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# Motorized recreation in trailside communities

A case study of Cheese Country Trail users & economic impacts



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## Executive summary

Motorized use of recreation trails is an important activity throughout the Lake States and an important component of outdoor recreation in Wisconsin. It is an enjoyable activity for all ages and an important form of outdoor recreation for older adults. Places to ride and trails that connect communities provide a unique way for motorized recreationists to enjoy Wisconsin's beautiful and varied outdoor landscape. Motorized use trails also provide important assets for tourism development in rural communities.

In this report, we raise issues related to motorized use of recreation trails and the communities affected by motorized trail users. We approach these issues from a community development perspective and focus on how trail user spending creates an externally driven economic stimulus in trailside communities. The discussion is supported with evidence from case study research of the Cheese Country Trail in Green, Lafayette, and Iowa Counties of southwestern Wisconsin.

The Cheese Country Trail is a multiuse trail system that has meandered through rural Wisconsin, from Monroe to Belmont and Mineral Point, for the past 20 years or so. It is built on a converted railroad bed and is open to motorized and non-motorized uses, including all-terrain vehicles (ATVs), utility terrain vehicles (UTVs), snowmobiles, off-road dirt bikes, mopeds, motorcycles, horses and horse-drawn conveyances, bicycles, and hikers.

In early 2010, Wisconsin & Southern Railroad submitted a proposal to reconstruct rail on the existing Cheese Country Trail, from Monroe to the west for approximately 4 miles.

Several locally elected public officials, in concert with local stakeholder groups, approached the University of Wisconsin-Extension Cooperative Extension to help develop and implement a comprehensive, up-to-date study of the economic impact of the trail. In response, a yearlong applied research project was initiated, and this report describes the results.

The goal of the case study was to observe use pressure and collect information from a representative sample of Cheese Country Trail users. Information was collected using a multifaceted approach. Volunteers were trained in September and October of 2010 to observe and conduct interviews. Observations began November 1, 2010, with data collected during randomly selected two-hour time slots throughout the 12-month survey period. Eight intercept locations were chosen along the trail, at Monroe, Browntown, South Wayne, Gratiot, Darlington, Calamine, Belmont, and Mineral Point. In November of 2011, additional information was collected using three focus group interviews. Results of the study are intended for use in improving the recreation experiences of future trail users and in helping local businesses and governments create tourism-related economic development strategies.

During the 12-month study period, local field staff volunteered more than 2,000 hours collecting the data summarized in this report. Specifically, they conducted 683 two-hour trail observations and 733 face-to-face interviews. The results reveal several important implications for outdoor recreation planning and local economic development. Snapshots of these results include the following:

## Trail usage

- During the 12-month study period, the Cheese Country Trail saw roughly 98,000 visitor-days of use (one day's use of the trail by an individual trail user).
- Two-thirds of all visitor-days were spent by non-local trail users, or those from outside the local three-county region.
- Almost three-quarters of all visitor-days occurred on weekends or holidays.
- The majority of Cheese Country Trail usage occurred between Memorial Day and Labor Day. A surprisingly high level of use occurred during the month of October.
- There was a modest amount of snowmobile usage during the winter of 2010–2011, but snowmobile activity was hampered by lack of snow and trail closures.

## Trail user characteristics

- The Cheese Country Trail attracts an older crowd of outdoor recreationists; the average age of users was mid-40s, with non-local trail users tending to be older than local trail users.
- Non-local trail users were more apt to be college educated and had significantly higher household incomes when compared to local trail users.



**Trip characteristics**

- The Cheese Country Trail was the primary reason most non-local trail users were visiting Green, Lafayette, and Iowa Counties.
- Trail users were generally satisfied with the trail itself.
- Most trail users accessed the Cheese Country Trail in either Monroe or Darlington.
- Day trips accounted for nearly three-quarters of all Cheese Country Trail usage.
- More than one-quarter of all users were overnight guests who stayed at local campgrounds, hotels, or motels; nearly all overnight guests were non-locals.
- Trail users also participated in activities such as dining and shopping during their trips.

**Economic impacts**

- Individual trip expenditure patterns of local and non-local trail users differed greatly.
- On average, individual non-local trail users spent between \$175 and \$220 per trip, depending on the time of year.
- Total combined spending of all trail users exceeded \$15 million during the 12-month study period. Non-local trail user spending accounted for over \$13 million of that amount.
- Non-local trail user spending supported almost 190 local jobs and contributed to almost \$3 million in employee compensation for local residents of Green, Lafayette, and Iowa Counties.

- A host of public policy issues must be addressed to maintain and enhance local development efforts relating to the Cheese Country Trail.

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# chapter 1

## Introduction and literature review



Trails can improve local quality of life, stimulate local economies, and offer recreation opportunities.

Recreation managers, open-space advocates, and local elected officials have become sensitized to the impacts and importance of parks and linked trail corridors that provide access, open space, and quality-of-life continuity within and between communities. Since the 1980s, a significant nationwide effort has helped convert railroad beds to a system of recreation trails. Today, this system is a network of connected open spaces, acting to build places that enhance the health of America's environment, economy, neighborhoods, and people (Rails-to-Trails Conservancy 1996). While the vast majority of these trails cater to non-motorized users (e.g., bicyclists, walkers, runners, and cross-country skiers), there is a growing interest in trails, use areas, and connected open spaces that cater to motorized users.

The purpose of this report is to develop a better understanding of motorized forms of outdoor recreation, trails catering to motorized users, and the development of communities affected by these types of trails. The yearlong case study of the Cheese Country Trail in southwestern Wisconsin served to explore key issues related to the local impacts of motorized use and the people who partake in this important form of outdoor recreation. This report is also intended to contribute to the growing collection of literature on the use and development of recreational amenities and their contributions to improving conditions across rural America.

### A review of the literature

Increasingly, natural and built amenities that provide opportunities for local recreation, such as lakes, parks, and trails, are thought to be a central component of rural development (Power 1988, 1996; Green et al. 2005). This is particularly true in amenity-rich regions, such as those found across the Lake States of Minnesota, Wisconsin, and Michigan (WDNR 2006; MNDNR 2008; MDNR 2003). Recreation trails are an important local amenity that can improve local quality of life, stimulate local economies, and offer recreation opportunities for local residents and visitors alike. Carefully planned recreation trails can use existing corridors and local land resources to provide additional economic development for local residents and communities without hurting the environment or other possible economic developments in the area.

There is a continual need to test, interpret, and more fully understand the social and economic effects amenity-based activities have on the communities in which these amenities reside. During the past quarter century, significant progress has been made in more fully understanding how recreation resources are integrated into community economies, with particular attention paid to public parks, trails, and related open spaces (Howe et al. 1997; Garvin 2001; Crompton 2001).

## MOTORIZED RECREATION IN TRAILSIDE COMMUNITIES

The academic literature on motorized recreation is geographically specific but thematically broad. Given the significance of geographic context, it is important to note that most of the available literature to date has focused on motorized recreation in the western and southern states (cf. Deisenroth et al. 2009; Foulke et al. 2006; Foulke et al. 2008; Fredman 2008; Coupal et al. 2001; Holmes and Englin 2010). From these studies, it is difficult to generalize to the Lake States due to differing trail characteristics, land ownership patterns, and rural conditions. We focused our literature search on the economic effects of motorized recreation, issues associated with demand for motorized outdoor recreation, and issues of use compatibility that are relevant to planning, with a specific interest in studies relevant to Wisconsin.

There has been a continual effort in Wisconsin to address issues associated with economic impacts of recreation and tourism at the community level. Examples of these efforts can be found in an annotated bibliography initially compiled by Haines et al. (1997), which has been updated and converted to a searchable online database (Scott and Marcouiller 2005).<sup>1</sup> These studies have addressed various types of tourism, including festivals, events, and attractions, and various types of relevant outdoor recreation pursuits, including camping, hunting and fishing, park visitation, and trail use (cf. Cooper et al. 1979; Olson et al. 1999; Marcouiller et al. 2002; Kazmierski et al. 2009). Motorized recreation literature specific to Wisconsin is limited. Early works

looked at off-road vehicles (Robertson and Bishop 1975) and snowmobiling (Moyer and Hansen 1986; Foti et al. 1987; Sumathi et al. 1991; Loden 1995).

A study from the mid-1990s (Ivanko 1996; Ivanko and Graefe 1996) used an on-site questionnaire of 378 randomly selected Cheese Country Trail users between May and June of 1996 to assess user satisfaction. This thesis and accompanying report do an excellent job of outlining issues associated with

use interaction; further, this work provides useful strategies to cope with conflictive recreation activities. However, the thematic and somewhat dated nature of this study, combined with rapid changes in technology and demand for outdoor recreation, renders it of limited use in understanding the local development impacts associated with current motorized outdoor recreation.

More recently, a warm-weather survey effort initiated by Sue Hamilton of the Wisconsin Department of Tourism in 2003 resulted in a statewide economic and demographic profile of all-terrain vehicle (ATV) users in Wisconsin (Wisconsin Department of Tourism et al. 2004). The dataset was based on face-to-face interviews and consequently was limited to relatively small sample sizes for region-specific detail.

The economic impact of linear trail systems on local communities has become more important due to intensified demand for public open-space corridors and increased community dependence on tourism as a source of income (ibid.; Keith et al. 1996; English et al. 2000; Reeder and Brown 2005).

Park and trail systems have been shown to provide tangible economic benefits to nearby communities (Howe et al. 1997; Mules 2005). These tangible economic benefits are wide-ranging and include increased property values (Crompton 2004) and the stimulating effect of visitor expenditures on local retail and service sector activity (Tribe 2005; Vanhove 2005). This second element is often referred to as “tourism.” Estimating this expenditure-driven local economic effect was the focus of a recent workshop compilation on trail expenditure studies (Carleyolsen et al. 2005) and several recent and closely related reports (Olson et al. 1999; Marcouiller et al. 2002; Kazmierski et al. 2009). Direct expenditure estimation and economic impact assessment are important tools that support tourism-focused development strategies.

## A case study of motorized use of recreation trails

The demand for trails and open-space corridors has grown significantly in Wisconsin (WDNR 2006, Chapter 2) and across the Lake States, while alternative uses that are potentially competitive have become a key public policy issue (ibid., Chapter 4). A look at data on state-owned trails in Wisconsin (table 1) shows that most state trails are designated as multiple-use trails; in other words, they are open for a combination of motorized and non-motorized activities. This said, motorized use tends to exhibit asymmetrical competition with non-motorized use (ibid.; Knopp and Tyger 1973; Vittersø et al. 2004; Marcouiller et al. 2008). Thus when combined, motorized use tends to dominate and drive off non-motorized use on the same trail. Of the 1,800 miles of trails owned by the state, over 90% are open to both motorized and non-motorized uses. Most allowable motorized use is restricted to snowmobile use in the winter, which serves to limit use interaction between motorized and non-motorized users. Indeed, only 411 miles of state trails are open to both ATV and snowmobile use.



<sup>1</sup> This database can be accessed at <http://urpl.wisc.edu/people/marcouiller/projects/clearinghouse/>.

Another interesting aspect of the state trails data relates to average miles per trail by designated use. Note that trails allowing motorized use are typically three to four times longer than trails designated as strictly non-motorized.

State trails in Wisconsin also vary significantly in amount of use. For instance, popular bicycle trails such as the Elroy-Sparta in west-central Wisconsin are well known, while many other trails are relatively unknown and little used. Unfortunately, comprehensive statistics on system-wide state trail usage are not widely collected, but state efforts are underway to supplement existing data.

In an effort to better understand trails, their usage, and their ability to contribute to a community's economic vitality, a multiyear project to assess a motorized use trail in southwestern Wisconsin was initiated in mid-2010. The Cheese Country Trail was selected as an interesting case study to examine in greater detail due to its active set of local stakeholders (e.g., the Tri-County Trail Commission, local ATV and snowmobile clubs), involved local community development educators (e.g., UW-Extension county faculty), intensive motorized use characteristics, and evolving historical structure.

The Cheese Country Trail corridor was used commercially as a railroad corridor for more than 100 years.<sup>2</sup> Originally dating back to 1857, the line from Warren, Illinois, to Mineral Point, Wisconsin (through Calamine, Darlington, and Gratiot), was termed the "Mineral Point Railroad." It took two hours for a train to travel between Mineral Point and Warren.

In 1870 a railroad was completed from Platteville to Calamine. Belmont, a station about midway between Calamine and Platteville, was platted by the railroad primarily because the officers of the company thought there should be a village between those two places (Lanz 1985). Then in 1881, a railroad was constructed from Monroe to Shullsburg. This link completed a continuous line of railroad between Milwaukee and Mineral Point.

The railroad brought prosperity to the communities it served, and as they prospered, so did the railroad. It brought in coal and other "items needed for everyday living" and carried out many products for export from the region, including cheese, cordwood, condensed milk, livestock, and grain (ibid.). Although the railroad made most of its revenues by moving freight, it also provided passenger service. This service was extremely important to many towns, especially the smaller ones lacking decent roads. The passenger service became vital in winter, when deep snows covered the roads, and in spring, when rains made the roads too muddy for travel. Occasionally the railroad would have to suspend service because of a washout, soft roadbed, or heavy snow, but rail service still excelled over that of any other type of transportation.

Changing transportation technologies meant a transition away from rail. Passenger service between Janesville and Mineral Point ended in 1950. Despite local interest in maintaining rail service, the entire line between Monroe and Mineral Point was abandoned by the mid-1980s.

In 1990 the Pecatonica Rail Transit Commission (the local governing authority) decided to lease part of its corridor to the Tri-County Trail Commission to use as a multiuse recreation trail until such a time that rail once again became a feasible mode of transportation. The Pecatonica Rail Transit Commission reserves the right to revoke the lease (with a six-month notice) and return the corridor to rail use.

**Table 1. State-owned linear trails in Wisconsin<sup>a</sup>, allowable uses, and mileage (as of September 2007).**

Nature of allowable use <sup>b</sup>	No. trails	Total miles	Ave. miles per trail
Strictly non-motorized	5	58	11.6
Multipurpose—open to ATVs and snowmobiles	10	411	41.1
Multipurpose—open to snowmobiles only (no ATVs)	22	1,259	57.2
Undecided and/or closed	5	92	18.4
<b>Total of all linear state trails</b>	<b>42</b>	<b>1,820</b>	<b>43.3</b>

**Source:** Wisconsin Department of Natural Resources (WDNR) 2007.

<sup>a</sup> Drawn from a complete list of designated state trails comprising the Wisconsin State Trail System (includes all linear trails owned by the WDNR), designated as such under the authority of Administrative Code NR 51.73. Trails not owned by the state may become designated state trails under the terms of NR 51.73.

<sup>b</sup> Any type of use may be limited on a trail, meaning that the use is allowed for only a portion of the entire trail length. Non-motorized allowable uses include walking, biking, rollerblading, cross-country skiing, and horseback riding (often a limited allowable use). Motorized uses include ATVs and snowmobiles and are often limited allowable uses. "Undecided" indicates allowable trail uses are yet to be determined through the Master Plan process.

<sup>2</sup>Those interested in a detailed history of the rail line are referred to a well-researched description by Daniel Lanz (1985).

## MOTORIZED RECREATION IN TRAILSIDE COMMUNITIES

The Cheese Country Trail currently incorporates roughly 60 miles of abandoned railroad bed between Monroe and Belmont/Mineral Point (the western segment of trail splits at Calamine, with one spur terminating at Belmont and the other at Mineral Point). The trail contains several sections, a map of which is found as figure 1. Along its entire length, the Cheese Country Trail currently hosts a variety of recreation opportunities, including the use of ATVs, UTVs, dirt bikes, and other miscellaneous motorized equipment in the summer and snowmobiling in the winter.

### Objectives and problem statement

This case study research was undertaken to provide a better understanding of trail usage, trip characteristics, and community development impacts. It adds a new dimension to the growing Wisconsin-based literature that helps us understand social and economic linkages between outdoor recreation and local community development. Specifically, our objectives in this case study research were to (1) measure trail-use pressure across all seasons for an entire year, (2) develop a trail-user profile, (3) estimate trail-user expenditure patterns, (4) determine attributes of the trail that need improvement, and (5) estimate economic linkages and local community development effects associated with trail usage.

The problems that we are attempting to address are broadly related to recreation management, leisure science, and amenity-driven rural development. Specific questions to which we seek answers are rather focused: Who visits recreation trails that allow motorized uses? What aspects of the trail draw visitors? What time of year do visits occur, and how is this related to receipts that flow to local business owners? Where should communities and recreation managers focus their efforts to maximize the benefits of the trail and ameliorate potential problems? How can recreation trails be better integrated into local economic development efforts? These are the generic questions being asked with specific reference to the Cheese Country Trail and the economic conditions of the Green, Iowa, and Lafayette County communities affected by the trail.

### Outline of report

This report is organized into two subsequent sections and three appendices. The next section provides an overview of key findings obtained from this applied research effort. The final section summarizes key policy implications generated by the research findings. Appendix A details the methods used to evaluate the Cheese Country Trail, including both data collection and analysis. The subsequent appendices contain the intercept stratification and a copy of the instruments used (intercept surveys and observation reports).

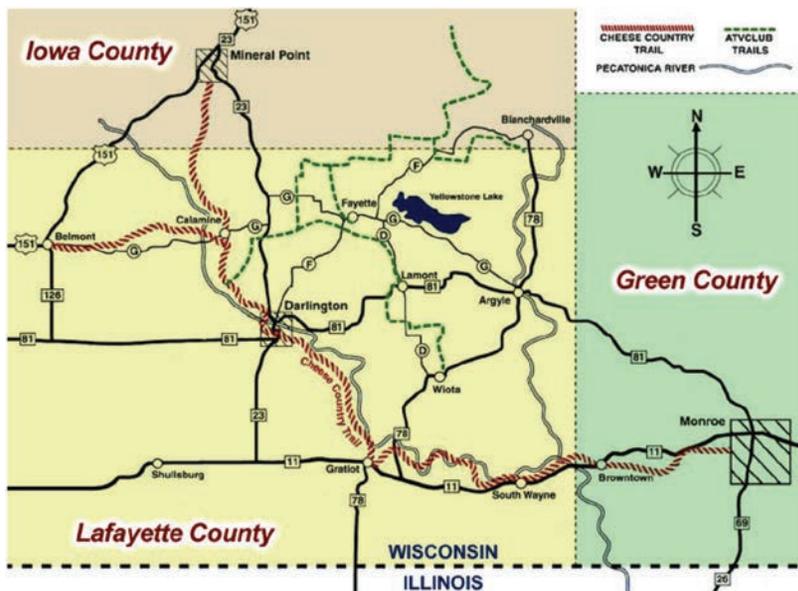


Figure 1. The Cheese Country Trail System and the counties that represent the study region (county boundaries extend beyond the figure boundaries).

# chapter 2

## Results



This section outlines the results of the trail observation periods, face-to-face surveys, and focus group interviews. These results are presented as descriptive summaries of the data we collected and serve as a basis for further analysis and discussion. We have made an attempt to comprehensively describe each element of the data collected. Further detail can be obtained from the authors. It is important to point out that the results reflect the quality of our random and representative sampling. We have made every attempt to minimize possible sources of bias. Our interpretations of this data attempt to remain objective and allow generalizations to the broader phenomena of trail use and community development impacts where applicable.

### Trail-use characteristics throughout the year

#### Observations

To gain insight into trail usage across all four seasons, we developed a randomized approach to observe the trail for a 12-month period, from November 2010 through October 2011. These observations involved the collection of a variety of data about trail conditions, weather, and trail usage.<sup>3</sup> This data collection effort served as the basis for expansion to the total population of trail users throughout the year.

Procedures used to expand observations to a total number of trail users accounted for a stratified random sample of observation periods and places that are described in appendix A. Further, this expansion accounted for the two-way nature of trail use, assuming that users entered and exited the trail at the same location. Finally, our expansion accounted for seasonal variation and the uniqueness of the 2010–2011 winter season. There were long portions of February and March in which the trail was essentially closed due to lack of snow and poor trail conditions. It is important to state the obvious limitation of this; our user counts and estimation procedures are specific to the period in which we made observations—November 1, 2010, through October 31, 2011.

#### An annual snapshot of trail-use pressure

Note from the summary of estimated monthly trail use found in figure 2 that we are careful to distinguish between monthly usage and monthly observations relative to weekend and weekday usage. Holidays have been included with weekends due to their similar levels of trail usage. Many user characteristics differed based on the origin (or place of primary residence) of the user (fully defined in the next section). While not shown in this graphic, our survey results suggest that on weekdays, the trail is used mostly by local residents, and on weekends and holidays, the trail is used mostly by visitors from outside the three-county area.

<sup>3</sup>The specific methods used to observe the trail are described in appendix A. A sample observation report used by trained field staff can be found in appendix C.

## MOTORIZED RECREATION IN TRAILSIDE COMMUNITIES

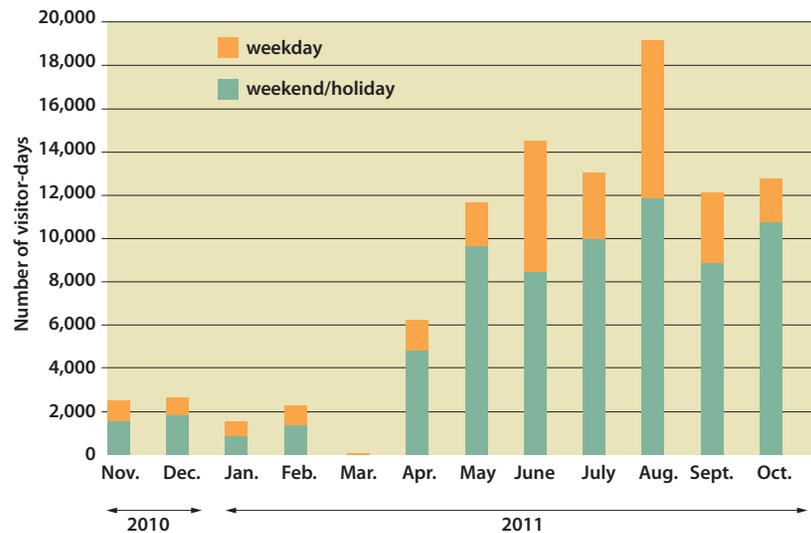
The seasonal expansion of trail users suggests that during the observation period, the Cheese Country Trail experienced a total of just over 98,000 individual visitor-days (one day's use by a visitor). While a complete breakdown of usage by season is summarized in appendix A (table A.3), note here that over 70,000 of these visitor-days occurred on weekends or holidays. This translates into roughly 72% of total visitor-days occurring on weekends or holidays, while only 28% occurred on weekdays.

Note from figure 2 that the highest levels of trail use occurred during the summer months of June, July, and August. Indeed, roughly 57,000 visitor-days, or 58% of all trail use, occurred between Memorial Day weekend and Labor Day weekend (May 28 and September 5 of 2011). Our

observations reflected an unseasonably pleasant autumn of 2011, with particularly high levels of October trail usage. In general, warm weather trail usage (by ATVs, UTVs, dirt bikes, etc.) far exceeded cold weather usage (by snowmobiles).

The uniqueness of the 2010–2011 winter season is reflected in figure 2 in the low levels of January and March trail usage. Indeed, the trail was closed part of January, the latter half of February, and all of March due to lack of snow and poor trail conditions. Warm and dry weather allowed a resumption of usage by ATVs and UTVs in April. Certainly, our results represent the weather conditions during 2010 and 2011, but anecdotal evidence by local residents suggests that this was a fairly typical year in southwestern Wisconsin.

**Figure 2.** Cheese Country Trail usage during the study period (in visitor-days per month).



## Survey results

A second and matching source of data for this case study research included face-to-face interviews with trail users. These were done during 683 randomly allocated two-hour observations throughout the study period. During each observation, field staff intercepted and surveyed two individuals at predetermined times and locations along the trail. The trained staff conducted a total of 753 face-to-face interviews.<sup>4</sup> As can be seen in table 2, the large majority (91%) of intercepts and survey requests were accepted on the first attempt. There were a small number of rejections, which occurred for a variety of reasons. An obvious reason was if the individual had already completed the survey. When a survey request was

rejected, the surveyor thanked the individual and then intercepted an individual in the next party. There were a small number of attempts that did not generate a valid response.

There were also 582 valid null samples, or observation periods when the observer did not encounter anyone to intercept during the predetermined period. Most often, null samples occurred during time slots that were scheduled early or late in the day (observations were conducted during randomly selected periods from sunup to sundown). Null samples were also often observed during inclement weather and when trail conditions were poor. These valid null samples are not represented in table 2.

**Table 2.** Summary of responses to survey request.

Response	No.	% Surveys completed
Accepted at first attempt	712	91.05
Accepted at second attempt	34	4.35
Accepted at third attempt	2	0.26
Accepted after three or more rejections	5	0.64
Rejected because person intercepted had already taken survey	29	3.71
<b>Total</b>	<b>782</b>	<b>100</b>

**Note:** This summary does not include null samples, where the observer did not encounter an individual to intercept.

<sup>4</sup> A complete description of methods used in this applied research can be found in appendix A. A sample survey instrument and a crib sheet that includes a narrative for the face-to-face interview can be found in appendix C.

### Trail user characteristics

Given the primary objectives of this study, we had an interest in differentiating Cheese Country Trail users by their place of origin. We established place of origin using the zip codes of trail users' primary residences. Interview results suggested that the majority of Cheese Country Trail users had primary residences located outside the three counties used as the local region in this case study. Specifically, roughly two-thirds of the respondents (485 of 733) resided outside of Green, Lafayette, and Iowa Counties in southwestern Wisconsin; this group will be henceforth referred to as "non-local" trail users. Just over one-third of the respondents (245 of 733) resided in the three-county area, and this group will be henceforth be referred to as "local" trail users. A summary of trail users' places of origin is found in figure 3. Note that the Cheese Country Trail provides a modest draw as a regional destination, with the vast majority of users living within a 150-mile radius of the trail.

Figure 4 provides an age profile of Cheese Country Trail users surveyed by volunteers. The mean age of Cheese Country Trail users was 45.6 years. The youngest trail user encountered by the survey team was 11, and the oldest was 84. The age structure for locals and non-locals was statistically different.<sup>5</sup> In general, non-locals (average age of 46.2 years) tended to be older than locals (44.6 years).

<sup>5</sup> According to appropriate statistical tests at the  $p < .05$  level, local and non-local age differences were statistically significant from equal distributions and/or means. In all circumstances, the statistical test assessed whether the distribution or mean values of local and non-local trail users are equal ( $p$  measures the probability that distributions and/or mean values are the same).

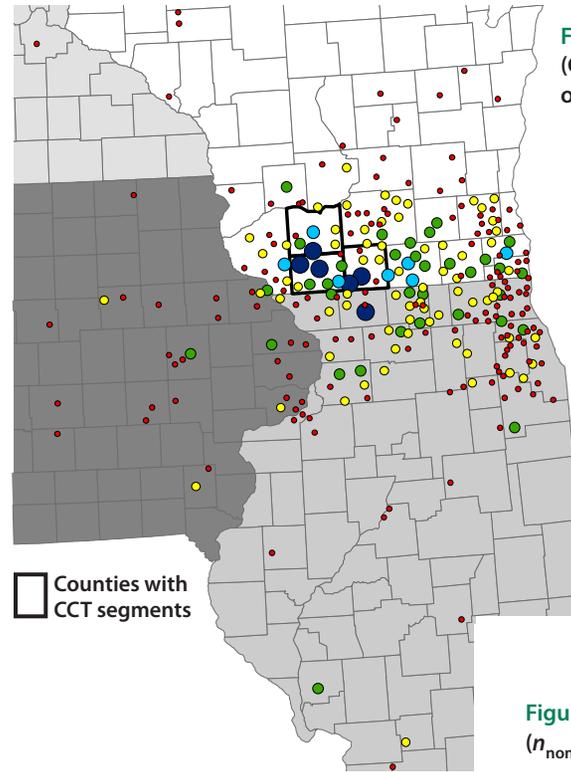


Figure 3. Place of origin of Cheese Country Trail (CCT) survey respondents (according to zip code of primary residence).

#### Percentage of respondents

- 0-0.25
- 0.26-0.50
- 0.51-1.00
- 1.01-2.00
- 2.01+

#### Visitors from outside the geography presented:

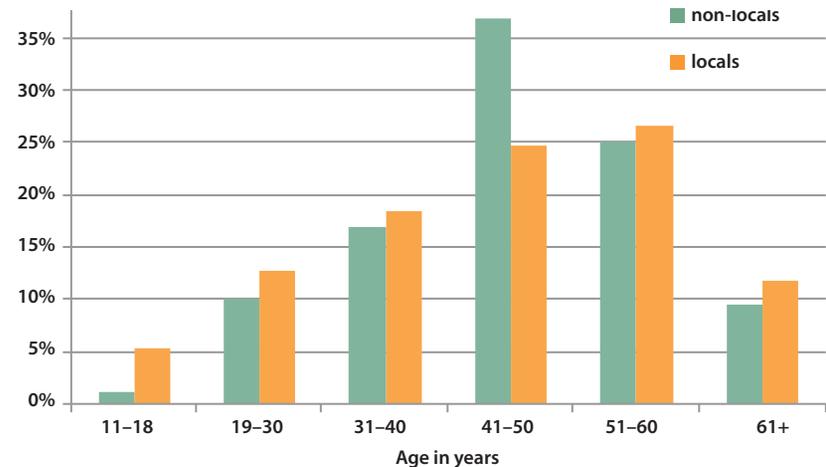
- 1 person each from Florida, Iowa, Michigan, North Carolina, Texas, and Virginia.
- 2 people each from Indiana, Ohio, and South Carolina.

724 from Midwest

733 from United States

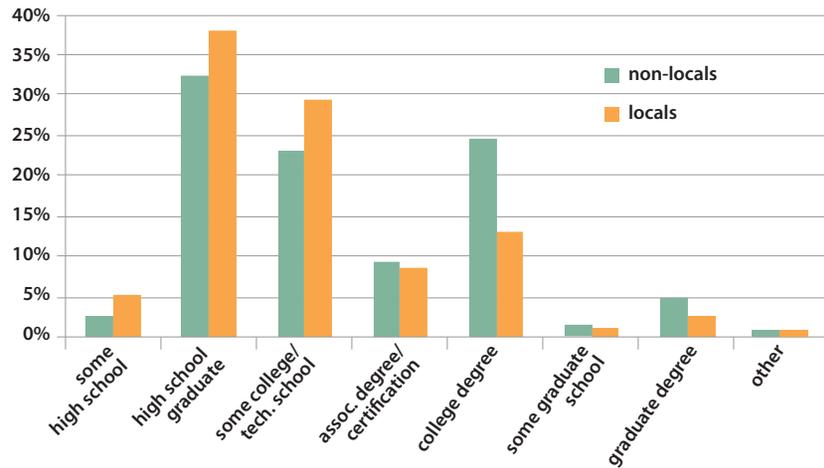
Figure 4. Age profile of Cheese Country Trail survey respondents

( $n_{\text{non-local}} = 484$ ,  $n_{\text{local}} = 243$ ;  $p = .000$ ).

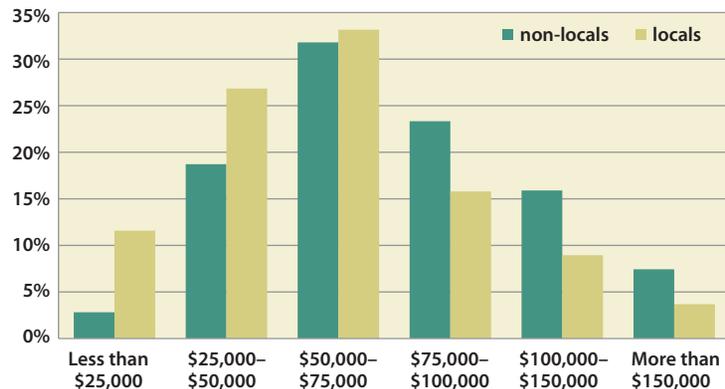


## MOTORIZED RECREATION IN TRAILSIDE COMMUNITIES

**Figure 5.** Educational profile of Cheese Country Trail survey respondents. Survey question asked respondents to identify their highest level of education attained ( $n_{\text{non-local}} = 470, n_{\text{local}} = 237; p = .009$ ).



**Figure 6.** Annual household income profile of Cheese Country Trail survey respondents ( $n_{\text{non-local}} = 390, n_{\text{local}} = 190; p = .000$ ).



An educational profile of trail users encountered in this study is shown in figure 5. Our survey work suggested non-local trail users were more apt to have college degrees and, in general, had higher levels of educational attainment when compared to local Cheese Country Trail users.

Given differences in sociodemographic characteristics and differing demands related to distance traveled, it was not surprising that we found significant differences in income of local and non-local Cheese Country Trail users. Note from the profile of surveyed trail users' annual household income (figure 6) that non-local users of the Cheese Country Trail tended to have higher annual household incomes (\$63,250 average) when compared to local trail users (\$48,750 average).

While many of the trail users we encountered were alone, we also frequently encountered trail users recreating in groups. The average group size was just over three people (3.04 for locals, 3.30 for non-locals). The average number of youths (people under the age of 16) per group was just under 0.40.



Trip characteristics were another key element of interest in this study. Several attributes of trail users' trips were measured using the face-to-face survey instrument. One question asked trail users about their past use of the trail, but most of the questions focused on the trip in which they were engaged at the time of the survey. Specifically, questions asked about users' motivations for taking the trip, access points along the trail, and overnight stays.

### Past trail use

The majority (roughly 85%) of trail users surveyed had ridden the Cheese Country Trail prior to the trip on which they were intercepted. Of those who had previously ridden the trail, many were regular users. An obvious finding of our survey work was that local trail users tended to use the trail more frequently. Note from the summary of users' reported trail use during the 12 months before being surveyed (figure 7) that most locals reported using the trail six or more times in the past 12 months, with many using it more than 30 times. This contrasts with non-locals, who were more apt to have either never ridden the Cheese Country Trail before or ridden it fewer than six times during the past 12 months.

### Trip motivations

Trail users' motivations for visiting the area varied widely (see figure 8). This said, the vast majority of non-locals were in the region specifically because of the trail. In fact, the trail itself or other local trails and leisure trips were particularly common motivations for both local and non-local riders. Also interesting to note is that a number of local residents indicated that they use the trail as a local route between communities or between family and friends in the region.

### Trail use characteristics

Trail users accessed the trail at various locations; Monroe and Darlington were the two most common access points. Indeed, these two communities were the starting points for almost 60% of user trips (39% and 19%, respectively). This is likely due to both availability of parking and the location of these communities at the far eastern end and the midpoint of the trail, which are logical places for trail access. Mineral Point and Belmont, the two western termini, were the starting points for 10% and 8% of trips, respectively.



Figure 7. Survey respondents' use of Cheese Country Trail during the preceding 12-month period ( $n_{\text{non-local}} = 380$ ,  $n_{\text{local}} = 239$ ).

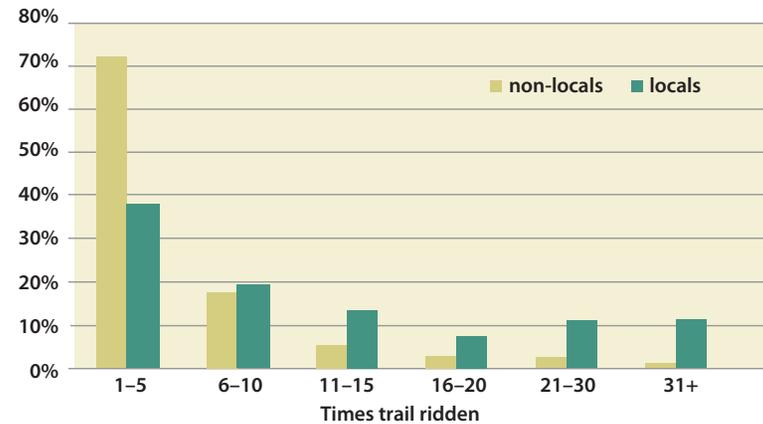
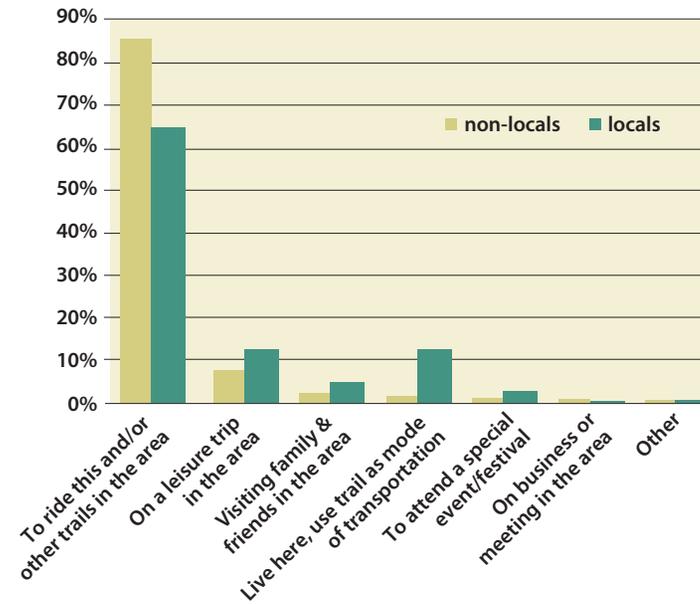
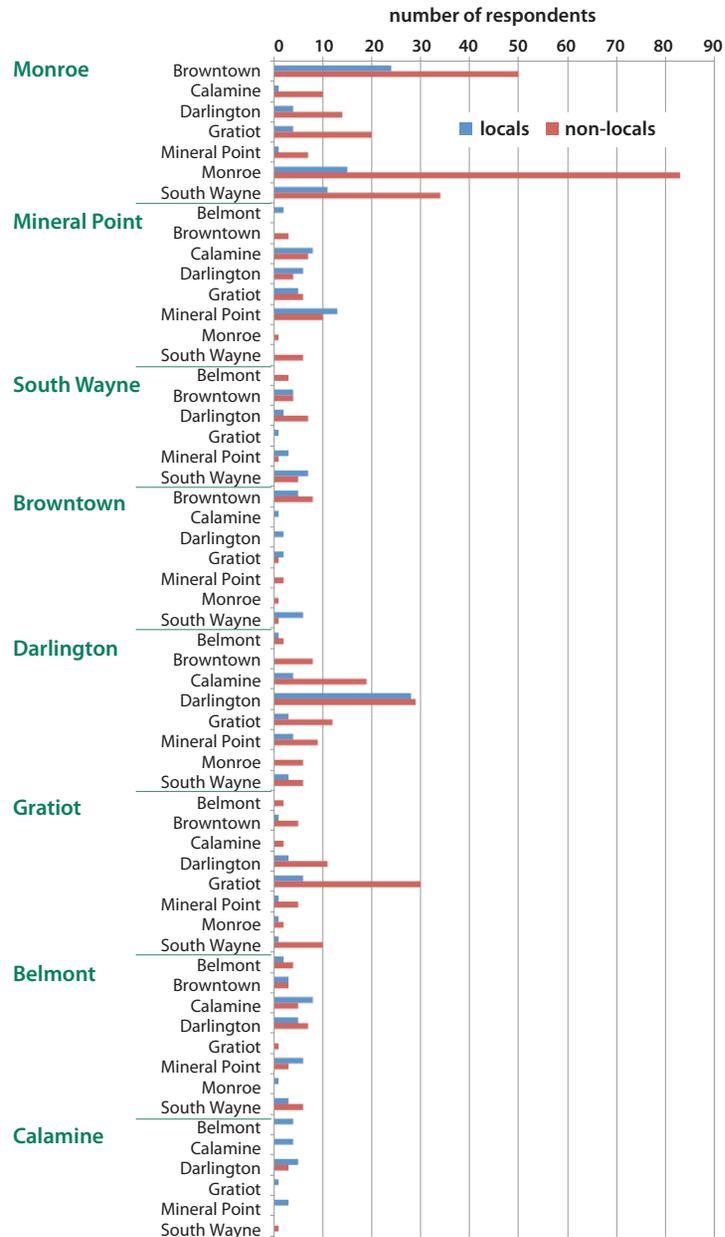


Figure 8. Trail users' motivations for visiting the Cheese Country Trail area (multiple responses possible).



## MOTORIZED RECREATION IN TRAILSIDE COMMUNITIES

Figure 9. Trail users' access points grouped by place of intercept (n = 707).

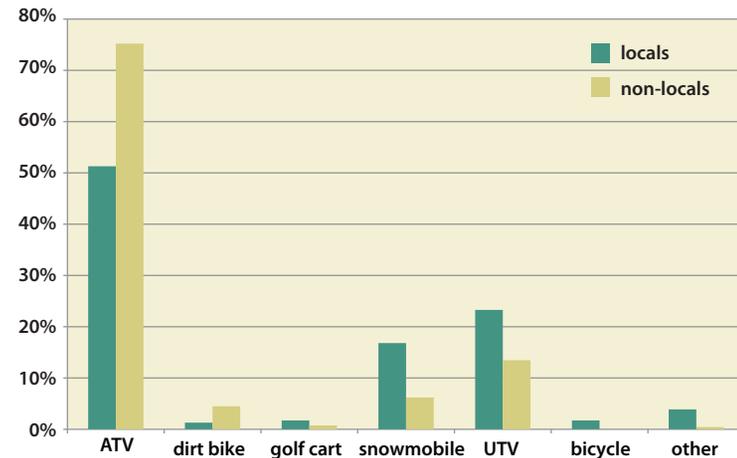


While generalizing about actual use of the trail is complex, evidence suggests that the average trail mileage traveled by non-locals was slightly more than that traveled by locals. Many trail users were intercepted at either Monroe or Darlington, the most common access points (see figure 9). The fact that we intercepted a trail user at a location was insufficient evidence from which to calculate total mileage of the user's trip because many users continued past their point of intercept. To make our calculations, we first removed those who were intercepted at their access point. Using those remaining, we calculated the average length of travel from starting point to point of intercept. Assuming that, at a minimum, trail users traveled back to their point of access, non-locals traveled an average of at least 22.3 miles,

while locals traveled an average of just over 19 miles. Certainly, these calculations represent the conservative lower bounds (or minimum) of average distance traveled on the trail.

Interviewers noted the types of equipment used by Cheese Country Trail users, a summary of which appears in figure 10. The majority of users encountered on the trail rode all-terrain vehicles (ATVs) or utility-terrain vehicles (UTVs).<sup>6</sup> A smaller number of users rode dirt bikes or golf carts, and a very small number rode bicycles. Interestingly, locals were more apt to ride UTVs, while the higher percentage of locals using snowmobiles (in the winter) reflected underlying patterns of local and non-local use (all users on groomed trails in the winter used snowmobiles).

Figure 10. Survey respondents' trail use by type of equipment.



<sup>6</sup>The differences between ATVs and UTVs are significant; their respective usage reflects skill level, application, and demographics of user groups. UTVs typically have steering wheels (instead of handle bars), with riders sitting side-by-side (instead of front-back). In addition, UTVs typically have a bed for carrying equipment, are useful for outdoor chores, and often cater to an older demographic.

### Duration of trip and overnight stay characteristics

Of the trail riders encountered during the yearlong study, almost three-quarters (74%) indicated that they were day-trippers (not making an overnight trip from home). Of the 26% of users that stayed for at least one night, the vast majority were non-local trail riders. Thus, trip duration in days is assumed to equal the number of nights stayed plus one. For locals, the average trip duration was slightly more than one day (1.04). But for non-locals, the average trip duration was 1.66 days for those intercepted on a weekend and 1.77 for those intercepted on a weekday. Somewhat surprisingly, weekday non-locals spent more nights, on average, than those intercepted on weekends. Only slight variation in trip duration was evident throughout the various seasons of the year.

We were further interested in the characteristics of overnight trail users' lodging, including lodging type (figure 11). Most overnight trail users stayed at campgrounds, followed by hotels and motels. It is important to remember that figure 11 reflects the number of survey respondents and not the total number of overnight trail riders. To get an idea of the total impact of overnight guests, we expanded accommodations expenditures (discussed later in this section).

For those whose trip included at least one overnight, we were further interested in the location of their overnight accommodations (summarized in figure 12).

Figure 11. Type of lodging used by overnight trail users (n = 192).

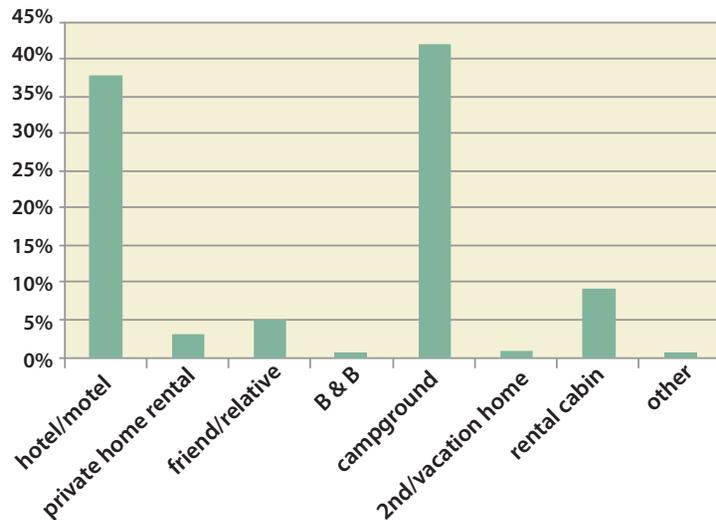


Figure 12. Location of lodging by type for non-local overnight trail users (n = 161).

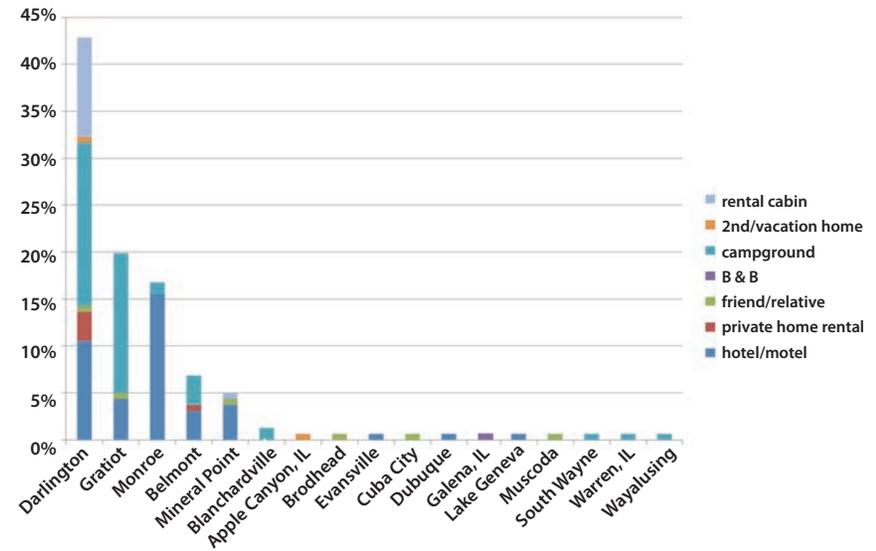
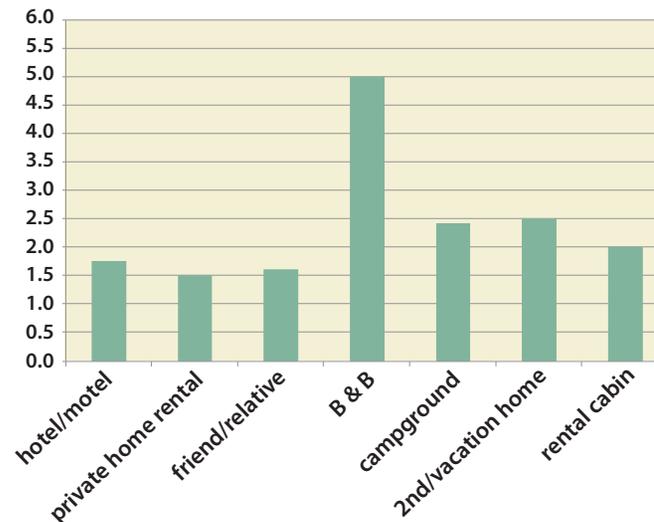
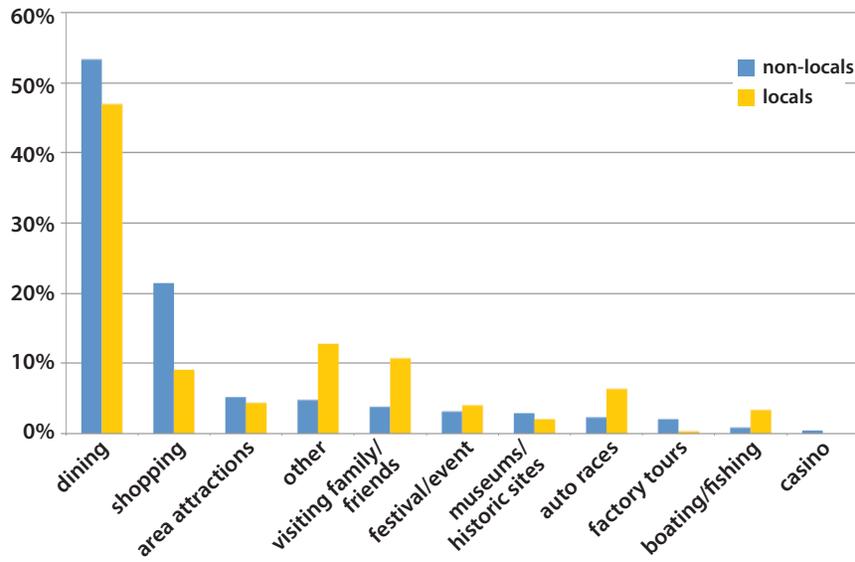


Figure 13. Average number of overnights by lodging type for overnight trail users (n = 190).

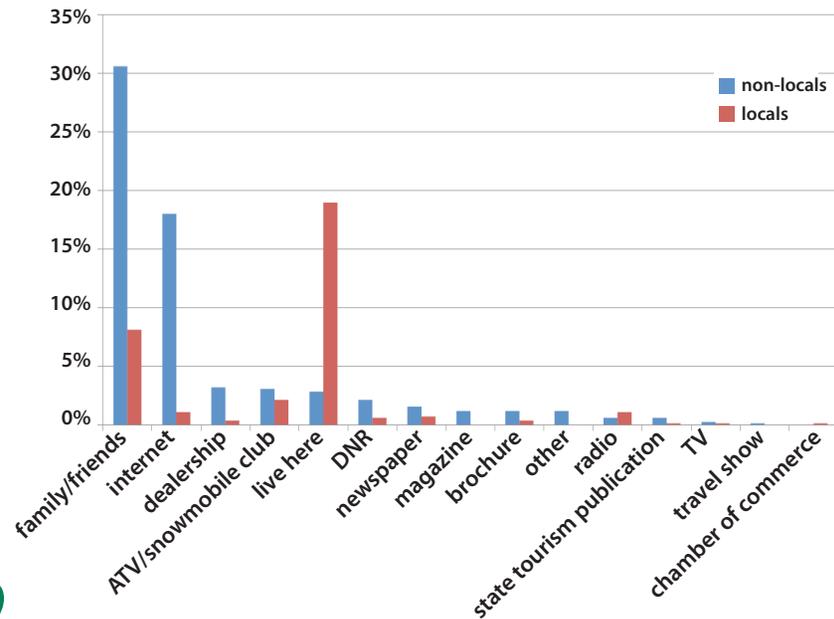


## MOTORIZED RECREATION IN TRAILSIDE COMMUNITIES

**Figure 14.** Other activities of survey respondents/members of immediate travel group while on the current trip (multiple responses possible).



**Figure 15.** How trail users learned about the Cheese Country Trail (multiple responses possible).



The vast majority of non-local trail riders who spent at least one night away from home chose to spend those nights in local accommodations, and accommodations in Darlington, Gratiot, and Monroe accounted for the vast majority of these overnight stays. A very small number of local trail users spent a night away from home (roughly 5%). Our survey results suggest that most of these users camp or stay with relatives.

Finally, we were interested in the number of nights overnight trail users spent away from their home of residence (see figure 13). It is important to recall that most overnight stays were spent at campgrounds or hotels and motels. Note from figure 13 that campers tended to spend at least two nights away from home while hotel and motel guests spent slightly fewer nights away. Interestingly, the trail rider staying overnight at a bed and breakfast indicated a five-night stay in Galena, Illinois.

### Related activities

To better understand the trip characteristics of those who visited the Cheese Country Trail, we were interested to learn about the other activities of trail users and their immediate travel party while on the trip (see figure 14). Most trail riders indicated that they also partook in dining and shopping, and smaller numbers of survey respondents partook in a variety of additional activities.

A related issue that is important to developing strategies to attract more visitors is the marketing of local businesses. Our survey addressed this issue by asking trail users how they learned about the area (see figure 15 for a summary of the responses). While most local trail users knew about the area by the simple fact that they lived there, most non-local trail users learned about the area from family and friends or the internet. Note that very few users learned about the area from state tourism brochures, magazines, newspapers, or television.



**Trail user preferences and attitudes**

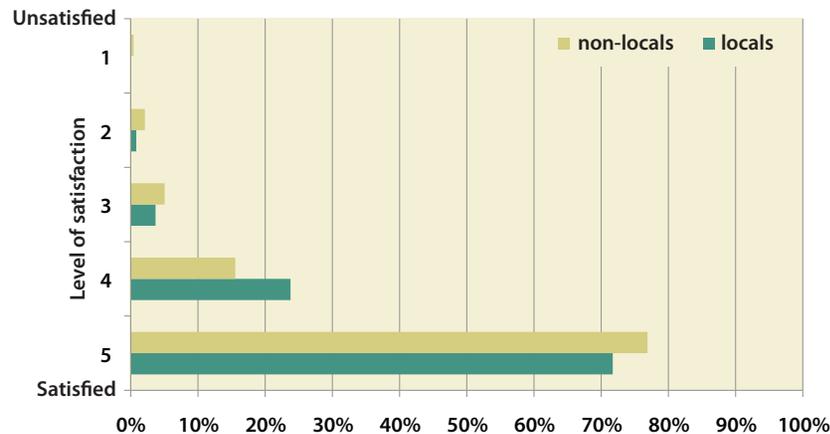
To better understand user preferences and attitudes, we asked trail users to identify their level of satisfaction with several aspects of the trail deemed important to use. This was done using a Likert-type scale from 1 (unsatisfied) to 5 (satisfied). A summary of trail users' responses to level of satisfaction with trail signage, trail grooming, trail safety, camping, and trail access and parking is shown in figures 16, 17, 18, 19, and 20.

Note from these figures that trail users were generally satisfied with the trail attributes mentioned in the face-to-face survey. In general, non-local trail users were more satisfied with these attributes than were local trail users. Overall, trail user ratings indicated less satisfaction with trail grooming and camping facilities than with other trail attributes, though the ratings were still on the satisfied side of neutral. This said, the "neutral" satisfaction levels

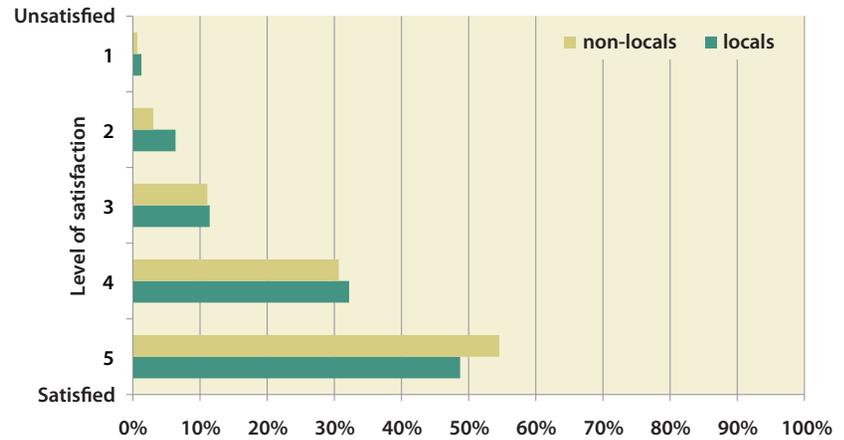
with camping facilities could be construed as "not applicable" because these trail riders may not have been overnight guests. Trail grooming is a constant maintenance issue given heavy use and the need for volunteer assistance. These issues are discussed in more detail in the section on focus group interviews.

Also, an open-ended statement elicited suggestions for improvements, a summary of which appears in table 3. Roughly 55% of survey respondents provided one or more suggestions. The most common response categories included trail grooming and maintenance (~30%); the need for an intensive-use area (a managed area with sand, hills, mud, water, and jumps) or more trail mileage (~20%); the need for more camping, access, parking, or rest areas (~20%); and the need for more signage and maps (~15%). Roughly 10% responded that everything was fine and that they liked the trail as it was.

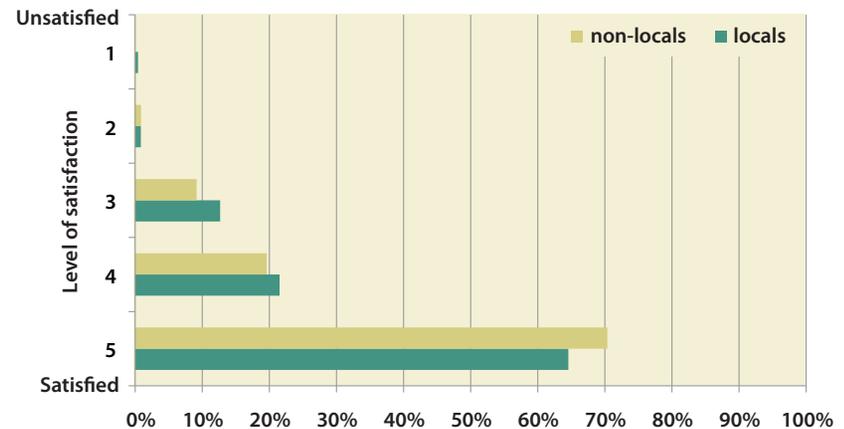
**Figure 16.** Survey respondents' level of satisfaction with Cheese Country Trail signage ( $n_{\text{non-local}} = 476, n_{\text{local}} = 244$ ).



**Figure 17.** Survey respondents' level of satisfaction with Cheese Country Trail surface grooming ( $n_{\text{non-local}} = 460, n_{\text{local}} = 236$ ).

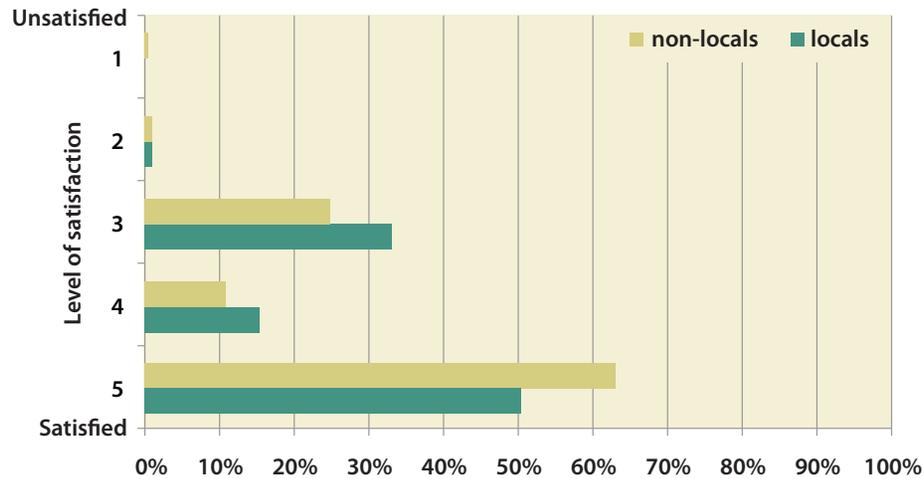


**Figure 18.** Survey respondents' level of satisfaction with Cheese Country Trail safety ( $n_{\text{non-local}} = 459, n_{\text{local}} = 237$ ).

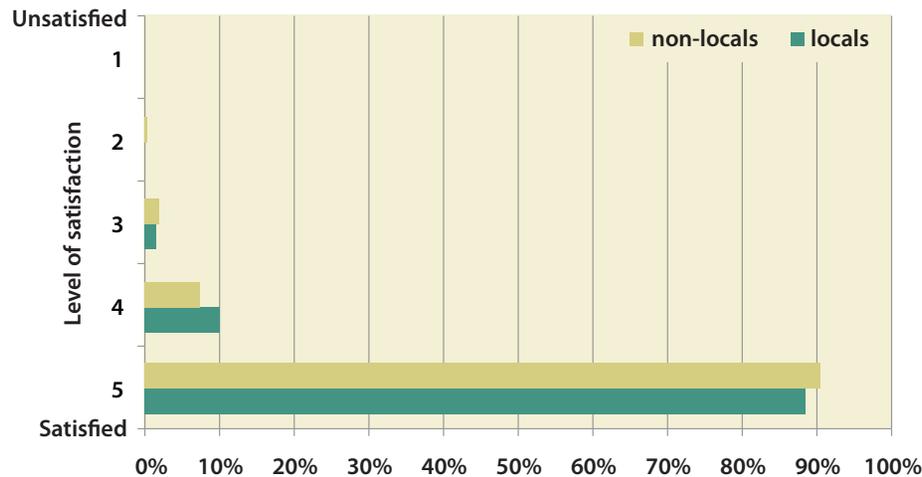


## MOTORIZED RECREATION IN TRAILSIDE COMMUNITIES

**Figure 19.** Survey respondents' level of satisfaction with Cheese Country Trail camping facilities ( $n_{\text{non-local}} = 345, n_{\text{local}} = 190$ ).



**Figure 20.** Survey respondents' level of satisfaction with Cheese Country Trail access and parking ( $n_{\text{non-local}} = 466, n_{\text{local}} = 237$ ).



**Table 3.** Summary of responses to the statement "If there is anything that could be done to enhance your experience in this area, please explain." (Summarized by major category; multiple responses possible).

Open-ended response	No. of responses
Better signage	49
Vegetation maintenance	39
More offroad areas	37
More routes	35
Rough trails	35
Add play area/intensive use area	33
Satisfied	32
Better grooming/grading	31
Add/improve camping	28
Better dust control	17
Better access	17
Better/more mapping	11
Longer trail	9
More/better parking	9
More rest stops/picnic areas	9
Too many large rocks	8
Less/smaller gravel	7
More difficult trails	6
Less pot holes	6
More open trails	6
Add unloading area	5
More bathrooms	5
Faster trail	4
Don't take away trail	4
Confusing trail	4
Uncooperative weather	4
Other*	66

\*Includes a variety of responses, each with three or fewer individual responses. A complete list of verbatim responses can be obtained from the authors.

## Local economic impact

Trail use and the activities of trail users have a wide variety of local impacts, including social, environmental, and economic effects. Our specific interest is in the economic impacts associated with use of the Cheese Country Trail. Economic impacts can be broadly defined to include both market-based and non-market-based effects. The latter includes elements such as values regarding the trails' impact on local quality of life, the quality of the environment, and the ability to pass on productive resources to the next generation. While important, these non-market-based effects are beyond the scope of this study. Our specific interest in local economic impacts focuses on the market-based economic effects associated with trip-related expenditures of trail users. This market-based economic impact is important because a portion of these dollars provides an economic stimulus: money flowing into the region that would not happen were it not for the trail itself.

We begin this section with a brief overview of the regional economy. We then describe the extent to which trail users spend money and estimate the amount of new money flowing into the region as a result of non-local trail user expenditures. Once expanded to an annual basis, these inflowing funds are then applied as a shock, or stimulus, to the regional economy to assess how the regional economy reacts to this influx of new dollars. This regional economic change is thus used as a basis upon which to describe and discuss the local economic impact associated with the Cheese Country Trail.

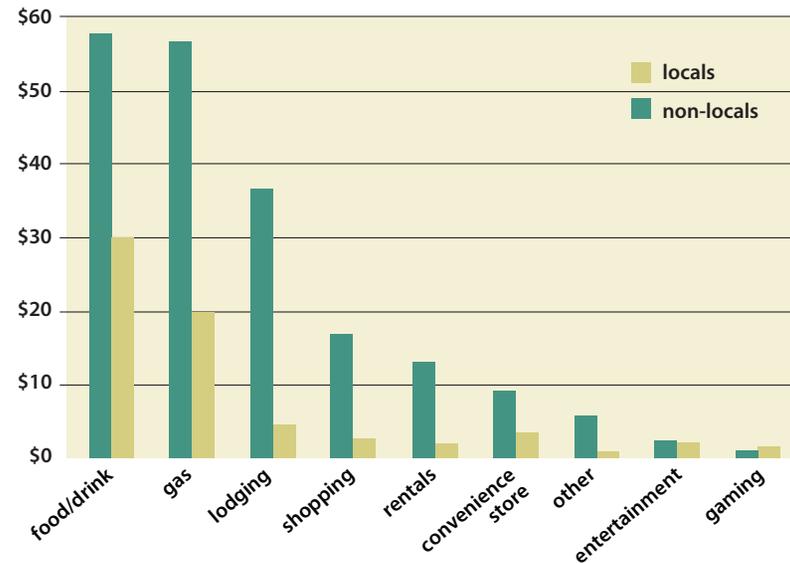
The regional economy of Green, Lafayette, and Iowa Counties in southwestern Wisconsin is characteristically rural.<sup>7</sup> This 1,980-square-mile region lies in the rolling hills, farms, and bucolic landscapes of the southwestern Wisconsin driftless area. Demographically, this three-county region has a resident population of 75,345, with 30,972 households (2009). In 2009, total regional employment was 41,849, generating total personal income of roughly \$2.7 billion. This income was made up of employee compensation (\$1.3 billion), proprietors' income (\$216 million), property-type income (\$882 million), and indirect business taxes (\$352 million). The average household income in the region was just over \$87,000.<sup>8</sup> The top employment sectors of the 2009 regional economy included agriculture (including grain farming, dairy cattle and milk production, and cheese manufacturing), retail nonstores (direct and electronic sales), state and local government, food services and drinking places, wholesale trade, private hospitals, and nonresidential construction.

## Trip-related spending by trail users

Our survey of trail users elicited responses for their actual out-of-pocket expenses on an individual trip basis. While this can be a confusing piece of information to recollect and estimate, we were careful to make this as simple as possible and to focus only on spending of the individual being surveyed. Furthermore, we were careful to allow respondents to recall and estimate spending for only the trip on which they were intercepted; thus the information on

spending could be assumed to have been fresh in their minds. This said, we admit to the possibility of bias (recall, strategic, and other types). At best, the expenditure information presented here represents our most diligent attempt to capture the reality of spending taking place as a result of trips to the Cheese Country Trail. It should be viewed as a fairly gross approximation of actual spending.

**Figure 21. Individual trail users' average expenditures per trip by category of spending (in 2010 and 2011 USD;  $n_{\text{non-local}} = 380$ ,  $n_{\text{local}} = 239$ ).**



<sup>7</sup> Data for this section is from a regional model of Green, Iowa, and Lafayette Counties constructed using 2009 county-level data from MicroIMPLAN (MIG 2011). A description of the specific methods used to estimate local economic impacts in this region can be found in appendix A. More detailed information about regional impact modeling can be obtained from the authors.

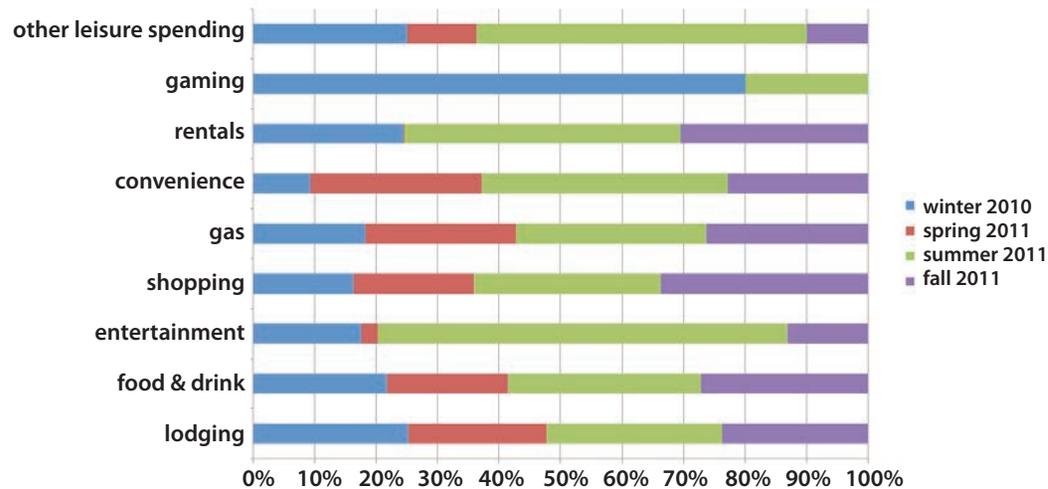
<sup>8</sup> This value reflects a broad variety of income types that include employee compensation, proprietors' income, and other property-type income. It also reflects the average, or mean, household income, which is higher than the median household income, or midpoint of a ranked list of household incomes. Median household incomes ranged from \$48,144 for Lafayette County to \$54,737 for Iowa County. (The Green County median was \$53,088.) The discrepancy between average and median household incomes is due to income inequality.

## MOTORIZED RECREATION IN TRAILSIDE COMMUNITIES

**Table 4.** Individual trail users' average expenditures per trip by observation period (in 2010 and 2011 USD;  $n_{\text{non-local}} = 380$ ,  $n_{\text{local}} = 239$ ).

Category of spending	Observation periods							
	11/1/10–3/30/11		3/31/11–5/27/11		5/28/11–9/5/11		9/6/11–10/31/11	
	Non-local	Local	Non-local	Local	Non-local	Local	Non-local	Local
Food & drink	\$56.40	\$27.80	\$57.43	\$24.24	\$61.03	\$33.62	\$49.57	\$27.27
Gas	\$36.43	\$31.22	\$52.38	\$13.89	\$67.05	\$17.50	\$45.36	\$19.51
Lodging	\$44.53	\$0.73	\$26.85	\$8.34	\$38.06	\$4.17	\$35.22	\$0.27
Shopping	\$13.30	\$2.73	\$15.31	\$3.52	\$16.69	\$1.45	\$21.43	\$6.97
Rentals	\$13.58	\$0.00	\$2.61	\$0.00	\$16.54	\$3.62	\$10.21	\$0.00
Convenience	\$15.91	\$1.41	\$7.90	\$2.98	\$9.53	\$4.60	\$3.95	\$1.52
Other	\$5.52	\$0.68	\$3.60	\$0.00	\$5.78	\$1.30	\$7.09	\$0.00
Entertainment	\$0.75	\$0.00	\$8.09	\$1.32	\$1.58	\$3.14	\$1.33	\$0.00
Gaming	\$0.22	\$6.36	\$2.94	\$0.00	\$1.27	\$0.00	\$0.00	\$0.00
<b>Total</b>	<b>\$186.64</b>	<b>\$70.93</b>	<b>\$177.11</b>	<b>\$54.29</b>	<b>\$217.53</b>	<b>\$69.40</b>	<b>\$174.16</b>	<b>\$55.54</b>

**Figure 22.** Percentage of type of spending by observation period (seasonal labels correspond to the dates listed in table 4;  $n = 719$ ).



We were able to gather information about expenditures from the more than 700 people we intercepted on the trail. Note from figure 21 that we took care to separate the expenditure patterns of local and non-local trail users. This is important simply because there are statistically significant differences in the expenditure patterns of the two groups ... *large* differences. The ability to look at the spending of non-locals separately is also important in order to estimate the stimulating effect of new money flowing into the region, money that would not flow in were it not for the trail itself. From the figure, note the relatively larger amounts of average individual trail user trip spending on food and drink, gas, and lodging. Also note that average individual non-local trail users spent more than twice as much as did local users. Given the manner in which we stratified our random sample of trail observations, it was important to separate these expenditure patterns by time of year. Once done, it became apparent that expenditure patterns of trail users did indeed vary by season (see table 4). While total individual spending by non-local trail users was highest from Memorial Day through Labor Day, total individual spending by local trail users was highest from November through March. Further, the expenditures within each category of spending also varied, as can be seen by looking at the percentage of each type of spending by time of year (figure 22).

Spending on food and drink, gas, lodging, and shopping remained fairly stable across seasons. In contrast, spending on gaming, while relatively low overall, tended to occur between November and March. Spending on entertainment (again low) tended to occur between Memorial Day and Labor Day.

**Translating non-local trail user spending into economic impacts**

Expansion of individual expenditure patterns to total levels of trail use was done from a disaggregated data summary that accounted for the four observation periods identified in table 4. This expansion accounted for local and non-local trail use estimates by weekend/holiday and weekday and is summarized in table 5. This procedure for expansion matched the stratified random sampling scheme outlined in appendix A.

While trip duration for local trail users was consistent with the predominantly single-day trail use of this user category, non-locals exhibited average trip durations of between 1.2 and 1.9 days, depending on the season. Since the average individual expenditure patterns summarized in table 4 were elicited on a per trip basis, there could be a need to adjust total visitor-days to account for non-locals who visited the trail multiple times on a single trip. Anecdotal evidence suggests that while multiple-day use of the trail does exist, most overnight visitors are single-day users of the trail.

The estimation of the economic impacts of trail users focuses on the infusion of dollars into the communities of this three-county region; thus, for economic impact modeling, we use only non-local trail user spending (roughly \$13 million) as the externally driven annual stimulus to the regional economy. While local

trail users spent a significant amount of money annually (over \$2 million), this can be viewed as a recirculation of local money, which does not contribute to the externally driven economic stimulus. However, it must be remembered that our survey did not include specific questions to determine the amount of money local users spent at area equipment retailers (purchasing ATVs, UTVs, snowmobiles, dirt bikes, etc.) and related businesses (purchasing trailers, accessories, and repair services). We believe the spending totals cited in this study are conservative estimates of total spending resulting from trail use.

**Local economic impacts of trail user spending**

The economic structure of a region is a key determinant in the extent to which externally driven economic impacts are felt locally. The Cheese Country Trail runs through the middle of three rural counties and past a number of small trailside communities. These small rural communities tend to have relatively few local retail and service businesses in which trail users can spend their money when compared to the larger economies of communities like Platteville or Madison, Wisconsin, and Dubuque, Iowa.

While specific community impacts and their relative differences are important, the ability to estimate regional economic impacts remains at the level of the combined three-county region. Green, Lafayette, and Iowa Counties are fairly rural in their economic characteristics when compared to the rest of the Upper Midwest.

Rural counties tend to have fewer local linkages for intermediate purchased inputs, or those items needed to produce the items that are sold locally. These smaller and less diverse regional economies also have relatively more leakages to the outside for the items sold by local retail and service sector businesses. Larger cities such as Madison, Dubuque, and Chicago tend to have more robust and diverse economies with a much broader array of local retail and service businesses and a commensurately higher amount of locally available intermediate purchased inputs. These larger, more diverse regional economies have fewer leakages and tend to be more self-contained. Hence, multiplier impacts of dollars tend to be larger as the economic structure of a regional economy grows.

When we apply non-local trail user spending to an input-output model of Green, Lafayette, and Iowa Counties, the multiplier effect of interindustry purchases generates additional impacts (see table 6). This money spent locally by non-local trail users generates a wide array of business activity within the region and has broader impacts on the economic structure of the regional economy. The initial spending has indirect impacts when it is re-spent by local businesses to purchase intermediate inputs and labor resources, and an increase in local household income and the spending of this increased income on consumable items generates induced impacts.

**Table 5. Expanded one-year spending of Cheese Country Trail users during the study period (in nominal USD).**

Category of spending	Non-local trail users	Local trail users	All users
Food & drink	\$3,813,501	\$980,850	\$4,794,350
Gas	\$3,820,084	\$603,798	\$4,423,882
Lodging	\$2,428,122	\$124,149	\$2,552,271
Shopping	\$1,152,515	\$79,177	\$1,231,692
Convenience	\$566,639	\$115,346	\$681,985
Rentals	\$871,667	\$71,540	\$943,207
Other	\$385,646	\$28,524	\$414,170
Entertainment	\$147,201	\$68,037	\$215,238
Gaming	\$71,404	\$26,499	\$97,903
<b>Total</b>	<b>\$13,256,779</b>	<b>\$2,097,920</b>	<b>\$15,354,699</b>

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Also, note that the stimulating effects of non-local trail user spending (roughly \$13 million) were only partially felt within the region. This is due to retail margining in businesses in which trail users spend money. In essence, a significant portion of gross receipts taken in by local retailers goes to pay for the wholesale costs of goods and services purchased by trail users. For instance, gas stations (important recipients of non-local trail user spending) have relatively low retail margins, often roughly 6% on gasoline. Except for this retail margin, the remainder often immediately flows back out of a given region, particularly if the region does not contain suppliers of the specific good or service being sold (e.g., oil producers, oil refineries that convert oil to gas, and wholesalers/distributors of gasoline). Thus, the regional model created for this

project used the initial \$13 million of non-local spending to retail and service sector businesses, applied appropriate retail margins to those sectors affected by such margining, and accounted for a net total local direct effect of roughly \$8.8 million. Approximately \$4.2 million of the initial spending of non-local trail users went straight back out of the region as the wholesale cost of providing the goods and services purchased.

Overall, the region-specific output multiplier represented by these results (reported in table 6) was 1.34, which is modest and reflects the region's more rural economic structure. To reiterate, the extent of multiplier impacts in a given region is a product of the relative diversity of the region's economic structure. The region-specific output multiplier of 1.34

is reasonable given the relative size of the regional economy and the significant leakage due to the lack of regional economic diversity.

It seems appropriate to include a quick note on the difference between output and income (in aggregate, also known as *value added*). *Output*, sometimes referred to as *industry sales*, is the total of all economic activity and is analogous to gross regional product, gross state product, and gross national product. In other words, it is the total value of all regional production, a portion of which can be considered "income." *Income*, or *value added*, is the value of the region's business output minus the value of all inputs purchased from other firms. It is therefore analogous to the "profit" or income generated locally. Value added

includes a combination of employee compensation, proprietors' income ("business profit"), other property-type income, and indirect business taxes paid to governments. The local economic impact of non-local trail user spending on employee compensation is outlined in table 7. Impact reports for other forms of income can be obtained from the authors.

Employee compensation results from jobs created, the jobs themselves resulting from the demands on businesses presented by non-local trail users and their spending patterns. Note from table 8 that over 160 jobs can be attributed to the direct spending of non-local trail users. These jobs are seasonal retail and service jobs that pay relatively low wages. The average amount of employee compensation for these types of jobs is

**Table 6.** Local economic impact on regional output associated with non-local trail user spending (MicroIMPLAN model results in 2012 dollars).

Industry sector <sup>a</sup>	Direct impact	Indirect impact	Induced impact	Total economic impact <sup>b</sup>
Agriculture	\$0	\$9,000	\$11,000	\$20,000
Mining	\$0	\$0	\$0	\$0
Construction	\$0	\$48,000	\$22,000	\$70,000
Manufacturing	\$0	\$88,000	\$24,000	\$113,000
TIPU <sup>c</sup>	\$0	\$123,000	\$44,000	\$167,000
Trade	\$1,287,000	\$153,000	\$298,000	\$1,738,000
Service	\$7,528,000	\$777,000	\$1,200,000	\$9,505,000
Government	\$0	\$143,000	\$57,000	\$200,000
<b>Total<sup>b</sup></b>	<b>\$8,815,000</b>	<b>\$1,341,000</b>	<b>\$1,655,000</b>	<b>\$11,811,000</b>

<sup>a</sup> This list represents a common grouping of the two-digit NAICS categories and is an aggregation of related individual business categories.

<sup>b</sup> Totals may not equal sum of values shown due to rounding.

<sup>c</sup> Refers to Transportation, Information, and Public Utilities, a combined two-digit NAICS grouping.

**Table 7.** Local economic impact on regional employee compensation associated with non-local trail user spending (MicroIMPLAN model results in 2012 dollars).

Industry sector <sup>a</sup>	Direct impact	Indirect impact	Induced impact	Total economic impact <sup>b</sup>
Agriculture	\$0	\$1,064	\$1,885	\$2,949
Mining	\$0	\$5	\$3	\$8
Construction	\$0	\$12,204	\$4,508	\$16,711
Manufacturing	\$0	\$11,344	\$2,000	\$13,344
TIPU <sup>c</sup>	\$0	\$28,400	\$10,478	\$38,878
Trade	\$485,442	\$55,922	\$130,359	\$671,723
Service	\$1,632,892	\$181,472	\$293,673	\$2,108,038
Government	\$0	\$77,314	\$17,197	\$94,511
<b>Total<sup>b</sup></b>	<b>\$2,118,334</b>	<b>\$367,725</b>	<b>\$460,102</b>	<b>\$2,946,161</b>

<sup>a</sup> This list represents a common grouping of the two-digit NAICS categories and is an aggregation of related individual business categories.

<sup>b</sup> Totals may not equal sum of values shown due to rounding.

<sup>c</sup> Refers to Transportation, Information, and Public Utilities, a combined two-digit NAICS grouping.

just over \$13,000 per year. Indirect and induced employment is more broadly felt with different income characteristics. Note that indirect and induced jobs created as a result of non-local trail user spending had average employee compensation per job of over \$28,000 per year. The regional employee compensation multiplier was 1.39 while the regional employment multiplier was 1.18. These numbers are again modest and reflect the unique rural economy of Green, Lafayette, and Iowa Counties.

### Focus groups

To better understand the observation and survey data collected and the context of local development issues associated with the Cheese Country Trail, we interviewed several locally active stakeholder groups that play an important role in making decisions about the trail. Three focus group interviews were conducted with individuals representing (1) local tourism business owners, (2) local public policy makers, and (3) motorized trail users. Results of each of these interviews will be discussed in turn.

### Local business owners

Business representatives agreed that trail users represented a significant portion of their sales. Depending on the time of year, business owners suggested 25% to 75% of their receipts were from trail users. Business was reported to be especially good on weekends.

The discussion revealed that businesses on and near the trail have worked together effectively. Focus group participants provided examples where convenience stores, restaurants, and campgrounds worked together to increase business through advertising and word-of-mouth promotions.

Businesses continue to expand their amenities to cater to needs of trail users. They agreed that they would prefer that additional toilet facilities and water *not* be provided on the trail, to draw more people to their businesses.

The primary facility and services issue discussed was signage, particularly signs that inform trail users of distances to towns and businesses. Signs directing trail users to businesses need to be updated. Business representatives also felt that parking options should be expanded. They discussed the need for additional parking information on the Cheese Country Trail website. In some communities, there was a reported need for in-town routes so trail users can legally drive to local businesses.

Business representatives suggested potential business opportunities, including an ATV/UTV wash (similar to a car wash), intensive-use areas, and additional equipment rentals.

### Public policy makers

Public policy representatives felt that people typically thought of northern Wisconsin as the destination for motorized recreation vehicles. The Cheese Country Trail was reported to be often overlooked because of this, although it is the only area for ATV usage in the southern part of the state.

Policy makers felt some of the area chambers of commerce and the Tri-County Trail Commission have not supported the marketing or economic development aspects of the Cheese Country Trail in the past. However, they did believe this situation has improved.

Public policy representatives suggested that the permitting process for using the trail should be as simple as possible. One recommendation was to make the facts about permits clearer, suggesting a “one-size-fits-all” program for all vehicle types and a more uniform trail permit for out-of-state users.

Participants in this focus group were concerned that the trail user demographic is aging. They felt younger users need to be encouraged in order to sustain trail usage levels.

The trail has unique challenges due to its ties to the railroad. Most public policy representatives stated that they did not think the “rails with trails” approach would be possible if the railroad were to redevelop the corridor. This conclusion was based on an engineering study done by Fehr-Graham for the Tri-County Trails Commission. The consensus among those in the group was that there was no room

**Table 8. Local economic impact on regional employment associated with non-local trail user spending (MicroIMPLAN models results in total number of jobs including part-time, full-time, and seasonal employment).**

Industry sector <sup>a</sup>	Direct impact	Indirect impact	Induced impact	Total impact <sup>b</sup>
Agriculture	0.0	0.1	0.1	0.2
Mining	0.0	0.0	0.0	0.0
Construction	0.0	0.5	0.2	0.7
Manufacturing	0.0	0.3	0.1	0.4
TIPU <sup>c</sup>	0.0	0.7	0.3	1.0
Trade	27.5	1.3	4.3	33.0
Service	133.2	9.1	10.9	153.2
Government	0.0	1.1	0.3	1.4
<b>Total<sup>b</sup></b>	<b>160.6</b>	<b>13.1</b>	<b>16.2</b>	<b>189.9</b>

<sup>a</sup> This list represents a common grouping of the two-digit NAICS categories and is an aggregation of related individual business categories.

<sup>b</sup> Totals may not equal sum of values shown due to rounding.

<sup>c</sup> Refers to Transportation, Information, and Public Utilities, a combined two-digit NAICS grouping.

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for a train and a trail in the same corridor, but existing roads are not of sufficient quality to haul corn, which is one of the proposed purposes of the return of rail. There is genuine concern that the trail will be eliminated if rail returns to operation in the area. In light of this, local governments will need data to make well-informed decisions and to understand how important the trail is to the region's economy.

In general, representatives felt there is a need for additional signage on the trail.

Policy makers stated there is demand, especially by younger trail users, for intensive-use areas just off the trail for ATVs and dirt bikes. A couple of intensive-use areas have been proposed in southwestern Wisconsin but have been rejected by local officials. They generally agreed that expanding the trail to form a loop would also be an opportunity for expanded usage.

Policy makers praised recent pilot programs to provide access to the fairgrounds in both Darlington and Monroe, as well as the downtown area and other nearby businesses in Monroe.

### Trail users

Those who use the trail frequently agreed that trail facility concerns center around four issues: parking, shelter, loading and unloading recreation vehicles, and the lack of an intensive-use area.

On weekends and holidays, parking lots were reported to be full and additional capacity needed. Users also felt a shelter somewhere along the trail was needed in case of storms. Loading and unloading recreation vehicles from flatbed trucks was also a concern. Trail users would like a ramp in each parking facility to easily remove their vehicles from their trucks.

The idea of an intensive-use area was raised many times. Many riders, especially the younger ones, would like an area to "play in the mud," and the group felt this would help retain and encourage more visitors.

Trail users felt that many of the problems and issues with the trail are driven by lack of money. Much more trimming, mowing, and dust management is needed to keep the trail safe for users. The trail needs to be wide enough for two vehicles to pass each other at all times. During the summer months, however, weeds and brush overhang the trail, shrinking it to a single lane.

Signage was also reported to be an issue. Members of the trail user focus group would like to see more trail signage to help direct visiting users on the trail as well as to direct them to nearby off-trail attractions and amenities. However, signs are often stolen or punctured with bullet holes, making them illegible.

The key public safety and regulation enforcement issues expressed by this group were related to alcohol consumption on and near the trail. The greatest concern was impaired driving. Regulations against drunk driving are challenging to enforce on the trail because it is difficult both to identify users when they are wearing full-face helmets and to identify vehicles. Other safety issues raised included speed, knowledge of right-of-ways, and proper use of lights. Some trail users reported being unaware of trail rules.

The trail user group also expressed significant concern that the trail occasionally nears capacity, mostly from Friday through Sunday mornings and on holidays. Proposed solutions to this problem included creating more trails, a trail loop, and an intensive-use area. Trail user representatives agreed that trail use during the study period was down from the past 5 years.



# chapter 3

## Summary, conclusions, and implications for public policy



The Cheese Country Trail is a valuable economic, cultural, and recreational asset for the region and the state.

With this case study research, we aimed to observe trail use pressure and collect information from a representative sample of Cheese Country Trail users. The information was collected using several methods, including observations, intercept surveys, and focus group interviews. Trained local field staff spent over 2,000 volunteer hours collecting the data over a period of 12 months.

From this data, we were able to create a profile of those who use the Cheese Country Trail and quantify the economic impact of the dollars spent by trail users from outside the three-county region.

We approached the research results from a community development perspective and raised key issues related to motorized use of recreation trails and the nearby communities affected.

The yearlong study and its subsequent focus group meetings yielded the following conclusions:

- The Cheese Country Trail is a valuable economic, cultural, and recreational asset for the region and the state. It brings thousands of people into the area and injects millions of dollars into the local economies. It has even greater potential with additional promotion and development.
- To promote and develop the economic, cultural, and recreational assets of the trail, there needs to be a private/public partnership among the wide array of its stakeholders. This partnership should include the Tri-County Trail Commission; local businesses; chambers of commerce; county, regional, and state tourism and economic development agencies; local and state natural resource agencies; and local and state ATV and snowmobile associations. The expertise of each of these groups is needed.
- Currently, the Tri-County Trail Commission is not organized or staffed to develop and carry out all the suggestions concluded from this study. Leadership for the development and promotion of the trail and the assets of its surrounding communities needs to be assumed by a partnership of agencies with full-time, professionally trained staff members from throughout the three-county region.
- Additional revenue and help from both state and local sources are needed to enhance the trail experience for users. This additional revenue would greatly help with grooming and maintenance of the trail. It would also help provide additional trail signage, both for safety and to direct trail users to nearby community attractions and businesses.

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- The trail use permit policy for both in-state and out-of-state users needs to be simplified and should involve uniform licensing of ATVs, UTVs, and snowmobiles.
- The trail nears capacity on some weekends and holidays. Intensive-use areas should be developed to relieve this congestion and attract additional motorized recreationists to the area. These areas would be especially attractive to the younger-than-average segment of motorized recreationists. The intensive-use areas could be developed close to the trail, on either public or private land.
- Safety on the trail was an important topic raised during the study. Major concerns about both speed and intoxicated operation of machines were expressed both in the surveys and focus groups. Suggestions to increase safety include (1) additional patrols on the trail, especially on weekends and holidays of heavy use; (2) additional signage on the trail and at access points, stating the speed limit and prohibiting intoxicated use of motorized vehicles; and (3) the required use of headlights.

### Long-term viability

According to the federal “rails to trails” legislation, the Cheese Country Trail will be affected by any future plans of the Wisconsin and Southern Railroad to rebuild tracks on the corridor currently leased from the Pecatonica Rail Transit Commission by the Tri-County Trail Commission (TCTC). If the railroad gives notice to rebuild tracks west of Monroe, the TCTC will have 6 months to vacate the segment to be rebuilt.

There would then be four options for continued use of the trail:

1. The trail could be shortened and a new trailhead developed outside of Monroe.
2. Road routes could be used to bypass the segment reverting to rails. This would be impractical and unsafe because of the hills and widths of the roads. This alternative would also prevent some trail users from using the routes because of age restrictions on the roads.
3. The TCTC could purchase or lease land for an alternative route into Monroe. This would be expensive and difficult given the many property owners along the trail.
4. The TCTC could establish a “rails with trails” solution with the cooperation of the railroad. However, because of the topography of the area surrounding the corridor, this option would be physically difficult and very expensive.

If the trail reverts to rail west of Monroe, the Cheese Country Trail will likely not end in Monroe, greatly affecting the city and its economy.

In this report, we provide estimates of the annual stimulus provided to the local economy as a result of recreational use of the Cheese Country Trail. To understand the economic impact of converting the trail back to rail would require a complex analysis with a host of embedded assumptions. These further analyses remain beyond the scope of this study but will be required for any comprehensive assessment of the benefits and costs associated with alternatives to this important corridor.



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# appendix a

## Methods



### The intercept and survey effort

This evaluation of the Cheese Country Trail case study relied upon a three-phase approach to gathering data. To elicit user characteristics and use pressure, a randomly allocated intercept and face-to-face interview survey strategy were developed. In addition, we gathered qualitative contextual evidence and information from a series of three focus group interviews with unique local stakeholder groups. This approach was chosen to allow triangulation of evidence, which allowed a contextual understanding of different data sources. Each of these phases will be discussed in turn.

Users of the Cheese Country Trail were intercepted along the roughly 60-mile route from Monroe to Belmont and Mineral Point in Wisconsin. One thousand stratified two-hour time slots between November 1, 2010, and October 31, 2011, were identified to collect information on trail conditions, use pressure, and user characteristics (see the schedule outlined in tables A.1 and A.2). Allocation of specific days, times, and locations was done randomly. Given our understanding of trail use, we stratified the selection of time slots by month. Periods of heavier use during warm weather (Memorial Day through Labor Day weekends) were sampled twice as heavily as the fall, winter, and spring periods (November 1, 2010, through May 27, 2011, and September 6 through October 31, 2011).

**Table A.1. Planned observation samples distributed along the Cheese Country Trail.**

Intercept locations <sup>a</sup>	Segment length (miles)	Approx. no. of time slots <sup>b</sup>
Monroe	—	125
Browntown	7.2	125
South Wayne	4.6	125
Gratiot	9.5	125
Darlington	9.8	125
Calamine	6.0	125
Belmont	10.0	125
Mineral Point	9.1	125
<b>Total</b>	<b>56.2</b>	<b>1,000</b>

<sup>a</sup> The exact sampling locations are as follows: Monroe—trail head parking lot outside of the city, Browntown—campground parking lot, South Wayne—parking lot on Cty N, Gratiot—campground parking lot by the depot, Darlington—campground parking lot, Calamine—grassy parking lot at trail crossing Cty Hwy G, Belmont—far end of town along street parking area, Mineral Point—parking area by depot.

<sup>b</sup> Specific number determined through random allocation.

## MOTORIZED RECREATION IN TRAILSIDE COMMUNITIES

Trail conditions and use pressure were recorded using a standardized observation report form (see appendix C) and reflected activities taking place during each two-hour time slot. User characteristics were collected via interview by trained volunteers who intercepted users at two designated times during each two-hour time slot. At 30 minutes past each hour, the first trail user to pass the interviewer and accept the survey request was interviewed using a standardized survey instrument. The instrument was developed to elicit information on trail use, marketing, trip expenditures, and demographic information (see appendix C). The survey interview was to be administered in an unbiased fashion and to last no longer than 5 minutes. This approach could yield a maximum of 2,000 sampled trail users. However, we anticipated null samples (sample times when no trail users were encountered) during times of low trail use. Accordingly, our initial hope was to obtain 600 to 1,500 usable survey interviews.

Given a general lack of specific trail usage data, we sampled all segments of the trail equally at predetermined locations near each of the eight communities along the trail (see table A.1 for specific intercept locations). Thus, we planned for approximately 125 sampled time slots at each location. The exact number was determined by a random allocation process using a random number generator.<sup>9</sup> Time slots were randomly allocated by day of week and time of

day. Given our understanding of typical trail usage, weekends and holidays were sampled twice as heavily as regular weekdays. Also, two-hour time slots began and ended according to our understanding of typical trail usage and volunteer safety. Generally, these time slots corresponded to the daylight hours in which the trail experiences use pressure. Certainly, summer months had earlier and later starting and ending times when compared to winter months, but the total number of time slots per month was predetermined as specified in tables A.1 and A.2.

A summary of actual observed time slots and trail user counts is shown in figure A.1. Note that volunteers staffed 683 two-hour time slots of observation during the yearlong study period. This yielded a relatively large number of null samples (time slots in which no trail users were seen). Table A.3 presents a summary of observations, use pressure, and time slots observed during the study period by weekend and weekday. For interpretation and to match periods in which stratification allowed for differing numbers of time slots, the information is divided into four time frames that roughly correspond to the seasons.

**Table A.2.** Planned observation periods distributed throughout the yearlong study period (November 2010 through October 2011).

Month	Weekend/holiday sampling		Weekday sampling		Study days/month	Total time slots/month
	No. days	No. time slots	No. days	No. time slots		
<b>2010</b>						
November	11	47	19	17	30	65
December	10	43	21	24	31	67
<b>2011</b>						
January	11	47	20	19	31	67
February	9	39	19	22	28	60
March	9	39	22	28	31	67
April	10	43	20	22	30	65
May	10	49	21	27	31	75
June	8	69	22	60	30	129
July	11	95	20	39	31	133
August	8	69	23	65	31	133
September	9	46	21	28	30	74
October	11	47	20	19	31	67
<b>Total</b>	<b>117</b>	<b>632</b>	<b>247</b>	<b>368</b>	<b>364</b>	<b>1000</b>

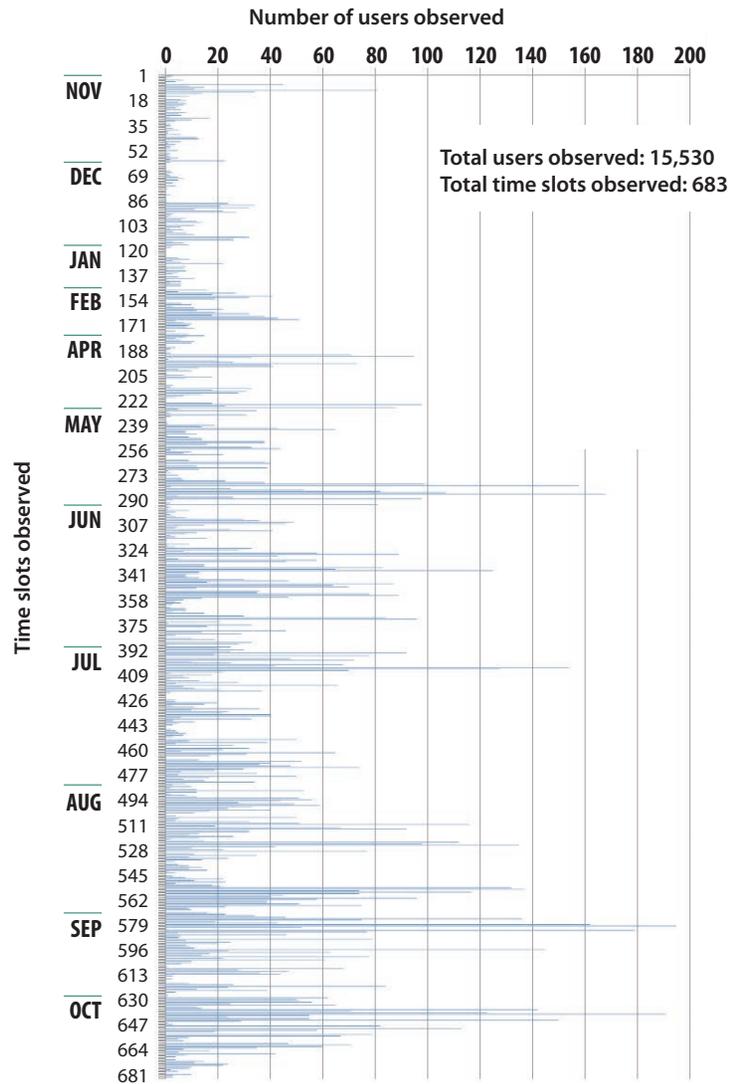
**Note:** Yellow shading indicates months with peak period usage (May 28 through September 5, 2011) stratified for double sampling pressure.

This allows us to expand our sampled number of users to a total population, basically accounting for the amount of time we observed trail use. Our total number of observed trail users reflects traffic in both directions on the trail. If we assume that Cheese Country Trail users entered and exited the trail at the same location, our total number of observed users would be at least twice the size of the number of trail users.

Further, to match our expenditure patterns, which were collected on a per trip basis, we further reduce our observations to account for trips where the user spent at least one night. Our assumption here was that individual users used the trail at least one day of their trip. While the vast majority of local users were day-trippers (roughly 5% exceptions), a modest number of non-locals had trips that were multiple days (at least one night).

<sup>9</sup> This was done using Random.org V2 available at [www.random.org/integers/](http://www.random.org/integers/).

**Figure A.1.** Actual observations of trail use between November 1, 2010, and October 31, 2011 (horizontal axis is not to scale due to trail closures and stratification approach identified in table A.2).



### Focus group interviews

To help better understand the data on trail use and recreational activity compatibility, we also gathered information from several groups that have a stake in the Cheese Country Trail and are involved in decision making. We sought to gain a better context for the data collected. Contextual issues included such topics as (1) the role of the Cheese Country Trail in local community development initiatives, (2) specific management issues associated with the trail system, and (3) important aspects of public policy that can affect trail usage and interactions between different recreational activities.

Our approach in developing, conducting, and analyzing this contextual data relied heavily on the focus group approach as outlined in Krueger (1994), Stewart and Shamdasani (1990), Morgan (1988), and Templeton (1987). A focus group interview is a carefully planned, informal small-group discussion. It is designed to collect information by getting participants to talk about their ideas and perceptions of a specific topic or issue.

Each focus group was comprised of five to ten people. Our intent was to obtain a broad contextual basis upon which to assess the validity of secondary data. We also sought to learn from knowledgeable sources about local trail

**Table A.3.** Data upon which expansion procedure was based (from observation reports and 2010–2011 calendars based on initial stratification).

Observation periods	Individuals observed	Time slots observed	Time slots trail open	Portion of time slots observed	Expanded number of observed users
<b>11/1/10–3/30/11</b>					
Weekend	1,251	115	1,152	9.98%	12,532
Weekday	182	59	2,240	2.63%	6,910
<b>3/31/11–5/27/11</b>					
Weekend	1,437	64	792	8.08%	17,783
Weekday	135	38	1,952	1.95%	6,935
<b>5/28/11–9/5/11</b>					
Weekend	8,242	186	1,800	10.33%	79,761
Weekday	1,343	130	3,296	3.94%	34,050
<b>9/6/11–10/31/11</b>					
Weekend	2,799	62	680	9.12%	30,699
Weekday	141	29	1,560	1.86%	7,585
<b>Total</b>	<b>15,530</b>	<b>683</b>	<b>13,472</b>	<b>5.07%</b>	<b>196,254<sup>a</sup></b>

<sup>a</sup>Total does not equal sum of values shown due to rounding.

issues related to (1) activities within trailside communities and (2) interactions within and between groups participating in different recreation activities. This approach has been successfully used in previous tourism-related research (Green et al. 1996; Marcouiller et al. 2002; Kazmierski et al. 2009; Marcouiller and Xia 2008).

Focus group interviews were conducted on three occasions in November of 2011. The interviews were conducted with individuals from specific stakeholder groups including (1) local tourism business owners, (2) local public policy makers, and (3) motorized trail users. These groups were selected to represent the primary interest groups of the local community that exhibit direct involvement with the Cheese Country Trail.

The focus group interviews were analyzed on the basis of responses to previously identified questions, statements, and probes. Specifically, all focus group interviews were recorded and content analysis was performed on responses to each question posed during the focus group session. Where useful, specific quotations were pulled from focus group sessions to emphasize important issues.

### Data analysis techniques

Data collected from the observation reports and completed survey sheets were entered into a data analysis template and checked for consistency. Summaries found in the Results section were generated from standard statistical analysis using an Excel 2007 spreadsheet. Arithmetic means and standard deviations were based on various groupings of the sample data, dictated by the specific analysis being conducted. Significant differences, where noted, are assessed using simple tests appropriate to the type of data being analyzed and are noted at the  $p < .05$  significance level.<sup>10</sup>

Several elements of the results expand sample responses. Most notably, total amounts of user spending needed for economic impact assessment were estimated by applying individual spending patterns to monthly estimates of trail use. This extended an approach used in previous studies that allowed for standardized annual spending levels. Expansion resulted from analysis of data collected by the intercept surveyor and matched to the prespecified stratification strategy. Proportional duration of intercept samples was accomplished using the surveyor notes on time at the intercept location prior to encountering a trail user. Expansion of the sample was then done through accounting for hourly, daily, and monthly stratifications by location.

### Estimating local economic impacts

To develop estimates of the local economic impacts associated with trail use, estimates of individual spending (once expanded to represent total visits) were used as initial stimuli for local businesses. Input-output models were constructed for the study region using the most recent 2009 county-level MicroIMPLAN datasets for Green, Lafayette, and Iowa Counties (MIG 2011). In calculating the demand shock, 2010 and 2011 spending levels were taken into account in the use of a sector-specific deflator to convert to 2009 dollars. All reports reflected results inflated back to a common 2011 reporting year using sector-specific inflation rates. A total

multiplier approach was used in running the impact models. The full description of input-output modeling as a standard method used to develop estimates of regional economic impacts is beyond the scope of this report but is readily available in standard textbooks on the topic (Shaffer et al. 2004; Chapter 15).

To assess the economic impacts resulting from trail user spending, non-local trail user expenditures were allocated to seven specific industrial sectors. Each sector into which expenditures were allocated is represented by a unique three- to five-digit NAICS code and is specific to the sector structure of MicroIMPLAN.<sup>11</sup> Expenditure categories, IMPLAN sectors, and respective NAICS codes are summarized in table A.4. Estimated total expenditures and the

**Table A.4. Respective industrial sectors for expenditure patterns used to estimate regional economic impacts (IMPLAN sectors and respective 3- to 5-digit NAICS codes in which expenditures were allocated).**

Expenditure category	IMPLAN sector	NAICS code
Convenience—retail	324	445
Gas—retail	326	447
Shopping—retail	329	452
Other—retail	330	453
Rentals	363	5322 <sup>a</sup>
Gaming	409	7139 <sup>a</sup>
Entertainment	410	713 <sup>a</sup>
Lodging <sup>b</sup>	411	72111/72112
Food and drinking places <sup>c</sup>	413	722

<sup>a</sup> Some exceptions are employed by IMPLAN; detailed queries are best referred to the authors.

<sup>b</sup> Includes hotels, motels, bed and breakfasts, and camping.

<sup>c</sup> Includes restaurants.

<sup>10</sup> In other words, where noted, we have 95% confidence that significant response differences exist between groups.

<sup>11</sup> While we recognize that this method of expenditure allocation could miss some sectoral groupings or oversimplify how spending relates to local business receipts, we are confident that these potential problems are minor. The approach represents a valid technique used to estimate the local supply-side shocks associated with visitor spending found in other tourism impact studies (cf. Smith 1988; Smith 1998; Marcouiller and Xia 2008).

amount spent locally were summarized. Only the local portion of expenditures that occurred within the Green, Lafayette, and Iowa County regional economy were used as the demand shock for input–output modeling.

Standard categories of economic impacts included *output*; *value added*, or *income*; and *employment*. *Output* is the aggregate impact on regional economic activity and includes all economic activity related to visitor spending, including intermediate purchased inputs; value added, or income; and imported inputs. *Value added*, or *income*, refers to the portion of total input that accrues locally, and it most clearly reflects the impacts felt by local residents. Income includes four components: employee compensation, proprietors' income, other property income, and indirect business taxes. *Employment* measures total jobs created locally, including full-time, part-time, and seasonal jobs.

The county-level input–output model used to calculate total impacts estimated multiplier effects measured as *direct*, *indirect*, and *induced*. These are uniquely calculated and reported for output, income, and employment. *Direct effects* include respective portions of the amount initially injected into the regional economy (non-local trail user spending in the region). *Indirect effects* relate to interindustry transactions resulting from the initial demand shock (direct effects). *Induced effects* include the increase in local income resulting from the direct and indirect effects and their subsequent effects on local consumption.

The extent of these round-by-round “multiplier” effects depends on the fundamental characteristics of the regional economy. In general, larger and more diverse regional economies exhibit higher levels of economic multiplier effects. Conversely, smaller and less diverse regional economies exhibit relatively lower multiplier effects. These economic multiplier generalizations reflect alternative levels of regional economic “leakage” and “capture.” They relate to regional export and import balances that differ by region. In general, the Green, Lafayette, and Iowa County region is a relatively small and less diverse exurban economy that lies in close proximity to the Madison, Dubuque, and Chicago metropolitan areas.



# appendix b

## Sample intercept schedule with randomly allocated time slots and locations

### November 2010—Study intercepts

■ weekend/holiday ■ weekday

Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
	1 Start 9, 30, 32,	2 20	3 10	4 20, 29	5	6 1, 6, 4, 17
7 20, 19	8	9	10 3, 16	11 4, 8, 3, 15, 16, 18, 24	12 26, 18	13 8, 16, 10, 5, 12, 15
14 21, 17, 19	15	16	17 26, 10, 16	18 31, 13	19	20 18, 29, 24, 2, 11, 8, 23, 13
21 1, 17, 30, 23, 14	22	23	24	25 29, 15, 28	26 21, 19	27 21, 9, 30 25, 19
28 23, 21	29 3	30				

**Holidays and observances**—Daylight-saving time ends (Nov. 7), Veterans Day (Nov. 11), Thanksgiving (Nov. 25), Thanksgiving holiday (Nov. 26)

### November 2010–March 2011

Scheduled intercept calendar numbers (relative to intercept time and place)

#	time	place	#	time	place
1.	9:00 am – 11:00 am	Monroe	17.	9:00 am – 11:00 am	Darlington
2.	11:00 am – 1:00 pm	Monroe	18.	11:00 am – 1:00 pm	Darlington
3.	1:00 pm – 3:00 pm	Monroe	19.	1:00 pm – 3:00 pm	Darlington
4.	3:00 pm – 5:00 pm	Monroe	20.	3:00 pm – 5:00 pm	Darlington
5.	9:00 am – 11:00 am	Browntown	21.	9:00 am – 11:00 am	Calamine
6.	11:00 am – 1:00 pm	Browntown	22.	11:00 am – 1:00 pm	Calamine
7.	1:00 pm – 3:00 pm	Browntown	23.	1:00 pm – 3:00 pm	Calamine
8.	3:00 pm – 5:00 pm	Browntown	24.	3:00 pm – 5:00 pm	Calamine
9.	9:00 am – 11:00 am	South Wayne	25.	9:00 am – 11:00 am	Mineral Point
10.	11:00 am – 1:00 pm	South Wayne	26.	11:00 am – 1:00 pm	Mineral Point
11.	1:00 pm – 3:00 pm	South Wayne	27.	1:00 pm – 3:00 pm	Mineral Point
12.	3:00 pm – 5:00 pm	South Wayne	28.	3:00 pm – 5:00 pm	Mineral Point
13.	9:00 am – 11:00 am	Gratiot	29.	9:00 am – 11:00 am	Belmont
14.	11:00 am – 1:00 pm	Gratiot	30.	11:00 am – 1:00 pm	Belmont
15.	1:00 pm – 3:00 pm	Gratiot	31.	1:00 pm – 3:00 pm	Belmont
16.	3:00 pm – 5:00 pm	Gratiot	32.	3:00 pm – 5:00 pm	Belmont

# appendix c

Intercept survey instrument,  
observation report, and local  
field staff crib sheet



**2010-2011 Cheese Country Trail Study  
Survey Sheet**

---

**Time of intercept:** \_\_\_\_\_  Male **Equipment Type:**  ATV  Dirt Bike  Golf cart  Snowmobile  
**Intercept code:** \_\_\_\_\_  Female  UTV  Bicycle  Other \_\_\_\_\_

---

**1. What is the primary reason for your trip to this area?**

To ride this and/or other trails in the area  
 To attend a special event/festival  
 On a leisure trip in area  
 Visiting family and friends in the area  
 On business or meeting in area  
 Live here, use trail as mode of transportation  
 Other \_\_\_\_\_

**2. Where did you get on the Cheese Country Trail**

Monroe  Darlington  
 Mineral Point  Gratiot  
 South Wayne  Belmont  
 Browntown  Calamine  
 Other location \_\_\_\_\_

**3. Have you ridden this trail before?**

No  
 Yes - How many times during the past 12 months? \_\_\_\_\_

**4. How many people are in your immediate travel group? \_\_\_\_\_**  
**How many in your group are younger than 16 years old? \_\_\_\_\_**

**5. Is this an "overnight" trip from home?**

No - returning home today (skip to #6)  
 Yes:  
 If yes, what type of lodging are you using?  
 Hotel/motel  Camp  
 Rent private home  2nd home/vacation  
 Friend/relative  Rent cabin  
 B&B  Other type \_\_\_\_\_

In what town did you overnight? \_\_\_\_\_  
 How many nights will you be away from home? \_\_\_\_\_

**6. What other activities will you or members of your immediate travel group participate in while on this trip?**

Shopping  Visiting family/friends  
 Museums/historic sites  Festival/event  
 Dining  Casino  
 Area attractions  Boating/fishing  
 Auto races  Factory tours (cheese/brewery)  
 Other \_\_\_\_\_

**7. Please estimate how much you (individually) have spent or plan to spend on this trip in the following categories?**

\$ \_\_\_\_\_ lodging/overnight accommodations  
 \$ \_\_\_\_\_ food & drink at area restaurants/bars  
 \$ \_\_\_\_\_ area entertainment  
 \$ \_\_\_\_\_ shopping (souvenirs, gifts, clothing)  
 \$ \_\_\_\_\_ gas, repairs (auto and equipment)  
 \$ \_\_\_\_\_ convenience stores  
 \$ \_\_\_\_\_ ATV/UTV/snowmobile rental  
 \$ \_\_\_\_\_ gaming (casinos)  
 \$ \_\_\_\_\_ other leisure spending

**8. On a scale of 1-5, how satisfied are you with ...**

	Unsatisfied		Neutral		Satisfied
Trail signage?	1	2	3	4	5
Grooming of trail surface?	1	2	3	4	5
Trail safety (emergencies)?	1	2	3	4	5
Camping facilities?	1	2	3	4	5
Trail access & parking	1	2	3	4	5

**9. If there is anything that could be done to enhance your experience in this area, please explain.**

\_\_\_\_\_

**10. How did you find out about the trails in this region?**

Family/friends  Radio  
 Internet  Chamber of commerce  
 Newspaper  State tourism publication  
 TV  ATV/snowmobile club  
 Magazine  Brochure  
 Travel show  DNR  
 Dealership  Live here

**11. What is your age? \_\_\_\_\_**

**12. What is the highest level of schooling you've completed?**

Some high school  
 High school graduate  
 Some college/technical school  
 Associate degree/certificate  
 College degree  
 Some graduate school  
 Graduate degree  
 Other

**13. Which of these categories best describes your annual household income?**

Less than \$25,000  
 \$25,000-\$50,000  
 \$50,000-\$75,000  
 \$75,000-\$100,000  
 \$100,000-\$150,000  
 More than \$150,000  
 Prefer not to answer

**14. What is your home zip code? \_\_\_\_\_**

**Study will be finished in early 2012; would you like results emailed?**

\_\_\_\_\_ no \_\_\_\_\_ yes (email: \_\_\_\_\_)

For interviewer following the interview, in retrospect, was the expenditure data given by the respondent reflective of ...

individual spending (correct), or  group spending?

MOTORIZED RECREATION IN TRAILSIDE COMMUNITIES

**2010-2011 Cheese Country Trail Study  
Observation Report**

Intercept Code: \_\_\_\_\_ Survey #1:  accept, \_\_\_ # reject, \_\_\_ # repeat; comments: \_\_\_\_\_

Interceptor's Name: \_\_\_\_\_ Survey #2:  accept, \_\_\_ # reject, \_\_\_ # repeat; comments: \_\_\_\_\_

Date of Intercept: \_\_\_\_\_ (mm/dd/yr)

Time of Intercept: Begin: \_\_\_\_\_ End: \_\_\_\_\_

Intercept Location:

<input type="checkbox"/> Monroe	<input type="checkbox"/> Darlington	<input type="checkbox"/> Mineral Point	<input type="checkbox"/> Gratiot
<input type="checkbox"/> South Wayne	<input type="checkbox"/> Belmont	<input type="checkbox"/> Browntown	<input type="checkbox"/> Calamine

Weather Conditions:

<input type="checkbox"/> Sunny	<input type="checkbox"/> Partly Cloudy	<input type="checkbox"/> Partly Sunny	<input type="checkbox"/> Cloudy
<input type="checkbox"/> Clear	<input type="checkbox"/> Foggy	<input type="checkbox"/> Light rain/drizzle	<input type="checkbox"/> Steady rain
<input type="checkbox"/> Misty	<input type="checkbox"/> Humid	<input type="checkbox"/> Heavy rain	<input type="checkbox"/> Sleet
<input type="checkbox"/> Thunderstorm	<input type="checkbox"/> Blizzard	<input type="checkbox"/> Light snow	<input type="checkbox"/> Heavy Snow
<input type="checkbox"/> Calm	<input type="checkbox"/> Light Wind	<input type="checkbox"/> Strong Wind	<input type="checkbox"/> Gusty

Approximate Temperature: \_\_\_\_\_°F

Trail Conditions: \_\_\_\_\_

Approx. snow depth: \_\_\_\_\_ (inches)

---

**Count of individual trail users (number of people) during intercept period (use line/slash method of counting; try not to double count)**

Motorized:

ATV: \_\_\_\_\_ = Total ATV

UTV: \_\_\_\_\_ = Total UTV

Dirt Bike: \_\_\_\_\_ = Total Dirt Bikes

Golf cart: \_\_\_\_\_ = Total Golf-carts

Snowmobile: \_\_\_\_\_ = Total Snowmobiles

Other (list): \_\_\_\_\_ = Total Other

Non-motorized:

Hiker: \_\_\_\_\_ = Total Hikers

Jogger: \_\_\_\_\_ = Total Joggers

Bicycler: \_\_\_\_\_ = Total Bicyclers

Equestrian: \_\_\_\_\_ = Total Equestrians

Other (list): \_\_\_\_\_ = Total Other

**Local Volunteer Crib Sheet  
Cheese Country Trail Study  
September 28, 2010 (v2)**

1. Be present at the scheduled location during the time slot listed on the calendar. Time slots were randomly allocated by month, day of week, and time of day (1000 in total).
2. During each time slot, volunteers do two primary tasks including (a) observing trail use and (b) intercept and conduct two face-to-face interviews with trail users.
3. Trail use will be observed by filling out the Observation Sheet. For weather observations, mark all that apply. Pay close attention to trail use and count (using dash/slash method) the number of individuals that pass your pre-determined spot on the trail. To the best of your ability, do not double count individuals. You will have two intercept opportunities during the two hour time slot to begin at the bottom of the hour ( \_\_:30 or thirty minutes past the hour). Mark results of each attempted intercept on the Observation Sheet.
4. Beginning at the bottom of each hour, select the first person that crosses your pre-determined point on the trail. Approach stopped trail user (do not attempt to stop a moving trail user) and begin the following conversation with your selected individual:

*Hello. My name is \_\_\_\_\_ and I am working with the UW-Extension and local trails groups on a year-long study of the Cheese Country Trail. Would you have a few minutes to answer a series of questions about your trail use today?*

If no, thank them, record non-response, and select the next trail user. If yes, then continue.

*Thanks ... have you participated in this survey before?*

If yes, thank them, record repeat, and select the next trail user. If no, then continue.

*For these questions, please respond with your own (individual) answers. Remember that they may not necessarily be the same as your group's answer.*

[conduct interview]

Thank the user for their time.

5. To the best of your ability, be legible and clear in your markings. Remember, someone will be transcribing your writing so it is important to be as clear as possible.
6. Be professional and respectful.



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