Snowmobiling in Montana

by James T. Sylvester

Our most recent research suggests that about 8 percent of the state's households include snowmobile recreationists. Nearly always, the whole family participates. With an average household size of about 2.5, perhaps as many as 100,000 Montanans participate in the sport each winter.

Virtually all winter visitors to Yellowstone, for instance, use snowmobiles. This is true in part because the park's internal roads are otherwise impassable to vehicles in winter. And the town of West Yellowstone has successfully promoted itself as "the Snowmobile Capitol of the World." Since Yellowstone National Park instituted limits to snowmobiling inside the park about 11 years ago, visitation has dropped. Snowmobilers still visit the area but have diversified their snowmobiling areas.

Our estimates suggest that nonresident snowmobilers spend about $147 per activity day, including food, lodging, and, often, snowmobile rental costs. Nonresidents accounted for about 97,000 activity days during the 2013-2014 snowmobile season, spending nearly $14.3 million in Montana. That spending supports about 200 winter jobs.

On average, residents spend much less per activity day than nonresidents ($56); most of their out-of-pocket costs are for gasoline. Resident yearly spending is about $96.3 million, with more than half spent on gasoline for snowmobiles and transportation.

Resident and nonresident snowmobilers buy about 4.3 million gallons of gasoline per season. With a base tax of $0.27 per gallon, we estimate that snowmobilers in Montana generate more than $1.2 million in revenue for the Highway Trust Fund.

Access to snowmobiling areas is a concern for Montana snowmobilers. They also are concerned about a lack of personal responsibility affecting access to some areas.

In short, snowmobiling is a popular, revenue-generating winter recreation activity for Montana. It is popular with a solid share of households in the state, and popular with nonresident tourists.

This project was sponsored by Montana State Parks, which administers the Snowmobile Trails Program. The Snowmobile Trails Program is funded by fuel taxes and vehicle decal fees related to snowmobile use. A primary purpose of this research is to estimate the amount of gasoline used by snowmobile users. Bureau staff conducted the research, using a two-pronged approach, described below.

1. The BBER contacted 694 households with registered snowmobiles by telephone. Three hundred households completed a computer-assisted telephone interview. Another 200 households were sent a paper questionnaire; 29 were returned. The mail questionnaires were sent to compare respondents with listed telephone numbers to those without.

Although these characteristics may not be representative of all resident snowmobilers, they do reflect a solid sample of those who register their snowmobiles.

2. Information on nonresident snowmobilers was estimated in another way. Because of budget constraints, nonresidents were not interviewed. We assumed that activity and spending patterns have not changed since earlier surveys. Little change in activities or expenditures was observed among previous surveys conducted in 1997, 2001, 2003, and 2006. Spending data were updated by using UM's Institute of Travel and Tourism Research expenditure reports for first quarter 2013.

Assumptions

We used several basic items from our survey of Montana snowmobile activity to derive statewide impacts. Using information from AAA Montana, Yellowstone National Park officials, and interviews with resident and nonresident snowmobilers, we assumed the following:

- An average gasoline price of $3.50 per gallon during the winter of 2013-2014.
- An average fuel consumption of 12 miles per gallon of gas.
- A total of about 14,000 visitors entered the park from West Yellowstone between December 2013 and March 2014. For comparison purposes, only 629 entered from the north entrance.

Resident-only assumptions include:

- Residents travel about 36 miles per activity day on their snowmobiles and spend about $24 for snowmobile fuel.

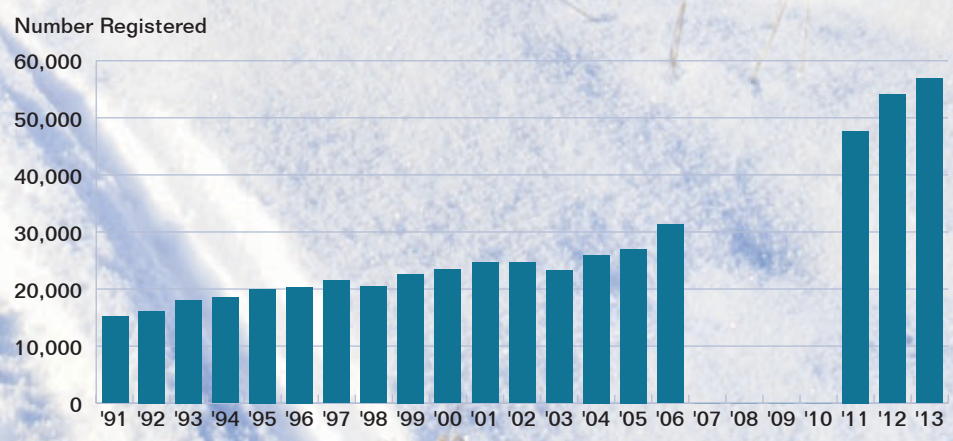
The following assumptions apply to nonresident snowmobilers who completed interviews in 2006. Surveys conducted in 1997, 2001, 2003 showed little change, so we assumed that this pattern continued, even though other areas of Montana are experiencing more nonresident snowmobiling.

- Nonresident snowmobilers in Montana travel about 85 miles per activity day – more miles than residents because nonresidents tend to come for one purpose and want their money's worth. This number did not change in previous surveys.
- The average length of a nonresident snowmobile vacation is six days. This number did not change over all previous iterations of the survey. There are indications that more nonresidents are visiting border areas, such as Lookout Pass, for day trips.

Snowmobile Numbers

Snowmobile owners who use their snowmobiles on public lands are required to register with the Montana Department of Justice, Title and Registration Bureau. Figure 1 shows the number of snowmobiles registered since 1991. Data are unavailable from 2007 to 2010. Changes in the titling of snowmobiles in 2005 resulted in a large increase in the number of registered snowmobiles in 2006. People with unregistered snowmobiles took advantage of the perpetual license for recreational vehicles and trailers. Montanans owned 56,844 registered snowmobiles in 2013. This is an 81 percent increase in the number of snowmobiles since 2006, the last year snowmobile numbers are available. Between 3,000 and 5,000 snowmobiles are registered each year.

Figure 1
Number of Registered Snowmobiles, Montana, 1990-2014



Source: Montana Department of Justice, Title and Registration Bureau.

Activity Days

One measure of the sport's popularity and potential impact is the number of "activity days," a figure roughly defined by the estimated number of snowmobilers and their average number of outings per season.

Assuming that participation rates have not changed dramatically since 2006, about 100,000 individuals snowmobiled an average of 12 days during the 2013-2014 season, resulting in about 1.2 million activity days.

Nonresident snowmobilers used to flock to West Yellowstone, an area with world-class facilities and packaged tours. Results from previous Bureau studies suggest that more than three-quarters of nonresidents snowmobiling in Montana spent time in or near West Yellowstone. Nearly half of the nonresident snowmobile permits sold during 2005-2006 were sold by West Yellowstone merchants. Since the majority of snowmobile rental activity also occurs in West Yellowstone, there is no indication that this proportion has changed. We use this estimate to derive the nonresident activity days.

In 2004, the National Park Service limited snowmobiles in Yellowstone National Park to 720 per day, all commercially guided. These limitations went into effect for the 2004-2005 winter season. The plan was in effect for three winters, allowing snowmobile and snowcoach use through the winter of 2006-2007. Figure 2 shows the precipitous decline in snowmobile visitation to Yellowstone National Park following the announced limitations. The 2013-2014 plan allowed for 318 commercially guided snowmobiles per day.

About 14,000 visitors with snowmobiles entered Yellowstone National Park during 2013-2014. On average, only about 2 percent of resident snowmobiling took place in Yellowstone Park, while previous Bureau survey data of nonresidents tell us that about 25 percent of all nonresident snowmobile activity took place near the park. We use Yellowstone Park visitation as an anchor for calculations; it is the only firm number for a dispersed activity. Nonresidents in previous surveys typically spend one day in the park and the rest on trails in the West Yellowstone area. For this study, we adjusted the amount of nonresident snowmobiling occurring in West Yellowstone to 20 percent. This adjustment accounts for growing use in other areas of Montana. Using these proportions, we arrive at a total of 97,000 activity days for nonresident snowmobilers in Montana during the 2013-2014 season. This is about 18 percent lower than in 2005-2006.

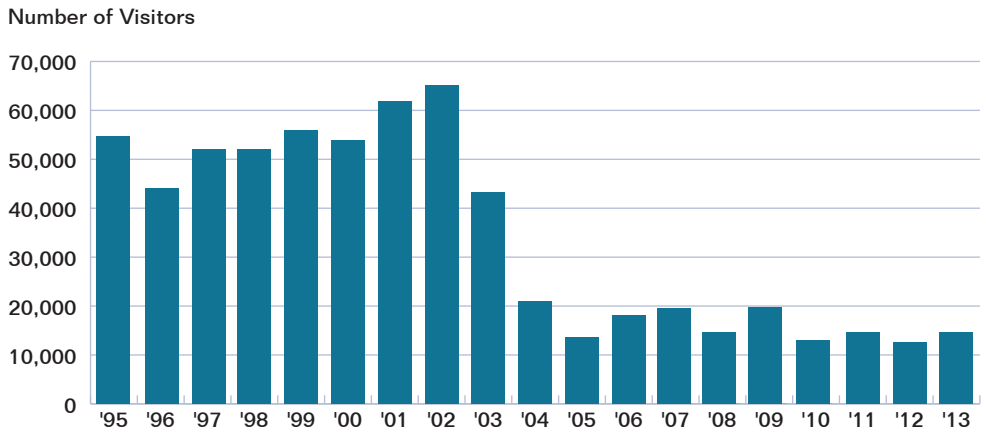
Most other nonresident snowmobiling activity occurs around Lookout Pass where Idaho and Washington residents make day-trips, spending little in Montana. Smaller numbers of nonresident snowmobilers also visit Cooke City, Lincoln, and Seeley Lake. Nonresident visits to border areas are shorter – on average, one day. Montana expenditures of nonresident border visitors are very small as gasoline is the primary purchase, and most is purchased in their hometowns.

Thus, combined resident and nonresident snowmobile activity days amounted to about 1.3 million days during Montana's 2013-2014 season compared to the 1.2 million activity days from the 2005-2006 and 1.4 million activity days estimated for the 2001-2002 snowmobile seasons.

Expenditures

We estimated snowmobile-related spending for residents in our survey of the 2013-2014 season. We were unable to survey nonresidents for budgetary reasons. We make estimates

Figure 2
Snowmobile Visitation, Yellowstone National Park, 1995-2013



Source: National Park Service.

of nonresident snowmobilers from data published by UM's Institute for Travel and Tourism Research. Nonresident snowmobiler expenditures are part of Montana's important nonresident tourism industry. Like other "basic" industries, tourism brings new dollars into the state economy.

Our estimates for total activity days provided the basis for estimating expenditures per day. We used spending per day, rather than per outing, because outings generally take only one day (for residents), or occupy several days for nonresidents. We also calculated gasoline usage estimates on a per-day basis, even though for nonresidents gasoline may be part of a package price.

Table 1
Expenditures per Person per Day, Montana, 2013-2014

	Mean	Resident Median	Percent with Spending	Nonresident Mean
Total daily expenditures	$107.53	$56.25		$147.49
Gas for snowmobiles	30.64	24.50	100%	10.70
Gas for transportation	33.73	25.00	76%	19.10
Lodging	6.25	0.00	12%	32.86
Restaurants, taverns, etc.	12.19	6.75	56%	21.77
Grocery and convenience stores	2.09	0.00	6%	15.55
Entertainment and recreation	10.96	0.00	8%	20.00
Other retail	10.43	0.00	7%	27.52
Other outing expenses	1.24	0.00	10%	0.00

Table 2
Total Resident Snowmobiler Expenditures, Montana, 2005-2006 and 2013-2014

	2005-06	2013-14
Total nonresident expenditures in Montana	$20,368,000	$14,331,000
Gas for snowmobiles	2,411,000	1,040,000
Gas for transportation	4,303,000	1,855,000
Lodging	4,297,000	3,193,000
Restaurants, taverns, etc.	1,078,000	2,115,000
Grocery and convenience stores	657,000	1,511,000
Entertainment and recreation	2,048,000	1,943,000
Other retail	5,574,000	2,674,000

Table 1 shows that total mean expenditures for nonresidents were about $147 per activity day. Nonresidents spent money in all categories, with the largest daily amount for lodging. Other retail, restaurants, taverns, and snowmobile dealers also received a portion of the nonresident purchases. Gasoline purchases for snowmobiles and transportation were about $30 per day. Daily nonresident expenditures in the 2005-2006 season were estimated at about $170 per person. Differences may be attributed to more one-day trips to bordering areas and the use of ITRR expenditures for all winter vacation visitors in 2013-2014.

Table 2 compiles total annual nonresident expenditures for each category, based on the estimate of 97,000 nonresident activity days. Nonresident snowmobilers spent about $14.3 million in Montana during the 2013-2014 snowmobile season compared to $20.4 million in the 2005-2006 season for daily personal expenses. About $3.2 million of this went for lodging, and another $2.1 million was spent in Montana restaurants and bars. Montana snowmobile dealers received about $2.6 million. Numbers for 2013-2014 are lower because activity days are down and spending per day is lower. Also the prevalence of more nonresident border trips shows in the lower gasoline purchases by nonresidents.

The impact of nonresident snowmobile-related spending can also be understood in terms of jobs and income. Approximately 25 percent of the nonresident spending becomes direct labor income for Montanans – income earned by people who work in lodging places, restaurants, taverns, and other businesses that serve tourists. The remaining percentage is spent on items that must be imported into Montana for sale such as groceries and clothing.

Overall, we estimate that nonresident snowmobilers generate more than $3.6 million per year in labor income for Montanans – or about 200 full- and part-time jobs during the winter season.

Residents also spend money to snowmobile in Montana but are not considered part of the economic base since they do not bring new money into Montana. The BBER survey of residents' expenditures suggests that residents typically don't incur lodging costs and spend less on eating and drinking and other expenses. A majority of residents don't make expenditures in several of the spending categories. As Table1 shows, residents' median expenditures were about $56 per day, about 40 percent of the comparable figure for nonresidents. Residents spent about $26 per day during the 2005-2006 season.

Table 3 summarizes these expenditures. Residents spend about $57 million on trip expenditures, mostly for gasoline, and another $39 million on yearly expenses. More than 60 percent of yearly expenditures are spent on snowmobiles, trailers, and maintenance. Resident expenditures in 2013-2014 doubled from the expenditures in 2005-2006. Much

Table 3
Total Resident Snowmobiler Expenditures, Montana, 2005-2006 and 2013-2014

	2005-2006	2013-2014
Total resident expenditures in Montana	$47,929,000	$96,293,000
Total trip expenditures	$26,775,000	$57,375,000
Gas for snowmobiles	12,750,000	24,990,000
Gas for transportation	10,200,000	25,500,000
Restaurants, taverns, etc.	3,825,000	6,885,000
Total yearly expenditures	$21,154,000	$38,918,000
Snowmobiles	4,208,000	6,654,000
Snowmobile trailers	756,000	858,000
Snowmobile clothing	3,400,000	7,049,000
Safety equipment	2,244,000	4,263,000
Snowmobile repair and maintenance	6,222,000	16,940,000
Snowmobile registration and licensing	108,000	84,000
Other yearly snowmobile expenditures	4,216,000	3,070,000

Table 4
The Most Important Issue Facing Snowmobiling

	1993-94	1997-98	2001-02	2005-06	2013-14
Access to snowmobiling areas	43%	46%	40%	53%	62%
Impact on the environment	5%	10%	9%	6%	3%
Safety & personal responsibility	18%	20%	14%	16%	12%
Other	8%	15%	36%	13%	6%
Yellowstone park issues				6%	
No response	19%	5%	1%	6%	18%

of the increase is in spending for gasoline as resident snowmobilers spend more days in the field, and prices are higher.

Gasoline Usage

Gasoline usage estimates are important because they suggest tax amounts contributed to the state Highway Trust Fund by snowmobilers. Under current legislation a portion of these revenues are returned to snowmobilers through the trail grooming program.

We asked each respondent the average distance traveled on a typical snowmobile outing. Resident snowmobilers travel an average of about 36 miles per day. Nonresidents travel about 85 miles per day on average.

We used several additional items on the questionnaire to estimate and verify gas usage. Specifically, we asked questions about each working snowmobile a household owned, including: how many days the snowmobile was used per year; how many miles per gallon the snowmobiled achieved; and how many gallons of gas it used each day.

The results derived from expenditures were then used to calculate the average amount of gasoline used by a Montana snowmobile in a year, and this average amount was multiplied by the number of privately owned snowmobiles. Estimates of gasoline usage from the expenditure data were also used. Five permutations of the data were averaged to arrive at the estimate. Nonresident usage was calculated from a per-day basis.

Snowmobilers in Montana used about 4.3 million gallons of gas during the 2013-2014 snowmobile season compared to 3.6 million gallons of gas during the 2005-2006 season. Snowmobilers contributed about $1.2 million to Montana's Highway Trust Fund in the 2013-2014 snowmobile season.

Key Issues

Our survey also offered an opportunity for respondents to comment on what they thought was the most important issue facing snowmobilers (Table 4). Access to areas where snowmobiling is permitted was the most frequently cited issue by residents. Nearly two out of three respondents mentioned access issues. About 12 percent of residents mentioned safety, particularly personal responsibility. Limited access in Yellowstone Park, a hot issue in 2005-2006, was barely mentioned.

Summary

Snowmobiling is a significant sport in the state, with significant economic impacts. Nearly 57,000 snowmobiles are registered in Montana. Residents used these snowmobiles about 1.2 million days during the 2013-2014 season. Nonresidents added another 97,000 days.

We estimate that nonresident snowmobilers spent more than $14 million in Montana during the 2013-2014 winter season, accounting for about 200 winter jobs. In addition, residents spent about $96 million, more than half of it on gasoline.

We estimate that snowmobilers (resident and nonresident alike) used about 3.6 million gallons of gasoline for their snowmobiles and paid about $1.2 million directly into the Highway Trust Fund during the 2013-2014 season via gasoline taxes.

Access to snowmobile areas is a concern for most resident snowmobilers.❑

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