

Trails and their gateway communities

A case study of recreational
use compatibility and
economic impacts



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Executive summary

Increasingly, recreational amenities that improve local quality of life are considered a central strategy for community development. This trend is taking place as demands for outdoor recreation increase and the supply of locations in which these demands can be accommodated continues to be constrained. Thus, interactions and conflicts among recreational users are becoming increasingly pronounced. Recreation compatibility, or the manner in which alternative recreational uses interact, has recently been understood as a critical element in recreation management. This is particularly true given increased emphasis on multiple-use recreation sites.

In this report, we provide an extension to the 2005–2010 Wisconsin Statewide Comprehensive Outdoor Recreation Plan (SCORP) and describe an approach to examine recreational use compatibility. This approach emphasizes the spectrum of interaction outcomes (complementary, supplementary, competitive, and antagonistic) with respect to multiple-use recreational trail systems.

This report is written for a variety of audiences. In addition to outreach professionals, planners, recreation managers, and development practitioners, we have taken care to tie discussion to policy decisions appropriate for public and private decision makers and interested stakeholder groups. For those interested in an overview of our work, this executive summary can be readily matched with a quick perusal of key graphics, photos, and highlighted text to gain an understanding of key takeaway messages.

The applied research uses a yearlong stratified sample of trail users on the southern portion of the Gandy Dancer State Trail (from Danbury to St. Croix Falls) as it traverses the rural landscapes of Northwestern Wisconsin. The methods used to gather data included a brief face-to-face survey administered through trail intercepts and a subsequent mail survey designed to elicit user perceptions, characteristics, and activities. The context for survey results are further matched with evidence gleaned from a series of focus group interviews conducted with a variety of local stakeholder groups.

Specifically, the following highlights showcase key findings of our work:

- Recent studies have identified several aspects that lead to the need for this applied research. These aspects include a general lack of empirical evidence that focuses on trail impacts and the lack of a comprehensive approach to recreation compatibility.
- Trails in the Lake States vary widely in both design and allowable uses. This said, a common trail type in Wisconsin consists of a crushed limestone surface on a flat, converted rail bed. The primary allowable uses of these trails are non-motorized recreation (hiking and biking), with limited snowmobile use in the winter. The Gandy Dancer Trail represents this common type of trail in Wisconsin.
- Most users of the Gandy Dancer Trail reside locally or come from the nearby Twin Cities metropolitan area in Minnesota.
- The average age of trail users encountered in this study was 47 years old.
- Trail users represented an average household income of \$78,000, which is higher than the average household income in Wisconsin.
- Recreational use pressures were highest in the summer and were dominated by hikers and bikers, while winter use was weather-dependent and was dominated by snowmobilers. Our estimates place total annual use of the southern portion of the Gandy Dancer Trail in Wisconsin at almost 50,000 individual user visits (28,000 parties) between October 2006 and September 2007.
- In general, hikers and bikers visited the trail for exercise, peace and quiet, and nature-related reasons while snowmobilers were motivated by the presence of enough snow (and an available trail).
- Hikers and bikers tended to affiliate with and also take part in other non-motorized recreational activities while snowmobilers were more apt to hunt and partake in other motorized recreational activities.



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- Hiking and biking appeared to be generally compatible uses with a level of asymmetrical (one-way) competition with ATV use and hunting. Snowmobiling, on the other hand, appeared to be relatively more compatible with ATV use and hunting.
- Crowding was not perceived as an issue on the Gandy Dancer Trail and, in general, users were satisfied with the trail as it currently exists.
- In general, trail users gave trail and community services higher importance-performance scores than they gave local tourism amenities. In other words, characteristics of the trail itself and its corresponding gateway communities were considered both more important and better performed than the local tourism amenities studied.
- Many trail, community, and tourism attributes deemed important by trail users were performing well on the Gandy Dancer. Scenery, environmental quality, clean public spaces, clean and available drinking water, and good local sit-down restaurants were identified as both important and well performed.
- This said, results suggest priority areas that could be improved:
 - Enforcement of rules, trail signage, and restrooms were all perceived as important but poorly performed compared to other trail characteristics.
 - Cell phone service and local business hours were relatively important services but were relatively poorly performed.
 - Local tourism businesses that were perceived as relatively important but were not well performed included bicycle repair shops, sporting goods stores, and take-out restaurants.
- On average, users of the Gandy Dancer spent roughly \$118 per visit in Polk and Burnett counties. When expanded to annual estimates, this amount translated into roughly \$3.3 million dollars in the local area as a result of trail user spending.
- When combined with local business effects (interindustry spending), this translated into a total economic impact of just shy of \$4.4 million (local multipliers of roughly 1.33) as a result of trail user spending.

In summary, the results of this work have been used to develop an operational trail profile. Important elements of this profile include trail use characteristics, recreational use compatibility, marketing, and economic impact data. This profile helps us understand key elements necessary for making sound public and private decisions. This improved understanding is intended to lead to improved management and better future development of trails and their surrounding gateway communities. While the findings are specific to the Gandy Dancer Trail and its communities, there is ample ability to extend many of the findings to the broader trails and gateway communities throughout the Lake States and beyond.

Results of this work further extend a more comprehensive approach to understanding recreational use interactions. While increased trail use demands within the context of limited budgets necessitate multiple uses of trail systems, understanding recreation compatibility can allow for progressive and adaptive site planning that acts to maximize complementary use and ameliorate antagonism and competition. Results of this study suggest that interactions among recreational uses can be estimated but remain complex and subject to change. Certainly, further research and monitoring would be prudent steps to capture both local uniqueness and changing recreational uses over time.



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chapter 1

Introduction and research overview



This new trail system enhances the health of America's environment, economy, neighborhoods, and people.

Recreation managers, open-space advocates, and local elected officials have become sensitized to the need for parks with linkage corridors that provide access, green space, and quality-of-life continuity within and between communities. Indeed, since the 1980s, a significant nationwide effort has created a network of connecting corridors by converting old railroad beds. This new trail system enhances the health of America's environment, economy, neighborhoods, and people (Rails-to-Trails Conservancy 1996, 2008). This report is written to focus attention on recreational trails and their local community context. Further, it is intended to contribute to the growing literature on the use and development of recreational amenities.

Brief literature review

Contemporary planning practice relies on a wide variety of information and data to make decisions about how best to implement sustainable community development.¹ Increasingly, natural and built amenities (i.e., rural landscapes and infrastructure) that provide locally available recreational opportunities have been thought to be a central component of this implementation challenge (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). Recreational trails are important local amenities that provide local community economic stimulus as well as recreational opportunities for local residents. Planned carefully, recreational trails can utilize local land resources in a generally environmentally benign fashion and provide income for

current residents without jeopardizing the possibility of future income streams.

¹ *Sustainable community development* has different meanings to different people. For this context, the term is perhaps best summarized by the Brundland Commission to indicate development that "meets the needs of the present without compromising the ability of future generations to meet their own needs."

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There is a continual need to test, interpret, and improve our understanding of the social and economic consequences of amenity-based activities and their effect on the local communities in which the amenities are found. During the past quarter century, there has been significant progress to more fully understand how recreational resources, particularly parks, trails, and related publicly provided open spaces, are integrated within community economies (Howe et al. 1997; Garvin 2001; Marcouiller et al. 2002).

In Wisconsin, there has been a continual effort to address issues associated with economic impacts of recreation and tourism at the community level, examples of which can be found in an initially compiled annotated bibliography by Haines et al. (1997) and an updated searchable online database by Scott and Marcouiller (2005). These studies have addressed the variety of specific tourism types, including festivals, events, and attractions, and the various types of relevant outdoor recreational pursuits, including camping, fishing, hunting, park visitation, and trail use (cf. Cooper et al. 1979; Marcouiller et al. 2002; Olson et al. 1999).

With specific reference to trail systems, local economic impacts have taken on increased importance given intensified demands for the development of public open-space corridors and general tendencies for increased community dependence on tourism as a source of income (Keith et al. 1996; English et al. 2000). Park and trail systems have been shown to provide tangible economic benefits to the gateway communities in which they exist (Mules 2005). These tangible economic benefits are wide-ranging and include the positive influence on property values (Crompton 2002, 2004) and the stimulation of local retail and service sector activity driven by the inflow of dollars spent by visitors (Tribe 2005; Vanhove 2005). This second element involves the stimulating effect of visitor expenditures on local retail and service sector activity, often referred to as “tourism.” Estimating this expenditure-driven local economic effect was the focus of a recent workshop compilation on trail expenditure studies (Carley et al. 2006) and several recent and closely related reports (Olson et al. 1999; Marcouiller et al. 2002). It also provides one aspect of the work reported here.

Another important aspect of trail use assessments involves recreational use interactions and the relative compatibility that exists among alternative uses. This aspect has been brought forward because of increased demands placed on trails and conflict associated with alternative recreational uses. Conflict in recreational uses has been defined as “goal interference attributed to another’s behavior” and is caused by four basic factors: activity style, resource specificity, modes of experience, and lifestyle tolerance (Jacob and Schreyer 1980; Marcouiller et al. 2008). Additionally, previous research has also placed environmental dominance and technological dependency on this list (Vittersø et al. 2004). This conflict can exist between different user groups, between different members of the same user group, and as a result of factors that

have nothing to do with trail activity at all (Moore 1994).

An interesting aspect of recreational use interaction is the significant amount of conflict that tends to be asymmetrical, or one-way. This trend is particularly acute between different user groups: that is, one group dislikes the primary recreational activities of the other group without reciprocation. For example, while hikers may dislike the activity of ATV use, ATV users do not dislike the activity of hiking (Watson et al. 1994). Additionally, there is often a “status hierarchy,” which is often partially based on equipment and expertise. For example, within the snowmobiling community, fast machines with larger engines and/or certain brand names are seen as “above” others. This “status hierarchy” also exists between different user groups; for example, hikers who had to move aside for horse groups often perceived the activity of horseback riding as connoting a higher status (ibid.). This “status hierarchy” is also based upon the six previously noted factors that cause conflict.

While some activities are perceived by recreationists as causing conflict, other activities are complementary or supplementary. More specifically, there are activities that do not cause conflict and indeed may even enhance the user groups’ enjoyment of their recreational experience.



A CASE STUDY OF RECREATIONAL USE COMPATIBILITY & ECONOMIC IMPACTS

Based on expert opinion (a modified Delphi process with recreation management professionals), the most recent Wisconsin Statewide Comprehensive Outdoor Recreation Planning (SCORP) process (WDNR 2006) initiated an overview of recreational use interactions in Wisconsin. The empirical results are summarized in table 1 and represent an extension of earlier work that addresses land use compatibility (Clawson 1974). Note from this table that, according to recreation managers, the outcomes

of recreational use interactions reflect positive (complementary), neutral (supplementary), and negative (ranging from competitive to antagonistic) relationships. In a manner that generally confirms previous work (cf. Knopp and Tyger 1973; Watson et al. 1994), this table shows that there is a general tendency for asymmetrical interactions, most notably along motorized and non-motorized lines.

While the most recent Wisconsin SCORP assessed recreational use interactions from the perspective of recreation managers (seen as experts), there is a continuing need to extend this comprehensive assessment of use interaction to recreational trail users themselves. Indeed, many studies have been done on the conflict between various user groups: between cross-country skiers and snowmobilers (Knopp and Tyger 1973), between floaters and motorized boaters (Shelby 1975), between canoe

paddlers and motorcraft users (Adelman et al. 1982), between mountain bikers and hikers (Watson et al. 1994), between water-skiers and anglers (Gramann and Burdge 1981), and between off-road vehicle users and non-users (Noe et al. 1982). The bulk of the studies that have been completed have been purely descriptive and focused on limited alternative uses. These issues of multiple uses, however, have broad implications for recreation management and the future enjoyment of recreational areas.

Table 1. Average land-based recreational activity compatibility ratings.

PRIMARY USE ^a	Interacting use ^a										Average compatibility
	ATV riding	Hunting	Snowmobiling	Horseback riding	Mountain biking	Cross-country skiing	Linear trail biking	Hiking	Wildlife watching	Camping	
ATV riding	X	5.3	6.5	5.1	5.5	4.9	5.5	6.1	6.9	7.5	6.0
Hunting	3.3	X	3.7	4.7	4.3	5.3	5.7	5.4	6.0	6.3	5.0
Snowmobiling	4.3	4.0	X	4.0	4.8	4.3	5.8	5.3	6.3	7.2	5.1
Horseback riding	2.2	3.5	3.0	X	3.8	4.9	4.5	6.3	7.3	7.7	4.8
Mountain biking	3.1	3.6	4.7	4.8	X	5.7	8.1	6.1	7.4	8.0	5.7
Cross-country skiing	1.8	3.6	2.6	3.3	4.2	X	5.6	4.9	8.1	8.5	4.7
Linear trail biking	2.6	3.9	5.5	5.3	8.2	7.1	X	7.4	8.0	8.7	6.3
Hiking	2.4	3.5	3.5	5.7	4.7	6.1	6.5	X	8.9	9.2	5.6
Wildlife watching	2.2	3.2	2.9	6.4	5.2	7.6	6.8	8.6	X	8.3	5.7
Camping	3.9	4.1	5.0	7.5	7.8	8.2	8.2	8.9	8.5	X	6.9
Average compatibility	2.9	3.9	4.2	5.2	5.4	6.0	6.3	6.6	7.5	7.9	

- highly competitive or antagonistic (below 4.0)
- moderately to mildly competitive (4.0–7.0)
- supplementary or complementary (7.0 and above)

Source: WDNR 2006, 4–6.

^aCompatibility ratings reflect the perceived level of conflict from the perspective of trail users participating in the activities in the left column—the primary use. Ratings should therefore be read horizontally. Results are based on responses from 23 Wisconsin recreation professionals.

Case study of recreational trail use

The demands for trails have 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). In Wisconsin, the state trails network involves a system of linear trails that have widely varying use characteristics (see figure 1 for a map of the network). A summary of state-owned trails in Wisconsin is found in table 2. Note from this table that most state trails are designated to support multiple use; in other words, most trails are open for a variety of activities. Of the 1,800 miles of trails owned by the state, over 90% are open to both motorized and non-motorized uses. To be sure, much trail mileage is segregated seasonally; given sufficient snow, snowmobile use is allowed on about 70% of the mileage and occurs in only the winter months. Importantly, just over 3% of state trail mileage is designated as strictly non-motorized. These figures are important because of an increasing interest in recreational use interaction and the potential for competitive and antagonistic use interactions between motorized and non-motorized users.

Another interesting aspect of state trails data relates to average miles per trail by designated use. Note that trails allowing motorized use are typically between three and four times longer than trails that are designated as strictly non-motorized. State trails in Wisconsin also vary significantly in the amount of use. For instance, bicycle trails such as the Elroy-Sparta in west-central Wisconsin are well known and well used, while many trails are relatively unknown and hidden from use. Unfortunately, comprehensive statistics on system-wide state trail usage are not widely collected, but state efforts are underway to supplement these figures.

In an effort to gain a better understanding of trails, their usage, and their ability to contribute to community economic vitality, a multiyear project to assess a state trail in western Wisconsin was initiated in late 2005. The Gandy Dancer State Trail was selected for study given its use characteristics and proximity to the large Twin Cities recreation market.

The trail extends a total of 98 miles, following an old railroad grade from St. Croix Falls north to Superior and serves as a representative case study of recreational trails. Indeed, we forward the proposition that the Gandy Dancer Trail is representative of a large majority of the Aldo Leopold Legacy Trail System (the Wisconsin State Trail System); its



Figure 1. The state trails network in Wisconsin.

Source: WDNR.

evaluation allows generalizations to be made about trail use, recreational use interaction, and community integration.² It exists as a multiple-use trail, falling into the third category of table 2, namely that it is open to mostly non-motorized uses with snowmobile use allowed during winter months with sufficient snowfall. This use type is representative of almost 70% of the mileage of the state trail system of Wisconsin.

Historically, the Gandy Dancer Trail was used commercially as a railroad for more than 100 years. The name—the *Gandy Dancer*—draws from the trail’s rich railroad heritage. More than a century ago, when the railroad was being built, the builders used tools that were from the Chicago-based Gandy Tool Company. As the workers toiled away, they often synchronized the swings of their tools and the movement of their feet with vocal cadences, earning them the name “gandy dancers.”

The Gandy Dancer Trail, along its entire length, currently hosts a variety of opportunities for recreation, including hiking, biking, wildlife viewing, ATV use in the summer, and snowmobiling in the winter. Not all uses are allowed along all stretches of the trail. The trail is separated into a northern section, the 51 miles that run through eastern Minnesota and northward to Superior (ATV use allowed), and a southern section, the 47 miles in Wisconsin from Danbury to St. Croix Falls (ATV use not allowed). The southern section, which traverses Burnett and Polk counties in Wisconsin,

serves as the focus of the case study (see figure 2). This section was selected because of its common type of allowable uses, local interest, proximity to a large metropolitan area, and rural location. The land for this portion of the trail is owned by the Wisconsin Department of Natural Resources and is managed by county land and forestry departments. Due to the trail’s proximity to many local amenities such as lodging, restaurants, and gas stations, it has been cited as “the most user-friendly trail in the Midwest” (Polk County 2005).

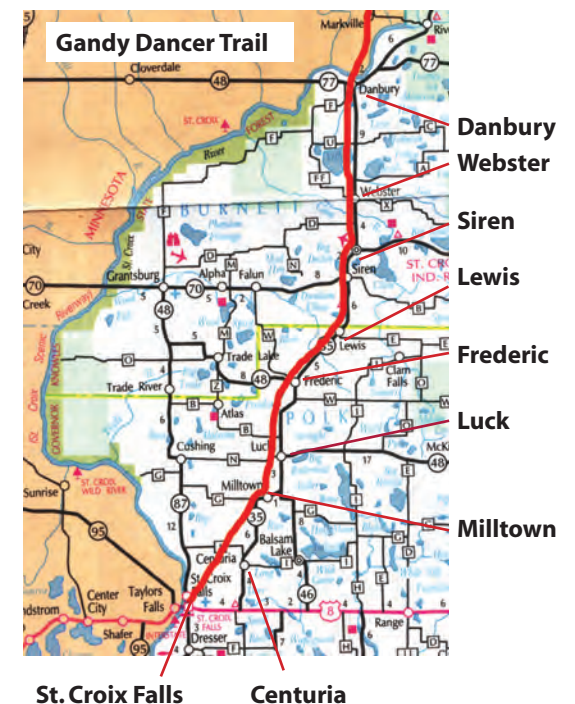
Table 2. Number and length of linear state trails in Wisconsin by allowable uses (as of September 2007).

Use ^a	Metric	Total	Average miles per trail
Strictly non-motorized	Number	5	11.6
	Mileage	58	
Non-motorized and open to both ATVs and snowmobiles	Number	10	41.1
	Mileage	411	
Non-motorized and open to snowmobiles (no ATVs)	Number	22	57.2
	Mileage	1,259	
Undecided and/or closed	Number	5	18.4
	Mileage	92	
Total of all linear state trails	Number	42	43.3
	Mileage	1,820	

Source: WDNR 2007. **Note:** Information is drawn from a complete list of designated state trails comprising the Wisconsin State Trail System (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.

^a Non-motorized allowable uses include walking, biking, rollerblading, and cross-country skiing. Horseback riding is also included but is often a limited allowable use. Motorized uses include riding ATVs and snowmobiles and are often found as limited allowable uses. “Undecided” includes trail uses that are yet to be determined through the state’s master planning process. Any one use may be limited (allowed for only a portion of the entire length of the trail).

Figure 2. The southern portion of the Gandy Dancer State Trail, representing the study region.



² This said, there are a host of caveats to this statement that lead us to interject an obvious recommendation for further research on alternative trail types including various allowable uses, visitation levels, and locations throughout the Lake States.

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As recreational patterns change and more and more people use the Gandy Dancer Trail, there has been a growing sense of conflict among uses, primarily related to the competition that exists between motorized and non-motorized uses.³ In this study, data was collected from users of the Gandy Dancer Trail in order to establish an understanding of the range of interactions, a spectrum that includes both positive (complementary) and negative (competitive and antagonistic) use outcomes. This information is intended to help planners assess actions to be taken by trail managers to make using the Gandy Dancer Trail (and the entire system of state trails) more enjoyable for all users. Additionally, the information collected will be used to assess local towns' perceptions of economic benefits from the users of the Gandy Dancer Trail, again enabling a better understanding of how the trail should be managed.

Objectives and problem statement

This research was undertaken to provide a better understanding of trail usage, recreational use interactions, and community development. Specifically, our objectives included (1) the development of a trail user profile for general marketing efforts, (2) application of a comprehensive use spectrum approach to understanding recreational use interactions, (3) integration of user perceptions regarding locally available amenities and services for improved local public decision making, and (4) estimation of 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. Who visits recreational trails? What aspects of the local trail motivate visitation, and how do differing uses interact? When during the 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 decision making to maximize benefits and ameliorate potential problems? How can use of a recreational trail be better integrated into local economic development efforts? These are the generic questions being asked with specific reference to the Gandy Dancer State Trail and the citizens of the communities of Polk and Burnett counties that are affected by recreational trail use.

Outline of report

This report is organized into two subsequent chapters with several related appendices. The next chapter provides an overview of key findings obtained from the applied research effort. The final chapter provides a summary and draws out key policy implications that are generated by the research findings. Appendix A provides specific detail regarding methods used to evaluate the recreational trail case study, including both data collection and analysis methods. Appendices B and C contain the intercept schedule and a copy of the survey instruments used.

³ Examples of this growing conflict on the Gandy Dancer Trail regularly arise. For instance, there have been filed petitions and/or recent discussions about horseback riding and wintertime ATV use.



Scott Hoffman

chapter 2

Descriptive results

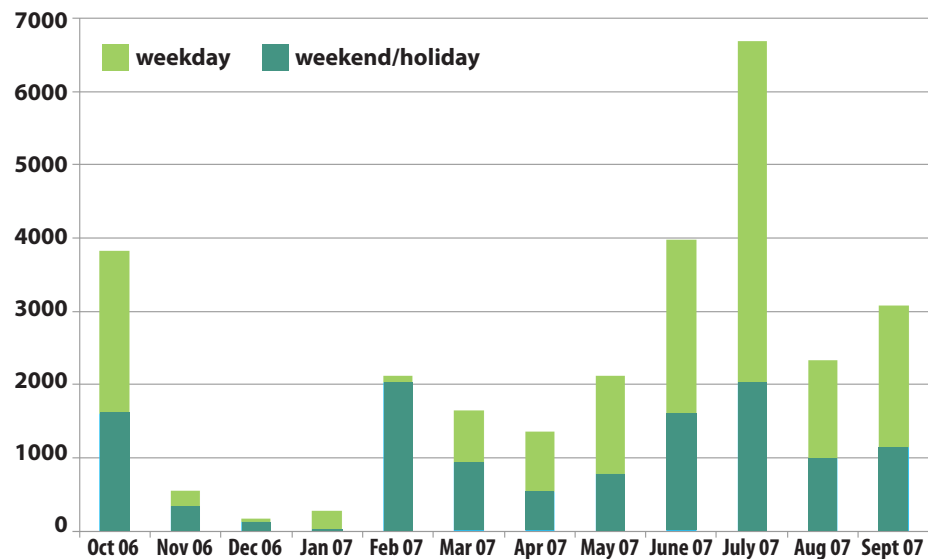


This chapter outlines the descriptive results of the intercept survey, mail survey, and focus group interviews. These results provide an overview of the data we collected and serve as a basis for further analysis (discussed throughout this chapter and in chapter 3). We have made an attempt at comprehensively describing each element of the data collected. Further detail can be obtained from the authors. To be sure, it is important to point out that the results reflect the quality of our sampling. We have made every attempt to minimize bias where appropriate. In interpreting this data, we have attempted to remain objective and allow generalizations of the broader phenomena of trail use interactions and gateway community issues where applicable.

Trail use

The estimate of total trail usage combines data collected by intercept surveyors with the manner in which samples were stratified (see appendix A). The results suggest that just over 28,000 parties or roughly 46,460 individual trail users utilized the southern portion of the Gandy Dancer Trail between October 2006 and September 2007. This estimate is further broken down into the estimated number of parties by month and type of day reported in figure 3. Note from this figure that obvious usage peaks existed during the study period. The most notable peak corresponded to the early and middle parts of the summer. The months of June and July accounted for roughly 37% of all usage of the trail that occurred during the

Figure 3. Gandy Dancer Trail usage (number of parties) during study period.



12-month study period. Late summer and early fall (September/October) also corresponded to a peak, with a drop in August due, most probably, to high temperature and humidity levels.

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Winter usage, particularly during periods of good snow, consists of predominantly snowmobiling. Without snow, there are small numbers of winter hikers and day users (joggers) who frequent the trail. It is important to note that the Gandy Dancer Trail exists in a zone that is often hampered by low snow levels. During this study period, the winter season (December 2006 through March 2007) had a

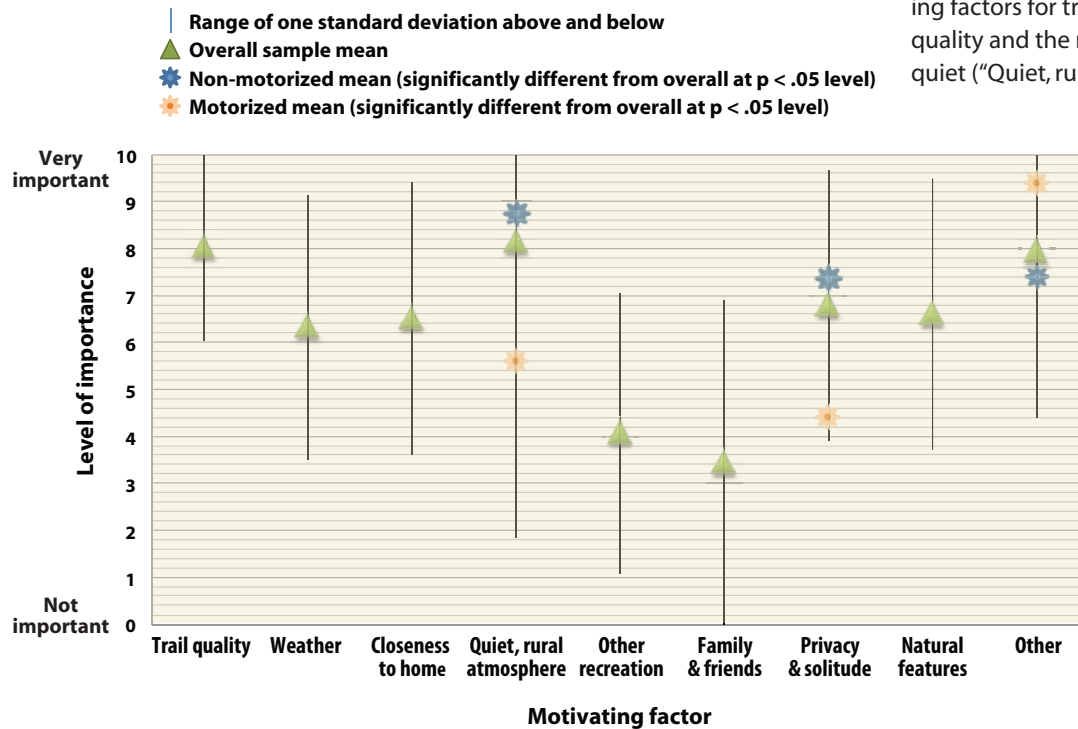
particularly low snow level, with the trail designated “open” to snowmobiles for a total of only 10 days in late February and early March. As noted in the figure, the opening of the trail to snowmobiles also corresponded to a rise in usage. Troughs in usage occurred in mid-late fall (November to December), during the snowmelt (April), and prior to more pleasant spring weather in May.

Trail users were motivated to visit the trail for a variety of reasons. Eight specific motivating factors, chosen for their appropriateness for visitors who use trails, were posed to users who participated in the mail survey. Response results for motivating factors are summarized in figure 4. For interpretation, the scale of importance ranged from zero to ten. Average values for all respondents are shown by the green triangles, with variation in responses represented by one standard deviation above and below denoted by the whiskers (lines).⁴ Note from this figure that of the eight factors presented as important to the visit, the key motivating factors for trail users included trail quality and the need for peace and quiet (“Quiet, rural atmosphere”).

Further analysis of the responses to this question suggested that there were two subgroups that were distinct in their responses to the question of recreational motivation. The two unique trail use groups can be generally differentiated by their modes of travel—motorized and non-motorized. In this case, the motorized group represents snowmobilers, and the non-motorized group primarily represents bicyclists, hikers, and wildlife watchers. In assessing each subgroup’s response to motivations for trail use, three significantly different factors were evident and are shown in the figure by colored stars. Non-motorized use respondents had significantly higher importance scores for “Quiet, rural atmosphere” and “Privacy and solitude” compared to the responses of the motorized group. Motorized use respondents had significantly higher importance scores for the “Other” category, which most often reflected the presence of snow. In figures 4, 5, and 6, those variables not showing motorized and non-motorized means had no significant difference in mean values at the $p < .05$ level.

Figure 4. Recreational motivation of Gandy Dancer Trail users.

Note: Snow was distinguished as such on the cold-weather survey instrument but is identified as “Other” in this figure since the warm-weather instrument did not mention snow (see appendix C).



⁴ This is done to provide the reader some understanding of the variation in responses. For simplification, this presentation assumes a normally distributed response.

Recreational trail users often participate in a wide variety of outdoor recreational activities. To better understand the involvement patterns of trail users, we asked our sample to rank a variety of different activities. Survey responses for recreational involvement by activity are summarized in figure 5.

Again, while the overall involvement patterns appear to suggest that trail users on the southern section of the Gandy Dancer Trail also participated in biking, hiking, camping, fishing, and swimming, there were significant differences among subgroups of trail users.

Motorized use respondents had significantly higher involvement scores for hunting, ATV riding, and snowmobiling, while non-motorized use respondents had higher scores for biking, hiking, cross-country skiing, and ice-skating. This pattern underscores the notion that different user groups undertake different associated recreational activities. Interestingly, there were no significant differences in responses for camping, fishing, and swimming among motorized and non-motorized users.

These results generally confirm findings from previous studies that used similar procedures. They underscore the complexity of recreational use, user groups' different interests, and the differing patterns of involvement in associated recreational activities pursued by various user groups. Further, and more to our set of recreation management issues, these characteristics set the stage for how recreational users interact and help explain the expectations presented in the previously mentioned use interaction display generated by Delphi in the most recent SCORP document (see table 1).

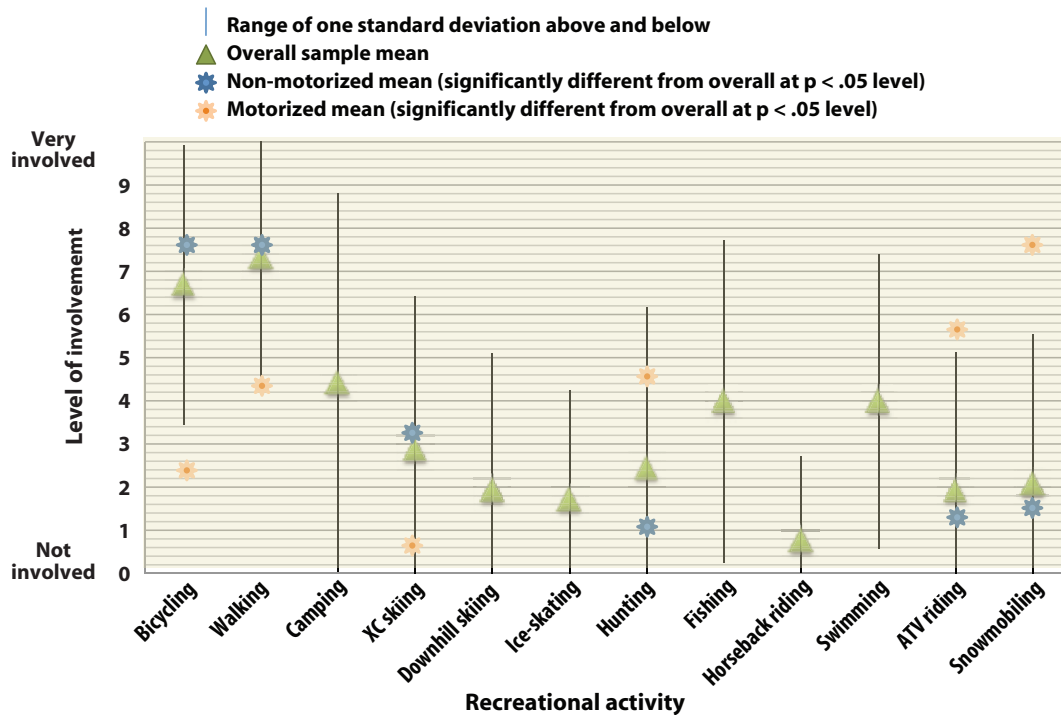
Use compatibility

To reiterate, an important contribution of this study involves the extension of the SCORP work on use compatibility that develops empirical evidence from the perspective of trail users (versus the perspective of recreation managers). To address these issues surrounding use interaction, a portion of the survey instrument dealt with eliciting responses from users of the southern portion of the Gandy Dancer State Trail regarding their perceptions of how use interaction plays itself out. The scale used for response was first described in text and ranges from 0 to 10, with representative terms including "antagonistic," "competitive," "neutral," and "complementary." Specifically, the following lead was provided to respondents to the written survey:

The compatibility of different recreational uses is a primary interest that drives this research. Compatibility among recreational users varies from antagonism (one use completely conflicts with another use) to complementary (one use enhances another use). In between antagonism and complementary lie competition (one use is traded off for another use) and supplementary, or neutral (one use has no impact on the other use).

Using this spectrum of compatibility from fully antagonistic to fully complementary, please fill out the following chart of recreational use interactions asking yourself.... From the perspective of my primary recreational activity, how compatible are the following other uses?

Figure 5. Recreational activity involvement of Gandy Dancer Trail users.

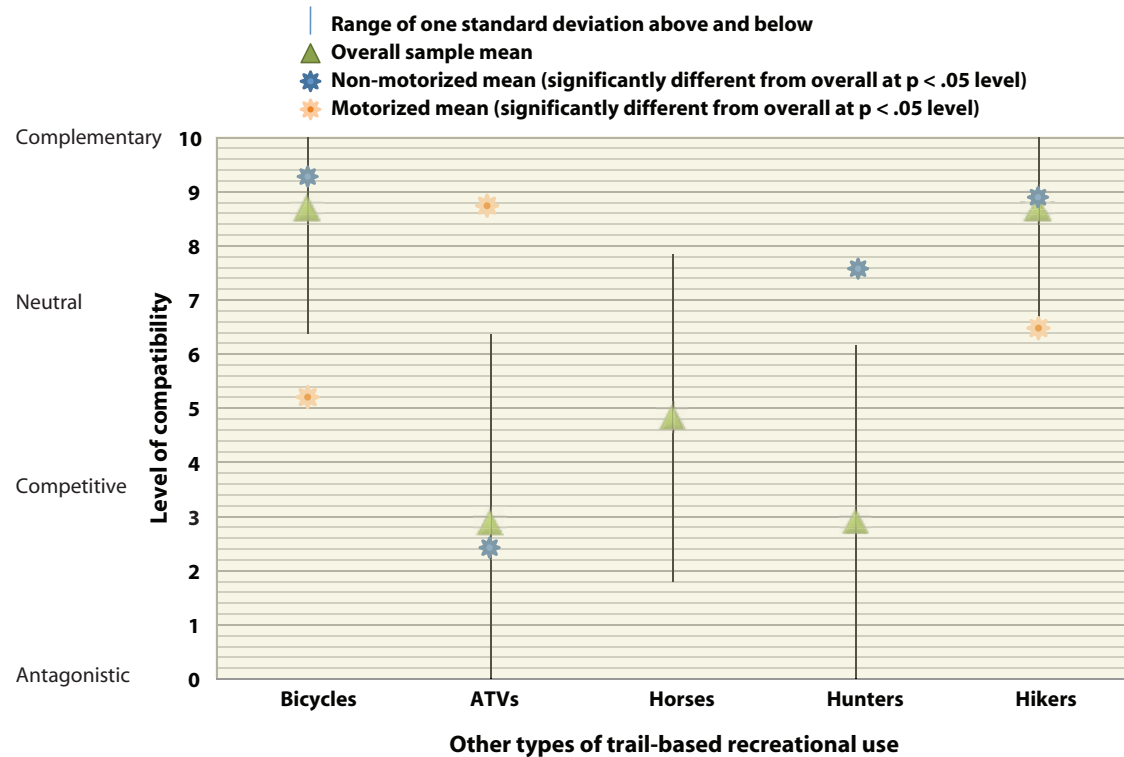


TRAILS AND THEIR GATEWAY COMMUNITIES

Results for this portion of the survey instrument are summarized in figure 6. Again, for interpretation, the triangle represents the average response from all respondents, whiskers denote one standard deviation above and below, and stars denote significant differences between responses of motorized and non-motorized user groups.

Note from this figure that while bicycling and hiking were deemed generally compatible with primary uses of this section of the Gandy Dancer State Trail (and indeed reflect the majority of users surveyed), there were interesting and significant differences between the level of compatibility perceived by non-motorized users and the level perceived by motorized users. Notably, motorized users responded with higher compatibility scores for ATV use and hunting than non-motorized users. Interestingly, our results for non-motorized and motorized users were somewhat more symmetrical when compared to previous Delphi results found in the SCORP work. Assigning significantly lower compatibility scores for bicycling and hiking, it appears that motorized users perceive non-motorized uses as slightly competitive.

Figure 6. Recreational use compatibility as perceived by Gandy Dancer Trail users.



FOCUS GROUP RESULTS

Non-motorized recreationists

Trails provide different experiences for different groups of people. For non-motorized recreationists, experiencing the trail has more to do with nature, health, and safety. “The solitude is what I enjoy the most,” one non-motorized trail user stated. Others went further: “[The trail] just allows my mind to be able to connect with nature more than when I’m out on the road.” Everyone in the group supported the health benefits that come from participating in silent sports on a trail. They also appreciated having a dedicated trail for walking or biking that is separated from vehicular traffic. One person commented, “Running on town roads is a little treacherous, especially on weekend nights when the crazies are out in full force. If you want to ride your bike or focus on what you’re doing, the trail is the best way to go. We have very few sidewalks even in town, much less in the country. The shoulders are pretty substandard.” The Gandy Dancer Trail seems to be one of the few walking- and biking-friendly amenities available in close proximity to Polk and Burnett county communities.

Non-motorized trail users became very vocal when the topic of user conflicts came up, and their comments centered specifically on their perception of motorized vehicle use. “We would hate to see it motorized. That would force us . . . from

hiking the trail. You can’t hike and have ATVs coming at you 20 miles per hour down the trail,” said one person. Another person summed up ATV conflicts this way: “The primary issue with ATVs is the dust, the attitude, and making the trail [unusable for others].” Others focused more on the attitudes of ATV riders and how they interact with others on the trail. “They wouldn’t realize that what they are doing is hurting somebody else’s wishes. They don’t care if somebody else is bothered.” The group generally sees ATV riders as being aggressive, having bad attitudes, and causing extensive damage to the environment. Expansion of Gandy Dancer Trail use to include ATVs was a primary concern to all in the group. “I am really afraid of the day when they try to open up the trail to ATVs, because it is bad right now,” one person said. The group’s view of snowmobilers is more positive due to past experiences.

Other concerns of the group included underutilization of the trail, up-to-date signage, enforcement of rules on the trail, and connections to other amenities from the trail.



TRAILS AND THEIR GATEWAY COMMUNITIES

In addition to the direct assessment of use compatibility, several issue statements with Likert scale response choices (ranging from “strongly agree” to “strongly disagree”) were posed to survey respondents to elicit further evidence of recreational use interaction. These additional issue statements and respondents’ responses are summarized in figure 7. For interpretation, verbatim statements from the survey instrument are shown on the horizontal axis.

Note from this figure that trail users were fairly adamant in agreement that their own use did not impact the enjoyment of others. Wider variation and more neutral tendencies existed for responses to a statement that the Gandy Dancer Trail has exceeded its ability to produce high-quality recreational opportunities. The caveat to this particular response pattern included an inability to discern any explanation as to why. As for the ability of management to affect recreational use interaction by strictly enforcing rules, responses suggested wide variation of opinion with neutral tendencies, but general agreement was evident in the responses to the statement about the ability of proper trail design to minimize conflicts. Interestingly, there was no general agreement in response to the statement regarding support for single uses, which may suggest that people may actually appreciate and expect multiple uses on trails if done appropriately.

Figure 7. Responses to various use compatibility statements.

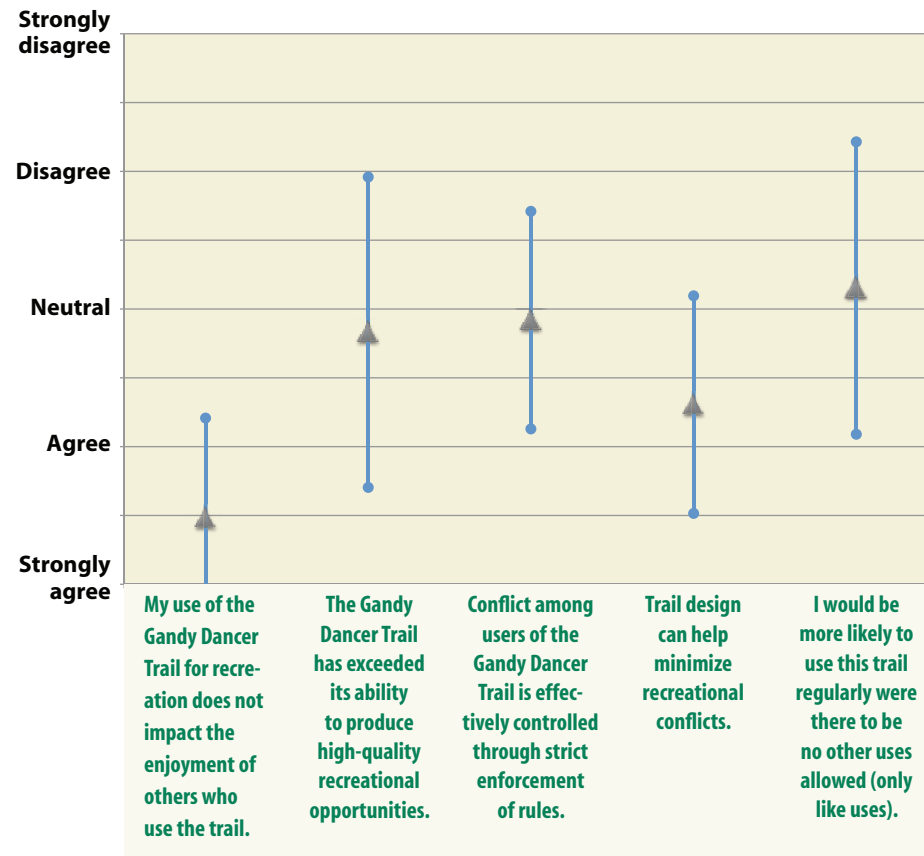


Figure 8. Responses to various crowding statements.



This latter point of expectations of having others use the trail was further probed using issue statements and Likert scale responses that focused on the issue of crowding. These verbatim statements and their responses are summarized in figure 8. Note from the figure that respondents perceived little issue with crowding on this portion of the Gandy Dancer Trail and generally are not bothered by their encounters with others along the trail (the first and last issue statements in figure 8). Wide variation with neutral tendency was evident in the responses to the statement “I prefer to be alone while recreating on the Gandy Dancer.” Finally, respondents voiced general disagreement regarding the notion that increased popularity of the Gandy Dancer Trail has compromised their enjoyment of the trail.

TRAILS AND THEIR GATEWAY COMMUNITIES

Crowding was further examined using statements that posed hypothetical increases in the use of the trail and asked respondents to answer as to how this increase would affect their own enjoyment of the trail. Specifically, these hypothetical increases were posed in the following fashion:

Evaluate the impact of each situation on your enjoyment of the Gandy Dancer Trail... Were I to have encountered _____, my enjoyment of the trail experience would be (response).

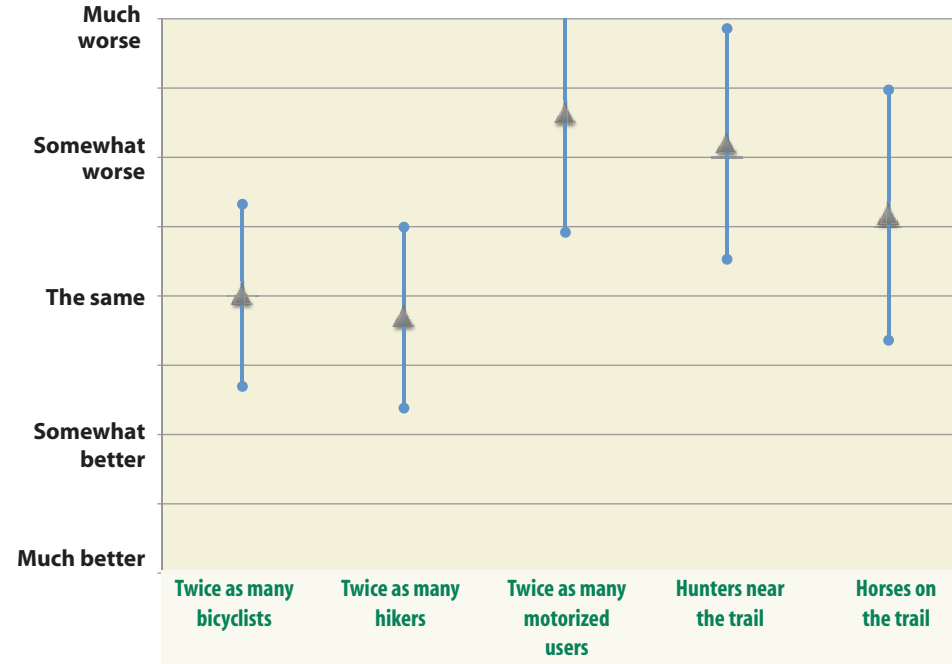
Responses to these hypothetical trail usage increases ranged along a “much better” to “much worse” Likert scale and are summarized in figure 9.

Note from this figure that twice as many bicyclists or hikers are perceived to have little impact on respondents’ own enjoyment. Interestingly, many of those surveyed suggest that encountering more of these types of recreationists would actually improve (or make somewhat better) their own enjoyment of the trail, which suggests generally low levels of usage. A general worsen-

ing of their own experience, however, is generally suggested for motorized use and hunting. More neutral yet still generally worse results are suggested for horses on the trail. It is important to note that these results reflect survey responses of current users and that current allowed uses restrict motorized use to snowmobiles during the winter months (December 1 through March 1) with adequate snowfall, while horses are not allowed at all. Certainly, different user groups can be expected to have different interaction relationships.

This descriptive set of results begins to address the complex aspects associated with alternative recreational activities, motivations, and interactions. To be sure, more analysis is warranted. In particular, our further analysis will focus on the development of explanatory models that can help in understanding the spectrum of use interaction outcomes. Certainly, further analysis of these results will continue to provide insight into how to best develop strategies that allow for maximum benefit while ameliorating potential competition, conflict, and antagonistic interrelationships among user groups and users themselves.

Figure 9. Responses to the effect of increased trail use on trail experience, by type and extent of extra use.



FOCUS GROUP RESULTS

Motorized sports enthusiasts

While other groups have the view that different uses tend to not work well together, motorized users think otherwise. "I truly think people can get along one way or another. If there's a problem, it's just that everyone has to be courteous, no matter what you do." The group recognizes that there are problems on trails but believes that these problems result from the actions of a small number of people. "You have the 1% that goes out and screws it up for everybody else on any trail. Walking, horseback riding, it doesn't make any difference." The motorized users also disagreed with non-motorized users in regard to why some users might not work well together. "Noise, dust, and smell . . . I don't accept the noise and smell [arguments]."

Some members of the group identified ATV challenges. "I [think] that the snowmobile industry has done a terrific job of educating. [Use of] four-wheelers just went boom. They caught on so fast that the clubs and stuff haven't caught up with the education. [The industry is] trying [its] best to educate them, but it is overpowering." Others in the groups framed the ATV issue this way: "The big issue . . . 90% of the issue with four-wheelers is tearing up people's property. . . . These are bad apples. Every group has its bad apples." Many in the group agreed that the problems tied to ATVs are more of an urban problem than

a rural one. They commented that it is the urban people that are riding ATVs on the trails for recreation, while the farmers are using ATVs as farm equipment.

Many in the group felt strongly about using the trail for economic development purposes and that the trail was currently underutilized. "Our biggest problem . . . [is that] there's nobody coming into the bars or restaurants or gas stations [during low-snow winters],"

said one person. The group members see themselves as being an economic engine and see other groups as being against economic development. "We are trying to help tourism in the state of Wisconsin.

They [non-motorized sports groups] are trying to deter it. They [local businesses] are not going to make money if everything went . . . to the hikers and the bikers. . . . Still, tourism in Wisconsin is number one. We try to bring people in. They try to keep people out." Further, many in the group agreed that they were not sufficiently recognized or appreciated for their trail maintenance efforts.



Assessment of current trail-related amenities

In an attempt to better understand how trail users of this portion of the Gandy Dancer State Trail viewed individual recreation-related amenities, we used the mail survey to collect response data that dealt with the relative importance of certain aspects of the recreational surroundings to recreational users' trail use. The intent of this section of the survey was to elicit user perceptions on the trail and its surrounding set of communities and their respective tourism

activities. This section of the survey was multidimensional in the sense that each characteristic required a response with respect to its "importance" and then a follow-up response with respect to how satisfied users were with the local provision, or "performance," of each characteristic. Within the marketing and recreation assessment literature, this is known as Importance-Performance Analysis (or IPA). At its core, IPA identifies salient qualitative features and asks respondents to rate product attributes in terms of how important they were to the overall experience and how

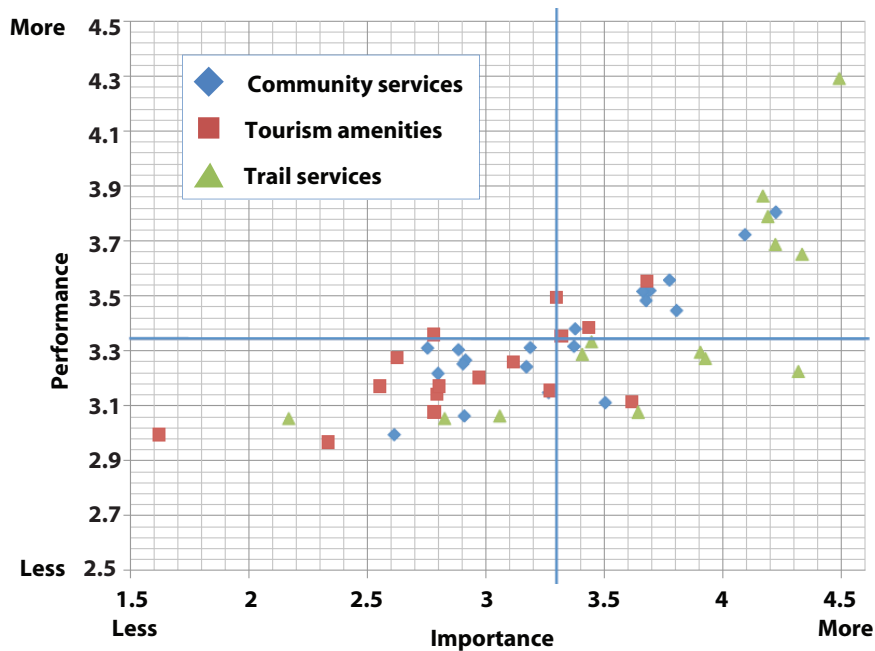
well they were performed to attain their intended outcome (Fletcher et al. 1992; Hammitt et al. 1996). This type of analysis allows us to array, in a relative fashion, the importance of various recreational attributes while simultaneously assessing the relative performance, or effectiveness with which attributes are provided by recreation managers or the local communities adjacent to the trail.

Our assessment of trail-based recreation was done for three unique amenity service groups: trail-related, local community, and tourism.⁵ These three sets of IPA results from trail use surveys are summarized in figure 10. Interpretation of IPA results is simplified by differentiating the four quadrants constructed using grand means (overall means for all combined characteristics) for importance and performance (denoted by the solid blue lines). Of particular interest are the patterns of response that place characteristics in the upper right quadrant (high importance and high performance). These are clearly items that are both important and well performed and can be noted as relative "successes." The other interesting quadrant to note is the lower right (high importance and low performance). With respect to trail users, these could be noted as relative "failures," as they represent characteristics that are relatively

important but are generally not well performed. Note from this figure that, overall, results suggest that trail services were most apt to be important, followed by community services. Tourism services were, in general, found to be least important. Respondents' views of the performance of these characteristic groups did not allow for clear generalizations.

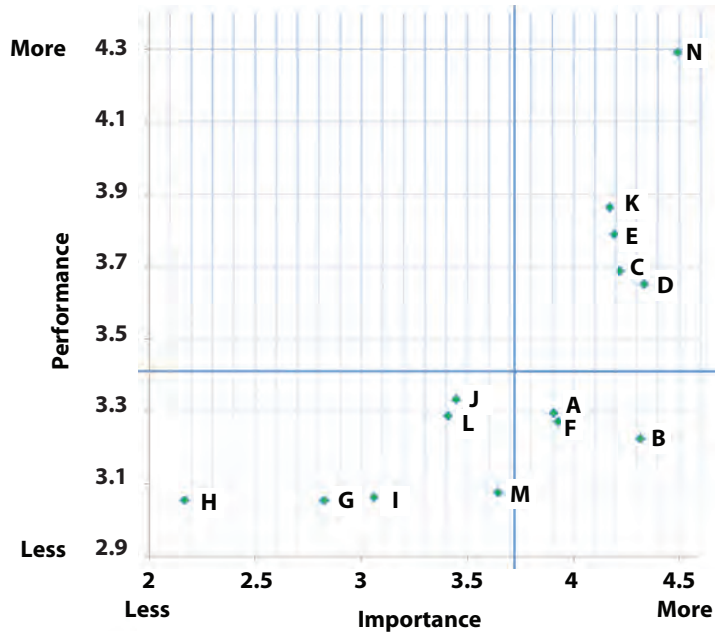
To gain understanding of this relative importance-performance simultaneity, it's helpful to separately assess each amenity service group, thereby allowing distinctions to be made among the specific characteristics. Trail services include both aspects directly under the purview of trail managers and characteristic amenities found and used by trail users along the trail itself. The IPA results for trail service amenities are summarized in figure 11. Note from this figure that specific items were found in the upper right quadrant ("successes") include motivating issues such as scenery, cleanliness of public areas, trail safety, trail surface, and grooming of trail surface. Conversely, trail services that fell into the lower right quadrant (relative "failures") include trail signage, enforcement of trail rules, and accessible restrooms. These items provide clear priority activities that trail managers could emphasize to generate improved performance.

Figure 10. Overall importance-performance results for amenity types, as rated by Gandy Dancer Trail users.



⁵ Figures 11, 12, and 13 show separate IPA results for each amenity service group. While these specific amenity service groupings are similar to previous studies (cf. Fletcher et al. 1992; Hammitt et al. 1996; Marcouiller and Mace 1999; Marcouiller et al. 2002), these categories were developed specifically for this project and were included in a prioritization process that was largely based on local informational needs.

Figure 11. Importance-performance results for trail service amenities, as rated by Gandy Dancer Trail users.

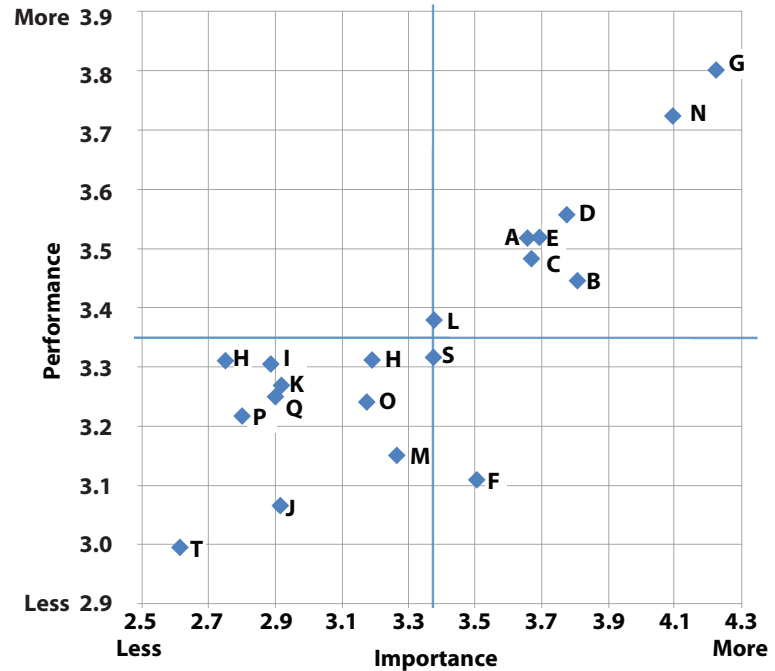


Local community services include those elements found in the communities that lie along the trail; specific elements and the IPA results of which are summarized in figure 12. Note from this figure that community service “successes” (those found in the upper right quadrant) include clean drinking water, environmental quality, streets and roads, medical facilities, bridges, fire protection, and law enforcement. For communities and local businesses looking to better accommodate trail users, priority issues include cell phone connections and local business hours.

Trail service amenities

- A. Trail signage
- B. Accessible restrooms
- C. Type of trail surface
- D. Grooming of trail surface
- E. Trail safety (emergencies)
- F. Enforcement of trail rules
- G. Camping facilities
- H. RV parks
- I. Equipment security facilities
- J. Picnic areas
- K. Cleanliness of public areas
- L. Refreshment stations
- M. Drinking fountains
- N. Scenery

Figure 12. Importance-performance results for local community services, as rated by Gandy Dancer Trail users.



Local community services

- A. Medical facilities
- B. Law enforcement
- C. Fire protection
- D. Streets and roads
- E. Bridges
- F. Cell phone connections
- G. Clean drinking water
- H. Libraries
- I. Public schools
- J. Job opportunities
- K. Local officials
- L. Shopping facilities
- M. Cost of living
- N. Environmental quality
- O. Public health services
- P. Dental services
- Q. Housing
- R. Solid waste disposal
- S. Local business hours
- T. Hi-speed internet

FOCUS GROUP RESULTS

Recreational trail managers

Professional trail managers provided a unique perspective on use compatibility because of their close relationship to trails and the people who use them. A common issue among this group relates to the management of user conflicts. They said their challenge in this regard isn't getting any easier. "One [user] ticks the other one [another user] off all the time. I get phone calls. You never hear a bird-watcher say, 'It's so nice to see ATVs are out there.' You never hear the ATVers say 'Oh, it's great coming around that corner and seeing two people in the trail at however fast I am going.'" Often user groups were seen as including "totally opposite-type people" who "don't know how to share." When asked about tools or policies for managing user conflicts, professional trail

managers appeared to prefer segregating uses. They specifically preferred to segregate uses by season.

Related to user conflicts, enforcement was also a key issue for this group. Illegal activities, ethical use, and user conflicts were identified as key enforcement issues. The entire group agreed that short-term and

long-term approaches are needed when dealing with serious problems. One person

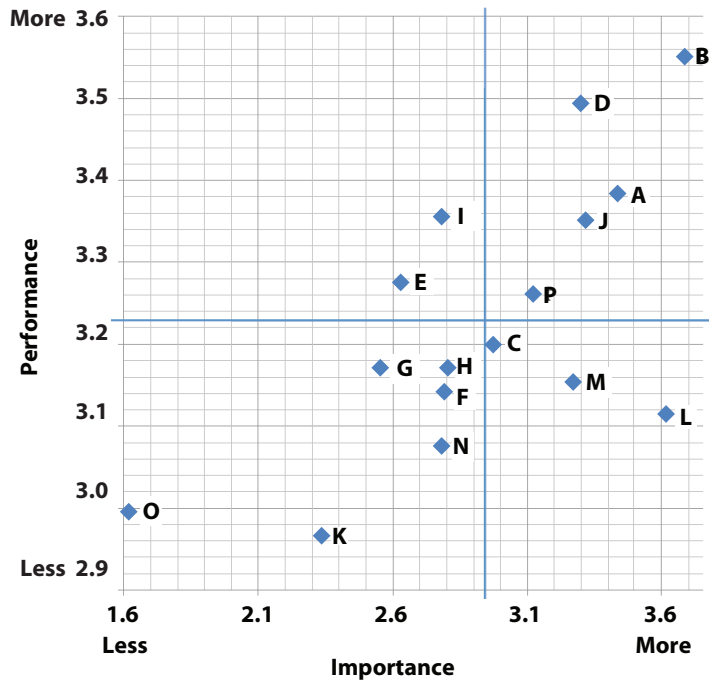
stated, "If you really want to get rid of an aggressive problem . . . you really have to enforce [the rules] . . . That's the way to do it."

Group members also cited the generational aspects tied to recreational enforcement issues. Education is a means to create a culture of compliant recreational users. They see this as being especially effective with youth. The ATV and snowmobile training programs put on by the Wisconsin Department of Natural Resources are examples of effective educational programs. Group members were far less supportive of education with older adults. One person stated, "Take an older person who has been doing [something] for years—they are going to continue to do it that way, unless they start receiving citations for it."

Trail managers also identified frustration dealing with funding challenges. Along with the benefits of trails comes the responsibility of managing the trails. The group agreed that rule enforcement is the most difficult aspect of the trail to fund. State grants were identified as becoming increasingly competitive and in general decline. The group further noted that money generated from citations is not substantial. One participant agreed that securing recreation enforcement funding is getting more difficult every year.



Figure 13. Importance-performance results for local tourism business amenities, as rated by Gandy Dancer Trail users.



Local tourism business amenities

- | | |
|----------------------------|--------------------------|
| A. Fast food restaurants | I. Movie theatres |
| B. Sit-down restaurants | J. Historical sites |
| C. Take-out restaurants | K. WiFi locations |
| D. Hardware stores | L. Bicycle shops/repair |
| E. Hotels/motels/B&Bs | M. Sporting goods stores |
| F. Amusements | N. Interpretive displays |
| G. Handicrafts & souvenirs | O. Gambling |
| H. Local arts & theatre | P. Festivals & events |

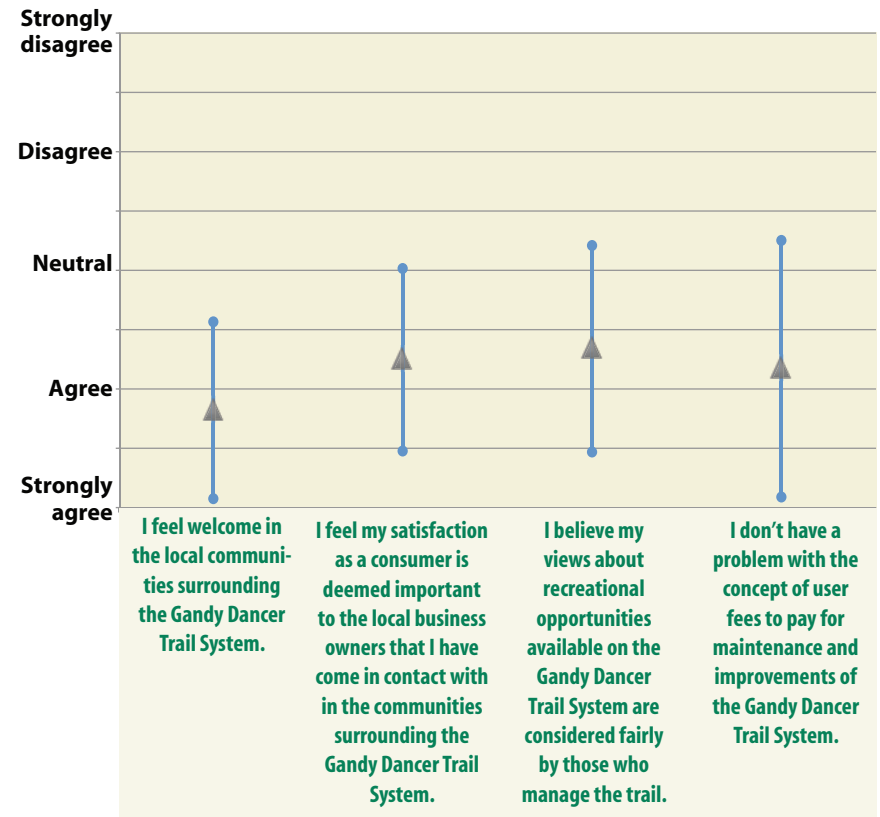
Finally, local tourism amenities include those aspects of the local business community that cater to tourists, including users of the Gandy Dancer Trail. IPA results for local tourism amenities are summarized in figure 13 and suggest the success of several business sectors in addressing the unique needs of Gandy Dancer Trail users. These include both sit-down and fast food restaurants, hardware stores, historical sites, and festivals and events. Those sectors identified as relatively poorly performed but still relatively important include bicycle shops and repair, sporting goods stores, and take-out restaurants. Clearly, these results suggest the opportunity for new and existing businesses to more closely cater to the demands of trail users within local communities adjacent to the trail. This descriptive analysis begins to address general service needs from the perspective of trail users overall. Certainly, further analysis can be done to examine how service need priorities differ among various trail user groups.

TRAILS AND THEIR GATEWAY COMMUNITIES

In addition to the importance-performance analysis, further understanding of trail user perceptions of amenities found along the trail and within surrounding “gateway” communities was obtained using statements and user responses along a Likert scale (ranging from “strongly agree” to “strongly disagree”). These verbatim issue statements and their response results are summarized in figure 14. Note from this figure that trail users felt generally welcome in the local communities surrounding the Gandy Dancer Trail. Further, they apparently felt as though their satisfaction as consumers was deemed important to the local business owners they encountered during their trail experience. Wider variation and more neutral tendencies were suggested by responses to the statement “I believe my views about recreational opportunities available on the Gandy Dancer Trail System are considered fairly by those who manage the trail.” Interestingly, generally positive results are suggested to the issue statement about support for user fees to help pay for maintenance and improvements along the trail system.

The IPA analysis and summary of user perceptions with respect to the surrounding “gateway” communities reported here suggests several priority issues for local trail managers, adjacent communities, and local business entrepreneurs. While this initial descriptive assessment of Gandy Dancer Trail user responses was kept at the aggregate level, it would seem logical for additional analysis to focus on specific user groups were these groups to be deemed of interest. Different recreational user groups would, no doubt, have different importance-performance results and therefore remain as topics for further analysis.

Figure 14. Responses of trail users to issues of local interaction and involvement.



FOCUS GROUP RESULTS

Trail commission members

This group was comprised of members of the Gandy Dancer Trail Commission. The commission is charged with coordinating policies between counties and states, identifying upcoming issues, and developing strategies for effective management. Commission members included representatives from Burnett, Douglas, and Polk counties in Wisconsin and a representative from Minnesota. The Gandy Dancer Trail Commission, an inter-governmental authority, has coordinated policies pertaining to the Gandy Dancer Trail since its inception.

The group members made a point to emphasize that the trail was currently underutilized and that they would like to see this change. They identified marketing as a key issue and voiced that it should focus on the communities. Instead of marketing the trail, the message should suggest that people “come to the community,” because “they will ride the trails anyway.”

The group perceived its biggest challenge as managing trail conflicts. Members noted that requests are regularly received for new uses of the trail; these are discussed in terms of how multiple uses work or do not work well together. The commission supported opening the trail to ATV use but only in the winter. They thought the use

expansion would increase the utilization of the trail. And, they noted, the frozen ground would protect the surface from damage. This position supported the concept of separating uses as a method of managing user conflict.

Other challenges voiced by the group came from unexpected issue sets. “We are getting more and more friends groups . . . around us. And most of the time friends aren’t really your friends. They have an agenda.” Dealing with private crossings and illegal uses were identified as enforcement challenges. Aging infrastructure was also identified as a major concern. Participants communicated maintenance challenges given the current roles and responsibilities between counties and the state. Adequate funding seemed to be part of the challenge, as did proper sharing of maintenance responsibilities. Group members also expressed that they see an opportunity as an organization to do more work centered on trail advocacy issues.



Local fiscal ability

Certainly, funds for maintenance and improvement of trail amenities and local service provision are tightly constrained by the local revenue and expense situation of the counties, municipalities, and towns found adjacent to the trail. Further, federal and state support mechanisms for trail maintenance and improvement are limited and are increasingly constrained. These public fiscal constraints limit the ability to effect change along the trail, to perform ongoing direct trail maintenance, and to make marginal improvements and/or upgrades to the existing facilities. In an effort to better understand trail users' perceptions of the set of local fiscal constraints, a section of the survey instrument was designed to elicit responses from trail users to hypothetical scenarios in which choices by local decision makers are made within the context of local fiscal improvement or degradation. This section of the instrument allowed trail users to put themselves in the position of a local public decision maker for purposes of allocating budget surpluses or shortfalls.

A summary of responses to these questions of how trail users, if placed in a decision-making framework, would allocate resources under conditions of local fiscal improvement (an increase in local revenues) and local fiscal decline (a drop in revenues) is forwarded in table 3. Note from this table that clearly interpretable results appear elusive, as the pattern of response has nearly equal distribution across all allocation categories. This is particularly true for the hypothetical situation of local fiscal improvement. Perhaps the two most obvious aspects of these results are that (1) spending for maintenance of the Gandy Dancer Trail was clearly viewed as part of the local fiscal situation and (2) when faced with a decline in revenues, increased taxation was clearly viewed as part of the solution. Certainly, further analysis of the responses to this question is warranted and remains for future work.

This descriptive set of results begins to scratch the surface of understanding user perceptions of local fiscal ability. Again, to be sure, there is a need for further analysis of this section of the survey responses.

Patterns of trail user spending

To reiterate, a key element of informational focus behind the applied research reported here is to understand the local economic linkages between the trail, its usage, and local communities. The specific aspect of economic impact addressed in the survey dealt with how users of the trail spend money at local businesses while using the trail. In this

way, we can begin to develop an understanding of how trail use impacts local businesses and the underlying regional economic structure.

A section of the mail survey instrument queried trail users to recall their expenditures for both the most recent trip to the southern portion of the Gandy Dancer State Trail and for a broader estimate of total recreational equipment spending during the previous year.

Table 3. Summary of responses to the allocation of local fiscal improvement (revenue increase) and fiscal decline (revenue decrease).

Question and response category	Mean response (\$)	Standard deviation (\$)
Suppose you were a local official and revenues increased by \$100 this year. How would you distribute this additional \$100 given the following choices?		
Reduce taxes	17.81	25.74
Increase spending for services (i.e., fire/police)	14.49	12.73
Increase spending for education	18.77	17.22
Increase spending for roads	16.19	15.69
Increase spending for social services	12.27	12.96
Increase spending for maintenance of the Gandy Dancer	20.21	24.31
Total	99.74	–
Suppose that local revenues decreased by \$100 this year. If forced to balance the budget, how would you make up for the lost revenue?		
Increase taxes	30.20	37.05
Decrease spending for services (i.e., fire/police)	9.29	13.01
Decrease spending for education	9.50	15.92
Decrease spending for roads	12.01	16.39
Decrease spending for social services	19.63	24.65
Decrease spending for maintenance of the Gandy Dancer	19.23	28.07
Total	99.86	–

Note: Totals do not equal \$100 due to rounding and minor sample anomalies.

Certainly, important caveats to this questioning involve an ability to recall how much was spent. While trip spending was done a relatively short amount of time before respondents completed the written survey (mailed surveys were received by trail users 3–10 days after the intercept, or trip), their spending patterns for the past year should be considered ballpark estimates given the length of time needed to recall annual expenditures. This said, descriptive analysis of responses to this section of the survey instrument is summarized in tables 4 and 5.

As will be discussed in the next section on economic impacts, our interest in collecting expenditure pattern data requires some additional dissection. Specifically, understanding local economic impacts necessitates matching data on spending patterns with the secondary data supporting regional economic models used to estimate impact; namely, regions are based on county borders. Thus, a separation of global trip spending and spending that occurred within the confines of Polk and Burnett counties was necessary.

Average individual spending patterns of the trail users studied, as summarized in table 4, suggest that spending is heavily focused on retail items. In particular, relatively large shares are spent on recreational equipment, restaurants/drinks, groceries/liquor, and gas. The local businesses catering to these demands include hardware and general merchandise stores, restaurants and drinking establishments, grocery stores, gas/service stations, and convenience stores. Note from table 4 that average levels of individual spending are roughly \$146 per trip with roughly \$118 of this spent locally within Polk and Burnett counties.

Trail users’ annual spending on recreational goods pertinent to trail use is summarized in table 5. Note from this table that significant amounts of money were spent on campers and motorized recreational equipment but that the percentage of annual spending that occurs within Polk and Burnett counties is much lower than global spending.

Table 4. Average individual trip spending of Gandy Dancer Trail users on recreational items used during the trip.

Item	Trip spending	
	Global (\$)	Local (\$)
Groceries/liquor	21.08	16.09
Restaurants/drinks	27.19	19.90
Gas, auto service	22.76	14.99
Recreation (golf, amusements, etc.)	3.68	3.29
Recreational equipment	60.39	57.03
Other retail	6.59	3.77
Casinos/gambling	1.33	1.32
Overnight accommodations	2.73	1.14
Total	145.75	117.53

Note: “Global” reflects spending regardless of place, while “Local” reflects spending in Polk and Burnett counties and is included within “Global.”

Table 5. Average annual spending of Gandy Dancer Trail users on recreational goods.

Equipment type	Annual spending	
	Global (\$)	Local (\$)
Campers (trailers, RVs, etc.)	1,991.62	865.92
Motorized recreational equipment (motorboats, ATVs, etc.)	805.78	328.13
Non-motorized recreational equipment (bicycles, canoes, etc.)	277.68	56.54
Tents and other camping gear	66.09	41.98
Other recreational items	160.22	118.98
Total	3,301.39	1,411.55

Note: “Global” reflects spending regardless of place, while “Local” reflects spending in Polk and Burnett counties and is included within “Global.”

FOCUS GROUP RESULTS

Adjacent property owners

The adjacent property owner group included individuals who live or own land adjacent to the Gandy Dancer Trail, including both secondary/seasonal homeowners and year-round homeowners. Parcel size owned by participants in this focus group varied from a fraction of an acre to more than 200 acres.



These individuals saw the Gandy Dancer Trail as a local asset. In fact, some adjacent property owners confessed to moving to the area to live next to the trail. Members of this group did not confirm the preconception that trails tend to create avenues for trespass. There was some discussion that the trail even reduced trespassing over the years. Increased property values were perceived as a result of proximity to the trail; increased land values resulted from real estate promotions that specifically market properties as adjacent to the Gandy Dancer Trail. Adjacent property

owners also expressed a sense of caring for the trail and said that the trail was underutilized and that communities don't "embrace it like they should." One person commented that greater trail access should be made at Elbow Lake Road and to Melvin Daniels Park.

However, all things related to the trail were not viewed as positives. Adjacent property owners expressed concern about communication with trail managers and law enforcement. One member voiced, "Spraying of herbicides and pesticides along the trail was not communicated very well, if at all." They also expressed some difficulty in reporting trail violations and finding out whether anything had resulted from the report. Many in the group voiced negative attitudes toward the use of ATVs on the trail. As one person stated, "I wouldn't like ATVs [on the trail]. I own an ATV and a snowmobile. I would like to see electric scooters on there." The group was receptive to expanded silent uses on the trail and commented that horses and electric scooters should be permitted use. Members of this focus group also cited trash as an issue.

Expansion of individual spending patterns to total regional estimates of spending was done using the expansion techniques discussed in appendix A (Methods). Namely, expansion was done based upon total trips made to this section of the Gandy Dancer Trail (refer to figure 3 on page 7). An expanded estimate of total trip spending by Gandy Dancer Trail users during the 12 months of study is summarized in table 6. In a similar fashion to individual spending patterns, total annualized spending was focused within local retail and service sector businesses; namely, hardware and general merchandise stores, restaurants and taverns, grocery stores, and gas stations. In total, results suggest that trail users spent almost \$3.3 million in the Polk and Burnett counties region between October 2006 and September 2007.

A summary of expanded levels of total annual spending on recreational goods by trail users is shown in table 7. Like the individual patterns, a majority of this type of spending was done for campers and motorized recreational equipment, with a total estimate of almost \$40 million spent annually in Polk and Burnett counties. Again, the percentage of this spending that occurred in Polk and Burnett counties was generally much lower than trip spending; in simple terms, larger ticket recreational items are less apt to be purchased locally. These are items that are often subject to greater selection and more price competition from retailers located in larger metropolitan regions.

This descriptive presentation provides initial understanding about spending patterns of trail users. The collection process, use of average (and aggregate) values, and the manner in which expansions were accomplished requires assumptions that provide context to their point accuracy. Simply stated, these should best be viewed as ballpark estimates. Certainly, further analysis of spending patterns can readily dissect aggregate patterns into different user groups and/or seasonal analyses to more clearly understand how different types of recreation contribute to local business activity. For our purposes in this presentation, aggregate and annualized estimates of spending by trail users is sufficient to provide a starting point of direct spending related to trail use for application to regional impact models.

Translation of spending into estimates of local economic impact

The economic structure of a region is a key determinant in the extent to which impacts are felt locally. The communities directly adjacent to the Gandy Dancer Trail vary widely in economic structure. Rural communities such as Centuria, Milltown, and Webster tend to have relatively fewer local retail and service businesses in which trail users can spend their money when compared to St. Croix Falls, Siren, and Danbury. While specific community impacts and their relative differences are important, the ability to estimate regional impacts remains at the county level (for our purposes a combined Polk and Burnett county regional level). It is important to further point out that Polk and Burnett counties, when compared throughout

Table 6. Annualized trip spending of Gandy Dancer Trail users on recreational items used during the trip.

Item	Trip spending	
	Global (\$)	Local (\$)
Groceries/liquor	591,455	451,679
Restaurants/drinks	763,193	558,464
Gas, auto service	638,618	420,613
Recreation (golf, amusements, etc.)	103,264	92,256
Recreational equipment	1,694,711	1,600,517
Other retail	185,005	105,784
Casinos/gambling	37,367	37,162
Overnight accommodations	76,491	32,095
Total	4,090,104	3,298,570

Note: "Global" reflects spending regardless of place, while "Local" reflects spending in Polk and Burnett counties and is included within "Global."

Table 7. Annual spending of Gandy Dancer Trail users on recreational goods.

Equipment type	Annual spending	
	Global (\$)	Local (\$)
Campers (trailers, RVs, etc.)	55,893,394	24,301,476
Motorized recreational equipment (motorboats, ATVs, etc.)	22,613,699	9,208,691
Non-motorized recreational equipment (bicycles, canoes, etc.)	7,792,934	1,586,651
Tents and other camping gear	1,854,751	1,178,230
Other recreational items	4,496,434	3,339,177
Total	92,651,212	39,614,225

Note: "Global" reflects spending regardless of place, while "Local" reflects spending in Polk and Burnett counties and is included within "Global."

TRAILS AND THEIR GATEWAY COMMUNITIES

the Lake States, are fairly rural in their economic characteristics. Rural counties tend to have fewer local linkages for intermediate purchased inputs (those items needed to produce the items that are sold locally). Micropolitan and metropolitan regions such as Eau Claire and the Chippewa Valley or the Twin Cities of Minneapolis and St. Paul, Minnesota, tend to have relatively 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. In general, smaller and less diverse regional economies are relatively more dependent on the outside for the items sold by local retail and service businesses. Conversely, larger and more diverse regional economies tend to be more self-contained. Hence, multiplier impacts tend to be larger as the economic structure of a regional economy grows. For example, the multiplier for a county would be smaller because there is a greater amount of economic leakage to the outside when compared to the multiplier for a larger region (e.g., the state of Wisconsin would capture a greater amount of economic activity than an individual county, thus, a state multiplier would be larger).

The economic stimulus of dollars spent by trail users tends to be quite modest relative to the overall economic structure of Polk and Burnett counties. For instance, in 2006, these two counties had a combined resident population of just over 61,000 people, with an average household income of almost \$60,600; 27,800 total jobs; and a total amount of personal income of about \$1.622 billion (MicroIMPLAN 2008). The total amount of trail-related trip spending by Gandy Dancer Trail users, for comparison, generated roughly \$3.3 million in local business receipts.



Table 8. Output (regional product) impact of trip-related spending by Gandy Dancer Trail users in the Polk and Burnett county region, in 2007 dollars.

Industry	NAICS code ^a	Output impact			
		Direct (\$)	Indirect (\$)	Induced (\$)	Total (\$)
Agriculture, forestry, fishing, & hunting	11	4,088	15,496	9,550	29,134
Mining	21	0	973	672	1,645
Utilities	22	0	37,508	20,252	57,760
Construction	23	0	22,510	3,846	26,356
Manufacturing	31–33	0	67,553	30,622	98,175
Wholesale trade	42	0	19,499	20,168	39,667
Retail trade	44–45	2,502,378	26,276	91,040	2,619,694
Transportation & warehousing	48–49	0	28,787	13,426	42,213
Information	51	0	74,372	18,060	92,432
Finance & insurance	52	0	29,228	27,602	56,830
Real estate & rental	53	0	87,679	22,085	109,764
Professional, scientific, & technical services	54	0	25,636	10,509	36,145
Management of companies	55	0	3,574	196	3,770
Administrative & waste services	56	0	43,846	8,496	52,342
Educational services	61	0	22	701	723
Health & social services	62	0	29	119,531	119,560
Arts, entertainment, & recreation	71	117,036	4,019	8,800	129,855
Accommodation & food services	72	558,162	20,200	48,889	627,251
Other services	81	0	10,266	27,002	37,268
Government & non-NAICS	92	3,506	17,921	131,885	153,312
Institutions		24,497	0	0	24,497
Total		3,209,667	535,394	613,332	4,358,396

Source: From a model developed using MicroIMPLAN.

^a NAICS refers to the North American Industrial Classification System, the standard system for collecting and analyzing data about businesses.

To reiterate, the estimation of economic impacts resulting from trail use focuses on the infusion of dollars into the communities surrounding the trail. Total local expenditures made by trail users are identified by local business sectors sensitive to travel expenditures in the previously described table 6 (page 25). When we apply these dollars to the input-output model of Polk and Burnett counties, the multiplier effect of interindustry purchases generates indirect impacts and the increased income of households drives induced impacts. These impacts are summarized for various economic characteristics in tables 8, 9, and 10.

A quick note on the difference between output and income (in aggregate, also known as “value added”): Output is the total result 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 accounting for all regional production. Income, or value added, is defined as 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, proprietor’s income (“business profit”), other property-type income, and indirect business taxes paid to governments.

It is interesting to note from tables 8, 9, and 10 that the amount of money spent in host communities by trail users had broader impacts on the economic structure of these two counties. This money had the effect of generating a broad amount of business activity within the regions. Results of the spending shock to the input-output models suggests that the direct spending of trail users generated total direct, indirect, and induced impacts that varied based on the amount of local spending.

Overall, multipliers representative of the results reported in tables 8, 9, and 10 were 1.33 (output), 1.37 (value added), and 1.14 (employment), which are quite modest and reflect the region’s more rural economic structure. To reiterate, the extent of multiplier impacts result from the relative diversity of each regions’ economic structure. These results are reasonable given the relative size of the regional economy.

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Table 9. Total value added impact (income—all types) of trip-related spending by Gandy Dancer Trail users in the Polk and Burnett county region, in 2007 dollars.

Industry	NAICS code ^a	Value added impact			
		Direct(\$)	Indirect (\$)	Induced (\$)	Total (\$)
Agriculture, forestry, fishing, & hunting	11	849	3,243	3,068	7,160
Mining	21	0	646	447	1,093
Utilities	22	0	29,124	14,863	43,987
Construction	23	0	8,550	1,481	10,031
Manufacturing	31–33	0	18,295	7,525	25,820
Wholesale trade	42	0	13,454	13,916	27,370
Retail trade	44–45	1,474,352	16,968	58,493	1,549,813
Transportation & warehousing	48–49	0	16,448	6,891	23,339
Information	51	0	31,909	6,878	38,787
Finance & insurance	52	0	18,880	18,133	37,013
Real estate & rental	53	0	62,207	15,239	77,446
Professional, scientific, & technical services	54	0	12,682	5,035	17,717
Management of companies	55	0	1,575	86	1,661
Administrative & waste services	56	0	26,569	5,023	31,592
Educational services	61	0	6	200	206
Health & social services	62	0	11	63,904	63,915
Arts, entertainment, & recreation	71	58,309	1,708	4,306	64,323
Accommodation & food services	72	228,432	9,078	20,046	257,556
Other services	81	0	4,866	13,045	17,911
Government & non-NAICS	92	2,327	5,675	112,581	120,583
Total		1,764,269	281,894	371,160	2,417,321

Source: From a model developed using MicroIMPLAN.

^a NAICS refers to the North American Industrial Classification System, the standard system for collecting and analyzing data about businesses.

Table 10. Employment (jobs) impact of trip-related spending by Gandy Dancer Trail users in the Polk and Burnett county region.

Industry	NAICS code ^a	Employment impact			
		Direct (no. jobs)	Indirect (no. jobs)	Induced (no. jobs)	Total (no. jobs)
Agriculture, forestry, fishing, & hunting	11	0.1	0.3	0.2	0.6
Mining	21	0	0	0	0
Utilities	22	0	0.1	0	0.1
Construction	23	0	0.2	0	0.2
Manufacturing	31–33	0	0.3	0.1	0.4
Wholesale trade	42	0	0.2	0.2	0.4
Retail trade	44–45	78.6	0.5	1.7	80.8
Transportation & warehousing	48–49	0	0.4	0.2	0.6
Information	51	0	0.6	0.1	0.7
Finance & insurance	52	0	0.2	0.2	0.4
Real estate & rental	53	0	1	0.3	1.3
Professional, scientific, & technical services	54	0	0.3	0.1	0.4
Management of companies	55	0	0	0	0
Administrative & waste services	56	0	1.3	0.2	1.5
Educational services	61	0	0	0	0
Health & social services	62	0	0	1.8	1.8
Arts, entertainment, & recreation	71	2.8	0.2	0.2	3.2
Accommodation & food services	72	13.7	0.5	1.2	15.4
Other services	81	0	0.2	0.7	0.9
Government & non-NAICS	92	0.2	0.1	0.1	0.4
Total		95.4	6.4	7.3	108.9

Source: Total number of jobs numbers are from a model developed using MicroIMPLAN.

^a NAICS refers to the North American Industrial Classification System, the standard system for collecting and analyzing data about businesses.

FOCUS GROUP RESULTS

Economic development and business interests

Economic and business interests unanimously identified the trail as a local economic asset. Depending on the type of business interest, however, the economic impact was seen differently. While everyone in the group saw the trail as underutilized, members saw the spending habits of different user groups differently. "When snowmobilers are out snowmobiling, they are easily identifiable," said one person. The same isn't necessarily so for silent (non-motorized) sport trail users. Some group members did not discount that silent sport trail users spend money and cited examples of bikers coming back to their store to buy things. One person summed up the challenge of linking customers to a recreational activity this way, "I can't tell what a person is doing in the area. They don't come in with a bicycle or 'a tourist' tattooed on their forehead [for me] to know what they are doing."

The group discussed the effect of the low-snow winters over the last several years. While some businesses saw declines in business, others found success. "Because of the lack of snowmobile groups, other things have taken their place. The women groups come with church retreats. So the void has been filled by these people [and they] are actually more predisposed to

shopping." The group agreed that snowmobilers tend to spend money on food and drink in the local taverns and restaurants. Others noted that "snowmobilers don't shop." Most people in the group agreed that different recreation-stimulated economic activities affect businesses differently.

The current promotion of the trail was perceived as lacking according to everyone in the group. Promotion was not seen as just advertisements in magazines and newspapers. One person commented, "I think our towns haven't taken full advantage of this . . . not at all. . . . A lot of them have put up signs for Gandy Dancer parking in Siren and Centuria, but that's where it ends." Another group member said, "A lot more money needs to be spent promoting the trail," while another pointed out a key factor: "I think to advertise it well would require cooperation along the whole length of the trail." Cooperative efforts by counties, communities, chambers, and tourism entities were seen as essential to effectively promoting the trail.



chapter 3

Summary, conclusions, and implications for public policy



Results from the Gandy Dancer Trail study provide a microcosm for continued discussions with local communities.

In this report, we document a recently completed multiyear project to assess a set of problems that address recreational use interaction, the integration of trail corridors within surrounding community development initiatives, and recreation management planning. Specifically, the problems addressed in the work reported here were multifaceted. As stated in chapter 1, the study aimed to answer numerous general questions with specific reference to users of the Gandy Dancer Trail and the Polk and Burnett county communities that are affected by recreational trail use: Who visits recreational trails? What aspects of the local trail motivate visitation, and how do differing uses interact? When during the year do visits occur, and how is this related to receipts that flow to local business owners? Where should communities and recreation managers focus decision making to maximize benefits and ameliorate potential problems? How can use of a recreational trail be better integrated into local economic development efforts?

We used a three-phase research approach that included a stratified intercept survey, a follow-up mail survey, and focus group interviews. This research was conducted during a 12-month period between October 2006 and September 2007 along the 47-mile portion of the Gandy Dancer State Trail in Wisconsin between St. Croix Falls and Danbury. Analysis of the data took the form of descriptive assessment, importance-performance analysis, and expansion of expenditure data to total spending estimates. Economic impact assessment was accomplished through the use of input-output analysis using a regional model constructed using MicroIMPLAN county-level datasets for Polk and Burnett counties.

Implications for recreational policy

Results suggest an assortment of public recreational policy issues that can be highlighted using the results from this study. The Gandy Dancer Trail, like many other trails, provides a microcosm for the continued discussions of recreational user interactions, resource protection, and the public lands interface with local communities. All of these elements must be balanced in context with the primary purpose of how stewardship of public lands will be achieved.

Sound recreational policy and a set of rational decision-making processes provide managers the needed tools to mitigate issues as they arise. This decision process is supplemented by an understanding of local recreational interactions. For the Gandy Dancer and similar trails across the state, an understanding of these local interactions is highlighted in this report. Namely, multiple uses of trails provide a complex set of interactions among and between various user groups. For the most part, non-motorized uses interact among themselves with either neutral (supplementary) or complementary interaction types. Likewise, motorized uses and hunting appear to be generally compatible uses. However, results of this study suggest that competition and antagonism can be exacerbated when non-motorized uses and motorized uses interact.

The objectives of public recreational policy can be best served by viewing user interaction decisions within a framework of maximizing complementary uses. These positive interactions can be accomplished through niche marketing, segregation of antagonistic uses, and strict enforcement of rules. Segregation of uses can, and often does, take on both temporal and spatial elements. For instance, snowmobiling and hiking can take place on the same trail and are normally segregated uses by season (temporal segregation). Adaptive site planning can be used to spatially segregate uses. For instance, snowmobiles and cross-country skiing can take place in the same corridor through the implementation of side-by-side trails maintained for each use and separated by natural or regulatory mechanisms.

Another aspect for consideration is the user characteristic of bundling recreational activities. In other words, users who participate in one type of recreational activity often participate in other related or similar activities. Each recreational experience represents a very distinctive pattern of participation in recreation. These patterns suggest that users in different segments seek different kinds of experiences. Because different experiences require different marketing approaches, segments may need individualized marketing strategies to attract the maximum number of potential participants. Individuals may, however, be members of more than one segment, indicating that

participation in recreation is determined by a complex interaction of multiple interests and motivations.

This study also supports the results of the Wisconsin SCORP on recreational barriers. These barriers, such as lack of information and noise from motorized uses, are an indication of planning issues that deserve attention, not just on the Gandy Dancer Trail but across many public lands. These barriers are also a subset of the larger recreational user conflict element that plays out daily on public lands. The challenge of removing these barriers also comes at

an increased risk of carrying capacity issues that, in turn, may cause other challenges for public land managers. Careful attention must be given to balancing the needs of the public resource stewardship and the needs of the public good.



Positive interactions can be accomplished through niche marketing, segregation of antagonistic uses, and strict enforcement of rules.

Efforts to make informed decisions and develop sound recreational policy are made within a dearth of user data and associated interactions with public lands. This void is usually most pronounced after recreational conflict is underway. Rarely is factual and objective data available to assist decision making. For a resource manager to make sound professional judgments, data collection of user recreational patterns must be done in a timely and frequent manner. The data collection techniques outlined in this report provide a basis for replication with other linear trails. By utilizing volunteer resources and effectively managing time, the benefits of data collection could potentially exceed costs. Also, data collection is one of the key elements involved in master planning of public lands and is key to moving beyond an arbitrary and capricious decision-making process on recreational uses to one of sound reason.

Implications for developmental policy

Results of this study can also help decision makers better understand the implications for local developmental policy. The economic impact of the Gandy Dancer Trail on the adjacent communities in Polk and Burnett counties is relatively modest compared to other economic activities within the region. Given the rural nature of the communities along the Gandy Dancer Trail, the \$3.3 million economic impact generated by the trail is important and plays a role in revenue generation and job creation when compared to the overall local economic engine. Retail, entertainment and recreation, and accommodation and food services are the three areas most impacted by trail-related spending. There is some indication that hotels, motels, and other local overnight accommodations are impacted to a lesser degree by trail users. This is probably due to both the high frequency of local users and the day-tripping nature of non-local trail users. Our estimates suggest that over 100 jobs per year are related to the economic activity stimulated by users of the Gandy Dancer Trail.

Economic development strategies are of growing concern among many citizens, business owners, and elected officials. Strategies can be developed to maximize the economic benefit of the trail. Building upon the concept of “feeling welcome in the community” that was noted in the survey, a “buy local” campaign could be implemented throughout the gateway communities affected by trail users. With the amount of economic leakage occurring, opportunities are available for local businesses to increase business related to the trail. Providing better customer service is a way to differentiate a business that experiences price competition from nearby cities. Opportunities to develop new businesses and to expand existing businesses also exist. Bike equipment/repair and take-out restaurants were identified as needed businesses in the communities along the trail. However, more in-depth business planning should be completed to explore the viability and demands for each of these ventures. Better business hours were also desired by trail users.

More specific trail promotion can also be implemented through coordinated efforts with communities along the trail. Trail packages can promote local business and may encourage local populations and second-home owners to take advantage of the trail and become aware of local businesses. Greater use of the trail is likely tied to promotion of all of the amenities in the communities of Polk and Burnett counties.

Survey and focus group results suggest that increased trail infrastructure for biking and hiking is needed within developed communities. The snowmobiling trail system is quite extensive in both counties, with trails connecting to the Gandy Dancer. However, hikers and bikers cited a shortfall of infrastructure, calling it “substandard.” Questions about trail infrastructure in the communities along the Gandy Dancer found that there were few-to-no sidewalks or designated bike lanes. Comprehensive planning can be used to assess current infrastructure and plan for future infrastructure. Additional trails should be linked to the Gandy Dancer and nearby attractions such as parks.

As cited earlier in this report, focus group participants commented on a perceived increase of property values along the trail. Previous studies (Crompton 2002, 2004) cite similar trends adjacent to parks, forest, and other public lands. The potential exists for increased parcelization along the trail. Currently, Polk and Burnett counties have high demand for lakeshore development. However, pressure on off-water lands may increase as lakefront supply decreases; this may already be occurring. Land use planning along the trail will be critical in preserving the “natural features, quiet rural atmosphere, and solitude and privacy” that trail users rate highly among their reasons for using the trail.

Implications for local outreach programming

Outreach programs help local governments investigate and create viable options for economic and community development, such as improved job creation and retention, small- and medium-sized business development, effective and coordinated emergency response, solid waste disposal, tourism development, workforce education, and land use planning. In fact, many county-based educators have continued to develop and deliver quality tourism programming throughout Wisconsin and beyond. In addition, there continues to be a modest support network of specialists that conduct applied research programs addressing tourism development. Examples of issues addressed in this programming include business development, marketing, outdoor recreation planning, natural resources-based development, amenity-based development, heritage tourism, nature-based tourism, festivals and events, tourism economics, tourism infrastructure, traveler research, and hospitality training. These tourism efforts on the local, regional, and state levels can greatly benefit from sanction, guidance, support, and packaging in creating an overarching umbrella for tourism programs.

In particular, this study can assist outreach programs in developing responses to recreational conflict as a component of tourism development. Tourism has been and will continue to be an important component of our social, economic, and environmental heritage. Outreach programs have an opportunity to engage educators, tourism professionals, and applied tourism researchers to share expertise and practices that are transferable to communities in the Lake States and beyond. By doing so, these programs have an opportunity to rapidly establish a collaborative network to help strengthen community-based tourism education and applied research. In addition, this study will be part of the “Recreational Conflict Clearinghouse,” in which literature and web-based resources will be captured to provide an organizing component intent on developing a better understanding of recreational conflict.

Lastly, this research may be integrated into the processes of outreach programs focused on conflict resolution. These groups work on a variety of issues including, but not limited to, mediator competencies, mediation styles, “best practices” in public policy disputes, and cross-cultural conflict. The research projects undertaken through this study serve a number of purposes that directly fulfill conflict resolution programs’ objective to educate people about conflict resolution theory, processes, and programs.

In conclusion, the work reported here represents a contribution to our understanding of the local context of recreation management and economic development planning with respect to parks and trails. Certainly, more work is needed to extend results to differing venues, situations, and contexts. This additional work can take the form of both future applied research and its outreach to interested individuals and groups. Ultimately, our attempt to better understand local amenities such as recreational trails intends to provide insight into more informed public policy that acts to assist with addressing problems creatively and objectively.

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appendix a

Methods used in evaluating use compatibility and impacts



We gathered information from a series of six focus group interviews with unique local stakeholder groups.

This evaluation of the Gandy Dancer Trail case study relied upon a three-phase approach to gathering data. To elicit user characteristics and use pressure, an intercept strategy with a brief face-to-face survey initiated our contact with trail users. This led to a follow-up mail survey that was designed to elicit data on more in-depth issues of recreation motivation, compatibility, spending patterns, and local community integration. In addition, we gathered more qualitative contextual evidence and information from a series of six focus group interviews with unique local stakeholder groups. This approach was chosen to allow triangulation of evidence, which allows a contextual understanding of different data sources. Each of these phases will be discussed in turn.

Users of the Gandy Dancer Trail were intercepted along the 47-mile route at 10 standard intercept locations, roughly corresponding to the points along the trail where users were required to stop. At these 10 locations, a standardized sampling strategy was applied that used two-hour time slots, randomly allocated during daylight hours (roughly varying between 6 a.m. and 9 p.m.) and there was a brief standardized face-to-face interview. Time slots and locations were selected using a numerical list of times and locations and a random number generator.¹ This was done for the pre-determined number of weekday and weekend days to achieve a pre-specified number of samples per month. Geographically, each intercept location was equally weighted, but the number of samples collected was stratified by month, with roughly double the number being administered during the late spring through early fall period (corresponding to the height of seasonal use).

The intercepts began in October 2006 and were administered through September 2007. Users were randomly intercepted beginning with the first person that came past the pre-specified intercept location at the beginning of each two-hour shift (see appendix B for intercept schedule). Once intercepted, users were interviewed briefly using a survey instrument (see appendix C) to gain basic information such as address, trail use characteristics, and surveyor observations.

¹ We used Random.org V2, available at www.random.org/integers/.

A summary of sample characteristics is shown in table A.1. Just over 700 two-hour time slots were administered during the yearlong intercept period. This yielded a relatively large number of null samples (a time slot completed without seeing a trail user). Note from the table that of the 387 samples with a user encounter (non null), a total of 278 resulted in completed intercepts—a response rate of roughly 72%. These valid responses included addresses and a limited number of user characteristics.

These sampled trail users were then included in the standardized mail survey. Using a modified Dillman approach (Dillman 1978), each sampled user then received a standardized survey instrument in first-class mail (see appendix C). This survey consisted of seven sections: recent use of the Gandy Dancer Trail, perceptions about the encounters you had on the trail, impact on the local economy, attitudes about community issues, perceptions about local tourism and recreational amenities, attitudes about evaluating fiscal trade-offs, and demographic information.

Note from table A.1 that of the 278 valid intercept responses, five were returned as bad addresses (here noted as null samples). There were a total of 212 completed and returned surveys yielding a mail survey response rate of almost 78%. Accounting for the 314 null intercepts (44.7% of total), the overall response rate from an intercept encounter (non-null intercept) to the final returned mail survey yielded an overall response rate of 54.9%.

Focus group interviews

To assist in understanding the data on trail use and recreational activity compatibility, we also collected information from several stakeholder groups that are locally active and play an important role in decision making. The information that we sought from these local stakeholder groups was contextual in nature. Contextual issues included such topics as (1) the role of the Gandy Dancer Trail in local community development initiatives, (2) specific management issues associated with the trail system, (3) recreational use compatibility and implications for management of the trail, and (4) important aspects of public policy that can affect trail usage and recreational use interactions.

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. The intent of these focus groups was to obtain a broad contextual basis upon which to assess the validity of secondary data and obtain insights into local trail issues as they relate to activities within communities along the trail and interactions within and between alternative recreational user groups from knowledgeable sources. This approach has been successfully used in previous tourism-related research (Green et al. 1996; Marcouiller et al. 2002; Marcouiller and Xia 2008).

Focus group interviews were conducted on six occasions between February and November of 2007 with individuals from six specific stakeholder groups. These groups included (1) recreation and land managers, (2) local tourism business owners, (3) local public policy makers, (4) landowners adjacent to the trail, (5) non-motorized trail users, and (6) motorized trail users. These groups were selected to represent the primary interest groups within the local community that exhibit direct involvement with the Gandy Dancer Trail.

Table A.1. Characteristics of the study sample

Type of characteristic	Survey instrument	
	Intercept survey	Mail survey
Respondent demographics:		
Age (years)	43.8	48.7
Education (years in school)	N/A*	13.3
Annual pre-tax household income	N/A*	\$78,970
Party size (no. of people)	1.66	N/A*
Percent female	44.1	39.8
Frequency of use (visits per year)	N/A*	39.7
Total sample attempts	701	278
Null samples	314	5
Number of responses	278	212
Response rate	71.8%	77.7%

* Information is not available given the survey instrument used.

An analysis of focus group interviews was conducted based on 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. Specific quotations were pulled from focus group sessions to emphasize important issues when it was useful.

Data analysis techniques

Data collected from the returned surveys was entered into a data analysis template and was checked for consistency. Summaries found in the results section (chapter 2) 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.²

Several elements of the results expand sample responses. Most notably, the total amounts of user spending needed for economic impact assessment were estimated by applying individual spending patterns to monthly estimates of use. This method extends an approach used in previous studies that allows for standardized annual spending levels. Expansion resulted from analysis of data collected by the intercept surveyor and matched to the pre-specified 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.

Estimation of local economic impact

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 2006 county-level MicroIMPLAN datasets for Polk and Burnett counties (MIG 2006). In calculating the demand shock, 2007 spending levels were taken into account in the use of a sector-specific deflator to convert to 2006 dollars. All reports reflect results inflated back to a common 2007 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).

For the assessment of economic impacts resulting from trail user spending, non-local use expenditures were allocated to seven specific industrial sectors. Each sector into which expenditures were allocated is represented by unique NAICS codes and is specific to the sector structure of MicroIMPLAN.³ Expenditure categories, IMPLAN sectors, and respective NAICS codes are summarized in table A.2. Estimated total expenditures and the amount spent locally were

Table A.2. Respective industrial sectors for expenditure patterns used to estimate regional economic impacts (IMPLAN sectors and respective NAICS codes in which expenditures were allocated).

Expenditure category	IMPLAN sector	NAICS code
Grocery/liquor stores	405	445
Restaurants (eating and drinking places)	481	722
Transportation related (gas, repairs)	407	447
Recreation (golf, amusements)	478	713*
Recreation equipment	409	451
Entertainment (gambling, theatres, bowling)	478	713*
Hotels, motels, bed & breakfasts, camping	479	72111/72112
Other retail	411	453

* Except 71394 and 71395

² In other words, where noted, we have 95% confidence that significant response differences exist between groups.

³ While we recognize that this method of expenditure allocation could miss some sectoral groupings and/or oversimplifies the manner in which 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, 1998; Marcouiller and Xia 2008).

summarized. Only the local portion of expenditures that occurred within the Polk and Burnett county regional economy were used as the demand shock for input-output modeling.

Standard categories of economic impacts included *output* (or the aggregate impact on regional economic activity), *value added* or *income* (that portion of total output that accrues locally), and *employment* (total numbers of jobs created locally).⁴ The county-level input-output model used to calculate total impacts estimated multiplier effects measured as direct, indirect, and induced impacts. 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 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 will depend on fundamental characteristics of the regional economy. In general, larger and more diverse regional economies will exhibit higher levels of economic multiplier effects. Conversely, smaller and less diverse regional economies will exhibit relatively lower levels of multiplier effects. These economic multiplier generalizations reflect alternative levels of regional economic “leakage” and “capture.” They relate to regional export/import balances that differ by region. In general, the Polk and Burnett county region is a relatively small and less diverse exurban economy that lies in close proximity to the Twin Cities, Duluth/Superior, and Chippewa Valley metropolitan areas.



⁴ *Output* includes all economic activity related to visitor spending, including intermediate purchased inputs, income (value added), and imported inputs. *Income* most clearly reflects the impacts felt by local residents and includes four components: (1) employee compensation, (2) proprietor’s income, (3) other property income, and (4) indirect business taxes. *Employment* measures total jobs created and includes full-time, part-time, and seasonal jobs.

appendix b

Intercept schedule

Number of scheduled intercepts

Month	Holidays and observances (date)	No. of weekend/holiday intercepts	No. of weekday intercepts	Total intercepts
2006				
Oct.	Columbus Day (9), Halloween (31)	20	20	40
Nov.	Veterans Day observed (10), Veterans Day (11), Thanksgiving Day (23)	20	20	40
Dec.	Christmas Day (25)	20	20	40
2007				
Jan.	New Year's Day (1), Martin Luther King Day (15)	20	20	40
Feb.	Valentine's Day (14), Washington's Birthday (19)	20	20	40
Mar.	–	20	20	40
Apr.	–	20	20	40
May	Memorial Day (28)	30	30	60
June	–	40	40	80
July	Independence Day (4)	40	40	80
Aug.	–	40	40	80
Sept.	Labor Day (3)	30	30	60
Total		320	320	640

Sample intercept schedule

January 2007

(20 weekend/holiday + 20 weekday = 40 intercepts total)

■ weekend/holiday ■ weekday

Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
	1	2	3	4	5	6
	14, 35, 11, 32, 28	37, 50	49		19, 19	42
7	8	9	10	11	12	13
2	43	45		9	29	26
14	15	16	17	18	19	20
32, 37	22, 48	20	28, 49	30, 35	36	48, 21
21	22	23	24	25	26	27
28	4		27, 5, 19			16, 40
28	29	30	31			
4, 29, 5			34			

Holidays and observances — 1: New Year's Day, 15: Martin Luther King Day

Note: Use "Winter Trailhead Locations and Schedules" for locations and times.

Intercept times and locations

Winter (December–March) trailhead locations and schedule

(Numbers relate to calendar for intercept time and place)

#	Time	Place	#	Time	Place
1.	7:00 am–9:00 am	St. Croix Falls	26.	7:00 am–9:00 am	Lewis
2.	9:00 am–11:00 am	St. Croix Falls	27.	9:00 am–11:00 am	Lewis
3.	11:00 am–1:00 pm	St. Croix Falls	28.	11:00 am–1:00 pm	Lewis
4.	1:00 pm–3:00 pm	St. Croix Falls	29.	1:00 pm–3:00 pm	Lewis
5.	3:00 pm–5:00 pm	St. Croix Falls	30.	3:00 pm–5:00 pm	Lewis
6.	7:00 am–9:00 am	Centuria	31.	7:00 am–9:00 am	Siren
7.	9:00 am–11:00 am	Centuria	32.	9:00 am–11:00 am	Siren
8.	11:00 am–1:00 pm	Centuria	33.	11:00 am–1:00 pm	Siren
9.	1:00 pm–3:00 pm	Centuria	34.	1:00 pm–3:00 pm	Siren
10.	3:00 pm–5:00 pm	Centuria	35.	3:00 pm–5:00 pm	Siren
11.	7:00 am–9:00 am	Milltown	36.	7:00 am–9:00 am	Webster
12.	9:00 am–11:00 am	Milltown	37.	9:00 am–11:00 am	Webster
13.	11:00 am–1:00 pm	Milltown	38.	11:00 am–1:00 pm	Webster
14.	1:00 pm–3:00 pm	Milltown	39.	1:00 pm–3:00 pm	Webster
15.	3:00 pm–5:00 pm	Milltown	40.	3:00 pm–5:00 pm	Webster
16.	7:00 am–9:00 am	Luck	41.	7:00 am–9:00 am	Jeffries
17.	9:00 am–11:00 am	Luck	42.	9:00 am–11:00 am	Jeffries
18.	11:00 am–1:00 pm	Luck	43.	11:00 am–1:00 pm	Jeffries
19.	1:00 pm–3:00 pm	Luck	44.	1:00 pm–3:00 pm	Jeffries
20.	3:00 pm–5:00 pm	Luck	45.	3:00 pm–5:00 pm	Jeffries
21.	7:00 am–9:00 am	Frederic	46.	7:00 am–9:00 am	Danbury
22.	9:00 am–11:00 am	Frederic	47.	9:00 am–11:00 am	Danbury
23.	11:00 am–1:00 pm	Frederic	48.	11:00 am–1:00 pm	Danbury
24.	1:00 pm–3:00 pm	Frederic	49.	1:00 pm–3:00 pm	Danbury
25.	3:00 pm–5:00 pm	Frederic	50.	3:00 pm–5:00 pm	Danbury

appendix c

Survey instruments



Intercept survey

User Intercept Survey – Gandy Dancer Trail Use Study
University of Wisconsin – Madison/Extension

1. How long have you been on the trail today?

2. How many miles of the trail did you use?

1. What is the primary reason for your trip to this area? (Please check only one category.)

- | | | |
|-------------------------------------------|-------------------------------------------------------------------|---------------------------------------------------------------|
| <input type="checkbox"/> Bicycling | <input type="checkbox"/> Horseback riding | <input type="checkbox"/> All terrain vehicle (ATV) use |
| <input type="checkbox"/> X-country skiing | <input type="checkbox"/> Snowshoeing | <input type="checkbox"/> Snowmobiling |
| <input type="checkbox"/> Walking | <input type="checkbox"/> Other non-motorized use
(type: _____) | <input type="checkbox"/> Other motorized use
(type: _____) |

2. In order of importance, what are your three favorite leisure activities?

- 1st Choice _____
2nd Choice _____
3rd Choice _____

3. Name and Address of trail user

A mail survey will be sent to you to fill out at your convenience. We will provide you a postage paid return envelope to use. As an incentive, all returned surveys will be entered into a drawing of no more than a total of 640 for awarding of prizes.

Surveyor observations:

Number of intercept location and time: _____ Time of arrival at intercept point: _____

Date of intercept: _____ Time of intercept: _____

Status of intercept: Accept _____ Reject _____

Recreational activity observed: _____

Type of recreational equipment used: _____

Party characteristics: Adults: # Males _____ # Females _____ Children: # Boys _____ # Girls _____

Approximate age of interceptee: _____ years old

Overcast _____, Approximate Temperature _____, Precipitation _____

Mail survey

Gandy Dancer Trail Study

University of Wisconsin – Madison/Extension

I. About Your Most Recent Use of the Gandy Dancer Trail:

1. How important were the following issues in your decision to use the Gandy Dancer trail?

	not important			somewhat important				very important			
	0	1	2	3	4	5	6	7	8	9	10
quality of the trail	0	1	2	3	4	5	6	7	8	9	10
weather	0	1	2	3	4	5	6	7	8	9	10
closeness to home	0	1	2	3	4	5	6	7	8	9	10
quiet, rural atmosphere	0	1	2	3	4	5	6	7	8	9	10
other recreational opportunities	0	1	2	3	4	5	6	7	8	9	10
family/friends in the area	0	1	2	3	4	5	6	7	8	9	10
privacy and solitude	0	1	2	3	4	5	6	7	8	9	10
nearby natural features	0	1	2	3	4	5	6	7	8	9	10
other (specify _____)	0	1	2	3	4	5	6	7	8	9	10

2. What activity served as the primary reason for your Gandy Dancer Trail recreation visit?

Please check only one of the following activities:

<input type="checkbox"/> Bicycling	<input type="checkbox"/> Horseback riding	<input type="checkbox"/> All terrain vehicle (ATV) use
<input type="checkbox"/> Walking	<input type="checkbox"/> Other non-motorized use (type: _____)	<input type="checkbox"/> Other motorized use (type: _____)

3. Please estimate the number of additional users that you encountered on your most recent visit to Gandy Dancer.

_____ # Bicyclists	_____ # Hikers/Walkers	_____ # Skaters/Rollerbladers
_____ # ATV users	_____ # Hunters	_____ # Horseback riders

4. Please identify how involved you are with the following recreational activities.

	not involved			somewhat involved				very involved			
	0	1	2	3	4	5	6	7	8	9	10
bicycling	0	1	2	3	4	5	6	7	8	9	10
roller blading or skating	0	1	2	3	4	5	6	7	8	9	10
walking	0	1	2	3	4	5	6	7	8	9	10
camping	0	1	2	3	4	5	6	7	8	9	10
cross-country skiing	0	1	2	3	4	5	6	7	8	9	10
downhill skiing	0	1	2	3	4	5	6	7	8	9	10
ice skating	0	1	2	3	4	5	6	7	8	9	10
hunting	0	1	2	3	4	5	6	7	8	9	10
fishing	0	1	2	3	4	5	6	7	8	9	10
horseback riding	0	1	2	3	4	5	6	7	8	9	10
swimming	0	1	2	3	4	5	6	7	8	9	10
ATV riding	0	1	2	3	4	5	6	7	8	9	10
snowmobiling	0	1	2	3	4	5	6	7	8	9	10

5. Approximately how many miles of the Gandy Dancer Trail did you use? _____ miles

6. Approximately how much time did you spend on the Gandy Dancer Trail? _____ hours

7. Please rate how the following items that would affect your return to the Gandy Dancer Trail System.

	not important			somewhat important				very important			
	0	1	2	3	4	5	6	7	8	9	10
# of encounters with others	0	1	2	3	4	5	6	7	8	9	10
quality of the trail itself	0	1	2	3	4	5	6	7	8	9	10
weather and season	0	1	2	3	4	5	6	7	8	9	10
price of gasoline	0	1	2	3	4	5	6	7	8	9	10
availability of suitable lodging	0	1	2	3	4	5	6	7	8	9	10
access (parking, etc.)	0	1	2	3	4	5	6	7	8	9	10
promotional materials	0	1	2	3	4	5	6	7	8	9	10
nearby shops and stores	0	1	2	3	4	5	6	7	8	9	10
price of the trail license	0	1	2	3	4	5	6	7	8	9	10

8. What is the likelihood you will visit the Gandy Dancer Trail again (circle the appropriate response)?

Very Likely	Likely	Don't Know	Not Likely	Very Low
-------------	--------	------------	------------	----------

II. Your perception about the encounters you had on this trip to the Gandy Dancer

How do different recreational uses interact? Answers to this question will vary from good to bad and represent what some have termed "The Spectrum of Compatible Use". Primary uses that completely conflict with other uses are often termed "Antagonistic". On the other end of the spectrum, primary uses that enhance other uses can be termed "Complementary". In between antagonistic and complementary interactions lie "Competitive" (one use is traded off for another use) and "Neutral" (one use has no impact on the other use).

9. Using this spectrum of compatibility from fully antagonistic (1) to fully complementary (10), please fill out the following chart of recreational use interactions asking yourself ...

From the perspective of my primary trail activity (see response to Q2), how compatible are the following other uses?

	Antagonistic		Competitive			Neutral		Complementary			
	0	1	2	3	4	5	6	7	8	9	10
bicycling	0	1	2	3	4	5	6	7	8	9	10
all terrain vehicle (ATV) use	0	1	2	3	4	5	6	7	8	9	10
skating and rollerblading	0	1	2	3	4	5	6	7	8	9	10
horseback riding	0	1	2	3	4	5	6	7	8	9	10
hunting	0	1	2	3	4	5	6	7	8	9	10
hiking/walking	0	1	2	3	4	5	6	7	8	9	10

For the following statements, mark the spot on the line that most closely aligns with your level of agreement.

10. My use of the Gandy Dancer Trail for recreation does not impact the enjoyment of others who use the trail.

strongly agree	agree	neutral	disagree	strongly disagree
----- ----- ----- -----	----- ----- ----- -----	----- ----- ----- -----	----- ----- ----- -----	----- ----- ----- -----

TRAILS AND THEIR GATEWAY COMMUNITIES

11. The people that I encounter while using the Gandy Dancer Trail do not generally bother me.

strongly agree agree neutral disagree strongly disagree

12. The Gandy Dancer Trail has exceeded its ability to produce high quality recreational opportunities.

strongly agree agree neutral disagree strongly disagree

13. Increased popularity of the Gandy Dancer Trail has compromised my enjoyment in use of the trail.

strongly agree agree neutral disagree strongly disagree

14. I prefer to be alone (without other human encounters) while recreating on the Gandy Dancer.

strongly agree agree neutral disagree strongly disagree

15. The Gandy Dancer Trail has become too crowded.

strongly agree agree neutral disagree strongly disagree

16. Conflict among users of the Gandy Dancer Trail is effectively controlled through strict enforcement of rules.

strongly agree agree neutral disagree strongly disagree

17. For the following questions, evaluate the impact of each situation on your enjoyment of the Gandy Dancer Trail.

	Much Better	Somewhat Better	The Same	Somewhat Worse	Much Worse
Were I to have encountered twice as many bicyclists, my enjoyment of the trail experience would be:	1	2	3	4	5
Were I to have encountered twice as many motorized users, my enjoyment of the trail experience would be:	1	2	3	4	5
Were I to have encountered hunters near the trail, my enjoyment of the trail experience would be:	1	2	3	4	5
Were I to have encountered more horses on the trail, my enjoyment of the trail experience would be:	1	2	3	4	5
Were I to have encountered twice as many hikers, my enjoyment of the trail experience would be:	1	2	3	4	5

18. Trail design can help minimize recreational conflicts (check your level of agreement).

strongly agree agree neutral disagree strongly disagree

19. I would be more likely to use this trail regularly were there to be no other uses allowed (only like uses).

strongly agree agree neutral disagree strongly disagree

III. How You Impact the Local Economy:

20. The following question pertains to your spending on items used during your most visit trip to the Gandy Dancer Trail and surrounding communities (local residents should report spending related to the use of the trail only). Please estimate the total dollar amount spent away from home and the portion used in the local communities surrounding the Gandy Dancer Trail System (either in Polk or Burnett Counties). Please use the following categories for reporting spending on this trip

	dollar amount spent during this trip away from home	percentage spent in Polk & Burnett Counties
EXAMPLE		
groceries/liquor	\$ 50	20 %
groceries/liquor	\$ _____	_____ %
restaurants/drinks	\$ _____	_____ %
gas, auto service	\$ _____	_____ %
recreation (golf, amusements, etc.)	\$ _____	_____ %
recreational equipment (bikes, boats, sporting goods, etc.)	\$ _____	_____ %
other retail (gifts, souvenirs, clothing)	\$ _____	_____ %
casinos/gambling	\$ _____	_____ %

21. Review the list of recreation equipment items and place a check in the box next to any item that your household has purchased in the last 12 months. For those items you checked, please estimate the price and enter the dollar amount in the space provided and indicate if purchased locally.

Item of recreation equipment:	Amount?	Purchased in Polk &/or Burnett Counties?	
campers (trailers, RV, truck or other)	\$ _____	yes	no
motorized recreational equipment (motorboats, ATVs, etc.)	\$ _____	yes	no
non-motorized recreation equipment (bicycles, canoes, etc.)	\$ _____	yes	no
tents and other camping gear	\$ _____	yes	no
other recreation items (list: _____)	\$ _____	yes	no

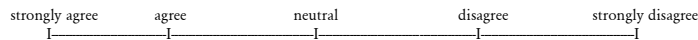
22. How many separate visits have you made to the Gandy Dancer Trail System during the past year (12 months)?

_____ separate visits to the Gandy Dancer.

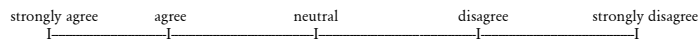
IV. Your Attitudes About Community Issues

For the following statements, mark the spot on the line that most closely aligns with your level of agreement.

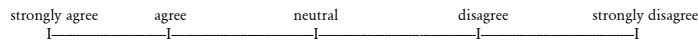
23. I feel welcome in the local communities surrounding the Gandy Dancer Trail System



24. I believe my views about recreational opportunities available on the Gandy Dancer Trail System are considered fairly by those who manage the trail



25. I feel my satisfaction as a consumer is deemed important to the local business owners that I have come in contact with in the communities surrounding the Gandy Dancer Trail System.



26. Please examine the following local services in the communities surrounding the trail and indicate both the LEVEL OF IMPORTANCE and the LEVEL OF SATISFACTION you associate with each service.

	<u>Level of Importance you place on:</u>					<u>Level of Satisfaction you experienced:</u>				
	Very Unimportant	Neutral	Very Important	Very Unsatisfied	Very Satisfied					
Medical Facilities	1	2	3	4	5	1	2	3	4	5
Law Enforcement	1	2	3	4	5	1	2	3	4	5
Fire Protection	1	2	3	4	5	1	2	3	4	5
Streets & Roads	1	2	3	4	5	1	2	3	4	5
Bridges	1	2	3	4	5	1	2	3	4	5
Cell Phone Connections	1	2	3	4	5	1	2	3	4	5
Clean Drinking Water	1	2	3	4	5	1	2	3	4	5
Libraries	1	2	3	4	5	1	2	3	4	5
Public Schools	1	2	3	4	5	1	2	3	4	5
Job Opportunities	1	2	3	4	5	1	2	3	4	5
Local Officials	1	2	3	4	5	1	2	3	4	5
Shopping Facilities	1	2	3	4	5	1	2	3	4	5
Cost of Living	1	2	3	4	5	1	2	3	4	5
Environmental Quality	1	2	3	4	5	1	2	3	4	5
Public Health Services	1	2	3	4	5	1	2	3	4	5
Dental Services	1	2	3	4	5	1	2	3	4	5
Housing	1	2	3	4	5	1	2	3	4	5
Solid Waste Disposal	1	2	3	4	5	1	2	3	4	5
Local Business Hours	1	2	3	4	5	1	2	3	4	5
Hi-speed Internet	1	2	3	4	5	1	2	3	4	5

V. Your Perceptions about Local Tourism and Recreational Amenities

27. Please examine the following elements of tourism in the area surrounding the trail and indicate both the LEVEL OF IMPORTANCE and the LEVEL OF SATISFACTION you associate with each of the services provided.

	<u>Level of Importance you place on:</u>					<u>Level of Satisfaction you experienced:</u>				
	Very Unimportant	Neutral	Very Important	Very Unsatisfied	Very Satisfied					
Fast-Food Restaurants	1	2	3	4	5	1	2	3	4	5
Sit-Down Restaurants	1	2	3	4	5	1	2	3	4	5
Take-Out Restaurants	1	2	3	4	5	1	2	3	4	5
Hardware Stores	1	2	3	4	5	1	2	3	4	5
Hotels/Motels/B&Bs	1	2	3	4	5	1	2	3	4	5
Amusements	1	2	3	4	5	1	2	3	4	5
Handicrafts & souvenirs	1	2	3	4	5	1	2	3	4	5
Local Arts and Theatre	1	2	3	4	5	1	2	3	4	5
Movie Theatres	1	2	3	4	5	1	2	3	4	5
Historical sites	1	2	3	4	5	1	2	3	4	5
WiFi Locations	1	2	3	4	5	1	2	3	4	5
Bicycle Shops/Repair	1	2	3	4	5	1	2	3	4	5
Sporting Goods Stores	1	2	3	4	5	1	2	3	4	5
Interpretive displays	1	2	3	4	5	1	2	3	4	5
Gambling	1	2	3	4	5	1	2	3	4	5
Festivals and Events	1	2	3	4	5	1	2	3	4	5

28. Please examine the following recreational elements associated with the Gandy Dancer Trail System and indicate both the LEVEL OF IMPORTANCE and the LEVEL OF SATISFACTION you associate with each element.

	<u>Level of Importance you place on:</u>					<u>Level of Satisfaction you experienced:</u>				
	Very Unimportant	Neutral	Very Important	Very Unsatisfied	Very Satisfied					
Trail signage	1	2	3	4	5	1	2	3	4	5
Accessible restrooms	1	2	3	4	5	1	2	3	4	5
Type of trail surface	1	2	3	4	5	1	2	3	4	5
Grooming of trail surface	1	2	3	4	5	1	2	3	4	5
Trail safety (emergencies)	1	2	3	4	5	1	2	3	4	5
Enforcement of trail rules	1	2	3	4	5	1	2	3	4	5
Camping Facilities	1	2	3	4	5	1	2	3	4	5
RV Parks	1	2	3	4	5	1	2	3	4	5
Bicycle Security Facilities	1	2	3	4	5	1	2	3	4	5
Picnic Areas	1	2	3	4	5	1	2	3	4	5
Cleanliness of Public Areas	1	2	3	4	5	1	2	3	4	5
Refreshment Stations	1	2	3	4	5	1	2	3	4	5
Drinking Fountains	1	2	3	4	5	1	2	3	4	5
Scenery	1	2	3	4	5	1	2	3	4	5

VI. Your Attitudes About Evaluating Fiscal Tradeoffs

Units of government are often forced to make trade-offs in order to improve or maintain the quality of life. The following scenarios ask you to allocate resources based on what you believe is important.

29. I don't have a problem with the concept of user fees to pay for maintenance and improvements of the Gandy Dancer Trail system. (mark your level of agreement).

strongly agree agree neutral disagree strongly disagree
 |-----|-----|-----|-----|

30. Suppose you were a local official and revenues increased by \$100 this year. How would you distribute this additional \$100 given the following choices? For example, would you distribute \$16.66 in each category, \$100 in one, or some other pattern?

	amount
a. Reduce taxes	\$ _____
b. Increase spending for services (i.e., fire/police)	\$ _____
c. Increase spending for education	\$ _____
d. Increase spending for roads	\$ _____
e. Increase spending for social services	\$ _____
f. Increase spending for maintenance of the Gandy Dancer	\$ _____
TOTAL	\$ 100.00

31. Suppose that local revenues decreased by \$100 this year. If forced to balance the budget, how would you make up for the lost revenue?

	amount
a. Increase taxes	\$ _____
b. Decrease spending for services (i.e., fire/police)	\$ _____
c. Decrease spending for education	\$ _____
d. Decrease spending for roads	\$ _____
e. Decrease spending for social services	\$ _____
f. Decrease spending for maintenance of the Gandy Dancer	\$ _____
TOTAL	\$ 100.00

VII. Demographic Information

32. If you have children, how many do you have living at home? _____ children

33. What is your gender? _____ male
 _____ female

34. What is your age? _____ years old

35. How many years of school did you complete? _____ years of school

36. Is your place of employment located in either Polk or Burnett counties?

- _____ yes
- _____ no
- _____ I'm retired
- _____ I'm unemployed

37. If you are employed, what is your occupation?

- | | |
|--------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| _____ Homemaker
_____ Service worker
_____ Laborer
_____ Transport equipment operative
_____ Craftsman | _____ Clerical worker
_____ Sales worker
_____ Manager/administrator
_____ Professional, technical worker
_____ Other (specify: _____) |
|--------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|

38. Please characterize yourself as a:

- _____ year-round resident of Polk and Burnett Counties
- _____ seasonal resident of Polk and Burnett Counties
- _____ visitor to Polk and Burnett Counties

39. What is your current annual pre-tax household income?

- | | |
|---------------------------|------------------------------|
| _____ Less than \$15,000 | _____ \$100,000 - \$149,999 |
| _____ \$15,000 - \$29,999 | _____ \$150,000 - \$199,999 |
| _____ \$30,000 - \$49,999 | _____ \$200,000 - \$249,999 |
| _____ \$50,000 - \$69,999 | _____ Greater than \$250,000 |
| _____ \$70,000 - \$99,999 | |

THANK YOU FOR YOUR ASSISTANCE!

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