



**2002 USER SURVEY FOR  
THE PENNSYLVANIA  
ALLEGHENY TRAIL  
ALLIANCE**

Stephen Farber, PhD  
Jose Argueta  
Shannon Hughes

University Center for Social and Urban Research  
University of Pittsburgh  
March 1, 2003

## Table of Contents

### Executive Summary

1. Introduction and Methodology
2. Trail Usage
3. The User Survey
4. Direct Spending Associated with the Allegheny Trail System in Neighboring Communities and the State of Pennsylvania in 2002
5. Geographic Origins of Use and Indirect Spending Effects
6. A Comparison of the Current Study with the 1998 Study

Appendix A The User Survey

Appendix B Tables for Estimating Visits

## Executive Summary

This study reports the analysis of the use of the Allegheny Trail Alliance system in Western Pennsylvania during the 2002 trail season, April 15 through November 15.

- A total of **5700 mail-in surveys** were placed on vehicles at seven strategic trailheads along the 100 continuous miles of the Great Allegheny Passage from Boston to Garrett, plus Montour Trail.
- The survey collected **2229 responses** by the cut-off date of December 18, 2002.
- This represents a **39% response rate**.

The user surveys asked for information on trail use, distances traveled, spending in local communities, and on bikes and equipment. In addition, the Allegheny Trail Alliance has positioned trail counters at 11 strategic locations along the trail. The counter information was coupled with the user survey information to obtain estimates of trail-related spending. Montour had to be excluded from the visit and total spending analyses because it had no functioning trail counters in the 2002 season.

The survey obtained information on small item purchases, such as food, clothing and gasoline, made in local trail-related communities:

- 59% of groups made some type of small item local purchases.
- The average person spent **\$8.84 per person per trip locally on these small items (\$9.64 if Montour is excluded)**.
- Spending varied significantly across trailheads, ranging from **\$2.87** per person per trip at Montour to **\$15.61** at Confluence.
- Spending varied substantially with distances traveled, ranging from **\$4.03 per person per trip for those traveling less than 10 miles** one way to a trailhead to **\$15.44 per person per trip for those traveling more than 60 miles**.

The user survey collected information on the overnight lodging costs and number of nights stayed:

- 13.3% of the visiting groups stayed overnight during their visit.
- The average number of nights stayed by groups who DID stay overnight was 2.4 nights; however, over the ENTIRE sample, the average number of nights stayed during a visit was only 0.31 nights.
- The average expenditure for groups who DID stay overnight was \$21.36 per person per night; however, over the ENTIRE sample, the average lodging expenditure per night was \$3.24 per person per night.
- This implies that over the ENTIRE sample, the average person spent **\$1.00 per person per visit for lodging** ( $0.31 \times \$3.24$ ).

The use survey collected information on bike and equipment expenditures during that past two years:

- The average spending on bikes and equipment over the entire sample was \$117.47 per person per year.
- The percentage biking time on the Allegheny Trail system for all users combined was 47.2%.

- Therefore, we estimate that the average person **\$55.45 per person per year on bikes and equipment** ( $\$117.47 \times 47.2\%$ ) in 2002 for use reasonably attributable to the trail system.

The trail counter readings at the eleven sites were analyzed to exclude outliers and an empirically based formula was used to convert these readings to number of persons visiting using the trails.

- The number of visits during the 2002 trail season along the Boston-Garrett trail section (Montour was excluded for lack of count data) was **347,053 visits**. The number of visits varied substantially across counters as Table E-1, Column 1, below shows.
- The average person made **6.8 trips per year** to this section of trail (excluding Montour).
- Therefore, we estimate that **51,342 different individuals** used this section of trail during the 2002 season (excluding Montour).

The visitation and spending estimates are combined to determine the three types of spending analyzed. These total spending estimates are shown in Table E-2:

- A total of **\$3,188,990 was spent on small items in local communities** along the trail. We can be 95% confident that this type of spending was within the range from \$2,615,143 to \$3,762,238 (not shown in Table 2).
- A total of **\$522,814 was spent on lodging**. We can be 95% confident that this type of spending was within the range from \$338,322 to \$707,592.
- A total of **\$3,551,135 was spent on bikes and equipment reasonably related to trail use** in 2002. We can be 95% confident that this type of spending was within the range from \$2,915,181 to \$4,187,120.
- Therefore, the grand total spending estimate associated with trail use in 2002, combining the three spending categories above, was **\$7,262,939**. The 95% confidence interval for this grand total was **\$5,868,646 to \$8,656,950**. This reflects direct spending only. It does not reflect indirect spending, such as purchases of food and material supplies of restaurants and shops along the trail system. The latter are considered below.

The study has considered the residential origins of trail users from information on the zipcodes of residence:

- Users traveled, on average, **43.7 miles one way** to reach trailheads.
- **Pennsylvania residents accounted for 90.3% of the visits** to the Boston-Garrett trail system.
- **Pennsylvania residents accounted for 87.9% of trail related spending**, including small items, lodging, and bikes and equipment.
- **Persons residing within 10 miles of the trail system accounted for 47.6% of the visits** to this trail system and **43.6% of the trail related spending**.
- Persons residing within 10 miles of the trail system were likely to make roughly **7 times** as many trips to the trail in a season as persons residing more than 30 miles from the trail.

The spending estimates above do not include the indirect spending associated with initial direct spending. In order to estimate the total spending effects, inclusive of the indirect spending, we have used multipliers based on other comparable area studies. After excluding the bike and equipment spending by persons residing outside Pennsylvania, under the presumption that they would make these purchases in their local communities, the study estimates:

- Total direct and indirect spending in Pennsylvania attributable to the trail system was **\$12,096,285** in the 2002 trail season.
- Total direct and indirect spending in communities within 10 miles of the trail system was increased by **\$3,174,593** due to trail related spending coming from outside those communities.

It is the spending from outside the local trail related communities that contributes to the economic development of these communities; more so than the spending that originates from within these communities. We could not determine the extent to which the trail system redirected spending by local residents from outside their communities back into their communities; this would also contribute to local economic development. The fact that persons traveling long distances spent roughly four times as much each trip as local visitors supports the argument that it is visitors from outside the communities that really contribute to economic development.

Comparisons of the current study with the study done for the Allegheny Trail Alliance in 1998 are complicated. First, the trail counters were not fully operable during the entire 1998 trail season. Second, there were difficulties in interpreting whether a non-response to spending questions meant a true \$0 or simply missing data. Although there was evidence of increased trail usage, from an estimated 304,408 visits to the Boston-Garrett trail section in 1998 to an estimated 347,053 visits in 2002, interpreting this as a true increase in use may be problematic. In 1998 we had to estimate usage for the entire season based on, at most, one-half a season of trail counter data. Trail counts for the 2002 season are more reliable. At least these two years' estimates confirm usage rates ranging from 300,000 to 350,000 visits.

Estimated per person spending in 2002 is well below even the lowest estimates for the 1998 season. This may be for two reasons. The 2002 survey covered the entire trail season, while the 1998 survey covered only the last half of the season when spending is the highest. Also, there may be true reductions in spending in 2002 as economic conditions were considerably poorer in 2002 than 1998. Estimated total small item and lodging expenditures in trail communities due to trail use ranged from \$5.4 to \$14.1 million in the 1998 study; and from \$2.9 to \$4.5 million in the 2002 study. Similarly, the range of estimates for bike and equipment spending was from \$8.9 to \$12.2 million in 1998 and from \$2.9 to \$4.2 million in 2002.

The large range of spending estimates in the 1998 study was due to the inability to distinguish between a true \$0 (low estimate) expenditure and missing data (high estimate). The 2002 study is much more reliable because it eliminated this data ambiguity. The range of estimates in 2002 is solely due to our attempt to establish a statistical range within which we can 95% confident that spending lies within that range,

and not to errors in data interpretation. We would conclude that the 2002 estimates for trail use and spending are much more reliable than the 1998 estimates.

We believe that the user survey in 2002 provides very reliable information on spending and usage patterns. These data can reasonably be used over the next several years to gauge the economic implications of trail use to Pennsylvania and local trail related communities. Where we see the greatest problems are in the use of trail counters to determine the number of visits and visitors. These problems include malfunctioning counters, as in the case of Montour and Greenock. But they also include the measurement difficulties in counting all users and avoiding double counting. The latter are much more difficult to solve, but may involve more effective placement of counters and more regular monitoring of counters for malfunctions.

While the focus of the study has been on spending, the survey did collect information on what things people would like to see improved on the trail system. Nearly a third of the respondents suggested more drinking water and toilet facilities. A smaller number suggested more snack shops.

Table E - 1  
 Estimated Number of Visits and Individuals Making  
 Visits to the Boston-Garrett Trail System in 2002  
 (Montour Excluded)

Trail Counter Location	Total Use (# Visits) During Season	Trailhead Used for Spending Estimates	Number of Trips per Person	Estimated Number of Individuals Making Visits (1/3) 4
	1	2	3	4
Garrett	9121	Rockwood	4.0	2280
Rockwood	10551	Rockwood	4.0	2638
Confluence	9484	Confluence	2.9	3270
RamCat	27883	Ohiopyle	3.5	7967
RR Station	27566	Ohiopyle	3.5	7876
Fernciff	58616	Ohiopyle	3.5	16747
Connellsville-S	51224	Connellsville	9.7	5281
Connellsville-N	39879	Connellsville	9.7	4111
Outback	8482	W.Newton	12.0	707
Buddtown	55083	W.Newton	12.0	4590
Greenock	49163	Boston	12.1	4063
Total	<b>347053</b>	All Combined	6.8	<b>51342</b>

Table E - 2  
 Estimated Total Spending on Small Items, Lodging, and Bikes  
 and Equipment for the Boston-Garrett Trail System in 2002  
 (Montour Excluded)

Trail Counter Location	Total Local Spending on Small Items  1	Total Lodging Spending  2	Total Bike & Equipment Spending (B&E)  3	<b>Grand Total Spending</b>  4	% of Total  5
Garrett	\$ 89,573	\$ 18,412	\$ 164,478	<b>\$ 272,462</b>	3.8%
Rockwood	\$ 103,607	\$ 21,296	\$ 190,249	<b>\$ 315,153</b>	4.3%
Confluence	\$ 148,144	\$ 47,865	\$ 203,039	<b>\$ 399,048</b>	5.5%
RamCat	\$ 318,146	\$ 90,810	\$ 339,512	<b>\$ 748,468</b>	10.3%
RR Station	\$ 314,533	\$ 89,778	\$ 335,656	<b>\$ 739,967</b>	10.2%
Ferncliff	\$ 668,805	\$ 190,900	\$ 713,719	<b>\$ 1,573,424</b>	21.7%
Connellsville-S	\$ 462,550	\$ 31,759	\$ 484,100	<b>\$ 978,408</b>	13.5%
Connellsville-N	\$ 360,109	\$ 24,725	\$ 376,886	<b>\$ 761,721</b>	10.5%
Outback	\$ 69,975	\$ 862	\$ 60,284	<b>\$ 131,121</b>	1.8%
Buddtown	\$ 454,438	\$ 5,596	\$ 391,504	<b>\$ 851,539</b>	11.7%
Greenock	\$ 199,109	\$ 811	\$ 291,708	<b>\$ 491,628</b>	6.8%
Total	<b>\$ 3,188,990</b>	<b>\$ 522,814</b>	<b>\$ 3,551,135</b>	<b>\$ 7,262,939</b>	100.0%