

An Economic Analysis of Tourism and Recreation in the Northern Forest: Studying the Northern Forest Canoe Trail Project

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In 2006, approximately 90,000 visitors paddled the waterways in six regions along the Northern Forest Canoe Trail. Their spending created \$12 million in economic impacts, supporting about 280 jobs. The results of this study suggest that expenditures by visitors attracted by the NFCT may help diversify local economies in the Northern Forest.

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<<http://www.nsrcforest.org/>>

Project Summary

Recreation and tourism are increasingly promoted as a means of diversifying economies in the Northern Forest, yet few studies have quantified how visitors' recreational activities affect local businesses. This research examines the economic impact of paddler recreation along the waterways of the Northern Forest Canoe Trail (NFCT). For the past few years, the Northern Forest Canoe Trail association has been working with communities to develop campsites, signage, and portage trails, as well as to promote the trail in the media. This project helps communities better understand the potential economic impacts of these endeavors.

Visitor demographics, trip characteristics, and expenditure data were collected at registration kiosks and through in-person and mail surveys. MGM2, an input-output model developed by the National Park Service, was used to model direct and indirect impacts. Discussions with regional land managers and business owners helped identify potential social and environmental concerns and challenges for communities seeking to attract new paddlers to the area.

Results indicate that approximately 90,000 visitors paddled the waterways in the six study regions. Their spending in local communities created \$12 million in total economic impacts, supporting about 280 jobs. The median paddler group spent about \$215 per trip primarily at lodging establishments, restaurants, grocery stores, and service stations. Non-locals spent an average of \$414-498 per trip, or \$46 per person per day. The analysis suggests economic impacts are driven by trip lengths, lodging types, group size, travel distances, and use of outfitters.

The results of this study suggest that expenditures by visitors attracted by the NFCT may help diversify local economies in the Northern Forest. Economic benefits can be increased by expanding camping and lodging opportunities on both public and private lands, constructing rustic shelters to attract additional users, developing and supporting guide training and promotion initiatives, holding organized events such as canoe races and festivals, and participating in collaborative marketing efforts. At the same time, communities must work together to proactively implement strategies for minimizing negative social and environmental impacts that may arise with increased visitation, such as the spread of invasive aquatic species, wildlife disturbance, increased traffic, overcrowding of waterways, and land degradation at campsites.

Background and Justification

- Changing rural economies
- Loss of traditional, forestry based jobs
- Decreases in permanent populations and community services



Background and Justification

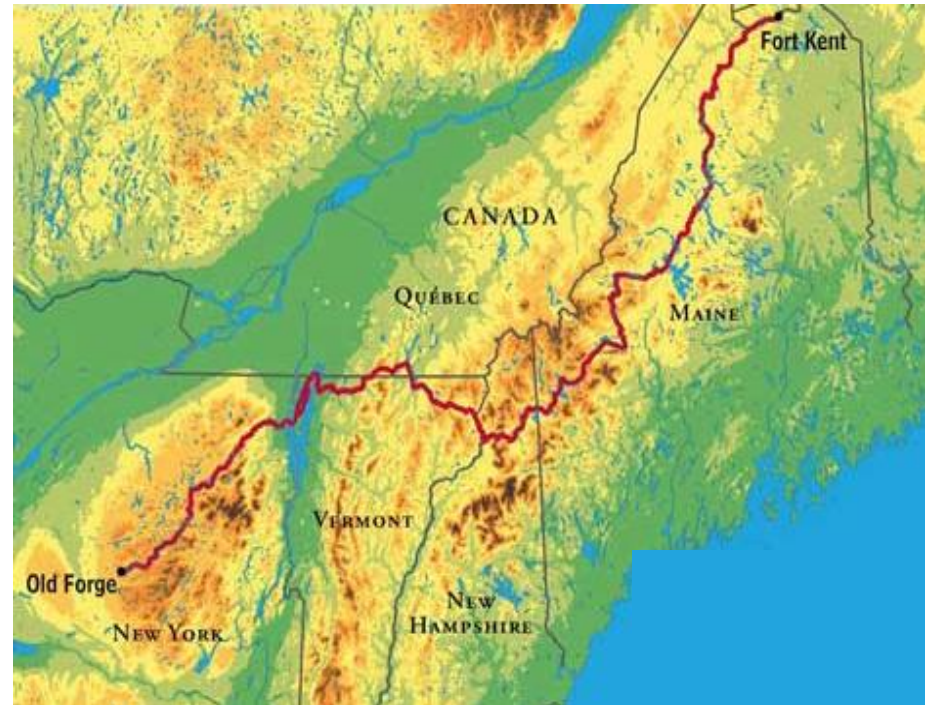
- Rural communities are seeking to diversify their economies
- Recreation and tourism based industries are viewed as possible ways to improve rural economies



Background and Justification

Research Question:

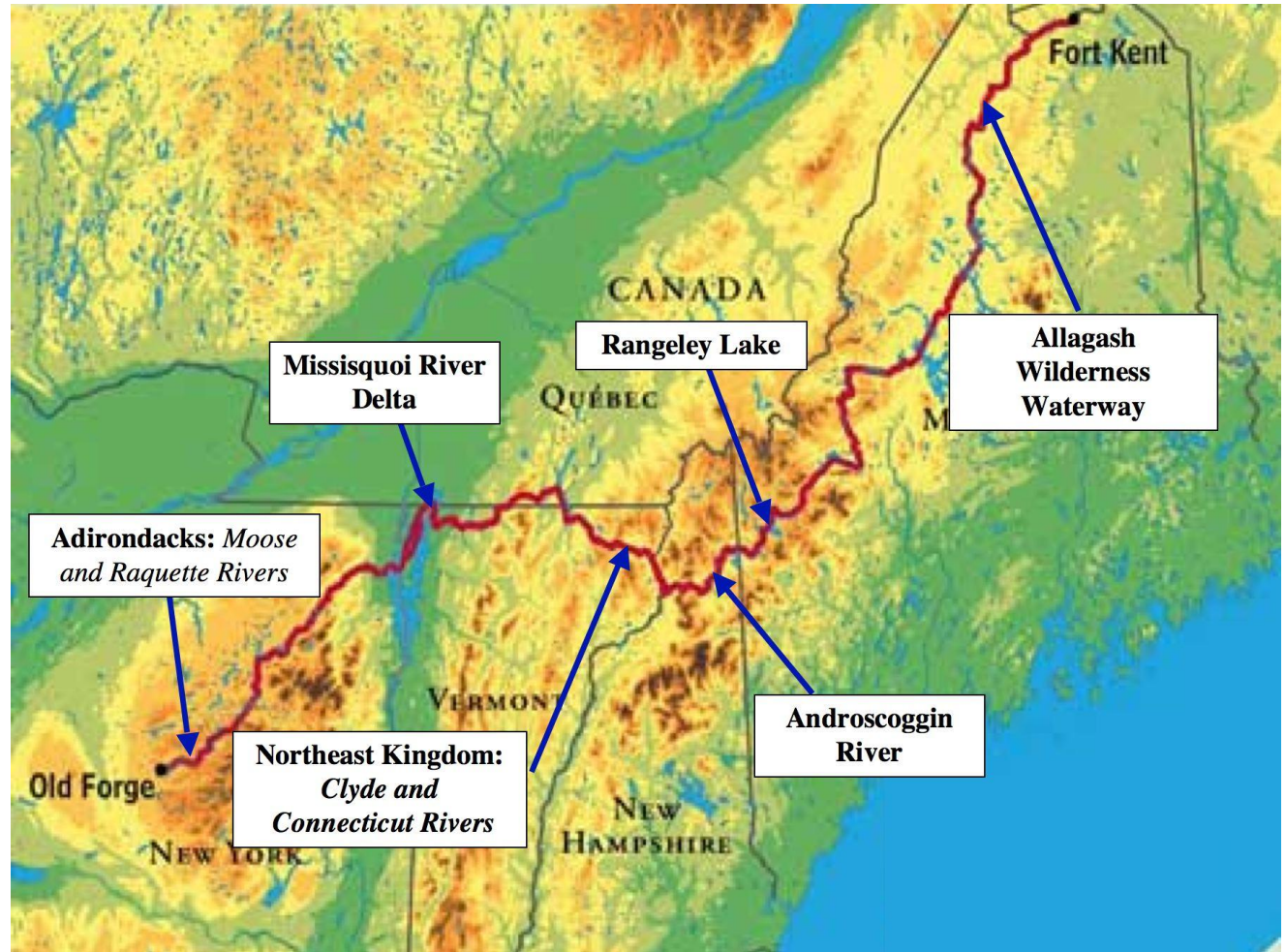
Can the Northern Forest Canoe Trail be a tool for sustainable community economic development?



The Northern Forest Canoe Trail

Methods: Study Regions

Research was conducted in six study regions



Methods: Surveys and Interviews

Paddler survey

- Visitor demographics
- Trip characteristics
- Local expenditures
- 17 registration kiosks
- 34% response rate at kiosks
- 1024 completed surveys

Campground and lodging interviews

- Visitation rates
- Impressions of the NFCT



Registration kiosk

Methods: Economic Modeling

Economic impact modeling

- MGM2 Software
- Outputs:
 - Sales/impact
 - Income generated
 - Jobs created

Assessment of social and environmental impacts

- Interviews with local land managers, business owners, residents

The screenshot shows the MGM2 software interface for entering user inputs. The main window is titled 'MGM2AllRegions.xls'. The interface includes a table for segment shares and a 'Balance Visitor Segment Shares' button. A 'Show Me' button is also visible.

Table 2. USER INPUTS: ENTER THE FOLLOWING NUMBERS

1. NUMBER OF VISITS IN PARTY NIGHTS: 80,609

2. VISITOR TYPES: Enter the distribution of visits by segment

3. Space is provided for up to 12 segments. Click on "Balance Shares" if percents do not sum to 100%.

SEGMENT	SHARE	Party-night
L-Day User	4.2%	3,407
NL-Day User	3.4%	2,711
Motel-In	0.0%	0
Camp-In	0.0%	0
Backcountry C:	36.3%	29,293
Motel-Out	22.6%	18,214
Camp-Out	27.3%	22,038
VFR	6.1%	4,946
	0.0%	0
	0.0%	0
	0.0%	0
	0.0%	0
CHECK SUM	100.0%	80,609

USE UNITS = Party-night

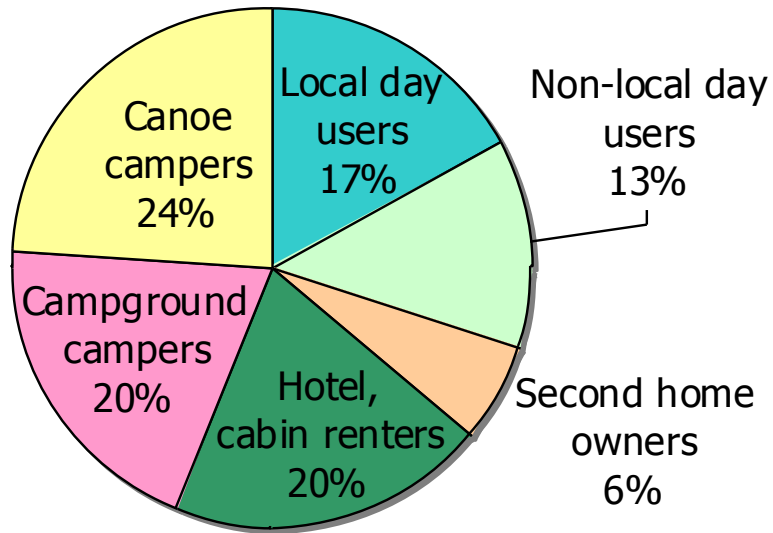
Note that units must be consistent between spending data in Table 1 and number of visitors above (cell E3).

Instructions:

1. Use option buttons in green area to enter visitor types as percentages or absolute number of visits (party nights).
2. If using percents, enter total visits in cell E3.
3. If visits > million, enter visits in thousands and choose "thousands" button.
4. Balancing button may be used to recompute totals or force percents to add to 100%.
5. When visits are complete, inspect total spending on TO TSP page and then select Multipliers.

MGM2 program

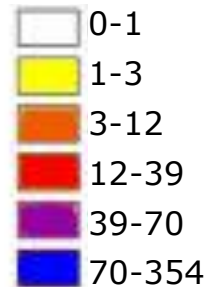
Results: Visitor Types



Types of visitors



Number of responses



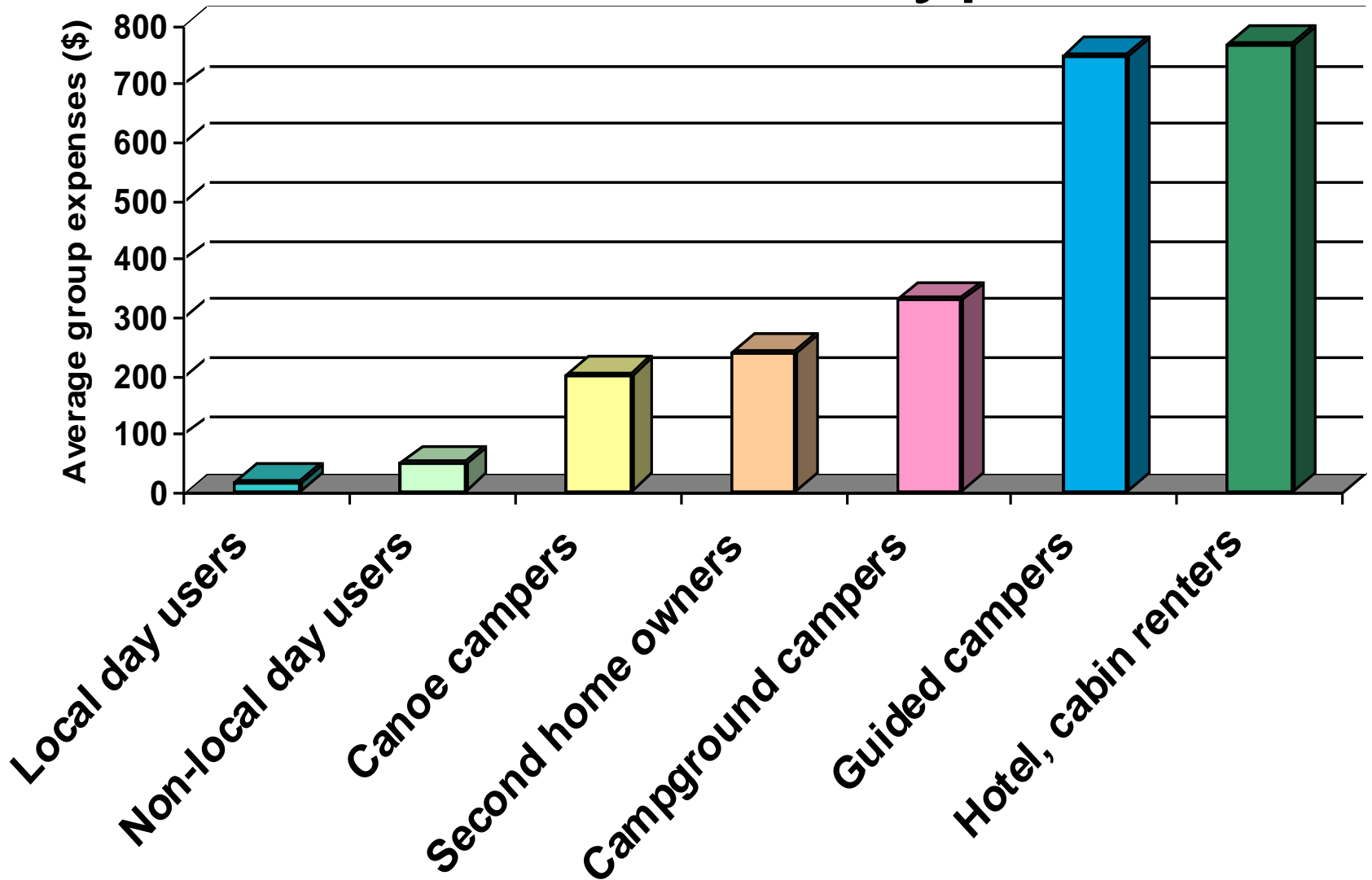
Home states of visitors

Results: Economic Impacts

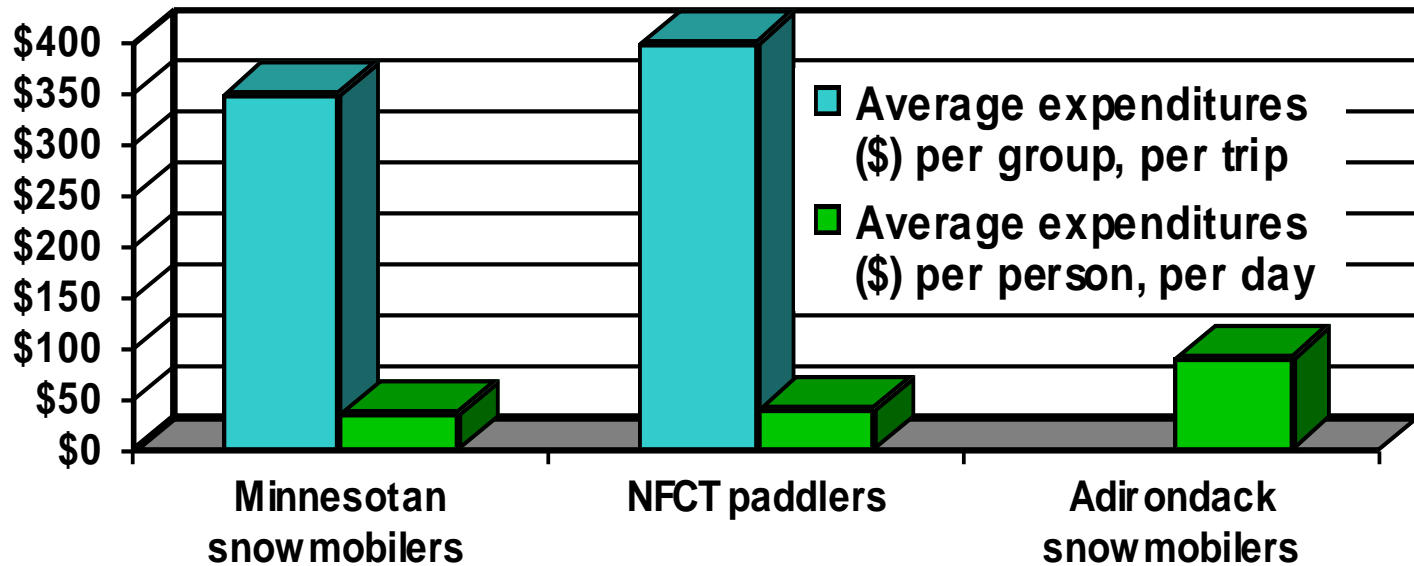
- **90,000** visitors
- **\$12.6** million in output/sales
- **\$4.1** million in personal income
- **280** jobs.
- **\$215**: Median group spending
- **\$456**: Mean group spending (non-locals)
- **\$46**: Average spending per person, per day (Non-locals)
- **85**: Number of non-local paddler groups needed to support one full-time job.



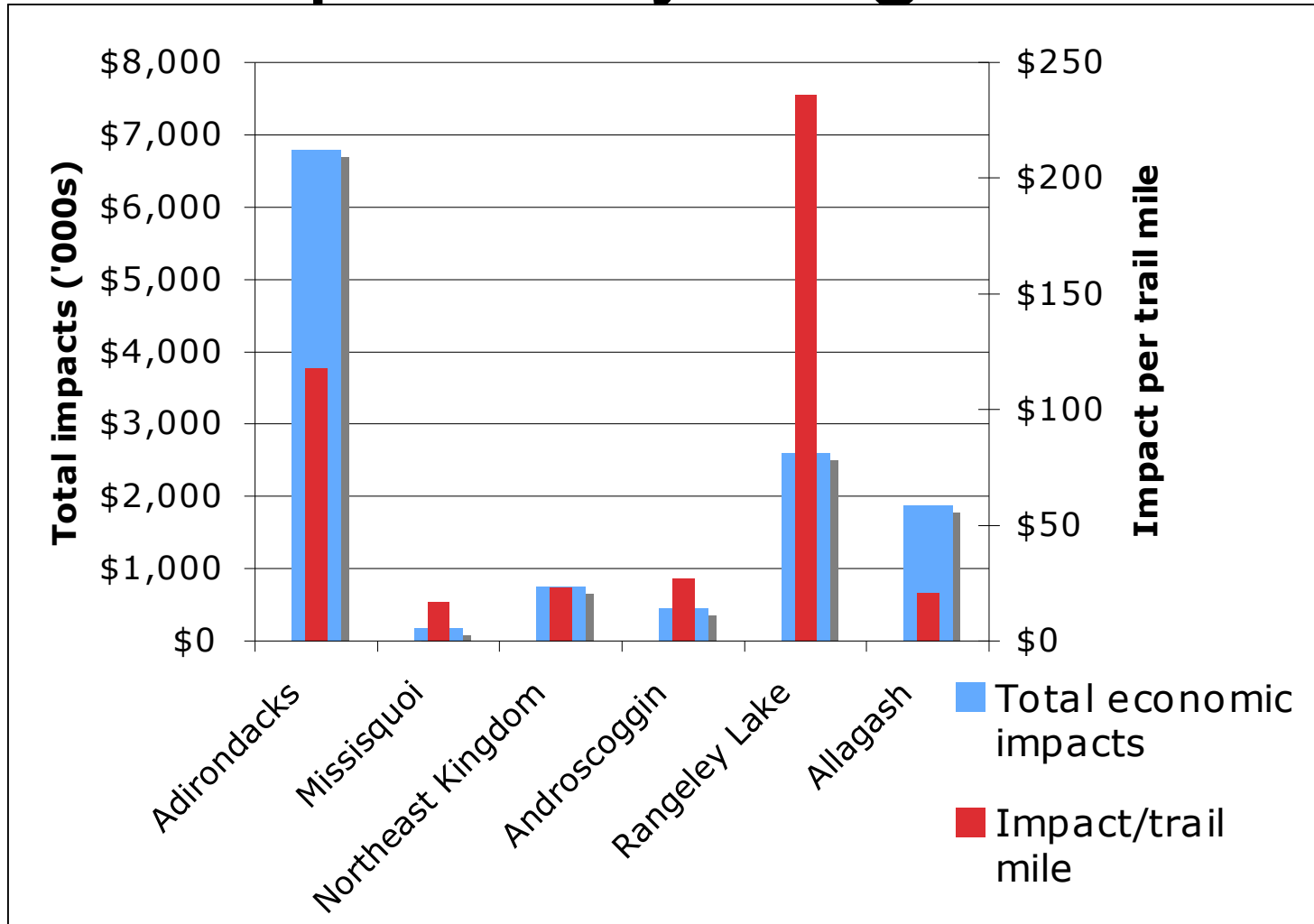
Results: Trip Expenditures Across Visitor Types



Results: Paddler Expenditures Compared to Other Tourists



Results: Total Economic Impacts by Region



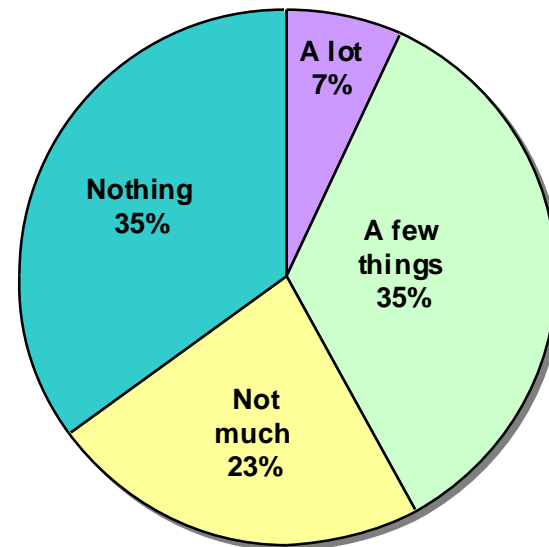
Results: Knowledge of the Northern Forest Canoe Trail

The NFCT is fairly visible, with 65% of paddlers reporting some knowledge of the NFCT.

The NFCT is also beginning to attract users; 17.7% indicated it was a reason for their trip.

Managers at 35% of waterway lodging establishments reported either knowing a lot or a few things about the NFCT.

Paddler knowledge of the NFCT



Outreach Efforts

- Presentations

- Adirondack Research Conference
- Vermont Travel Industry Conferences
- Northeast Recreation Research Conference
- Northern Forest Canoe Trail Board Meeting
- University of Vermont Symposiums

- Publications

- Website: www.uvm.edu/tourismresearch/NFCT
- Final report distributed to area land managers
- Special report written for the NYS Department of Environmental Conservation
- Summary pamphlet distributed to local governments, chambers of commerce, and other groups, in collaboration with the Northern Forest Canoe Trail membership association



Noah Pollock presenting at the 2007 Vermont Travel Industry Conference.

Implications and Applications in the Northern Forest Region

The results suggest that paddler recreation and tourism can positively impact local economies.

Local communities have an important role to play in guiding the development of the Northern Forest Canoe Trail to catalyze economic benefits while minimizing negative social and environmental impacts. Economic benefits can be increased by expanding camping and lodging opportunities on both public and private lands, constructing rustic shelters to attract additional users, developing and supporting guide training and promotion initiatives, holding organized events such as canoe races and festivals, and participating in collaborative marketing efforts.



Implications and Applications in the Northern Forest Region

Local communities and the NFCT must work together to proactively plan and implement strategies to minimize the negative social and environmental impacts of increased visitation. These negative impacts include the spread of invasive aquatic species, wildlife disturbance, increased traffic, overcrowding of waterways, and land degradation at campsites.



Future Directions

- Conduct a longitudinal analysis of visitor economic impacts
- Conduct research on the economic and environmental costs and benefits of different types of recreation
- Research economic impacts of second homeowners and new residents
- Research best practices for managing social and environmental impacts
- Help the tourism industry prepare for the impacts of peak oil and climate change in the Northern Forest



List of Products

Publications

- Pollock, N., Chase, L., Ginger, C., Kolindinsky, J. (In progress). Assessing Economic Impacts of The Northern Forest Canoe Trail. *Journal of Environmental Planning and Management*.
- Pollock, N., Chase, L., Ginger, C., Kolindinsky, J. (In press). Methodological innovations for measuring economic impacts of long-distance recreation trails. In *Proceedings of the Northeastern Recreation Research Symposium*. Bolton Landing, NY; U.S.D.A. Forest Service. (Peer reviewed)
- Pollock, N. (2007). *The Northern Forest Canoe Trail: Economic impacts and implications for sustainable community development*. Master's thesis, University of Vermont, Burlington, Vermont.
- Pollock, N., Chase, L., Ginger, C., Kolindinsky, J. (2007). *The Northern Forest Canoe Trail: Economic impacts and implications for sustainable community development*. Final Report.
http://www.uvm.edu/~snrvtdc/NFCT/NFCT_Final_Report.pdf
- Pollock, N., Chase, L. The Northern Forest Canoe Trail: An Economic Impact Study. Summary Pamphlet. <http://www.uvm.edu/~snrvtdc/NFCT/NFCTPamphletNF.pdf>

Visit our website at: <http://www.uvm.edu/~snrvtdc/NFCT/>

Presentations

- Chase, L., Barewicz, M., Pollock, N., Watson, B., Whipple, C. (2007, November). Economic Impacts of Outdoor Recreation. Presentation at the Vermont Travel Industry Conference, Burlington, VT.
- Pollock, N., Chase, L. (2007, June). Results from 2006 Economic Impact Study of The Northern Forest Canoe Trail. Presentation to the Northern Forest Canoe Trail Board Meeting, Etna, NH.
- Pollock, N., Chase, L. (2007, April). The Northern Forest Canoe Trail: Economic Impacts and Implications for Sustainable Community Development. Presentation at the Northeastern Recreation Research Symposium, Bolton Landing, NY.
- Pollock, N., Williams, K. (2007, April). Measuring and mapping economic impacts of the Northern Forest Canoe Trail. Guest lecture, course in Natural Resources, Burlington, VT.
- Pollock, N., (2006, October). The Northern Forest Canoe Trail: An Economic Impact Study. Presentation at the Rubenstein School Graduate Student Symposium, Burlington, VT.
- Pollock, N., Chase, L., Williams, K. (2006, September). Northern Forest Canoe Trail: Implications for Sustainable Community Development. Presentation at the National Extension Tourism Conference, Burlington, VT.
- Pollock, N., Williams, K. (2006, May). The Northern Forest Canoe Trail: An Economic Impact Study. Presentation at the Adirondack Research Consortium Conference, Lake Placid, NY.
- Chase, L., Brangan, J., Pollock, N., Williams, K. (2005, November). Heritage and Recreation Tourism: Benefits of a Regional Approach. Presentation at the Vermont Travel Industry Conference, Manchester, VT.