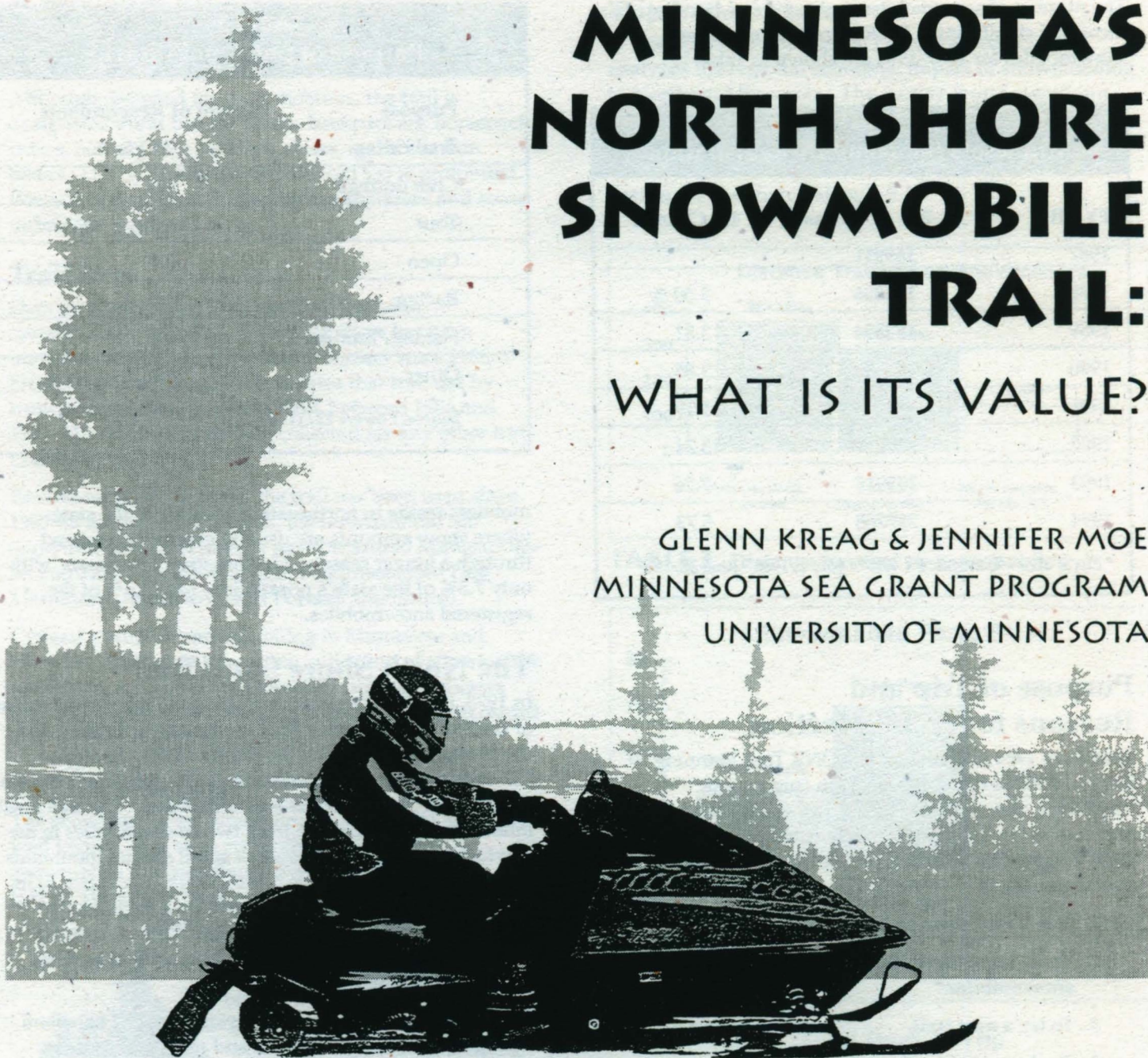


MINNESOTA'S NORTH SHORE SNOWMOBILE TRAIL:

WHAT IS ITS VALUE?

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Winter trail-related recreation activities (snowmobiling and cross-country skiing) in Minnesota are in high demand and generate substantial tourism activity. Minnesota's North Shore of Lake Superior has both types of trails that, along with two major downhill ski areas, anchor the area's winter tourism business.

For 1985, snowmobiling in Minnesota was estimated to contribute \$300 million-a-year

to the state's economy.⁴ Currently in Minnesota there are more than 12,500 miles of trails designated for snowmobiling. Over 10,000 miles of the trails are funded by the Department of Natural Resource's (DNR) Grants-In-Aid (GIA) programs. GIA trails are built by local people, often on privately owned land, sponsored by a local unit of government, and funded by the DNR through its Trails Assistance Program.¹

The number of snowmobiles registered in Minnesota has increased significantly. DNR records of registered snowmobiles for 1987-1994 are shown in Table 1.

TABLE 1.
Minnesota Snowmobile Registration

FY YR*	No. of Licenses	% Change
1987	169911	
1988	175856	3.50 %
1989	182554	3.81
1990	189586	3.85
1991	191838	1.19
1992	222029	15.74
1993	205916	-7.26
1994	217708	5.73

* Fiscal Year - Example: FY 1987 = July 1, 1986 - June 30, 1987

Purpose of Trip and Reasons for Trail Selection

Studies in 1984 and 1985 by the DNR Trail Planning Section yielded direct feedback on current trail conditions, descriptions of experiences on DNR trails, and reasons for choosing to use a particular snowmobile trail. Reasons for selecting to ride on a particular trail were:

1. Trails are "close-to-home."
2. Trails were "known and liked by the snowmobiler."
3. To try a new trail.
4. Trail goes somewhere I want to go.
5. "Snow conditions."

Over three-fourths of all trips in northeastern Minnesota were identified as "trail riding." Table 2 presents some other purposes of snowmobile trips:

Snowmobiling is most popular in areas with sufficient reliable snow cover. Because of this it is not surprising that a disproportionate number of Minnesota snow-

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TABLE 2.
Purpose of Snowmobile Trip

Purpose	Percent of Respondents
Trail riding	78.2%
Club outings	9.8
Tour	4.2
Open	3.7
Racing	0.8
Fishing/hunting	0.4
Other	0.6

Source: Powers 12/11/89

mobilers reside in northeastern sections of the state where snow amounts are usually greater and extend through a longer season. Northeastern Minnesota, with only 7.5% of the state's population, has 12.4% of the registered snowmobiles.

The North Shore State Trail

In 1975, the State Legislature authorized the development of the North Shore State Trail with master planning for the project completed by the DNR in 1981. In 1984, a 152-mile portion of the authorized 235-mile trail between Duluth and Grand Marais was completed. The trail is set inland from the shoreline from two to seven miles in the Sawtooth mountains, a range of small coastal mountains that span the length of the North Shore. For much of its length, the North Shore Trail provides a backcountry experience for the trail user. The trail crosses over 60 rivers and creeks, passes next to several lakes and has many spectacular vistas.

The trail is serviced by seven parking areas, 14 shelters with pit toilets and campsites, and nearly 40 bridges. Spurs connect the trail with coastal communities. Connecting GIA trails extend the choice of places to explore. Connections with other trails allow snowmobilers to travel throughout Minnesota, Wisconsin, and Michigan. The trail was not continued beyond Grand Marais and across the Grand Portage Indian Reservation to the Canadian Border due to tribal opposition. However, with steadily increasing use on the trail, there is greater interest in completing the trail to Grand Portage and the Canadian Border as originally planned. In 1990, the Grand Portage Band reversed their position. In 1991, they were successful in obtaining a federal grant to develop the trail across the reservation. The only remaining incomplete link is between Grand Marais and the Grand Portage Reservation which is planned for completion by

the DNR in 1995. A Canadian trail is being constructed that will meet the North Shore Trail at the international border.

Although designed for snowmobilers, the trail is designated multi-use for hikers, backpackers, horseback riders, hunters, dog sledders, skiers, and mountain bikers. Use by all-terrain vehicles (ATVs) is prohibited. Warm weather use is limited by marshy areas and some unbridged waterways.

Trail Use

Data on North Shore Trail use have not been systematically collected. However, there has been informal tallying of use by trail groomers since 1986-87.² From those data, the DNR estimates that trail use by snowmobilers has increased 900% between 1986 and 1992-93.⁵ No data have been collected for any other trail user activities.

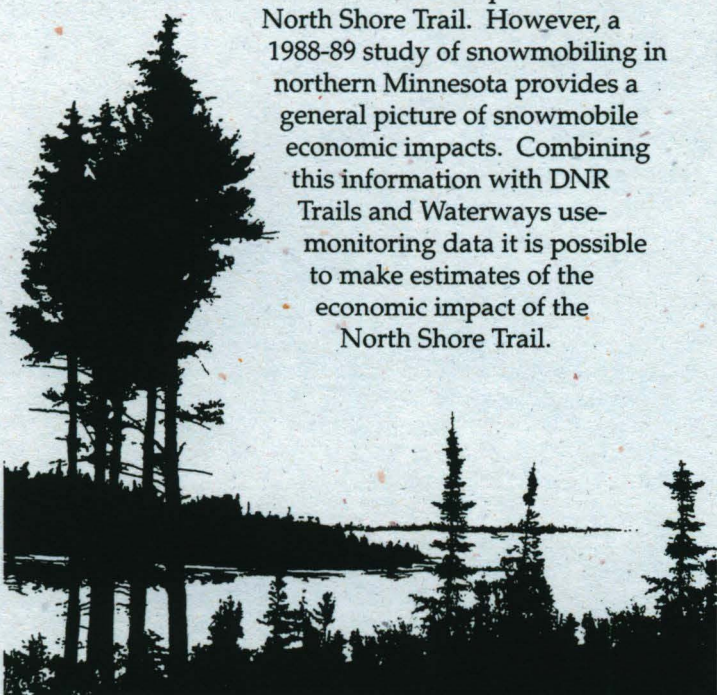
Besides recreational users, the trail has been used since 1987-88 for two major events; the International 500 Snowmobile Race (Thunder Bay, Ontario to Minneapolis-St. Paul) and the 500-mile John Beargrease Sled Dog Marathon (Duluth to Grand Portage and return).

General studies of snowmobiling in Minnesota and Northern Minnesota give some indication of snowmobile activities. A survey of snowmobile licenses indicates that the number of registered snowmobiles has increased 28.1% from 1987 to 1994.³

Economic Impact

The economics of snowmobiling in Minnesota are not well known. The state currently estimates that snowmobile use contributes over \$2 million in fuel taxes.⁴ There have been no studies that specifically examine the economic impact of the

North Shore Trail. However, a 1988-89 study of snowmobiling in northern Minnesota provides a general picture of snowmobile economic impacts. Combining this information with DNR Trails and Waterways use-monitoring data it is possible to make estimates of the economic impact of the North Shore Trail.



Trip Expenditures

A 1988-89 survey by Klaers, Powers & Associates^{6,7} analyzes the regional economic impact of snowmobiling in Northern Minnesota. The survey found significant differences in trip length and party size when it compared local users (NE MN residents) with visiting snowmobilers. Characteristics of resident and visitor parties are shown in Tables 3-5.

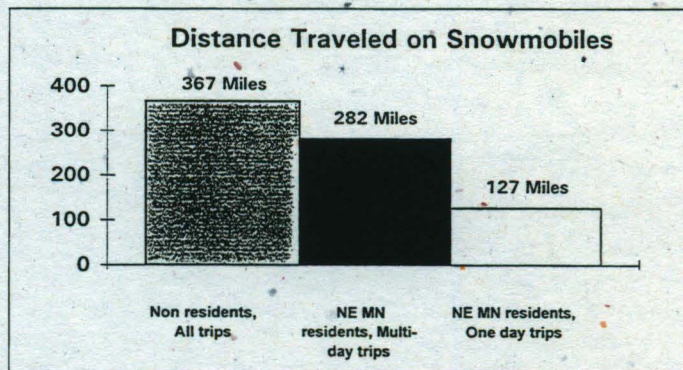


TABLE 3 Distance traveled on snowmobiles

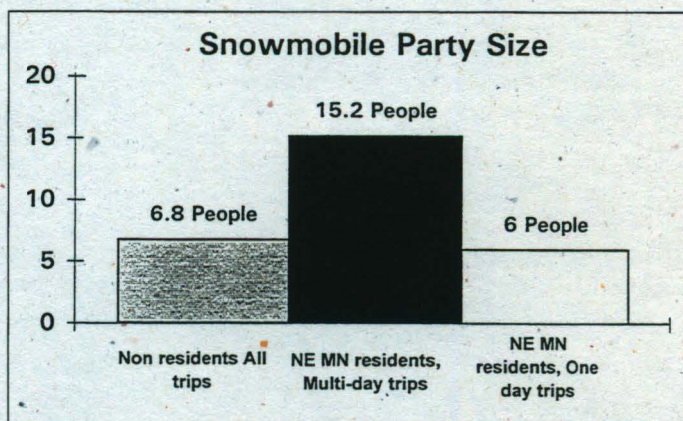


TABLE 4 Snowmobile party size

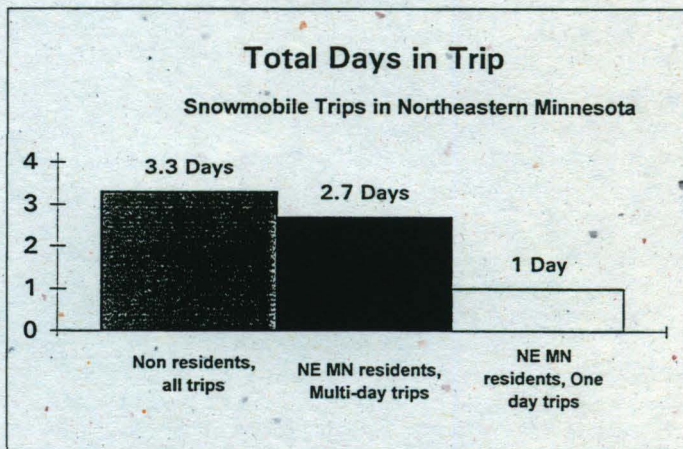


TABLE 5 Total days in trip

Spending is divided into two categories: trip expenditures and non-trip expenditures. The survey measured trip expenditures made by snowmobilers while on outings in northeastern Minnesota.

There are four tables used to present trip expenditures. Tables 6 and 7 show spending by visitors to northeastern Minnesota (from other parts of Minnesota and out-of-state) while tables 8 and 9 show spending by regional residents for one-day and multi-day intra-regional trips.

A surprising 57.8% of the reported outings by regional snowmobilers were for 2 or more days. Since there is such a high level of intra-regional overnight outings there should be a substantial impact on the market and development strategies for individual communities. The results for this intra-regional travel are split into two tables, one for day trips and the other for longer outings.

The fuel consumption estimates in tables 6-9 have been adjusted. This makes a considerable difference in the economic impact.*

The day-use lodging expenditures in Table 8 need some explaining. In the survey, the question was about day outings and meant no overnight lodging was involved. But about 9% of the respondents indicated they purchased lodging on the trip, an obvious problem in interpreting the survey question. An explanation for this may be that respondents interpreted as having a day's worth of snowmobiling spread over two days, or, more likely, the

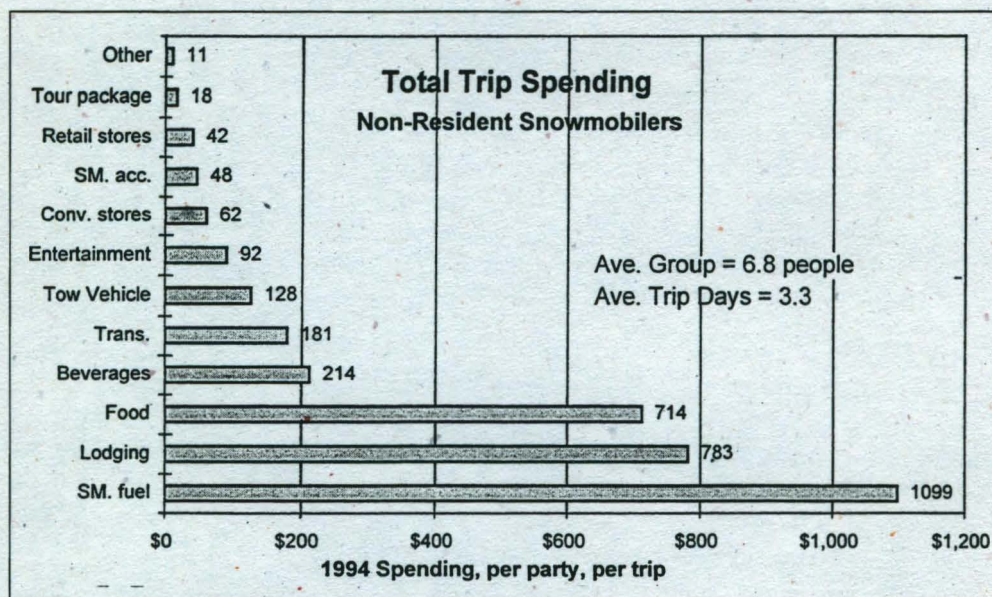


TABLE 6 Total trip spending (SM=snowmobile)

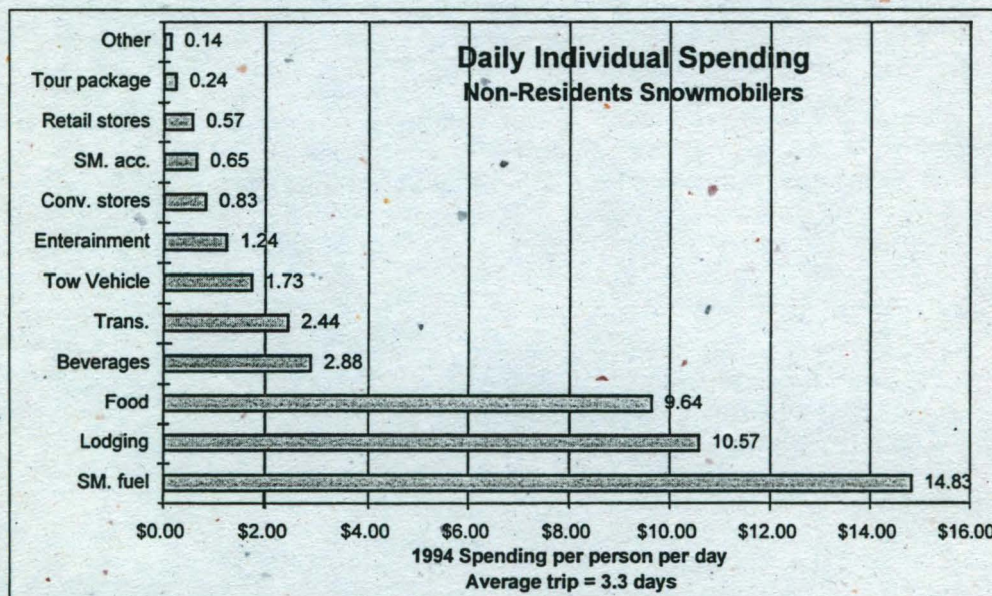


TABLE 7 Daily Individual spending (SM=snowmobile)

*Estimated fuel expenditure. The initial snowmobile fuel expenditure reported for one non-regional person for an entire outing was \$11.16. Assuming that snowmobilers average 13 miles to the gallon, and, given that the average visiting snowmobiler traveled 367 miles, the \$11.16 expenditure level meant that the average snowmobiler: paid \$0.40 per gallon for gasoline, managed 49 miles to the gallon, or brought 75% of his fuel with him. None of the preceding conclusions of any combination of them, seem plausible. It can be concluded, then, that either the respondents were under-reporting their expenditures or the previous operating assumption that all trip expenditures were for the group could not be applied to fuel consumption.

There is however, a reasonable means of calculating an alternative value as noted in the following: The survey found that the average non-regional snowmobiler traveled 367 miles during their stay. (Wisconsin Department of Natural Resources and local snowmobile dealer both estimate that snowmobiles average about 13 miles to the gallon of fuel.) During the 1988-89 season, fuel prices ranged from \$1.50 to \$2 (gas/oil mix) on the trail. The survey found that 96.6% of the visiting snowmobilers purchased fuel on their trip. Thus, the adjusted per person per trip fuel consumption is derived by the following calculation (367 miles / 13 mpg) * \$1.50/gallon * .966 = \$40.57.

one-day trip was actually part of a larger outing using a motel or resort as a base.

1994 Estimated Expenditures by Snowmobilers on the North Shore Trail

Based on the total use estimates from DNR trail groomer tallies and data from the 1989 Economic Impact Study, the total 1994 expenditures by snowmobilers using the trail is estimated to be \$2,117,000. This total accounts for variations in local versus out-of-region users and day trip versus overnight users. Day use accounts for 20% of the total spending and multi-day trips represents 80% of the total expenditures. Adjusted for inflation, the total figure is in January, 1994 dollars. No multipliers are included to estimate total economic impact.

The significance of this trail to the coastal area goes beyond the dollars generated. The trail is a key resource that has offered the opportunity for tourism-related businesses to be open in the winter. This in turn, has generated improvements in facilities and, with increased income, created greater stability in those tourism businesses. The opportunity for a longer tourist season has also attracted new development to the area creating a greater variety of facilities for all tourists, year-around.

Economic impact goes beyond travel and trail use activities. Snowmobilers spend large amounts of money for equipment and accessories that are not directly related to the use of a particular trail. The North Shore Trail and the rest of the trail infrastructure in Minnesota creates the demand for these non-trip expenditures. Without the trails and their interconnections into a statewide trails system, there would be only minimal demand for snowmobiles.

Non-Trip Expenditures

Non-trip expenditures should not be attributed to any particular trail, but are a function of the general availability of riding opportunities. Information in the 1988-89 Powers study provides insight into the additional expenditures of participants for equipment and related goods and services demonstrating the impact of trails far beyond their immediate area. Table 10

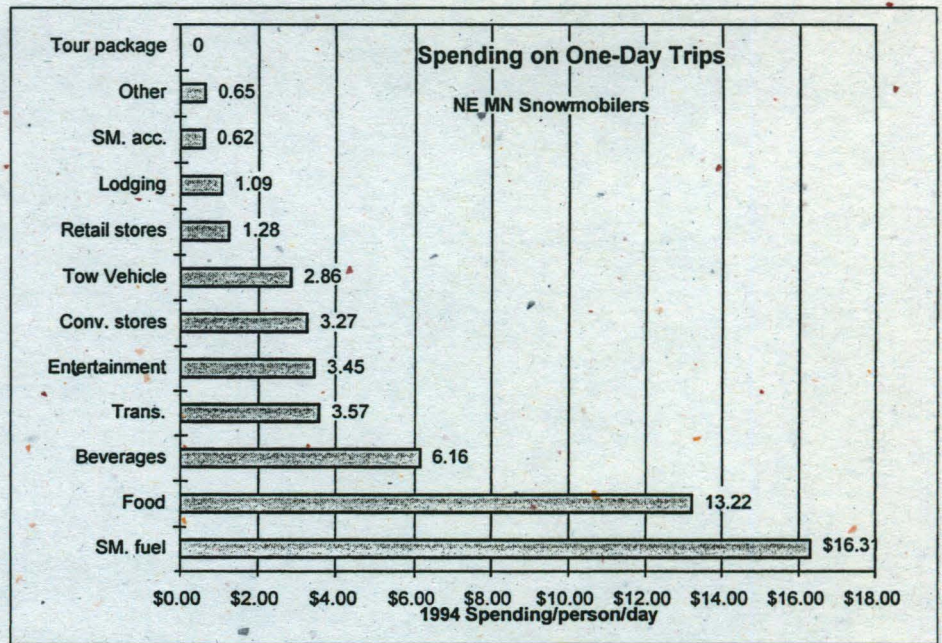


TABLE 8 One-Day trip spending, (SM=snowmobile)

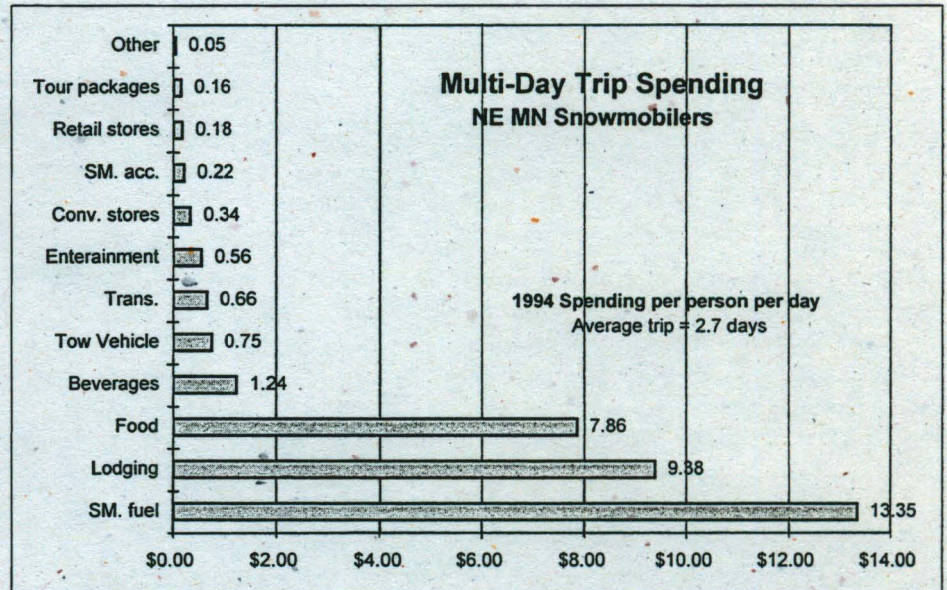


TABLE 9 Multi-Day trip spending (SM=snowmobile)

summarizes the results. The study estimates that at least 90% of non-trip expenditures were made in the area where the respondents lived.

Discussion

The economic benefit to the State of Minnesota from snowmobiling activity is significant and spread broadly, both in the area where the trails are located (trip-related expenditures) and the home location of snowmobile owners (non-trip related expenditures). The development of inter-linking trails in Minnesota and the reliability and comfort of new snowmobiles encourages more and longer trips. Linkages to trails in other states and Canada encourages interstate/international travel and increases the appeal of snowmobiling.

TABLE 10.
Non-trip Expenditures, 1994

Item	Amount Spent*	Percent Buying
Snowmobile	\$3,179	
Snowmobile Trailer	246	
Subtotal	\$3,425	
Clothing	251	81.8%
Other snowmobile equipment	93	58.6%
Snowmobile parts/repair	218	82.7%
Registration, license, and taxes	88	83.3%
Insurance	175	80.8%
Other	46	13.7%
Subtotal	\$ 871	
Total	\$4,296	

Source: Powers 12/11/89
* Average for buyers and non-buyers. Inflation adjusted to January, 1994.

The relative reliability of good snow cover, especially in Northeastern Minnesota also adds to the appeal.

Continued user satisfaction will be a critical part of maximizing the economic opportunity of the trail. As the number of users increases, trail maintenance will become one limiting factor in trail use growth and in user satisfaction. The North Shore Trail already suffers from some deteriorated trail conditions during peak weekends despite Saturday night grooming. Management policies such as reducing trail speed limits can assist in improving trail conditions. Other issues such as crowding and safety may impact future growth opportunities. For the present, there is significant growth potential, particularly for weekday use. Trail maintenance, management policies, crowding, safety, and overall perceived quality of the snowmobiling experience will each have an impact on the future economic potential of the trail.

Impacts of snowmobile operation on the local environment will also influence use. Noise, and fumes affecting local residents, and safety concerns of non-snowmobilers are becoming issues. Additionally, dog

sledders and other winter trail users are demanding more access to the trail. General concerns about overdevelopment of the North Shore and loss of its wild character may bring future restrictions to growth.

The economic impact of snowmobiling is significant to the local economy of the North Shore in the winter. With growth of both residents and visitors in the area, more use can be expected. However, the North Shore Trail will be a significant economic factor in winter tourism business for many years.

Endnotes

1. Anderson, Dorothy H., Jerrilyn LaVarre Thompson, and S. Brad Sinn. 1989 "Minnesota Snowmobiling: Results of 1988-89 Snowmobile Survey" University of Minnesota, Department of Forest Resources. 23 pages.
2. Minnesota Department of Natural Resources, "Groomer Survey Records" 1985-86, 86-87, 87-88, 90-91 to 93-94. 18 pages.
3. Minnesota Department of Natural Resources, License Bureau. "Snowmobile License 1987-1994."
4. Minnesota DNR Trails and Waterways. 1986. "Minnesota Snowmobiling: Results of 1984-85 Snowmobile Surveys" Minnesota Department of Natural Resources. 40 pages.
5. Highland, Bruce 1994 Letter dated June 30, 1994, including enclosures
—North Shore State Trail Proposal Pages 3-5.
—North Shore State Trail Extension Impact Survey. 9 pages.
6. Powers, John 1989. "Economic Impact of Snowmobiling Working Paper #2: Primary Snowmobiler Survey" Klaers, Powers and Associates. 33 pages.
7. Powers, John 1989. "The Economic Impact of Snowmobiling in Northeastern Minnesota: Preparing for the Future" Northeastern Minnesota Development Association and Klaers, Powers and Associates. 50 pages.



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