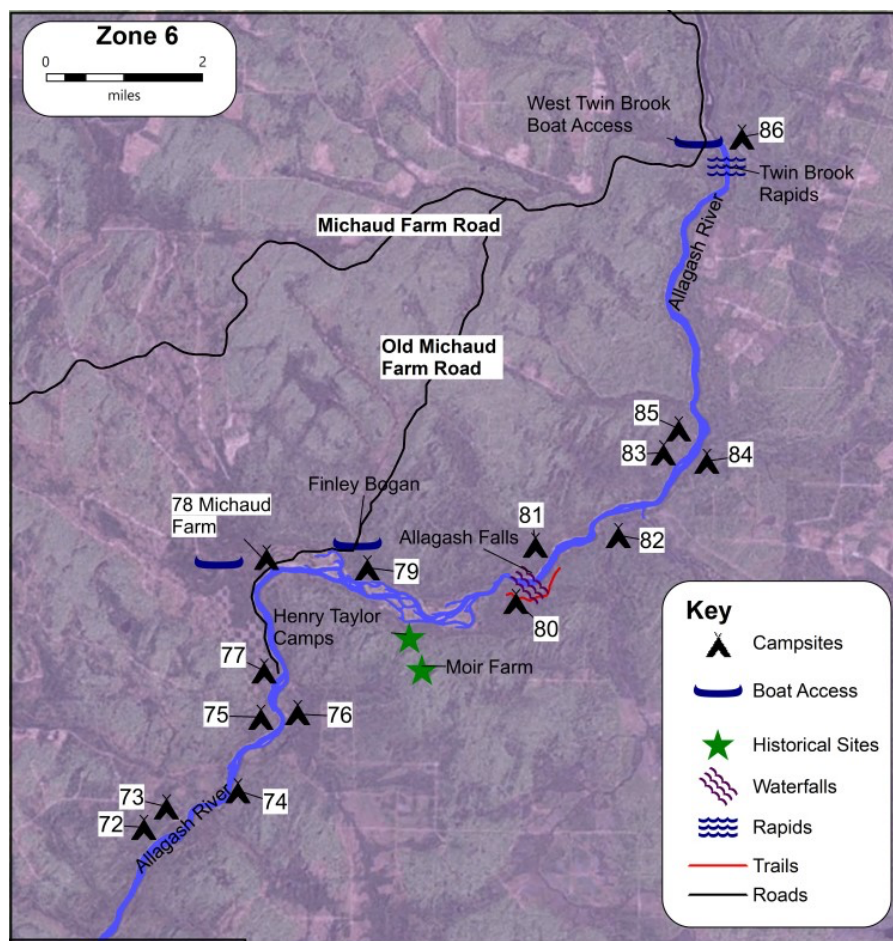
This is the last zone I stayed in.



Zone 5: Select the campsites used on this trip and enter the number of nights you spent at each campsite.

- |                             |                             |                              |
|-----------------------------|-----------------------------|------------------------------|
| 58. Sweeney Brook           | 59. Back Channel            | 60. Squirrel Pocket          |
| 61. Jalbert's Sporting Camp | 62. Inlet                   | 63. Tower Trail              |
| 64. Round Pond Rips         | 65. Outlet                  | 66. Turk Island              |
| 67. Croque Brook            | 68. Hosea B                 | 69. Five Finger West         |
| 70. Five Finger Brook South | 71. Five Finger Brook North | I did not stay in this zone. |

This is the last zone I stayed in.



Zone 6: Select the campsites used on this trip, and enter the number of nights you spent at each campsite.

- |     |                 |     |                 |     |                 |
|-----|-----------------|-----|-----------------|-----|-----------------|
| 72. | Deadwater South | 73. | Deadwater North | 74. | Bass Brook      |
| 75. | Cunliffe        | 76. | Cunliffe Depot  | 77. | Ramsay Ledge    |
| 78. | Michaud Farm    | 79. | Taylor Landing  | 80. | Allagash Falls  |
| 81. | Falls Bank      | 82. | McKeen Brook    | 83. | Big Brook South |
| 84. | Big Brook East  | 85. | Big Brook North | 86. | East Twin Brook |

I did not stay in this zone.

\*Overnight visitors were sent to the end of the trip mapping section.

**Only day trippers were shown the following questions.**

What is your access point?



- Allagash Lake
- Finley Bogan
- Johnson Pond
- Other (Please describe) \_\_\_\_\_
- Chamberlain Bridge
- Henderson Bridge
- Michaud Farm
- Churchill Dam
- Indian Stream
- The Thoroughfare

How many hours did you spend within the AWW? Answers: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 & 12+

What was your primary destination?

- Allagash Lake
- Eagle Lake
- Long Lake
- Round Pond
- Chamberlain Lake
- Heron Lake
- Michaud Farm
- Unmasks Lake
- Churchill Lake
- Indian Pond
- Telos Lake
- Other (Please Describe) \_\_\_\_\_

**End of Block: Trip Mapping**

**Start of Block: Access points**

The following questions ask about decisions that you made related to your access point to the watercourse. This information will assist the Bureau of Parks and Lands in understanding how visitors choose access points.

In choosing places to visit within the AWW, some people prefer to visit new areas each time, while others enjoy going back to familiar places. Please indicate decisions made regarding your access point. \*

- Visit new areas
- Revisit same areas
- Both

\*Visitors were only shown this question if they visited the Allagash Wilderness Waterway before.

Did you request information about access points on the watercourse from the Bureau of Parks and Lands before your trip?

- Yes
- No

Visitors use different sources of information to learn about access points to the watercourse. Please indicate the following sources you used. (*check all that apply*)

- Bureau of Parks and Land Staff
- Told by friends
- Allagash Wilderness Waterway map
- Newspaper
- North Maine Woods check stations
- Don't remember
- Guidebooks
- Other (Please Describe) \_\_\_\_\_
- Been there before
- Topographic maps
- Internet/website

What were the reasons for choosing your access point? (*check all the apply*)

- A new area, variety
- Been there before, familiarity
- Easy access
- Able to travel more distance for one-way canoe trip
- Other (describe) \_\_\_\_\_
- Access to good fishing or hunting
- Close to home
- Able to travel less distance for one-way canoe trip
- Less crowded

What were reasons for not choosing other access points

- Too far to destination from access point
- Too long a drive to access point
- Time constraints
- Road conditions too poor
- Lack of fishing and hunting
- Not interested in other access points
- Too crowded
- Watercourse travel too difficult or challenging
- Weather
- Wanted to visit new area
- Water too shallow for boating/canoeing
- Other (describe) \_\_\_\_\_

**End of Block: Access points**

**Start of Block: Visitor Encounters** The following questions were only shown to visitors who camped overnight.

How many other parties on average camped within sight or sound of your campsite? \_\_\_\_\_

How did you feel about the number of other people you saw at the campsites on the Allagash Wilderness Waterway?

- Saw way too few    • Saw too few    • About right    • Saw too many
- Saw way too many    • Does not matter to me one way or another    • Do not remember

Was a campsite available where you planned to stop each night?

- Always    • Usually (At least ½ time)    • Sometimes (Less than ½ time)    • Never

Did you take the first available campsite you found where you intended to stop?

- Yes    • No

How often were you able to find a campsite that was acceptable in terms of other parties being camped within sight or sound?

- Always    • Usually (At least ½ time)    • Sometimes (Less than ½ time)    • Never

Did you reject an available campsite because of its conditions (litter, damaged trees, erosion)?

- Yes    • No \*

\* If a visitor selected no, they were not shown "What conditions caused the rejection of campsite?"

What conditions caused the rejection of campsite? Check all that affected your decision.

- |  |   |
|--|---|
| • Litter   | • trees with exposed roots                      |
| • too many damaged trees                           | • lack of vegetation ground cover               |
| • condition of fire pit                            | • scarce vegetation for screening other campers |
| • too many trails leading into and out of campsite | • human waste                                   |
| • not enough tent sites                            | • firewood scarce                               |
| • erosion at campsite                              | • site too buggy                                |
| • site too wet                                     | • ridge pole or table in poor condition         |
| • too many rustic improvements                     | • other (describe) _____                        |

Did you reject an available campsite because of its location (shallow boat landing; poor view, too close to another occupied campsite)?

- Yes    • No \*

\* If a visitor selected no, they were not shown "What location conditions caused the rejection of campsite?"

What location characteristics caused the rejection of campsite? Check all that affected your decision.

- |  |                                |
|--|--------------------------------|
| • too close to another occupied campsite | • multi-cell campsite          |
| • poor view of water                     | • too far away from boat       |
| • no level ground for tent               | • size too small for our group |
| • shallow water for landing boat         | • not enough shade             |
| • no breeze for insects                  | • too close to water           |
| • lack of good swimming area             | • lack of good fishing         |
| • other (describe) _____                 |                                |

**All visitors were shown the following questions.**

About how many parties did you see traveling the watercourse per day? Answers: 1, 2, 3, 4, 5, 6, 7, 8, 9, &amp; 10+

How many of these parties were large parties (12 or more people)? Answers: 1, 2, 3, 4, 5, 6, 7, 8, 9, &amp; 10+

How did you feel about the number of other people you saw per day while paddling or boating in the AWW?

- Saw way too few    • Saw too few    • About right    • Saw too many
- Saw way too many    • Does not matter to me one way or another    • Do not remember    •

**End of Block: Visitor Encounters**

### Start of Block: Recreational Experiences

The following questions ask for your personal opinion about the Allagash Wilderness Waterway (AWW). This information will assist the Bureau to better understand the experience of the user.

We would like to find out how important the following recreational opportunities and conditions are to you when visiting the AWW.

	Not at all Important	Slightly Important	Important	Very Important
<b>A. Natural Environment-</b> enjoy the view from lake or river; the scenic quality of nature; observe and hear wildlife; the peace & quiet of a remote area.				
<b>B. Physical Activity-</b> physical exercise and health; physical challenge.				
<b>C. Personal and Social Experiences-</b> get away from daily routine; develop a sense of self confidence; chance to think and reflect; simplify daily needs.				
<b>D. Exploration and Remoteness-</b> an area free of man-made or very limited man-made noises; remoteness from cities & people; an adventure & challenge.				
<b>E. Solitude-</b> a small, intimate group experience; isolated from other groups; privacy.				
<b>F. Connection with Nature-</b> learn about nature; opportunity for self-discovery.				
<b>G. Connection with Special Place/ Tradition-</b> feel connected to a place that is important to me; feel a sense of an earlier rugged time in history.				
<b>H. Wilderness or Backcountry Skills-</b> improve backcountry travel skills; learn to travel to a remote destination and return successfully; a sense of self-sufficiency; recreation in a primitive environment.				
<b>I. No Litter and Waste-</b> amount of litter along the watercourse and at campsites.				
<b>J. Management Control-</b> condition of the watercourse including the campsites and portage trails; publicized rules and regulations; extent of naturalness conditions at the designated campsites.				
<b>K. Information on Watercourse-</b> finding suitable campsites, information on where other users are likely to be; finding an unoccupied campsite.				
<b>L. Number of Users-</b> you saw while traveling; in groups that camped near you; large groups of users.				
<b>M. Hunting, Fishing, Gathering-</b> experiences associated with doing these activities in a remote area.				

### End of Block: Recreational Experiences

**Start of Block: Satisfaction Level**

We would like to find out how satisfied you were with the following recreational opportunities and conditions to help assess the quality of your experience on this trip.

	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied
<b>A. Natural Environment-</b> enjoy the view from lake or river; the scenic quality of nature; observe and hear wildlife; the peace & quiet of a remote area.					
<b>B. Physical Activity-</b> physical exercise and health; physical challenge.					
<b>C. Personal and Social Experiences-</b> get away from daily routine; develop a sense of self confidence; chance to think and reflect; simplify daily needs.					
<b>D. Exploration and Remoteness-</b> an area free of man-made or very limited man-made noises; remoteness from cities & people; an adventure & challenge.					
<b>E. Solitude-</b> a small, intimate group experience; isolated from other groups; privacy.					
<b>F. Connection with Nature-</b> learn about nature; opportunity for self-discovery.					
<b>G. Connection with Special Place/ Tradition-</b> feel connected to a place that is important to me; feel a sense of an earlier rugged time in history.					
<b>H. Wilderness or Backcountry Skills-</b> improve backcountry travel skills; learn to travel to a remote destination and return successfully; a sense of self-sufficiency; recreation in a primitive environment.					
<b>I. No Litter and Waste-</b> amount of litter along the watercourse and at campsites.					
<b>J. Management Control-</b> condition of the watercourse including the campsites and portage trails; publicized rules and regulations; extent of naturalness conditions at the designated campsites.					
<b>K. Information on Watercourse-</b> finding suitable campsites, information on where other users are likely to be; finding an unoccupied campsite.					
<b>L. Number of Users-</b> you saw while traveling; in groups that camped near you; large groups of users.					
<b>M. Hunting, Fishing, Gathering-</b> experiences associated with doing these activities in a remote area.					

**End of Block: Satisfaction Level**

**Start of Block: Campsite Features****Visitors were only shown this section if they camped overnight.**

The following questions ask about your preferences for campsite conditions on the watercourse. During your recent visit, how important were the attributes of a campsite to your experience. Please read each question carefully and check the box that best describes your opinion.

	Not at all important	Slightly Important	Important	Very Important
A. Amount of vegetation ground cover				
B. Dry ground				
C. Rustic improvements (e.g., log seats) in addition to picnic table				
D. Amount of litter present				
E. Letter/numbers carved on picnic table/ridge pole				
F. Ridge poles attached to picnic tables				
G. The number of trees with exposed roots				
H. The number of trees with nails, hooks, ax marks, etc.				
I. Amount of vegetation screening between campsites				
J. Out of sight and sound of other campers				
K. Good fishing nearby				
L. Good place to tie up boat or land canoe				
M. Level ground for tent				
N. Shade				
O: Number of trails/paths leading into and out of my campsite, other than the privy and water access				
P. Good Swimming nearby				
Q. Locating an available campsite when ready to stop				
R. Erosion at campsite				
S. Easy access to boat or canoe				
T. Amount of vegetation for screening between water and campsite				
U. Cross-breeze				

**End of Block: Campsite Features**



**Start of Block: Economic Spending**

This section is concerned with your accommodations and spending while in Maine and on your Allagash Wilderness Waterway (AWW) trip. Please only include the time traveling to and from the waterway and your time on the waterway.

Note: Maine residents should only include information that is directly related to this trip.

On this trip, how many nights did you spend in Maine aside from your time at the AWW? (Please write a number in the box below)

For you and your group, please report all estimated expenditures for the items listed below during this trip to Maine and the AWW.

Please write "0" if no money was spent in a particular category and round your responses to the nearest dollar amount.

**Please enter all expenses directly related to your AWW trip.**

	Dollar amount spent
Camping and access fee	
Canoe and equipment rental	
Car repair	
Clothing	
Entertainment (movies, festivals, etc.)	
Food and restaurants/bars	
Gas	
Groceries	
Guiding services	
Guided trips (such as rafting or hunting trip)	
Lodging	
Outfitter transportation and parking	
Permits (such as fishing)	
Recreational Gear	
Souvenirs	
Other (describe):	

**Please enter all expenses from your time in the state of Maine.**

Please exclude all expenses from the table above. For example, if you took a side trip to Baxter State Park.

Note: Maine residents please only include expenses from the trip.

	Dollar amount spent
Camping and Access Fee (such as checkpoint fee)	
Canoe and equipment rental	
Car repair	
Food and restaurants/bars	
Gas	
Groceries	
Guiding services	
Guided trips (such as rafting or hunting trip)	
Lodging	
Outfitter transportation and parking	
Permits (such as fishing)	
Recreational Gear	
Souvenirs	
Other (describe):	

**End of Block: Economic Spending****Start of Block: Ending Section**

How important or valuable are recreational experiences like the AWW to you personally?

- Extremely Important
- Very Important
- Fairly Important
- Not very important
- Not at all important

Is there anything else about the Allagash Wilderness Waterway experience you would like to share with us?

---



---



---



---



---



---

Thank you for participating in our survey! Your responses are greatly appreciated.

Please write your first name and email address or phone number if you wish to be entered into a drawing for the 20" by 24" limited edition print. A winner will be chosen and contacted at the end of the study period in December 2019.

---

**End of Block: End Section**

APPENDIX B:  
CONTACT CARD

**Front:**

**Allagash Wilderness Waterway Visitor Study**

We need your assistance! The Bureau of Parks and Lands is working with the University of Maine to conduct a study on Allagash Wilderness Waterway trip activities and assessment of travel and camping experiences. The purpose of this study is to assess visitors' satisfaction with conditions while visiting on this trip. To ensure high quality visitor experiences, we need a better understanding of the recreational use occurring in the Allagash Wilderness Waterway. We would greatly appreciate if one person from your party would be willing to fill out this card and receive a survey that will be sent after your trip.

Your participation in this survey is voluntary. Since each person receiving a survey will represent many others who will not be surveyed, your cooperation is extremely important. The answers you provide will be confidential. An email address you provide to receive the survey is for sending the questionnaire only. Our results will be summarized so that the answers you provide cannot be associated with you or anyone in your group or household. Your name and email address will not be given to any other group or used by us beyond the purposes of this study.

University of Maine  
Parks, Recreation and Tourism Program  
5755 Nutting Hall  
Orono, ME 04469-5755

**Back:**

- 1) Date: \_\_\_\_\_ 2) Check Station Location: \_\_\_\_\_
- 3) What is your intended access point to the watercourse? \_\_\_\_\_
- 4) What is your intended exit point? \_\_\_\_\_
- 5) Do you plan to stay overnight on this trip? \_\_\_\_\_ YES \_\_\_\_\_ NO
- 6) If YES to staying overnight – approximately how many nights? \_\_\_\_\_ nights
- 7) What kind of group are you with? (Please mark)
- |                              |   |
|------------------------------|---|
| _____ Alone                  | _____ Family or friends                         |
| _____ Family plus friends    | _____ From an organization (Scouts, Club, etc.) |
| _____ Other (describe _____) |   |
- 8) How many people are in your group? \_\_\_\_\_ PEOPLE
- 9) Have you visited the Allagash Wilderness Waterway before? \_\_\_\_\_ YES \_\_\_\_\_ NO
- 10) CITY/TOWN: \_\_\_\_\_ STATE: \_\_\_\_\_

**To participate in the online survey please provide: (please remember only one person from your party)**

**NAME:** \_\_\_\_\_ **EMAIL ADDRESS:** \_\_\_\_\_

**THANK YOU!**

APPENDIX C:  
RAFFLE PICTURE IMAGE



*Below the Falls*



**Donated by the Bureau of Parks and Lands**



