

Nebraska Rural Trails: Three Studies of Trail Impact



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Table of Contents

	Page
Special Thanks	2
Acknowledgments	3
List of Maps, Tables and Figures	4
Abstract	8
Executive Summary	9
Trail Selection and Profiles	12
Methodology	18
Results 1: Small Town Residents	19
Results 2: Rural Property Owners	49
Results 3: Businesses and Organizations	78
Conclusions, Discussion and Limitations	92
References	101

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List of Maps, Tables and Figures

	Page
<i><u>Trail Selection and Profiles</u></i>	
Map 1- Wabash Trace Trail	13
Map 2- MoPac East Trail	14
Map 3- Oak Creek Trail	15
Map 4- Cowboy Trail	17
<i><u>Residential Results</u></i>	
Table 1-1- Did You Occupy/Buy Home Before or During/After Trail Conversion?	20
Table 1-2- Mean Years in Residence by Trail	21
Figure 1-1- Four-Trail Comparison: Percent Purchasing/Occupying Before or After Trail	21
Table 1-3- Trail Segments Responding	22
Table 1-4- How Informed Were You During Trail Design/Construction?	23
Figure 1-2- Percent of Residents Supporting/Opposing Trail at Five Points in Time	24
Figure 1-2a- Four-Trail Comparison: Residents' Mean Level of Support at Five Points in Time	25
Table 1-5- Four-Trail Comparison: Percent of Residents Very Opposed or Moderately Opposed to Trail at Five Points in Time	26
Figure 1-3- Perceived Influence of Trails- Residents	27
Figure 1-3a- Four-Trail Comparison: Mean Perceived Influence of Trails by Residents	27
Figure 1-4- Satisfaction with Trail in Your Community- Residents	28
Figure 1-5- Residential Responses- Is Living Near the Trail Better or Worse than Railroad?	29
Figure 1-4a- Four-Trail Comparison: Residents' Satisfaction with Trail in Your Community	30
Figure 1-5a- Four-Trail Comparison: Residential Responses- Is Living Near the Trail Better or Worse than Railroad?	30
Figure 1-6- Trail Maintenance Item Ratings by Residents	31
Figure 1-6a- Residential Four-Trail Comparison: Weed Control	32
Figure 1-6b- Residential Four-Trail Comparison: Trash Removal	33

Figure 1-6c- Residential Four-Trail Comparison: Litter Control	33
Figure 1-6d- Residential Four-Trail Comparison: Mowing	34
Table 1-6- Residents' Ratings of Trail Conditions	35
Figure 1-7a- Trail Conditions: Crime	36
Figure 1-7b- Trail Conditions: Personal/Nuisance	37
Figure 1-7c- Trail Conditions: Aesthetic/Experiential and Health/Recreation	38
Figure 1-7d- Trail Conditions: Community/Economic	39
Figure 1-8- Impact of Trail on Speed of Home Sale	40
Figure 1-9- Impact of Trail on Price of Home Sale	41
Figure 1-10- Impact of Trail on Home Purchase Decision	42
Table 1-7- Use of Trails for Recreation by a Family Member- All Residential Respondents	43
Figure 1-11- Four-Trail Comparison: Residents' Use of Trails for Recreation by a Family Member	43
Table 1-8- Frequency of Respondent Trail Use- Residential	44
Figure 1-12- Four-Trail Comparison: Frequency of Residential Respondent Trail Use	44
Table 1-9- Use of Trails for Transportation- Residential	45
Table 1-10- Mean Importance of Reasons for Engaging in Outdoor Recreation	47
Figure 1-13- Reasons for Recreation Rated- Residential Respondents With and Without a Trail User	48
Figure 1-14- Reasons for Recreation Mentioned- All Residential Households with a Trail User	49
 <i><u>Property Owner Results</u></i>	
Table 2-1- Did You Purchase Rural Property Before or During/After Trail Conversion?	50
Table 2-2- Breakdown of Respondents by Trail	51
Figure 2-1- Type of Land Use for Rural Property	51
Table 2-3- Employment Status of Property Owners	52
Table 2-4- How Informed Were You During Trail Design/Construction?	53
Figure 2-2- Percent of Property Owners Supporting/Opposing Trail at Five Points in Time	54

Figure 2-2a- Four-Trail Comparison: Property Owners' Mean Level of Support at Five Points in Time	55
Table 2-5- Four-Trail Comparison: Percent of Property Owners Very Opposed or Moderately Opposed to Trail at Five Points in Time	56
Figure 2-3- Perceived Influence of Trails to Rural Property Owners	57
Figure 2-3a- Four-Trail Comparison of Property Owners: Mean Perceived Influence of Trails	58
Figure 2-4- Satisfaction with Trail in Your Community- Rural Property Owners	59
Figure 2-5- Property Owners-Is Living Near the Trail Better or Worse than Railroad?	59
Figure 2-4a- Four-Trail Comparison: Property Owners' Satisfaction with Trail in Your Community	60
Figure 2-5a- Four-Trail Comparison: Property Owners Rating Living Near the Trail Better or Worse than Railroad	61
Figure 2-6- Trail Maintenance Item Ratings- Rural Property Owners	62
Table 2-6- Property Owners' Ratings of Trail Conditions	63
Figure 2-7a- Property Owners Perceived Trail Conditions: Crime	64
Figure 2-7b- Property Owners Trail Conditions: Personal/Nuisance	65
Figure 2-7c- Property Owners Trail Conditions: Aesthetic/Experiential and Health/Recreation	66
Figure 2-7d- Property Owners Trail Conditions: Community/Economic	67
Figure 2-8- Impact of Trail on Speed of Rural Property Sale	68
Figure 2-9- Impact of Trail on Price of Rural Property Sale	69
Figure 2-10- Impact of Trail on Rural Property Purchase Decision	70
Table 2-7- Use of Trails for Recreation by a Family Member - Property Owners	71
Figure 2-11- Four-Trail Comparison: Use of Trails for Recreation by a Family Member	71
Table 2-8- Frequency of Respondent Trail Use- Small Town Residents and Rural Property Owners	72
Figure 2-12- Four-Trail Comparison: Frequency of Property Owner Trail Use	73
Table 2-9- Use of Trails for Transportation	73
Table 2-10- Mean Importance of Reasons for Engaging in Outdoor Recreation- Small Town Residents and Property Owners With Family Trail User	74

Table 2-11- Mean Importance of Reasons for Engaging in Outdoor Recreation- Property Owners With and Without a Family Trail User	75
Figure 2-13- Reasons for Recreation Rated- Property Owners With and Without a Family Trail User	76
Figure 2-14- Reasons for Recreation Mentioned- Property Owner Households with a Trail User	77
<i><u>Business Results</u></i>	
Table 3-1- Surveys Mailed and Received by Trail	78
Table 3-2- Town of Origin of Business Survey Respondents	79
Table 3-3- Breakdown of Respondents by Type of Business	80
Table 3-4- Have You Ever Supported the Trail Financially?	81
Figure 3-1- Percent of Business Owners Supporting/Opposing Trail at Five Points in Time	82
Figure 3-2- Perceived Influence of Trails to Business Owners	83
Figure 3-2a- Four-Trail Comparison of Business Owners: Mean Perceived Influence of Trails	84
Figure 3-3- Satisfaction with Trail Near Your Business	85
Figure 3-4- Is Operating a Business Near the Trail Better or Worse than Near the Railroad?	85
Figure 3-3a- Four-Trail Comparison: Business Owners' Satisfaction with Trail Near Your Business	86
Figure 3-4a- Four-Trail Comparison: Business Owners Percent Rating Business Operation Near the Trail Better or Worse than Railroad	87
Figure 3-5- Impact of Trail on Speed of Business Sale	88
Figure 3-6- Impact of Trail on Price of Business Sale	88
Figure 3-7a- Trail Impact on Current Business Activity	89
Figure 3-7b- Trail Impact on Business Activity in Two Years	90
Figure 3-7c- Trail Impact on Business Activity in Five Years	90
Table 3-5- Rate of Trail Use Before, During and After Work	91

Abstract

- Report Title: Nebraska Rural Trails: Three Studies of Trail Impact
- Subject: An investigation to determine the impact of rural rail to trail conversions on small town residents, small town businesses and property owners.
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- Abstract: This research is part two of the Nebraska Rural Trails Project a multi-year research program designed to provide assistance to state and local trail managers and developers by documenting the impact of the Nebraska's developing trail system.
- In this phase of the project, mail surveys were used in rural areas to learn more about the trails' impact in several areas, including usage patterns, public safety, property values, and community quality of life. Three rural rail-trails (the Cowboy, MoPac East, and Oak Creek) in Nebraska, and one (the Wabash Trace Trail) in western Iowa were included. Extensive information on household demographics and trail usage patterns was also collected.
- Key Words: Rail-Trails, Open Space, Property Value, Public Safety, Quality of Life, Trails, Recreational Trails, Rural Trails.

Executive Summary

As pointed out in *A Network of Discovery: A Comprehensive Trails Plan for the State of Nebraska* (1994), trails have played a central role in Nebraska's history. The Oregon, California, Mormon, and Pony Express Trails were central to the development of early cross-country communications networks and the opening and settlement of the American West. Though long ago replaced by the Union Pacific sector of the transcontinental railroad, and later by the Lincoln Highway (US 30) and Interstate 80, the authors of *A Network of Discovery* rightly pointed out in their report that the historic trail corridors of Nebraska still remain relevant to our lives today, albeit in somewhat different roles:

“Trails are now assuming other roles by emerging as important recreational and transportation arteries for people. Protected trail corridors help people rejuvenate themselves through fitness activities and contact with their environment, offer safe alternative routes for people to commute between home, school, workplace, and shopping, reduce traffic congestion and energy consumption, and preserve wildlife habitats.” (*A Network of Discovery*, p. 1)

And the authors of this vision for Nebraska's future trail system went on to suggest a more nuanced approach to viewing the benefits of a statewide trail system.

“There is also a dimension to the development of trails in Nebraska that transcends recreation and transportation... Trails, then, offer opportunities for both recreation and discovery of ourselves and our state.” (*A Network of Discovery*, p. 2)

Since the creation of Nebraska's comprehensive trail plan, *A Network of Discovery* in 1994, trail development has continued to move forward, particularly in the major cities of Omaha and Lincoln. From a complete absence of recreational trails and greenways in early 1989, Omaha has developed a system that today contains approximately 67 miles of paved recreational trails, and another 35 miles of trails are

scheduled for completion within the next eight years. Trail development has been even more rapid in Nebraska's capitol city of Lincoln. Yet evidence concerning the impact of recreational trails remains largely anecdotal, both in Nebraska and nationwide, even as pockets of opposition continue to challenge trail managers and developers to justify trail resource expenditures.

The authors of Nebraska's trail plan suggested in 1994 that the State should develop a *trail system* that would have *multiple benefits*, including recreation and fitness, economic development, improved community image and quality, environmental education and preservation, and community development and transportation:

“The creation of recreational opportunities is central to trails development; however, the system should have benefits beyond recreation. These benefits and roles... include transportation, education, family experience, health and safety, and economic development.” (*A Network of Discovery*, p. 9)

Seven years later, as that system continues to evolve, it seems worthwhile to assess our progress in realizing these benefits. To this end, this research examined the perceived impact of the existing trail system among small town residents, rural property owners, and rural and small town business owners along four targeted trail segments on the Cowboy, Oak Creek, MoPac East, and Wabash Trace trails. Using mail survey methodology, we asked these citizens about their level of support and use of the trails, as well as the trails' impact on a wide variety of issues, including public safety, local transportation, property values, economic activity and general community identity and pride. Responses were obtained from a total of 255 small town residents, 128 rural property owners, and 83 businesses along the four trails. For organizational purposes, our results are presented in three separate sections: Small Town Residents, Rural Property Owners, and Business Owners.

We found that small town residents and business owners generally expressed stronger support for trails, and used the trails more often, than rural property owners. They also reported higher levels of trail benefits at the personal, family and community levels, and expressed greater optimism about the trails' economic impact, influence on community pride, and a variety of other issues. A much higher percentage of these respondents felt that the trails were better neighbors than the railroads that preceded them. In general, our respondents did not report widespread concerns about trail-related crime and vandalism, and saw most trail maintenance as acceptable or better, with rural property owners excepted. Although most of the business owners did not report a direct positive impact on their businesses due to the trails, they expected the trails to contribute to general business activity in their communities, especially in the long run.

With respect to the trails' impact on recreational and physical activity, our results suggest that the trails are contributing at least modestly to an increase in outdoor activity and physical activity levels among Nebraska citizens. Our respondents most frequently rated exposure to nature and the outdoor environment as the most important reasons for using the trails, followed closely by improved health and fitness through exercise.

Finally, our results include numerous comparisons of the four trails on each of the issues of interest. Due to the variety of issues and comparisons involved, generalizations are difficult to summarize succinctly, but at the very least it may be said that respondents near the MoPac East and Wabash Trace trails had a tendency to be more supportive of trails than those near the Cowboy and Oak Creek Trails. These differences may be attributable to a number of factors, including respondent demographics and trail maturity.

Trail Selection and Profiles

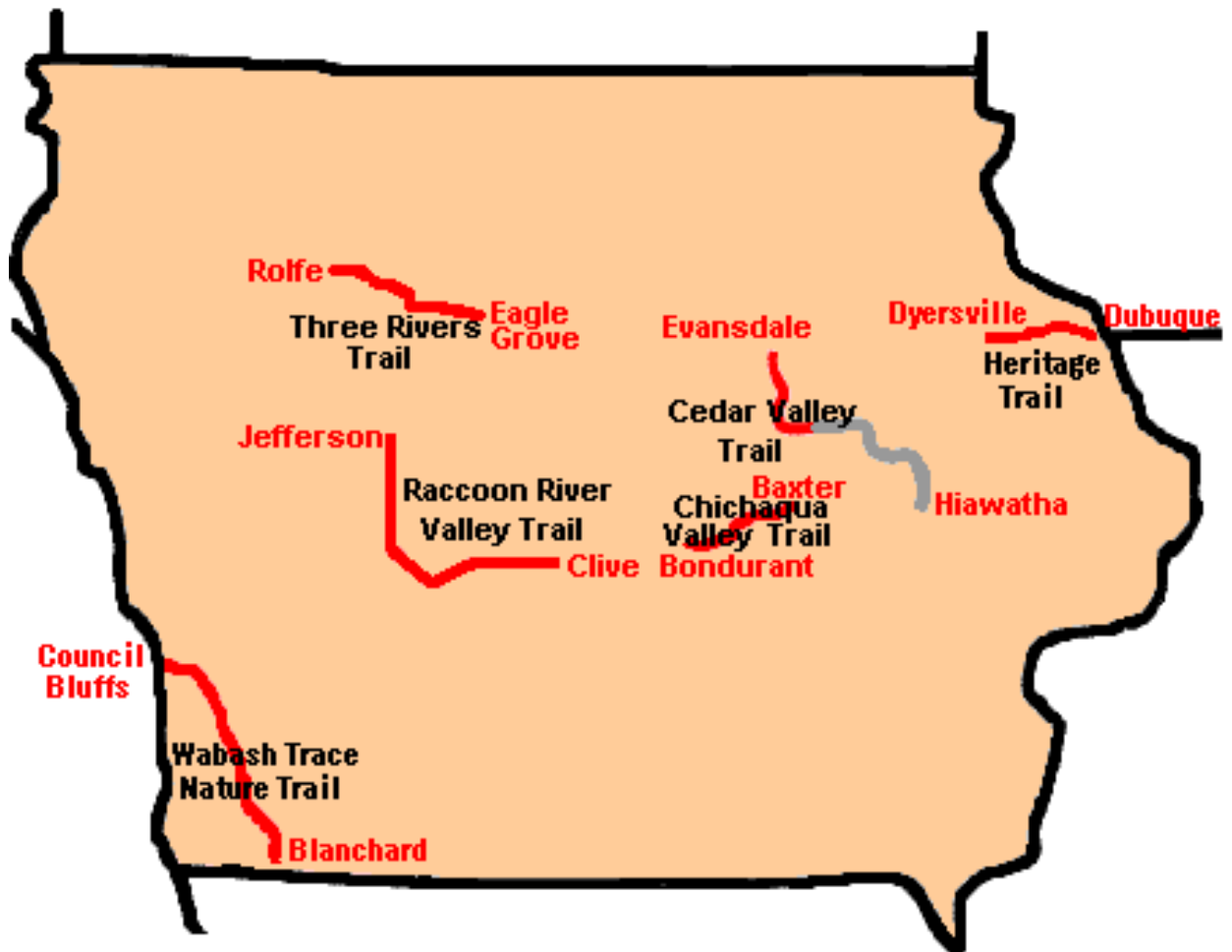
Trail Selection

To cover the widest possible range of rural trails, criteria were first established for the inclusion of specific targeted rural trail segments. First we sought to include both trails that had some suburban homes included as well as trails that went through rural property as well as small towns in both Nebraska and Iowa. Second, we sought to include trails that are connected or may be connected to the American Discovery Trail System. Within the Nebraska and Iowa system as of 2001, four trail segments met these criteria and were selected for inclusion in this project. All four trails are similar in their general physical characteristics and recreational potential i.e.: they are constructed with crushed limestone as their base and the trails allow walking, bicycling, running/jogging, mountain biking, and cross country skiing. Limited equestrian use is allowed in certain areas, but motorized use is not allowed on these trails.

The Wabash-Trace Trail

The Wabash-Trace Trail (Map 1) runs for 63 miles from Council Bluffs, Iowa. To Blanchard, Missouri. We chose to study the segment from Council Bluffs to Malvern, Iowa, a distance of 21.9 miles. The trail runs along the Loess Hills of western Iowa. There is a parallel horse path from Council Bluffs to Mineola. There are three towns along this segment: Mineola, Silver City and Malvern. There are many small river and creek crossings, which explains why there is a staggering number of bridges, seventy-three at last count, that are along the entire length of the Wabash-Trace Trail. Currently the trail is not connected to any other trail system in Iowa but that could change in the

future as the new Nebraska-Iowa footbridge is built across the Missouri river. On completion of this bridge, the Wabash-Trace could quite possibly connect with the City of Omaha's trail system. The Southwest Iowa Nature Trails Project Corporation currently owns and operates the Wabash-Trace Trail.



Map 1 – The Wabash Trace Trail

The Mo-Pac East Trail

The Mo-Pac East trail (Map 2) extends 25 miles from 84th Street in Lincoln, Nebraska, east to Wabash, Nebraska. There is a parallel equestrian trail that runs from 98th Street in Lincoln to the town of Elmwood. The Mo-Pac East connects with the 84th

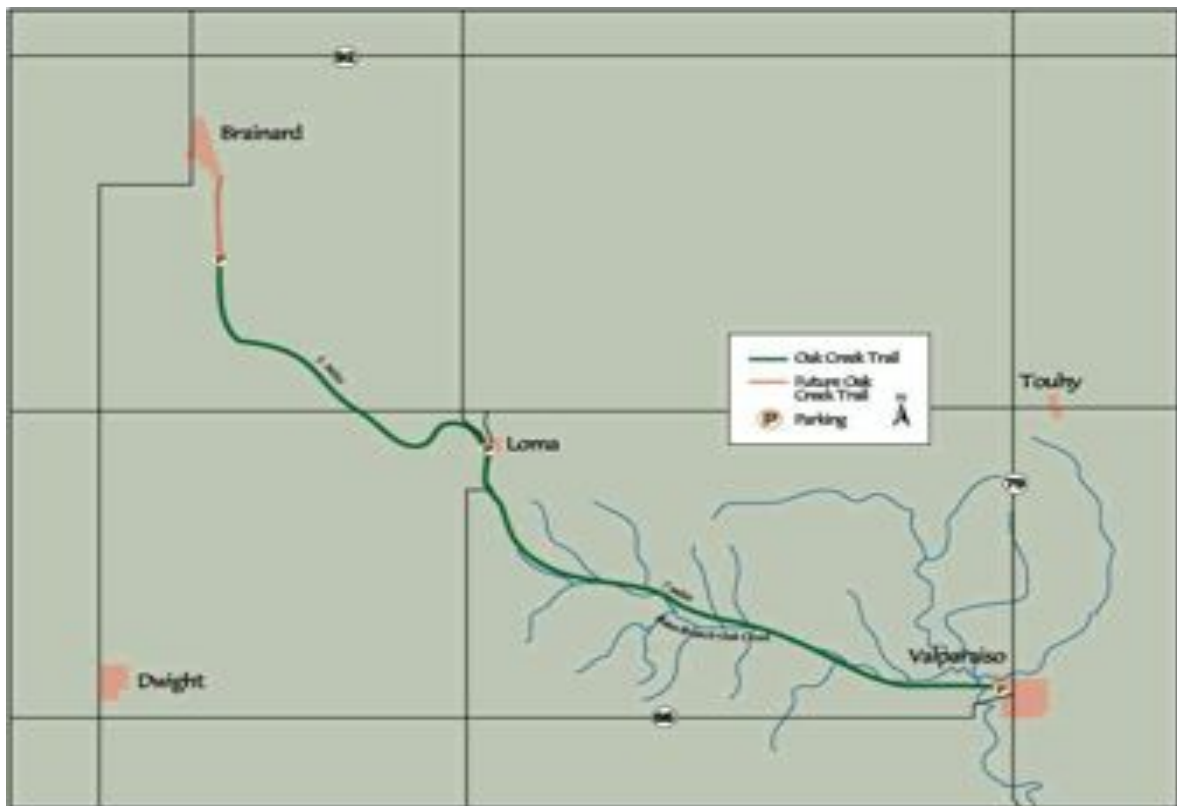
Street terminus of Lincoln's 60-mile trail network. The Mo-Pac East goes through the communities of Walton, Eagle, Elmwood and Wabash. Three of these towns were included in our study. The trail will eventually extend to the Platte River Connection, a two million dollar bridge over the Platte River, currently under construction and scheduled for completion in 2002. Once the bridge is complete there are plans for the Mo-Pac East trail to link with the Omaha trail network. In the future one will be able to go from Omaha to Lincoln, a distance of forty-six plus miles, on the Mo-Pac East Trail. The Mo-Pac East Trail was an active rail line until 1984 when the then Missouri-Pacific Railroad abandoned the rail corridor.



Map 2- Mo-Pac East Trail

The Oak Creek Trail

The Oak Creek Trail (Map 3) runs 12 miles from Valparaiso, Nebraska to one mile south of Brainard, Nebraska. The trail runs along natural prairie grass, majestic oak woodlands and highland vistas. The corridor was once occupied by the Union Pacific Railroad but was taken out of service, using the Federal Rail Bank process in 1993. The Lower Platte South Natural Resources District also currently manages this trail. The trail passes through two small towns, Valparaiso and Loma, Nebraska (filming site for “To Wong Fu, Thanks for Everything!”- Julie Newmar). The trail ends 1 mile south of Brainard. There are plans for its extension into Brainard.

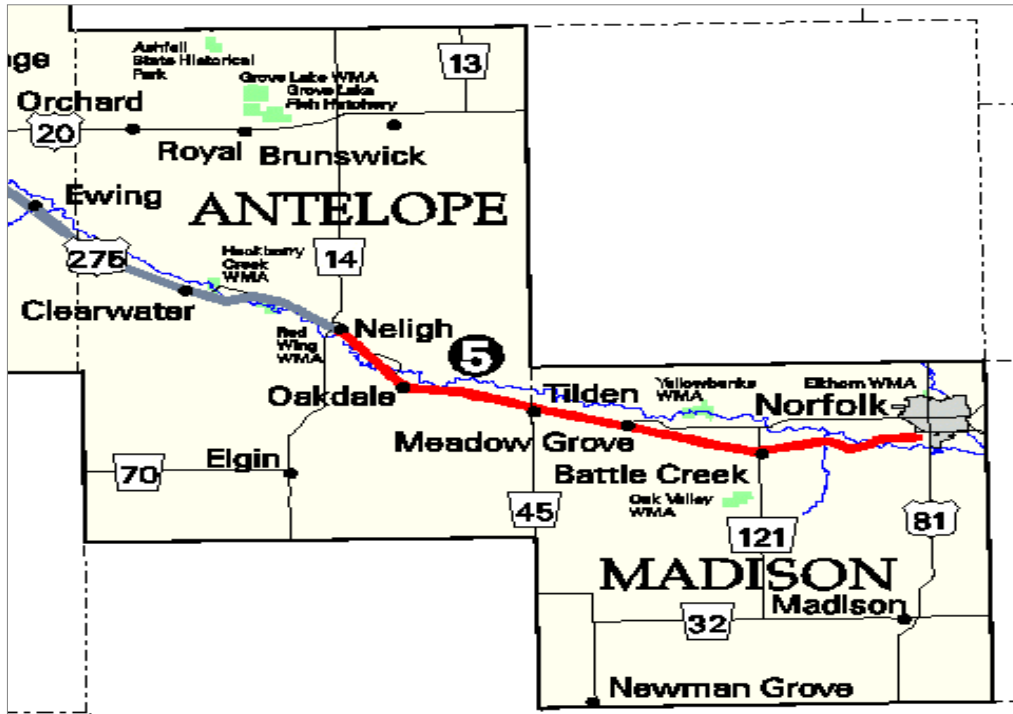


Map 3 – The Oak Creek Trail

The Cowboy Trail

The Cowboy Trail (Map 4) is the Nation's longest rail to trail conversion, a total of 321 miles when completed; it is Nebraska's first State Recreational Trail to be donated to the state by Rails to Trails Conservancy on December 5, 1994. The historic Chicago and Northwestern Railroad right of way, now the Cowboy Recreation and Nature Trail, passes through spectacular scenery as it travels from Norfolk, Nebraska west through the Elkhorn River valley and will eventually end in Chadron, Nebraska, in Nebraska's Sandhills area. Currently there are only 47 miles of the 321 miles completed, with the longest completed segment of 34 miles running from Norfolk to Neligh, Nebraska. This 34-mile segment of the trail is the segment we elected to study for our research project. The segment starts on the western outskirts of Norfolk and goes through the communities of Battle Creek, Meadow Grove, Tilden, Oakdale and ends on the western edge of Neligh.

The city of Norfolk is planning a 2-mile extension of the trail so that the eastern terminus of the Cowboy Trail will begin in a Norfolk city park instead of out on the edge of Norfolk. The Nebraska Game and Parks Commission currently manages the trail. When the trail is completed it will have 221 bridges and pass through 29 communities.



Map 4 – The Cowboy Trail

Methodology

The Surveys

To examine the variables of interest in this study, we developed three separate mail surveys. The target subjects for our three surveys were rural property owners, residential owners and business owners. In their final forms, the surveys contained items addressing four distinct issues of interest: property values, trail development involvement, public safety and trail use.

Following the method of previous trail research, items were developed to solicit the opinions of adult household members (19 years of age or older). For the property owner survey we sent surveys to owners that have property that the trail either bisects or is adjacent. For the residential survey we targeted the residents that live in the small communities where the trail either runs directly through the town or the town is adjacent to the trail. In almost all cases the residents did not live more than three or four blocks from the trail. For the business survey we sent a survey to almost all businesses that were in communities that had a trail going through town or was adjacent to the town.

To determine the property owners for the Oak Creek trail and the Mo-Pac East trail, members of the trail research team obtained the names and addresses from the Lower Platte South Natural Resources District. To obtain the property owners' names and addresses for the Wabash-Trace and the Cowboy Trail, the research team obtained plat maps and directories that listed the current property owners. To obtain the residential and business owners' names and addresses, phone books of each community along each trail were used.

This process yielded, for all four trails, a total of 300 property owners, 913 residential owners, and 249 business owners. We sent the property owner survey out first with the residential and the business surveys following in four-week intervals. After the initial surveys were mailed out, we followed up with two postcard reminders to encourage people who had not filled out and returned the surveys to do so as soon as possible.

Results

Study 1: Small Town Residents

Demographics and Sample Overview

Of the 255 households responding to our mail survey, 189 (74.1 percent) live either adjacent to the targeted trail or said that the trail intersects their property. Due to the size of the towns included in the research plan, none of the respondents could have lived more than two or three blocks from the trail. Almost all of these residences were single-family homes (93.9%), and only 2% reported that they were renters. Those responding to our surveys were more often females (53.8%) than males (46.2%), and their mean age was 52.6 years. The average length of residence in the current location was approximately 17 years. As one might expect given this length of time in residence, most of the respondents reported that they occupied their residential property before the construction of the trail (Table 1-1).

Table 1-1- Did You Occupy/Buy Home Before or During/After Trail Conversion?

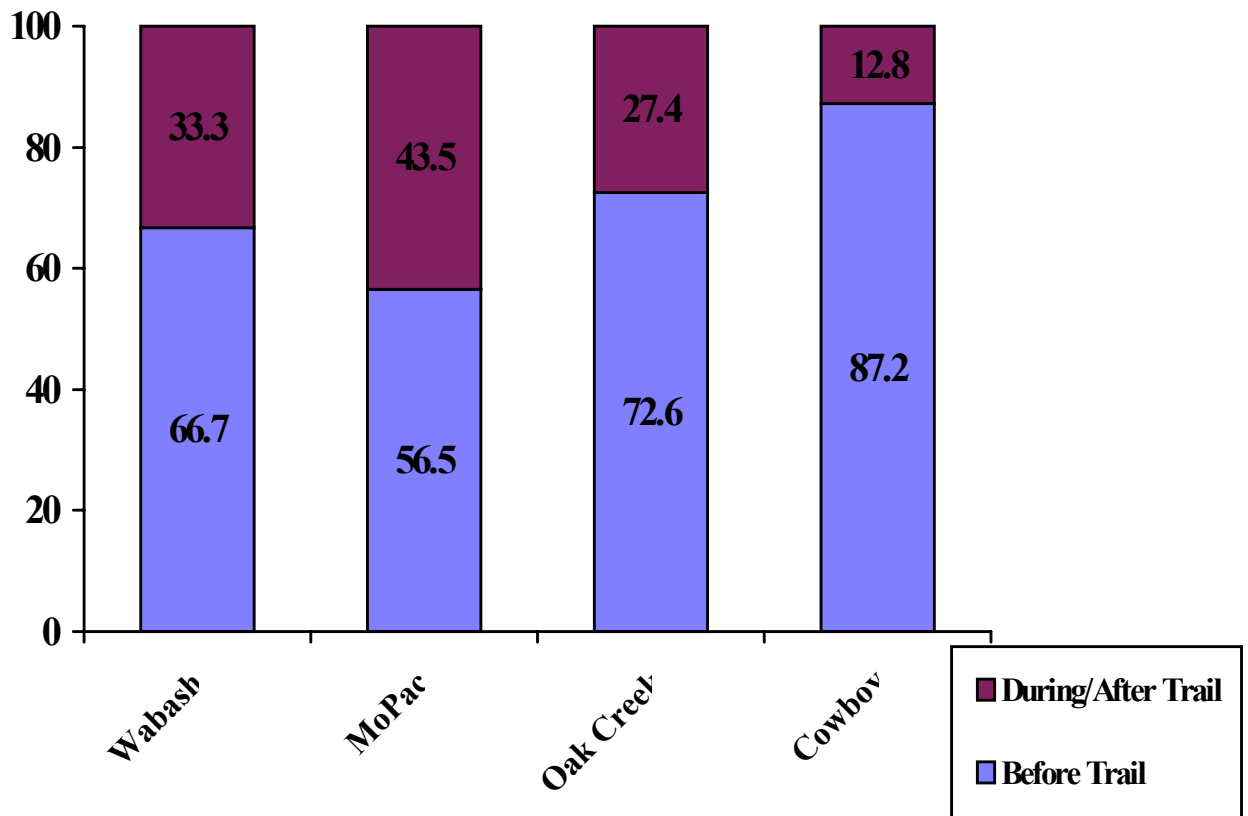
	Number	Percent
Before Trail	178	73.9%
During/After Trail	63	26.1%
Total	241	100%

As shown in Table 1-2, and Figure 1-1 however, there were differences between the trails in both length of time occupying the current residence and whether or not the property was purchased before or after trail conversion.

Table 1-2- Mean Years in Residence by Trail

Wabash Trail	16.09
MoPac East Trail	12.08
Oak Creek Trail	16.69
Cowboy Trail	20.08

Figure 1-1- Four-Trail Comparison: Percent Purchasing/Occupying Before or After Trail



Almost two-thirds of our respondents (62.4%) were either employed full-time or self-employed, while about one-fourth (25.3%) of them reported that they were retired.

With the possible exception of one trail, we obtained acceptable representation from each of the four rural trails we targeted (Table 1-3). Households on the Wabash Trail (N= 81) accounted for 31.9 percent of our respondents, while the Oak Creek (N= 70) accounted for 27.6 percent of the survey group. We received responses from 80 residents near the Cowboy Trail, accounting for another 31.5 percent of our responses. Responses from residents near the MoPac Trail were received in disappointing numbers (N= 23), and accounted for the remainder of our respondents, with 9.1 percent. A substantial number of surveys targeted at these residents were returned as undeliverable.

Table 1-3- Trail Segments Responding

	<i>Number</i>	Percent
Wabash Trail	82	31.9 %
MoPac Trail	23	9.1%
Oak Creek Trail	70	27.6%
Cowboy Trail	80	31.5%
Total Responding	255	100%

Participation in Trail Development

Three questions in our survey addressed whether or not the respondents had participated in trail development and/or felt informed about the rail-trail conversion process. While 19 percent of our respondents reported that a member of their household attended trail-planning meetings in their community, only 6.2 percent of them reported that they or a family member had been actively involved in the planning, development or maintenance of the trail. We also asked our respondents how informed they felt they were

“at the time of the design and construction of the trail.” Table 1-4 below shows our findings on this question for those 173 residents who reported that they occupied their residential property prior to the rail line’s conversion to a trail.

Table 1-4- How Informed Were You During Trail Design/Construction?

	Number	Percent
Not informed	51	29.5%
Minimally Informed	61	35.3%
Moderately Informed	39	22.5%
Fully Informed	22	12.7%
Total	173	100%

Support for the Trail Over Time

To assess the attitudes of small town residents toward the trails over time, we asked them to describe their level of support or opposition to their respective trails at several points in the trail conversion process. More specifically we asked about trail support or opposition: 1. As an idea before it was built, 2. During planning and design, 3. During construction, 4. Shortly after built, and 5. As the trail exists today. As shown in Figures 1-2 and 1-2a, the responses we received to this set of questions clearly indicate a pattern of escalating support for trails as the rail-trail conversion draws nearer to completion. A close look at Figure 1-2 also suggests that the rising support for these trails over time tended to come from the conversion of those who previously were “neutral” or unaware of the trail conversion process, rather than the conversion of large numbers of

firm trail opponents.

Figure 1-2- Percent of Residents Supporting/Opposing Trail at Five Points in Time

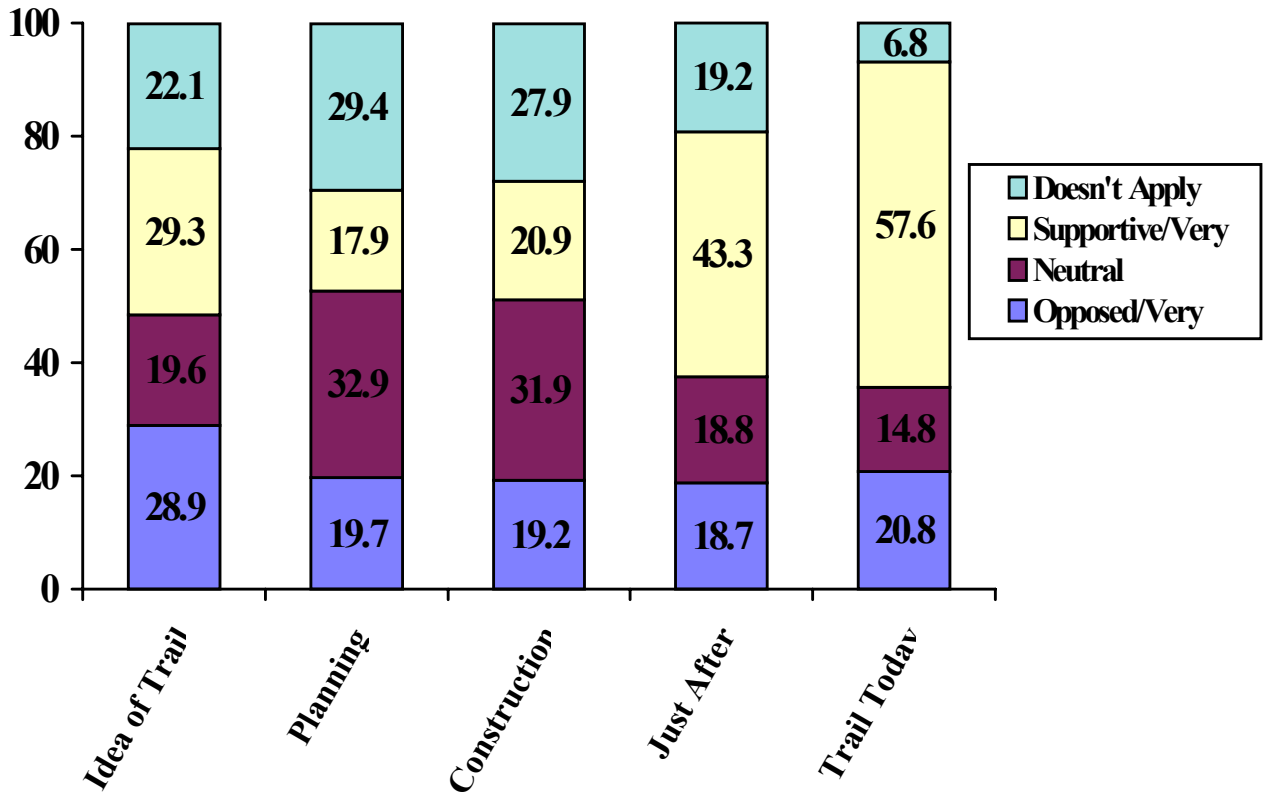
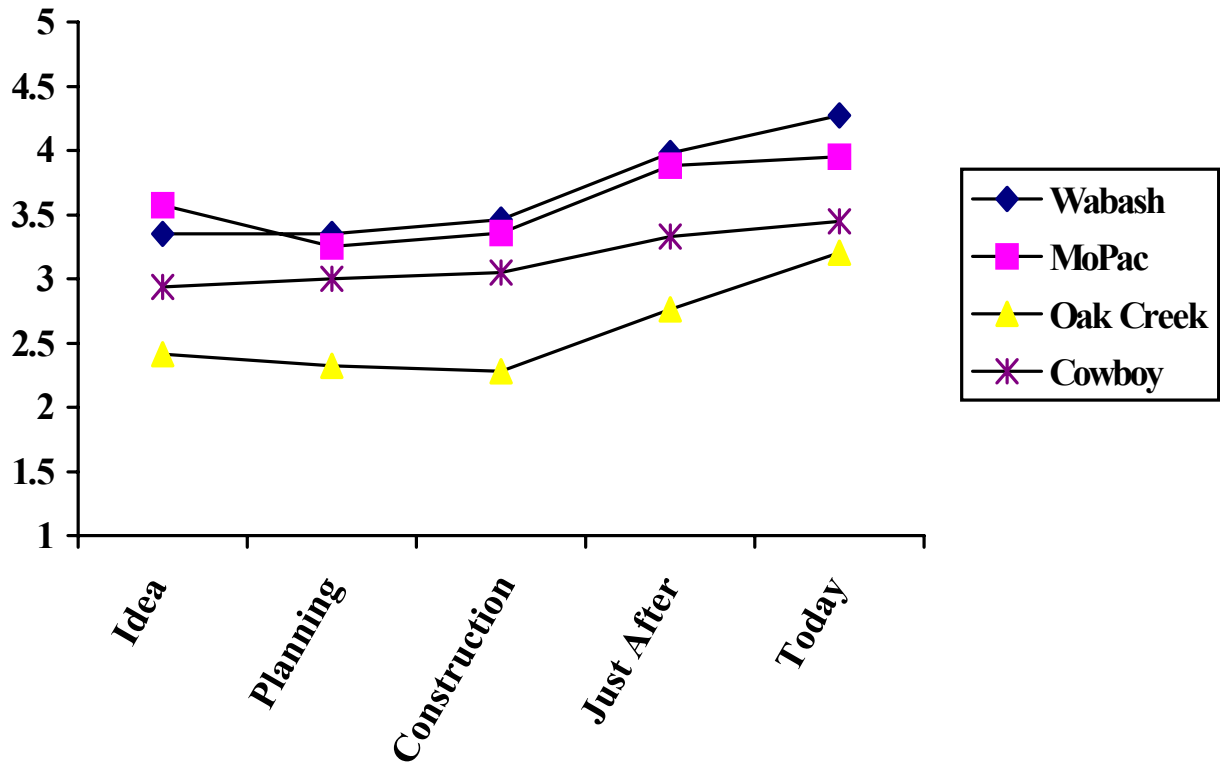


Figure 1-2a looks at the same data in another way. After the “does not apply” responses were excluded, this analysis provides a four-trail comparison of the mean level of trail approval/disapproval, rated on a five-point scale (5= very positive to 1= very negative).

Figure 1-2a- Four-Trail Comparison: Residents' Mean Level of Support at Five Points in Time



Although Figure 1-2 may be encouraging to supporters of rail to trail conversions, the data should probably be interpreted with a certain amount of caution. As Figure 1-2a suggests, a closer look at our data reveals a picture of greater complexity, with considerable variability in support from one trail to another. Following up on this in Table 1-5 below, it can be seen that residents' opposition to these trails was more concentrated in some locales than others. There were noteworthy differences in the expressed level of trail opposition, with greater and more consistent opposition expressed for the Oak Creek Trail, and in general only a moderate reduction in opposition to trails is seen in the four settings.

Table 1-5- Four-Trail Comparison: Percent of Residents Very Opposed or Moderately Opposed to Trail at Five Points in Time

	<i>Wabash</i>	<i>MoPac</i>	<i>Oak Creek</i>	<i>Cowboy</i>
	(n=81)	(n=23)	(n=70)	(n=80)
Idea of Trail	18.5	28.6	56.9	39.1
Planning	10.9	16.7	47.7	28.8
During Construction	6.5	21.4	50.0	25.4
Just After Completion	7.4	18.7	43.1	21.8
Trail Today	7.0	28.6	37.3	23.2

Note: “Does not apply” responses were excluded in the calculation of these percentages.

Trail’s Influence on Self, Family and Community

Next, we presented our respondents with a series of scales in which they were asked to rate the influence of the trail on their own life, on other family members, the surrounding neighborhood, the community, and the county. These results are shown in Figures 1-3 and 1-3a below, and generally indicate that the rural rail-trail conversions are seen as beneficial influences on personal and community life. It is interesting to note that the larger the social frame of reference (i.e., community or county), the greater the perceived benefits of rural rail-trails.

Figure 1-3- Perceived Influence of Trails- Residents

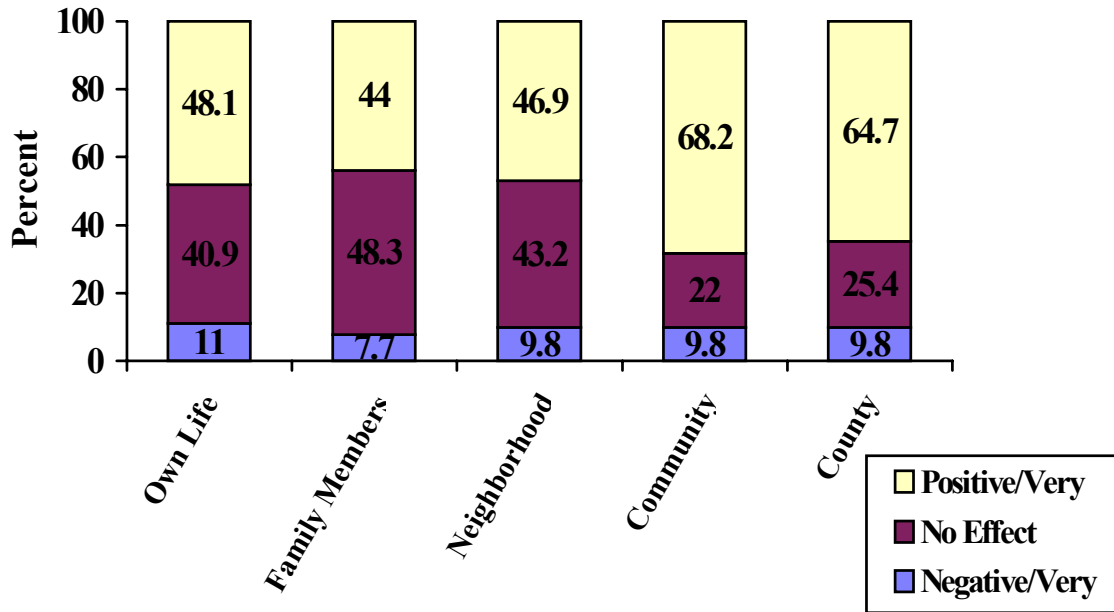
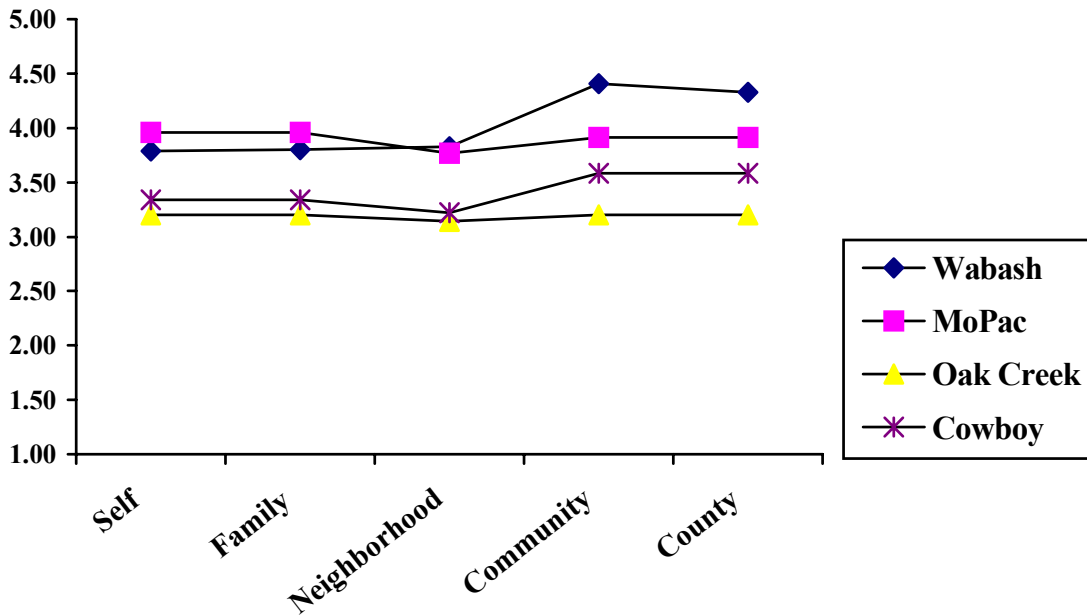


Figure 1-3a looks at the same data in another way. It illustrates the mean level of benefit on a five-point scale (5= very positive to 1= very negative) our respondents expressed, broken down by specific trail.

Figure 1-3a- Four-Trail Comparison: Mean Perceived Influence of Trails by Residents



We also asked the residents of small communities to rate their level of satisfaction with the trail in their community, as well as whether living near the trail is better or worse than living near the railroad. The results of these questions are shown in Figures 1-4 and 1-5 below. As shown in Figure 1-4, while almost two-thirds of our respondents were very or moderately satisfied with the trail, less than 15 percent reported that they were very or moderately dissatisfied. Figure 1-5 indicates that a very similar picture emerged with respect to the issue of living near the trail versus living near the railroad. While about one-third of all respondents reported no difference between the trail and the railroad, only about 10 percent of them found living near the trail worse than living near the railroad.

Figure 1-4- Satisfaction with Trail in Your Community- Residents

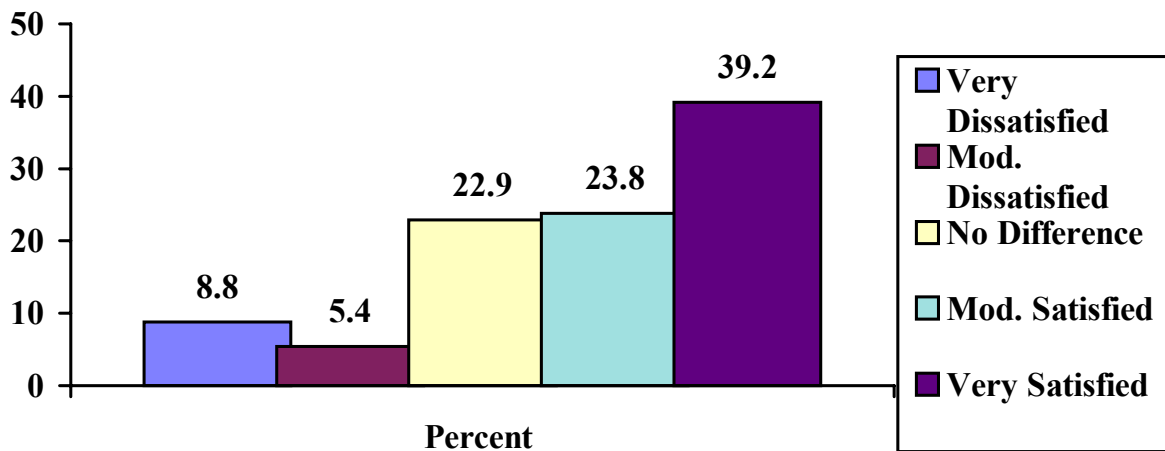
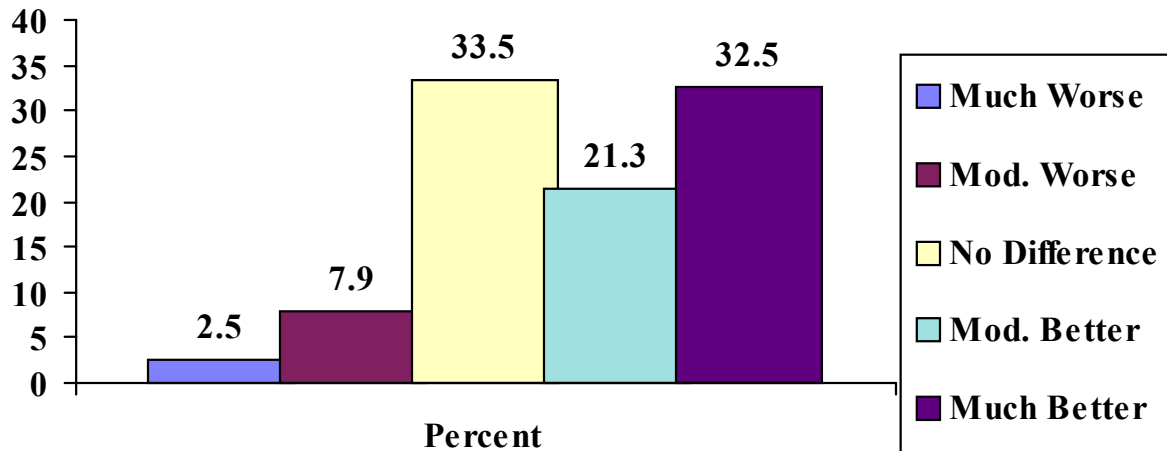


Figure 1-5- Residential Responses- Is Living Near the Trail Better or Worse than Railroad?



Given the previously observed differences we have seen in the amount of opposition to trails in different locales (Table 1-5), a breakdown of responses to items reflected in Figures 1-4 and 1-5 by was conducted by trail. These findings are illustrated in Figures 1-4a and 1-5a respectively. An interesting feature of Figure 1-4a is the small percentage of respondents from the Oak Creek and MoPac Trails, where reported trail opposition was highest (see Table 1-5), who actually indicated dissatisfaction with the trail as a community feature. Figure 1-5a, comparing the trail to the railroad as a residential neighbor, reveals a similarly puzzling finding, i.e. objections to the trails do not appear to be based on unfavorable comparisons of the trail with the previously existing railroad. We will return to a consideration of these findings later in the discussion section of this paper.

Figure 1-4a- Four-Trail Comparison: Residents' Satisfaction with Trail in Your Community

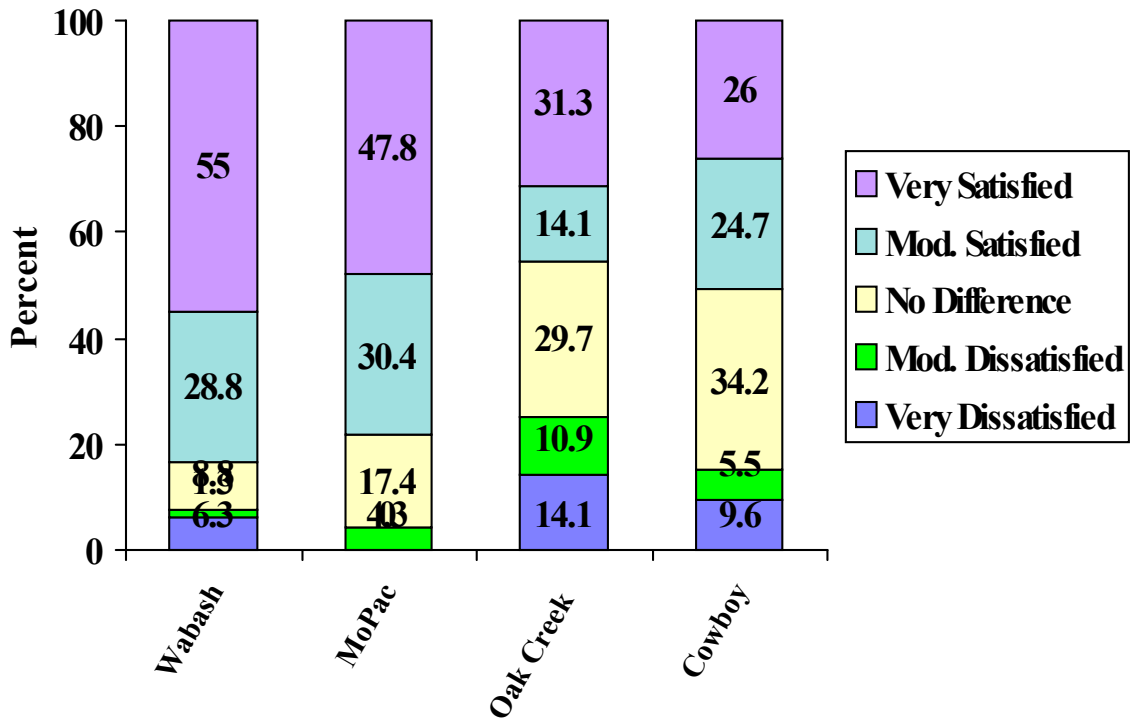
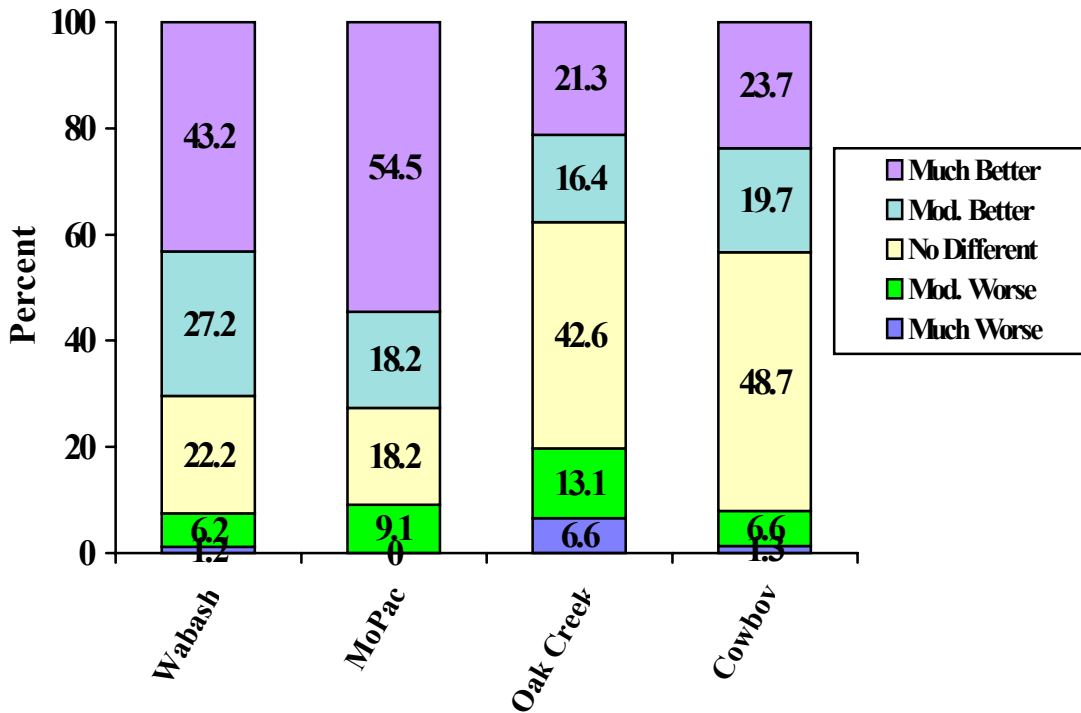


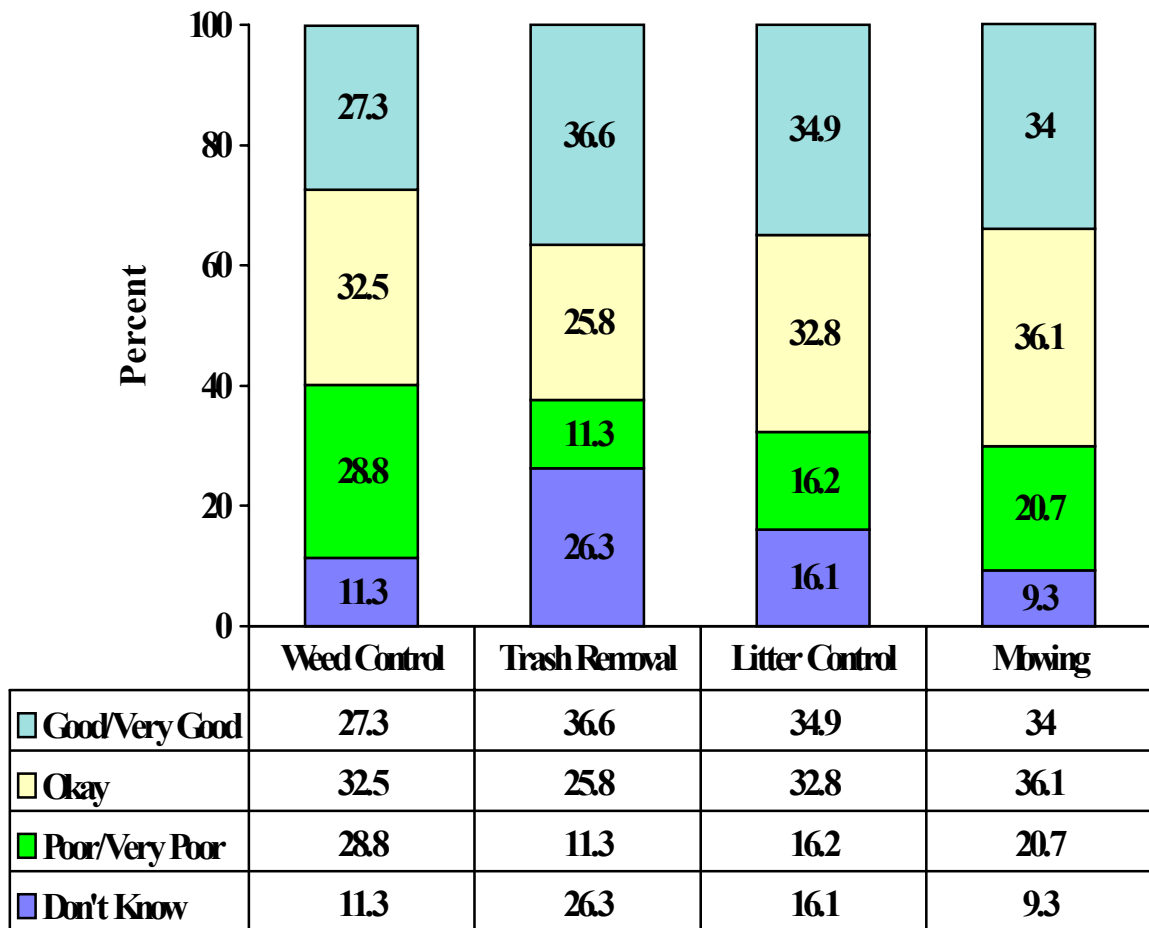
Figure 1-5a- Four-Trail Comparison: Residential Responses- Is Living Near the Trail Better or Worse than Railroad?



Trail Maintenance, Conditions and Crime

To better understand our respondents' perceptions of trail conditions, we included a large number of items in our residential surveys specifically relating to trail maintenance, general conditions, and crime. Reasoning that the most reliable information would be obtained from respondents who either had a view of the trail from their home or had a trail user in the family, only respondents who met those conditions were selected for these analyses. 194 respondents met these criteria, and Figure 1-6 shows our findings for four items specific to trail maintenance. Generally speaking, the clear majority of our respondents viewed the maintenance of the trails as acceptable or better.

Figure 1-6- Trail Maintenance Item Ratings by Residents



A more detailed look at trail maintenance is provided in Figures 1-6a through 1-6d below, which show trail-by-trail comparisons for the respondents' ratings on each of the four trail maintenance categories. It can be seen from these figures that weed control was viewed as the most problematic area of trail maintenance, and that residents near the MoPac and Oak Creek trails tended to be more critical of trail maintenance in general, especially when compared with residents near the Wabash Trail.

Figure 1-6a- Residential Four-Trail Comparison: Weed Control

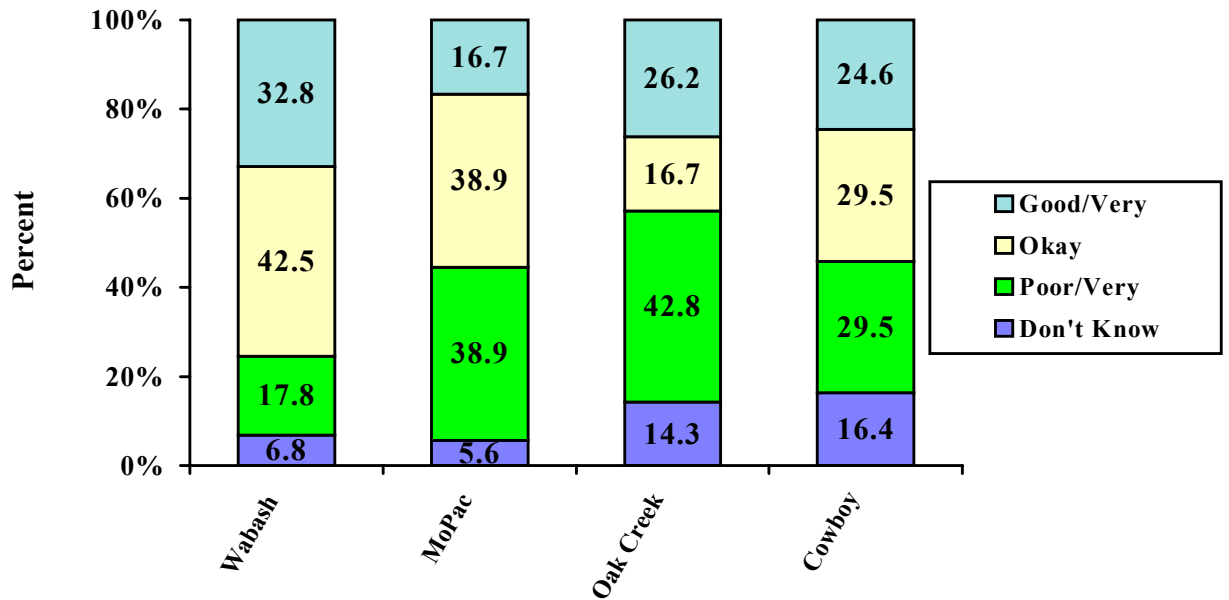


Figure 1-6b- Residential Four-Trail Comparison: Trash Removal

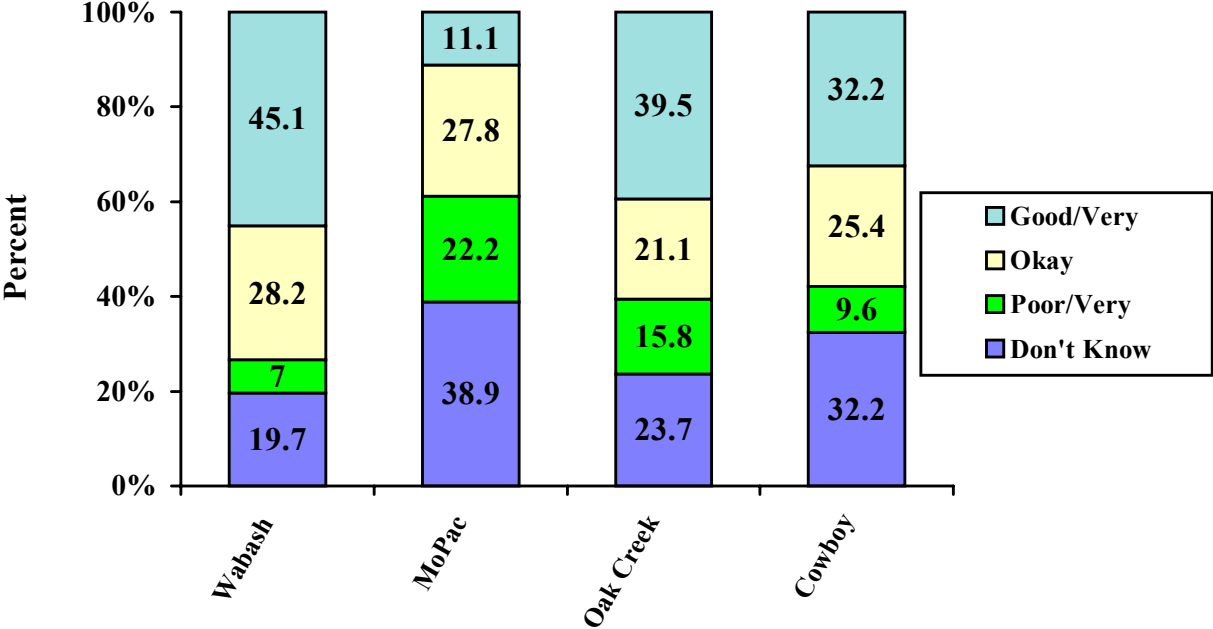


Figure 1-6c- Residential Four-Trail Comparison: Litter Control

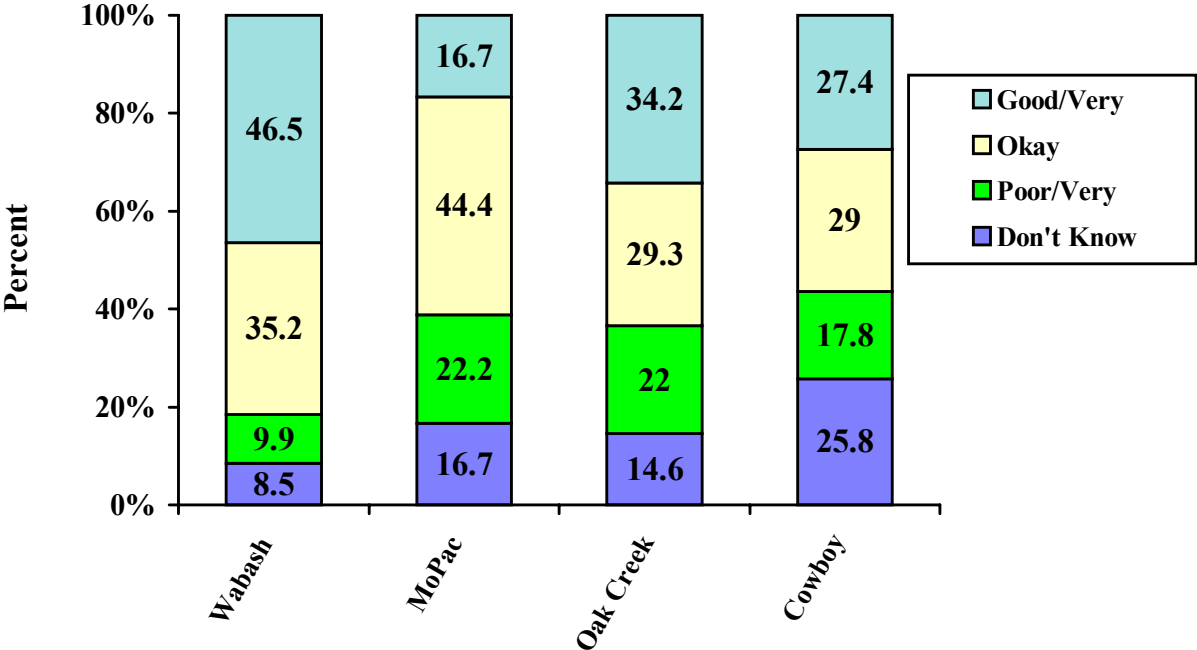
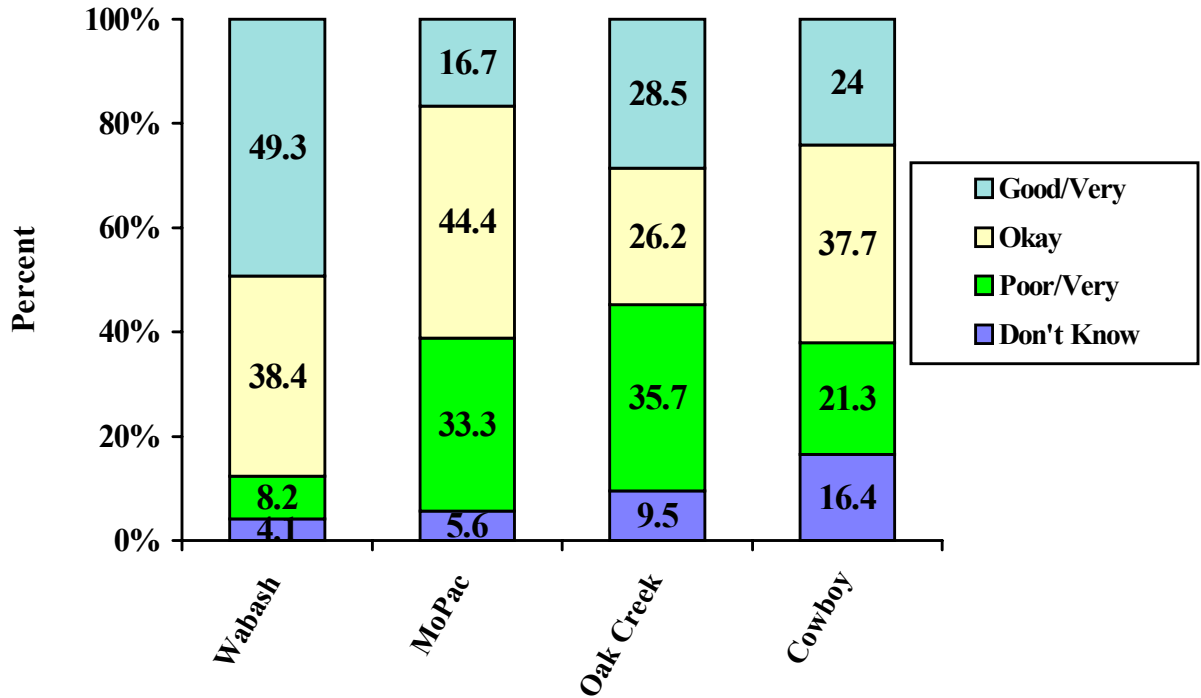


Figure 1-6d- Residential Four-Trail Comparison: Mowing



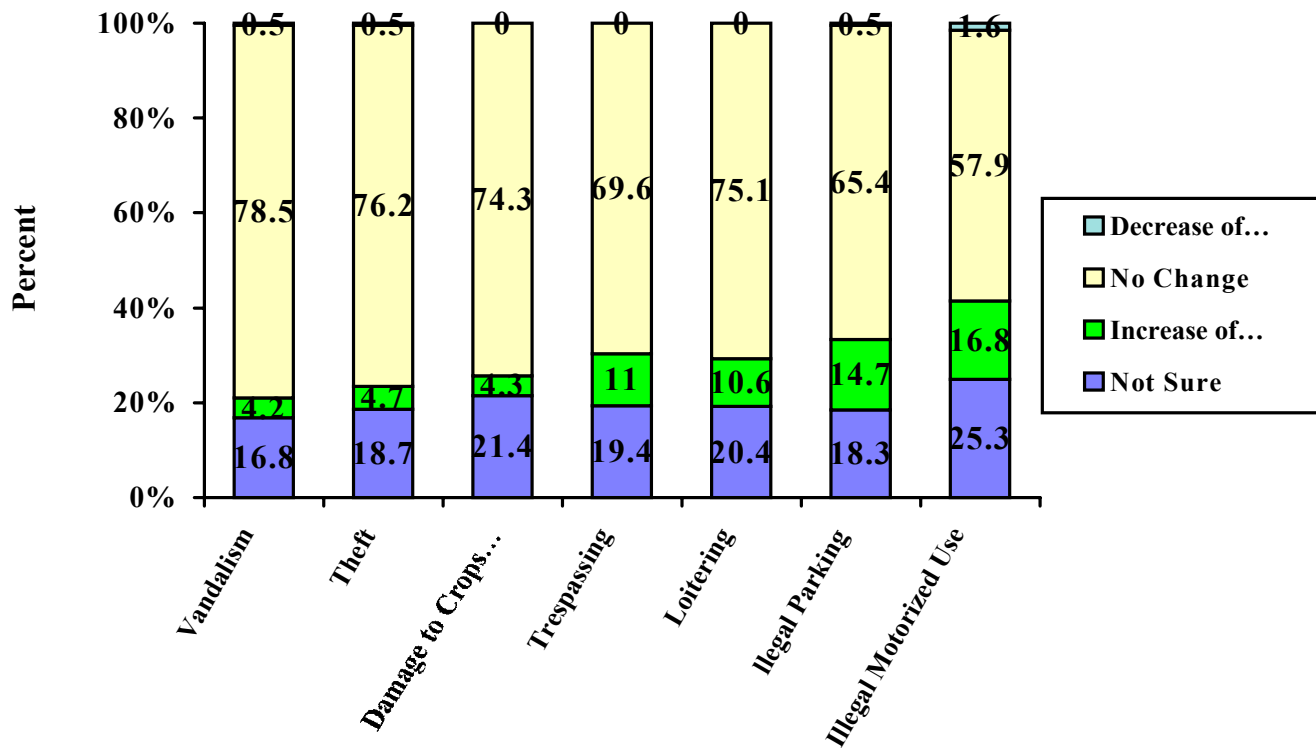
To learn as much as possible about how residents viewed trail conditions, we asked them to respond to a large number of items relative to crime, personal experiences and nuisance behavior, aesthetic and experiential qualities, health and recreation, as well as community and economic issues. They were asked whether the trail had increased, decreased or made no difference in each of these items. Table 1-6 and Figures 1-7a through 1-7d show the results of these questions for the four trails combined.

Table 1-6- Residents' Ratings of Trail Conditions

Item/Category	Percent Ratings			
	Not Sure	Increase of	No Change	Decrease of
Crime				
Vandalism	16.8	4.2	78.5	.5
Thefts	18.7	4.7	76.2	.5
Damage to Crops, etc.	21.4	4.3	74.3	0
Trespassing	19.4	11.0	69.6	0
Liability Suits	28.4	1.1	70.0	.5
Illegal Parking	18.3	14.7	65.4	1.6
Illegal Motor Vehicle Use	25.3	16.8	57.9	0
Loitering	20.4	10.6	75.1	0
Personal/Nuisance				
Privacy	9.3	5.7	63.7	21.2
Social Interactions	11.6	42.6	44.2	1.6
Rude Users	20.4	17.3	60.7	1.6
Noise	9.6	13.9	69.0	7.5
Roaming Pets	11.7	12.2	75.5	.5
Aesthetic/Experiential				
Aesthetic Value	13.4	23.5	58.8	4.3
Preserve Natural Spaces	10.7	52.9	33.2	3.2
Health/Recreation				
<i>Nature Education</i>	15.4	42.6	41.0	1.1
Health and Fitness	4.3	60.6	33.5	1.6
Recreation Opportunities	6.8	68.9	23.7	.5
Community/Economic				
Neighborhood Enhancement	8.5	44.1	44.7	2.7
Community Pride	6.4	58.8	33.2	1.6
Economic Opportunity	15.9	42.3	39.7	2.1

Looking at Table 1-6 first, it can be seen that the greatest changes are in a positive direction, and that these changes (i.e., “increase of” or “decrease of”) are reported in the categories of items we have referred to as Aesthetic/Experiential, Health/Recreation, and Community/Economic.

Figure 1-7a- Trail Conditions: Crime



An examination of Figure 1-7a reveals that, generally speaking, great amounts of change were not reported in these categories. Less than five percent of small town respondents reported that there had been an increase in criminal behaviors such as vandalism, theft, crop and livestock damage, and the like. About ten percent reported that the trails had led to an increase in loitering and trespassing, while a somewhat larger number of residents (about 15 percent) reported that illegal parking and illegal motorized trail use had increased.

Figure 1-7b- Trail Conditions: Personal/Nuisance

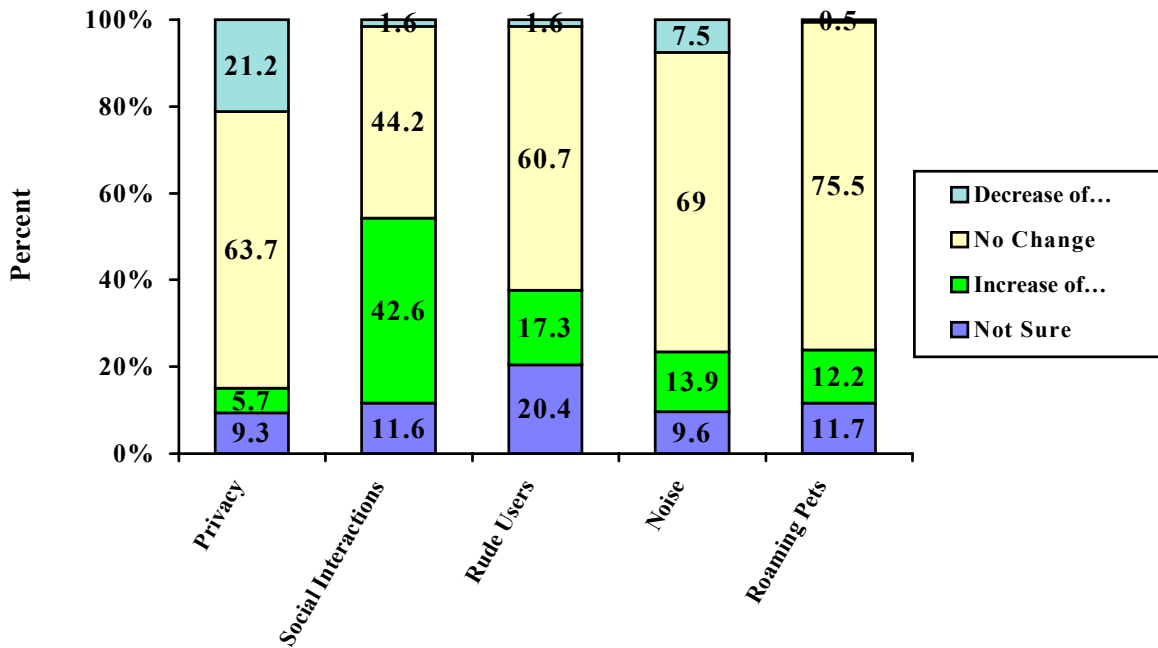


Figure 1-7b shows our findings on a group of items we have labeled “Personal/Nuisance” issues. Rude trail users (17.3 percent) and a reduction of privacy were reported by a noticeable percentage of our respondents, with increased noise and roaming pets a somewhat smaller issue. Note that the decrease in privacy, reported by 21.2 percent of our respondents, was the largest single negative impact in the set of items shown in Table 1-6. Alongside this, increased social interactions, presumably a positive factor for most respondents, were reported over 40 percent of those responding to our survey.

For organizational purposes, Figure 1-7c below shows the combined results of two categories from Table 1-6: “Aesthetic/Experiential” and “Health/Recreation.” In this figure we see the two areas in which our respondents reported the greatest increases: health and fitness, and recreation opportunities. In each case, over 60 percent of those surveyed reported that the rail to trail conversion resulted in an increase of opportunities

in these areas, and there were few respondents who were not sure of the impact of the trails with regard to these issues.

Figure 1-7c- Trail Conditions: Aesthetic/Experiential and Health/Recreation

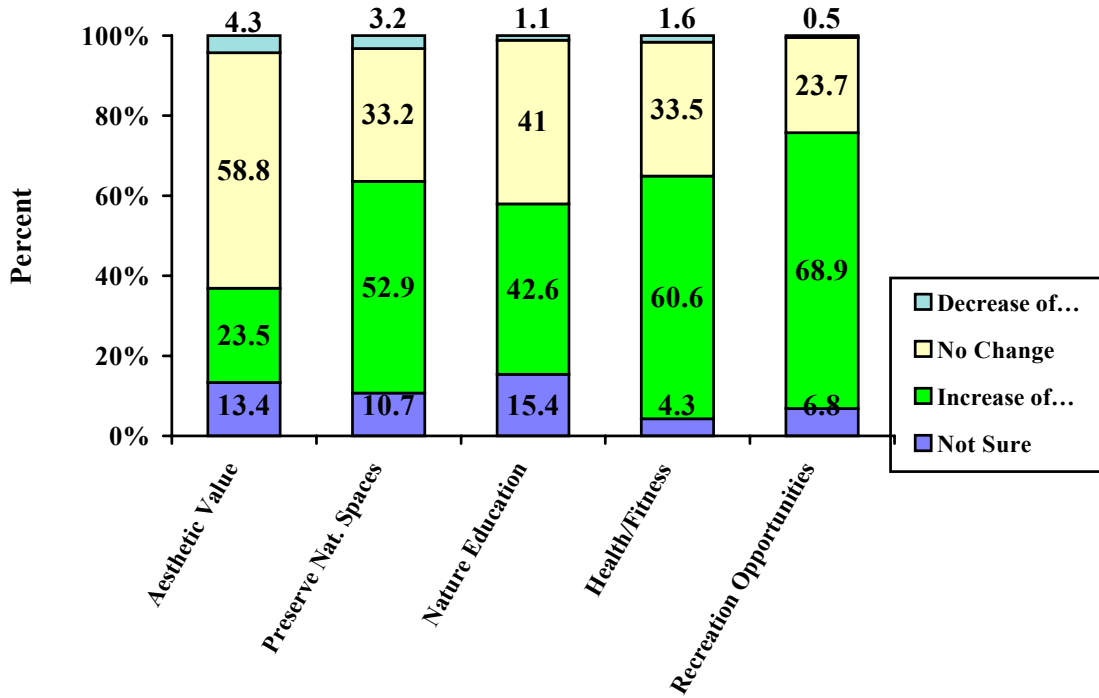
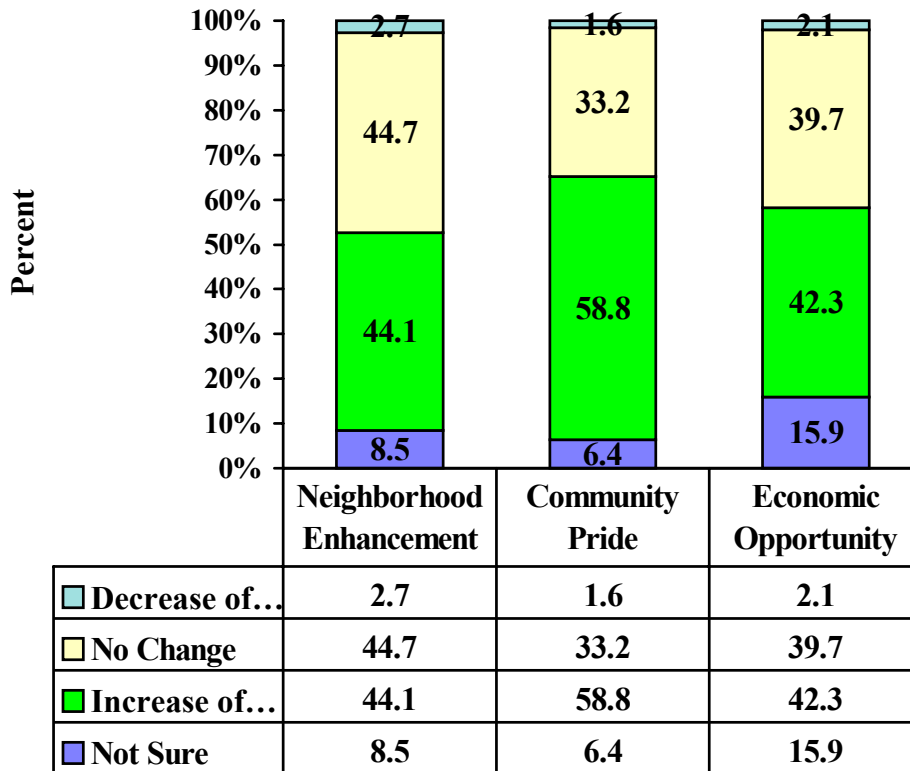


Figure 1-7d provides a graphic representation of the final three items from Table 1-6, the category we have called “Community/Economic”. With few respondents unsure, 44.1 percent of the small town residents were of the opinion that the trails resulted in an increase in neighborhood enhancement, 58.8 believed that the trails increased community pride, and 42.3 percent believed that they increased economic opportunity.

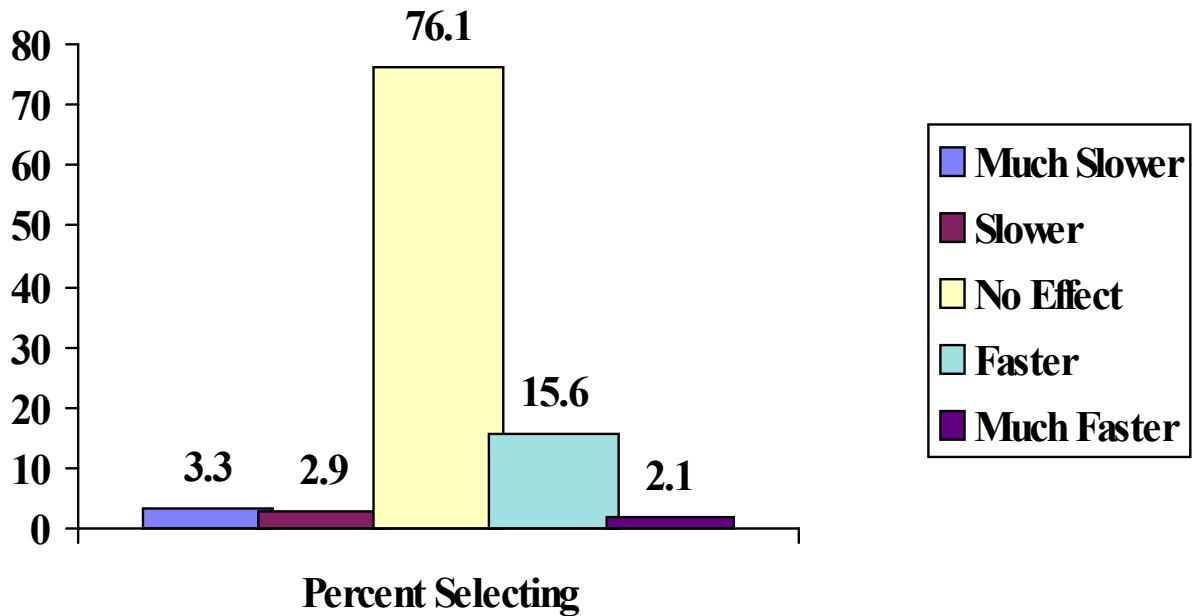
Figure 1-7d- Trail Conditions: Community/Economic



Economics and Property Values

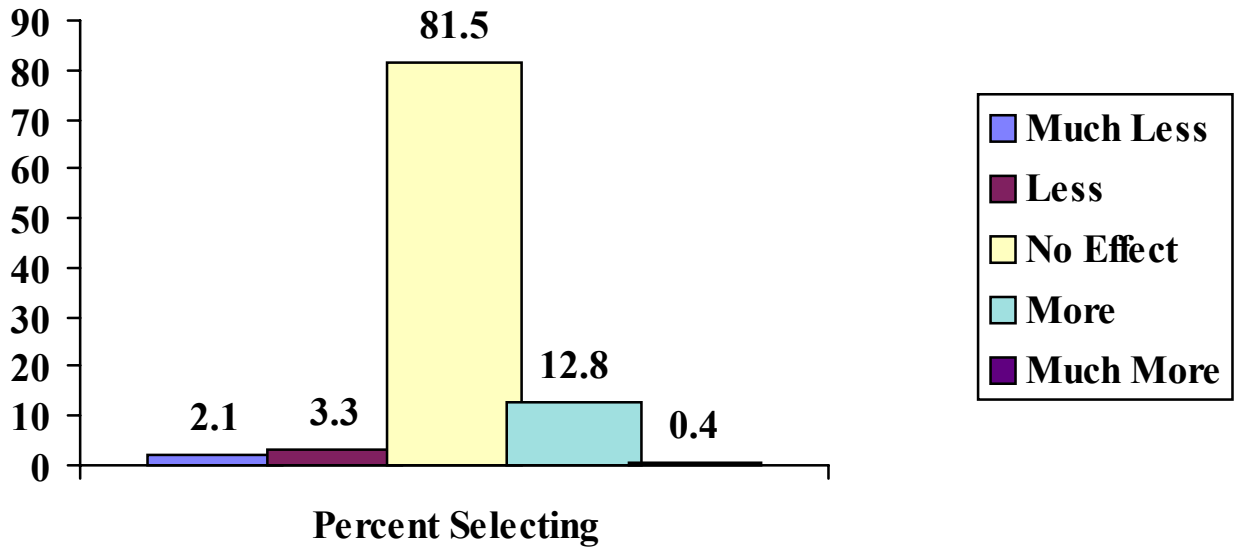
Previous trail research in urban and suburban settings has given considerable attention to the perceived impact of trails on residential property values and marketability, and we continued this focus in our investigation of trails in rural settings. To accomplish this, we asked our respondents to estimate the impact of the trails on the speed and price of home sale, should they place their homes on the market. Our findings on the issue of speed of home sale are shown in Figure 1-8, where it is apparent that the results, though largely neutral, weigh slightly in favor of a quicker sale. Most of the optimism on this issue was concentrated on the Wabash and MoPac trails, where 79 percent of those reporting that the trails would improve the speed of home sales resided.

Figure 1-8- Impact of Trail on Speed of Home Sale



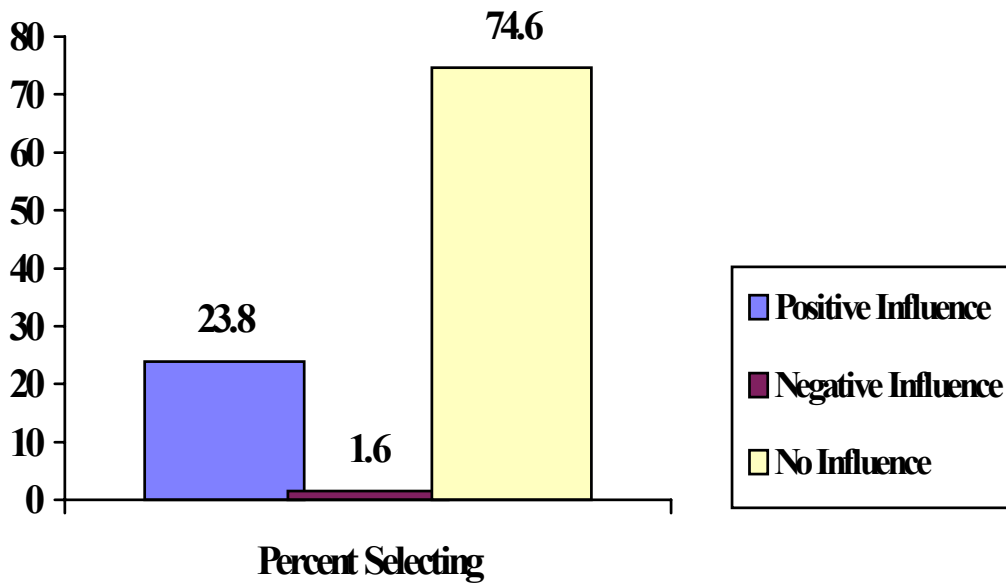
A look at trail impact on the value of home sales is provided in Figure 1-9. Although the outcome is largely neutral, it is slightly tilted in favor of a positive impact on home prices. Here again, the optimists with regard to selling price were primarily residents near the Wabash and MoPac trails, who accounted for 71.8 percent of the “more money” and “much more money” responses. In the case of both speed of sale and amount of home sale, it seems noteworthy that few residents in our survey actually perceived the trails to have a harmful economic impact on their residential property.

Figure 1-9- Impact of Trail on Price of Home Sale



The survey respondents were also asked if they first purchased or occupied their present home before or during/after the conversion of the railroad to a trail. In the latter case we asked its impact on their purchase decision. As shown above in Table 1-1, about one-fourth of the respondents indicated that the trail was present or under construction when they purchased or occupied their homes. As we see in Figure 1-10, of those respondents who purchased or occupied their homes during or after the rail to trail conversion, almost one in four indicated that the trail positively influenced their decision, and only one respondent indicated that the trail was a negative influence.

Figure 1-10- Impact of Trail on Home Purchase Decision



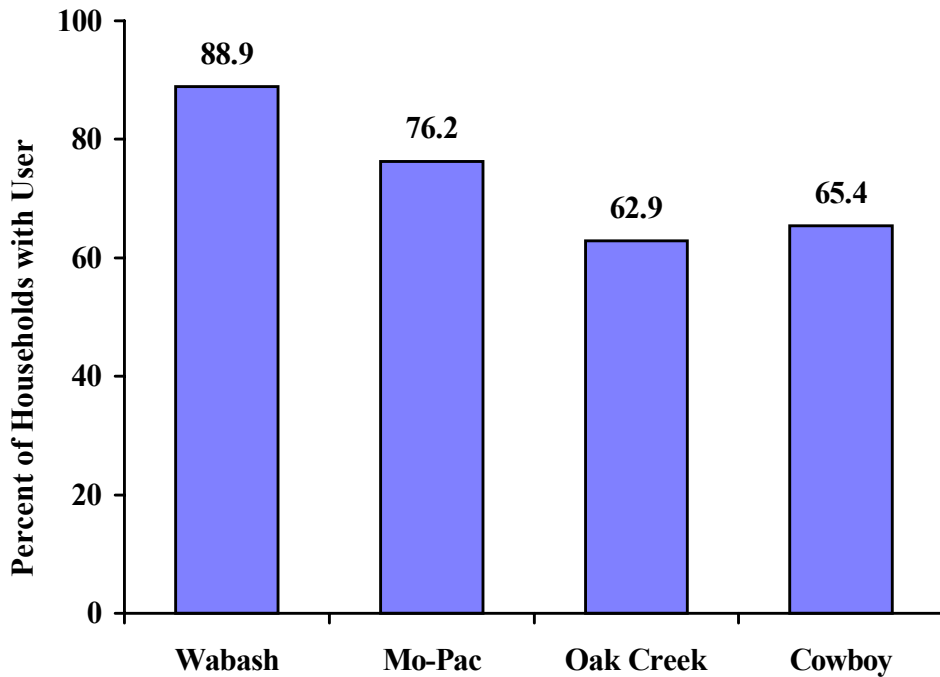
Trail Use

We asked our small town residents a variety of questions concerning trail usage, including whether or not any family member ever used the trail for recreation, the frequency of trail use by various household members, and whether or not the trail was ever used as a substitute transportation corridor. In a high percentage of cases a member of the responding family used the their local trail at least occasionally. As shown in Table 1-7, almost three-fourths of the households we contacted reported that they themselves or another family member used the trail for recreational purposes. Trail usage was not consistent on all trails, however. As shown in Figure 1-11, our data indicated that households living near the Wabash and Mo-Pac Trails used the trails recreationally more than those near the Oak Creek and Cowboy Trails.

**Table 1-7- Use of Trails for Recreation by a Family Member-
All Residential Respondents**

	Number	Percent
Yes	178	73.6%
No	64	26.4%

**Figure 1-11- Four-Trail Comparison: Residents' Use of Trails for Recreation
by a Family Member**



We also asked our respondents how frequently they themselves used the trails for recreation. As Table 1-8 reveals, about 31 percent of the respondents were daily or weekly trail users, while a similar number (28.6 percent) were only occasional trail users, and 25.5 percent never used the trails.

Table 1-8- Frequency of Respondent Trail Use- Residential

	Number	Percent
Daily Use	17	7.4%
Weekly Use	54	23.4%
Once or Twice a Month	35	15.1%
Few Times a Year	66	28.6%
Never	59	25.5%
Total	231	100%

Figure 1-12- Four-Trail Comparison: Frequency of Residential Respondent Trail Use

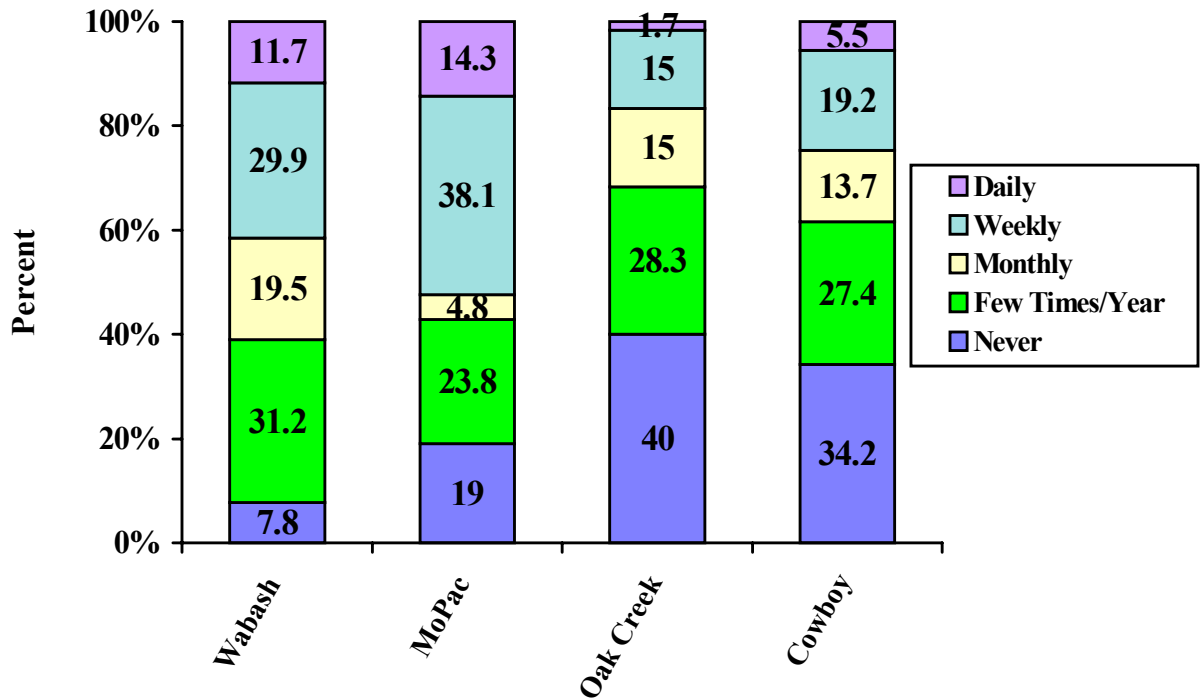


Figure 1-12 shows that residents who were frequent trail users were concentrated on the Wabash and Mo-Pac trails, non-users were more likely to reside near the Oak Creek and Cowboy trails, while occasional use appears in a relatively consistent pattern on all trails. The different demographic characteristics of the communities (e.g. age, income and family composition) or the characteristics of the trails themselves (length and proximity to other local recreation amenities) may account for this.

We also asked the respondents how frequently they or members of their families used the trails for transportation purposes. As shown in Table 1-9, just fewer than 10 percent of our respondents reported that this occurred at least occasionally. Almost two-thirds of transportation usage of the trails took place on the Wabash Trail.

Table 1-9- Use of Trails for Transportation- Residential

	Number	Percent
Use Occasionally or Often	22	9.2
Don't Use for Transportation	216	90.8
Total	238	100%

Why They Recreate

Finally, we asked our respondents to rate the importance of twelve possible reasons for engaging in outdoor recreation on a five-point scale (1= not important, 3= moderately important, 5= extremely important). In Table 1-10, the mean rating on each of these items is shown for those in our sample who reported that a member of their family used the trails for recreation. Because of previous research indicating that there are

significant gender differences in outdoor recreation preferences, we have reported the mean responses separately for both males and females.

The data in Table 1-10 reveal that nature and outdoor experiences were the most important reasons for trail-related outdoor recreation among our respondents, followed closely by a desire for health promotion, relaxation, and simply having fun. Of somewhat less importance were exercise and spending free time. For this latter reason, we found the only statistically significant gender difference, with female respondents consistently placing a greater priority on this factor than males. This finding is congruent with observations by other researchers (e.g., Kleiber, 1999) suggesting that women in today's society are keenly aware of a greater sense of obligation to others, which places great constraint on their ability to have and enjoy unobligated time.

Table 1-10- Mean Importance of Reasons for Engaging in Outdoor Recreation

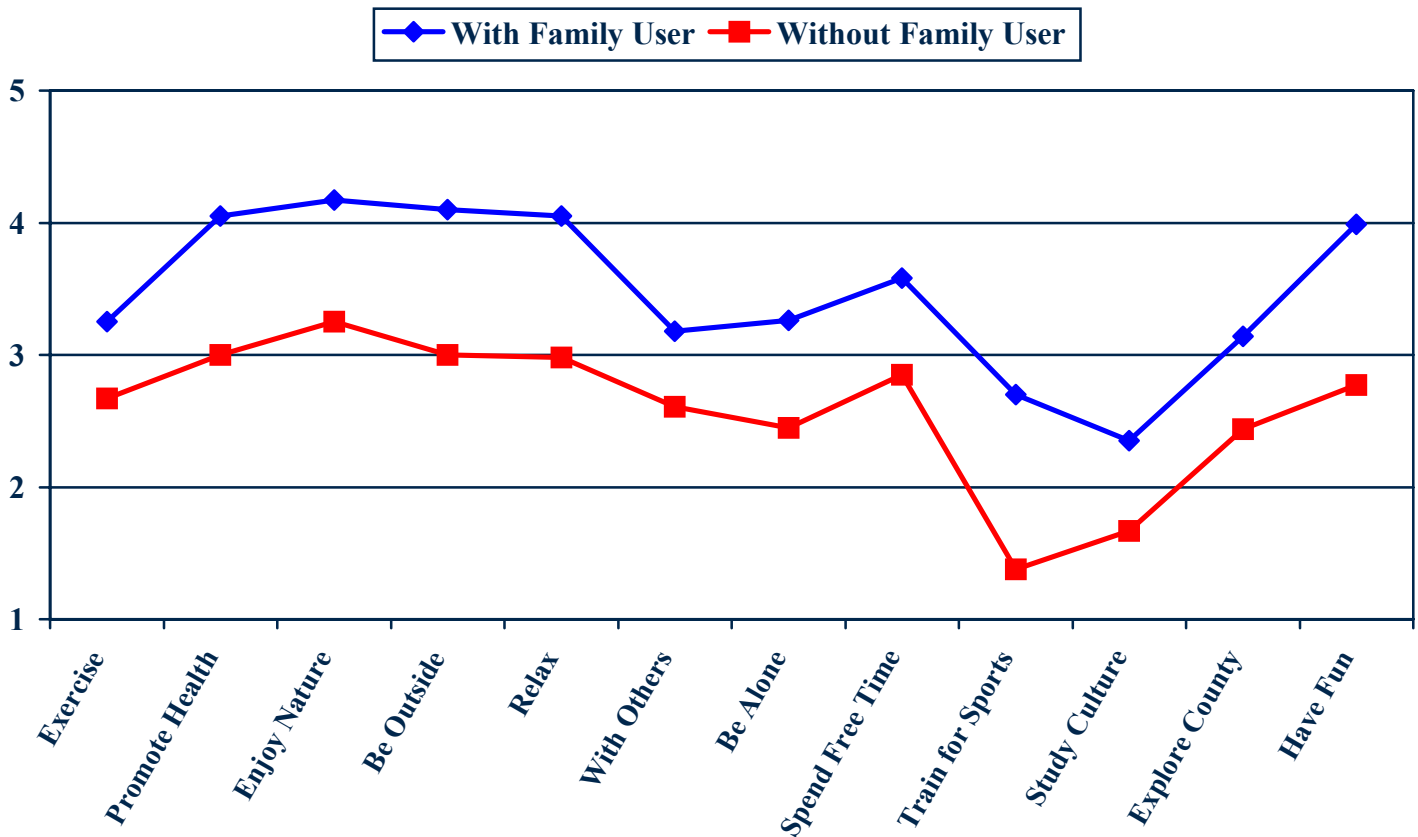
Reason for Outdoor Recreation	Males (70)	Females (104)	All (174)	Item Rank
Exercise	3.63	3.63	3.63	5
Promote health	3.91	4.12	4.03	3
Enjoy nature	4.16	4.16	4.16	1
Be outside	4.09	4.10	4.09	2
Relax	3.96	4.09	4.03	3
Be with others	3.11	3.21	3.17	8
Be alone	3.27	3.21	3.24	7
Spend free time*	3.35	3.71	3.57	6
Train for sports	2.14	2.36	2.27	11
Study culture	2.29	2.38	2.34	10
Explore county	2.99	3.21	3.12	9
Have fun	3.91	4.04	3.99	4

* Significant gender difference ($p < .05$).

Moving down the list, of only moderate importance to our small town residents were being alone or with others and using the trails to explore their counties, while least important were studying culture and training for sports.

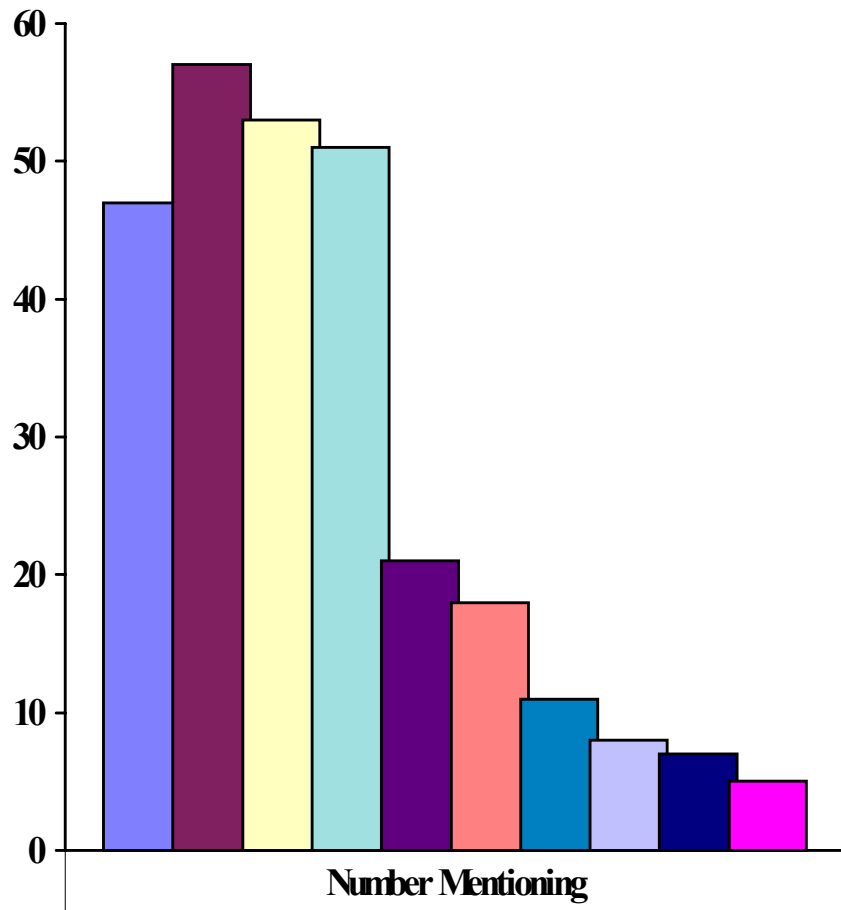
We also examined this data after separating the respondents into those who reported that they had a trail user in the family and those who did not. As shown in Figure 1-13, those who had a family trail user assigned substantially higher priorities to every reason for engaging in outdoor recreation.

Figure 1-13- Reasons for Recreation Rated- Residential Respondents With and Without a Trail User



Taking another, more subjective, approach to understanding reasons for trail use, we provided an open-ended question asking the respondents to simply list the most important reason or reasons for their use to the trails. As Figure 1-13 shows, the findings on this question yield a slightly different picture of their thoughts on trail use. While exercise ranked only fifth among twelve reasons for engaging in outdoor recreation, it was the most often mentioned purpose for trail-related recreation when we invited open-ended responses from the respondents.

Figure 1-14- Reasons for Recreation Mentioned- All Residential Households with a Trail User (n=174)



	Number Mentioning
Exercise	47
Exercise/Health	57
Exercise + Activity	53
Exercise + Nature	51
Nature/Outdoors	21
Walk/Jog	18
Bike	11
Relax/Escape	8
Fun	7
Safety	5

Results

Study 2: Rural Property Owners

Demographics and Sample Overview

We received 128 completed surveys out of 300 mailed, for a response rate of 42.6 percent. Of the 128 total households responding, 59.3 percent reported as occupying a dwelling on the rural property they owned. With respect to the property’s location relative to the trail conversion, 62.9 percent said that the trail ran adjacent to their property, and 37.1 percent reported that the trail bisected their property. Unlike the respondents to the survey of small town residents, where over half of the respondents were female, those responding to our survey of property owners were predominantly males (63.6%). The mean respondent age was 59.2 years. The median length of ownership of the property was 22 years, with a mean of 29.05 years. As one might expect given this duration of ownership, most of the respondents reported that they owned their rural property before the conversion of the railroad to a trail (Table 2-1).

Table 2-1- Did You Purchase Rural Property Before or During/After Trail Conversion?

	Number	Percent
Before Trail	106	85.5%
During/After Trail	18	14.5%
Total	124	100%

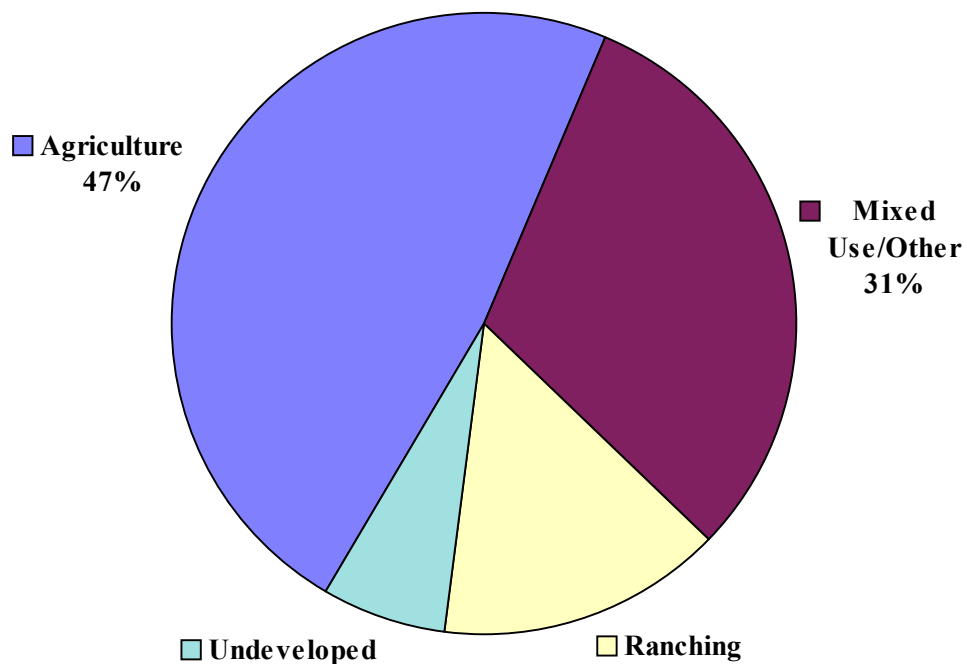
As shown in Table 2-2, we received surveys from a substantial number of property owners on each of our four trails, with somewhat greater numbers coming from the MoPac and Wabash Trails.

Table 2-2- Breakdown of Respondents by Trail

	Number Mailed	Number Received	Percent
Wabash Trail	76	35	27.3
MoPac East Trail	129	48	37.5
Oak Creek Trail	54	23	18.0
Cowboy Trail	41	22	17.2
Total	300	128	100.0

We also asked the owners of rural property to identify the predominant use of the land they owned. As shown below in Figure 2-1, agriculture was the predominant use of the property owned by our respondents, followed by mixed use and ranching.

Figure 2-1- Type of Land Use for Rural Property



The employment status of our property owner respondents is shown below in Table 2-3. Almost half of our respondents (45.8%) were employed full-time, while about one-fourth of them (27.1%) reported that they were retired.

Table 2-3- Employment Status of Property Owners

	Number	Percent
Employed full-time	54	45.8%
Employed part-time	3	2.5%
Retired	32	27.1%
Self-employed	21	17.8%
Homemaker/Student/ Other	8	7.7
Total	118	100%

Participation in Trail Development

Three questions in our survey addressed whether or not the property owners had participated in trail development and/or felt informed about the rail-trail conversion process. In contrast with our sample of small town residents, where only 19 percent reported attending trail-planning meetings, 35.8 percent of rural property owners reported that a member of their household had attended a trail-planning meeting. And while only 6.2 percent of the small town residents reported that they or a family member had been actively involved in the planning, development or maintenance of the trail, 14.6 percent of the property owners had done so. We also asked the property owners how informed they felt they were “at the time of the design and construction of the trail.” Table 2-4 below shows our findings on this question for those 105 residents who reported that they owned their rural property prior to the rail line’s conversion to a trail. (For comparison

purposes, the right hand column in the table shows the comparable responses from our sample of small town residents.)

Table 2-4- How Informed Were You During Trail Design/Construction?

	Number	Property Owners Percent	Residents' Percent
Not informed	23	21.9%	29.5%
Minimally Informed	33	31.4%	35.3%
Moderately Informed	33	31.4%	22.5%
Fully Informed	13	12.4%	12.7%
Total	105	100%	100%

Support for the Trail Over Time

To assess the attitudes of property owners toward the trails over time, we asked them to describe their level of support or opposition to their respective trails at several points in the trail conversion process. More specifically we asked about trail support or opposition: 1. As an idea before it was built, 2. During planning and design, 3. During construction, 4. Shortly after built, and 5. As the trail exists today. As shown in Figure 2-2, the responses we received to this set of questions clearly indicate a substantial and relatively stable level of opposition to trail development among rural property owners, a pattern not evident among the small town residents, where trail opposition was less extensive and receded over time (see Figure 1-2, previous results). In common with the previous residential sample, we observe a pattern of escalating support for trails as the rail-trail conversion draws nearer to completion. But unlike the small town residents, the increasing support for the trails over time among rural property owners tended to come

from the conversion of those who previously answered “does not apply”, as opposed to the conversion of those who were previously “neutral” about the trail development process. In neither case did there appear to be a conversion of large numbers of firm trail opponents.

Figure 2-2- Percent of Property Owners Supporting/Opposing Trail at Five Points in Time

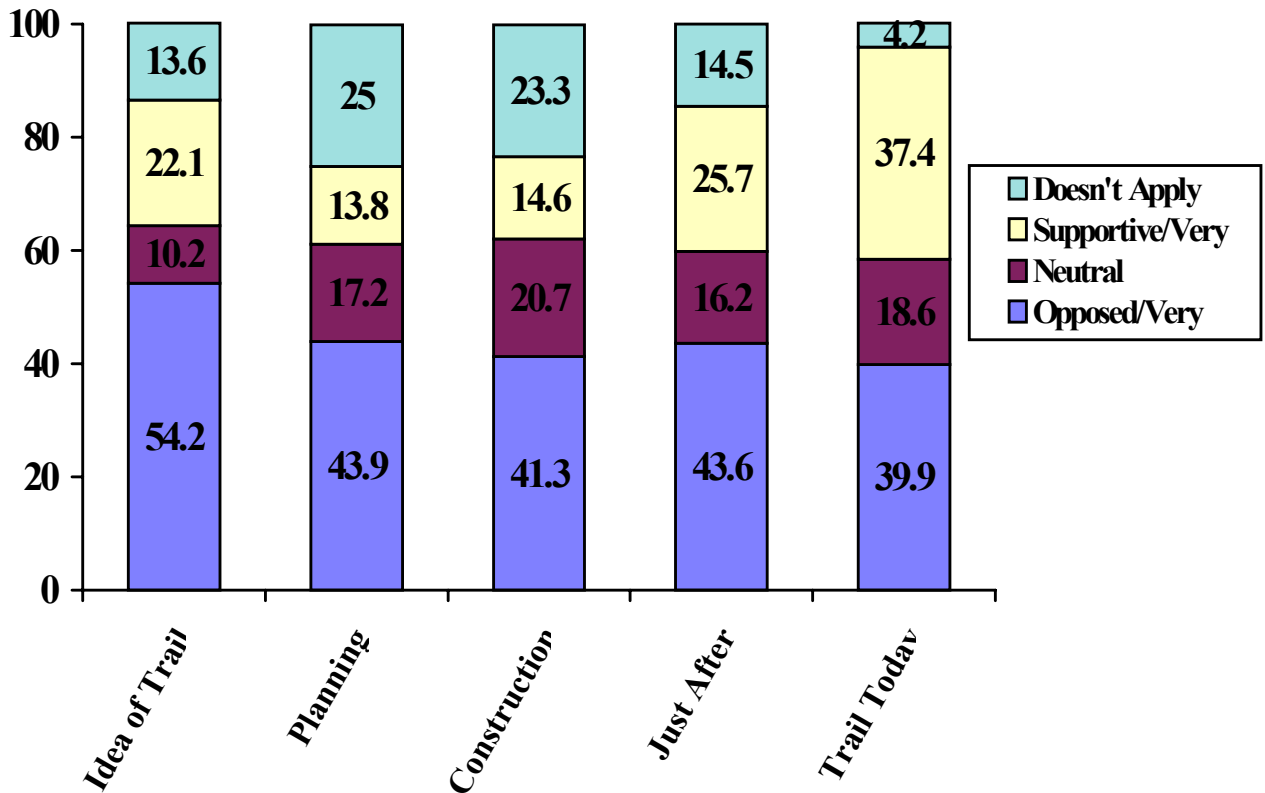
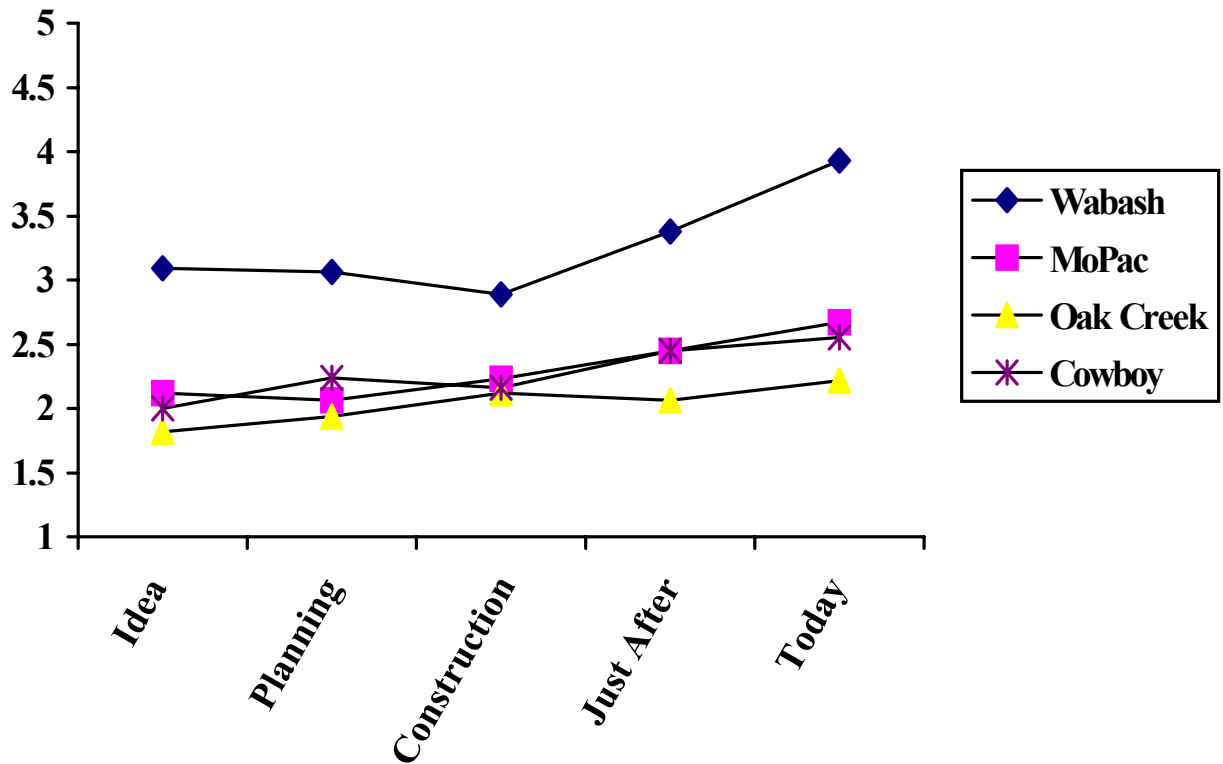


Figure 2-2a looks at the same data in another way. After the “does not apply” responses were excluded, this graphic provides a four-trail comparison of the mean level of trail approval/disapproval, rated on a five-point scale (5= very positive to 1= very negative). Aside from the property owners adjacent to the Wabash Trail, this figure shows substantially lower overall levels of support among the property owners than we saw among the sample of small town residents, as well as a smaller increase in trail support over time.

Figure 2-2a- Four-Trail Comparison: Property Owners' Mean Level of Support at Five Points in Time



Following up on this in Table 2-5 below, it can be seen that property owners' opposition to these trails was strong in the case of all trails except for the Wabash. As the figure also shows, opposition to trail development was considerably stronger among rural property owners than among small town residents. Among the property owners the degree of opposition to trails was in many cases no less than double that which we observed among the sample of small town residents.

Table 2-5- Four-Trail Comparison: Percent of Property Owners Very Opposed or Moderately Opposed to Trail at Five Points in Time

	Wabash (n=23)	MoPac (n=42)	Oak Creek (n=17)	Cowboy (n=20)
Idea of Trail	39.1 (18.5)	64.3 (28.6)	76.5 (56.9)	75.0 (39.1)
Planning	33.3 (10.9)	58.3 (16.7)	75.1 (47.7)	70.6 (28.8)
During Construction	39.1 (6.5)	51.4 (21.4)	64.7 (50.0)	63.2 (25.4)
Just After Completion	24.8 (7.4)	52.4 (18.7)	70.6 (43.1)	60.0 (21.8)
Trail Today	10.3 (7.0)	43.5 (28.6)	66.7 (37.3)	60.0 (23.2)

Note: “Does not apply” responses were excluded in the calculation of these percentages.
 Figures in parenthesis are for small town resident sample.

Trail’s Influence on Self, Family and Community

Next, we presented the property owners with a series of scales in which they were asked to rate the influence of the trail on their own life, on other family members, the community, and the county. These results are shown in Figures 2-3 and 2-3a. They generally indicate that rural property owners see the rail-trail conversions as more beneficial influences at the community and county level, as opposed to benefiting them directly. The data also indicate that this group is, again, far more pessimistic about the benefits of rail-trails than were the small town residents (see Figures 1-3 and 1-3a in small town residents’ results).

Figure 2-3- Perceived Influence of Trails to Rural Property Owners

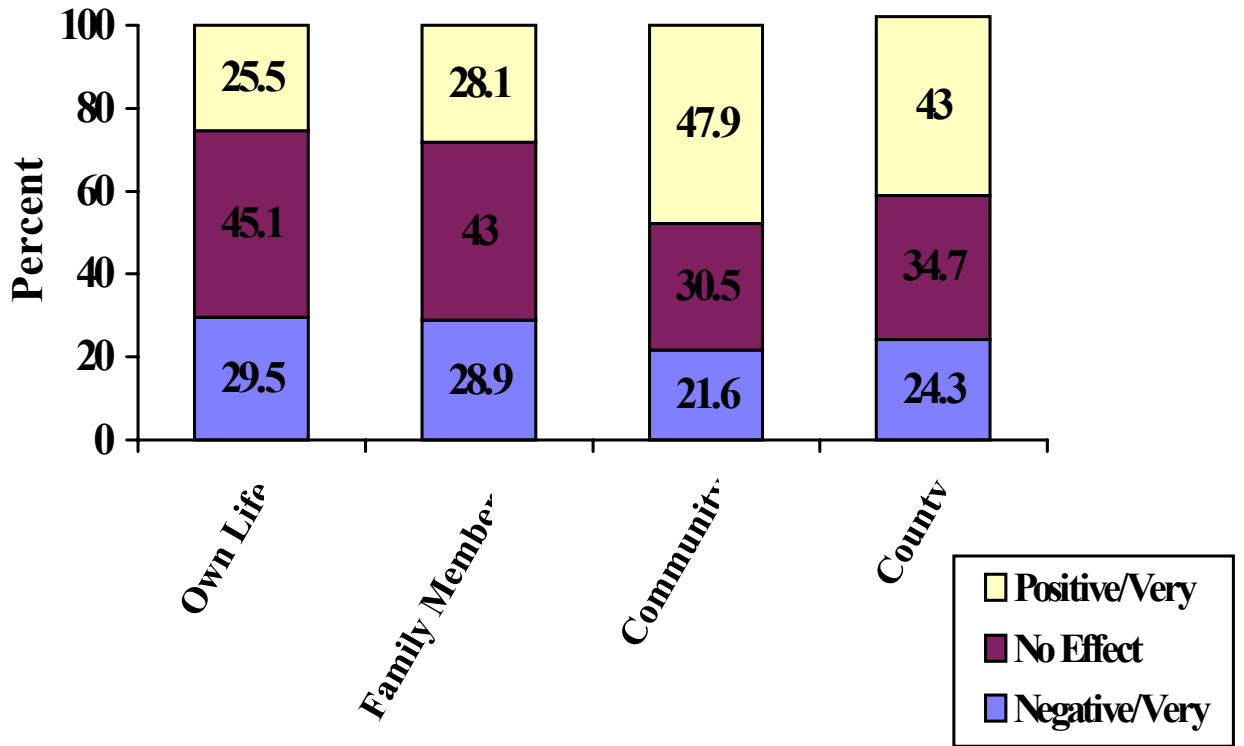
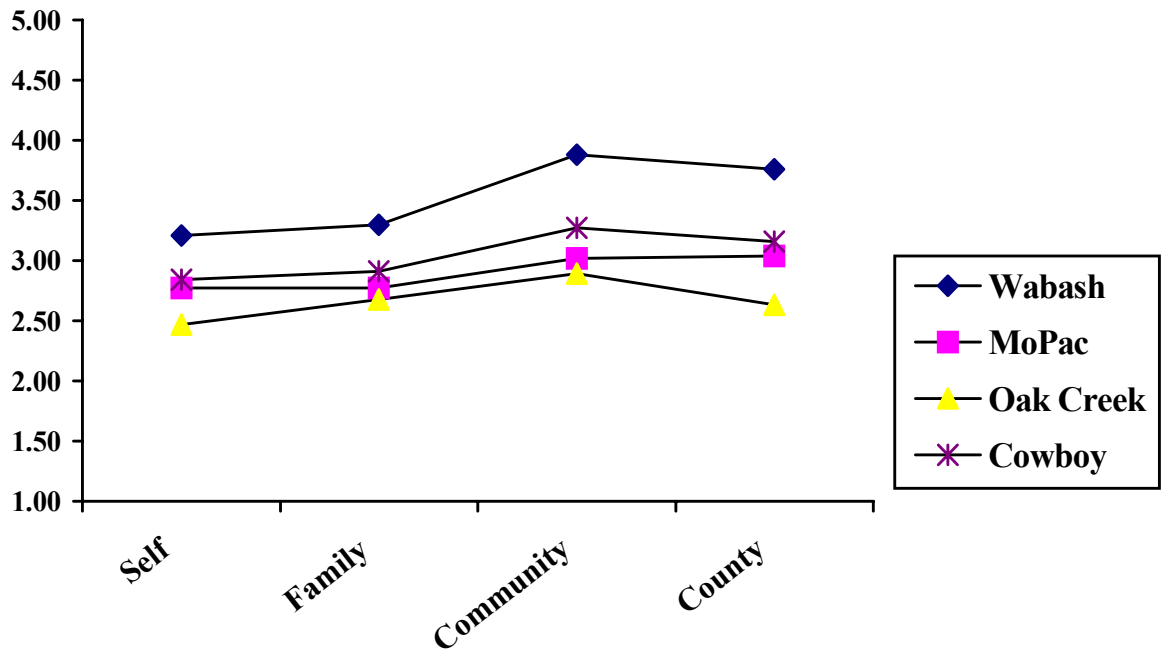


Figure 2-3a provides a different look at the same data. It illustrates the mean level of benefit on a five-point scale (5= very positive to 1= very negative) our rural property owner respondents expressed, broken down by specific trail. These results generally indicate that only the property owners near the Wabash Trace Trail perceived the trails to have a positive influence, while others viewed them as neutral to slightly negative.

**Figure 2-3a- Four-Trail Comparison of Property Owners:
Mean Perceived Influence of Trails**



We also asked the property owners to rate their level of satisfaction with the trail near their property, as well as whether living near the trail is better or worse than living near the railroad. The results of these questions are shown in Figures 2-4 and 2-5. As shown in Figure 2-4, the owners of rural property were more often dissatisfied with trails than the small town residents, where almost two-thirds were very or moderately satisfied with them. While less than 15 percent of small town residents reported that they were very or moderately dissatisfied, over 42 percent of property owners fell into those categories. Figure 2-5 provides a very similar and relatively negative picture with respect to the issue of living near the trail versus living near the railroad. Over one-third (36.1 percent) of rural property owners believed that living near the trail was moderately or much worse than living near the railroad, while only about 10 percent of small town residents believed that to be the case (see Figure 1-5, previous results section).

Figure 2-4- Satisfaction with Trail in Your Community- Rural Property Owners

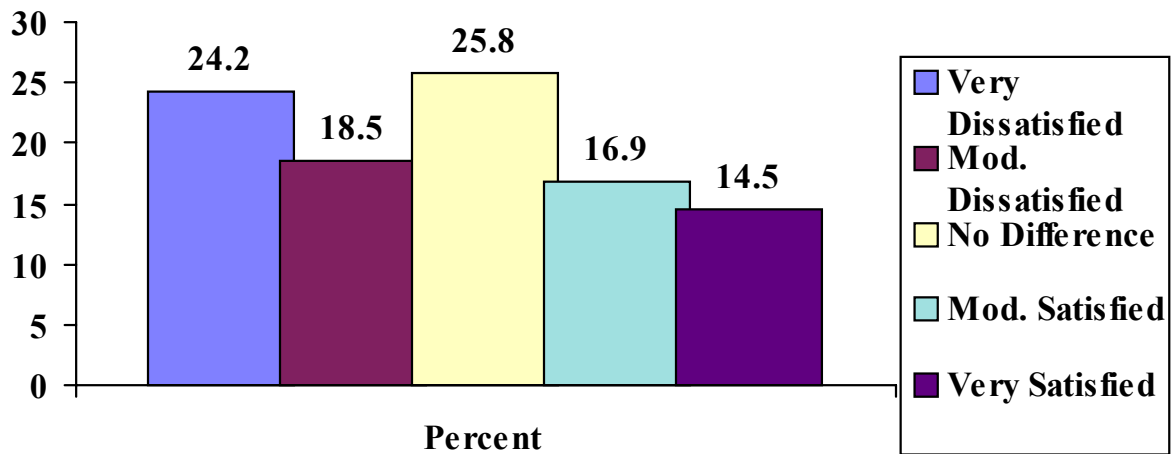
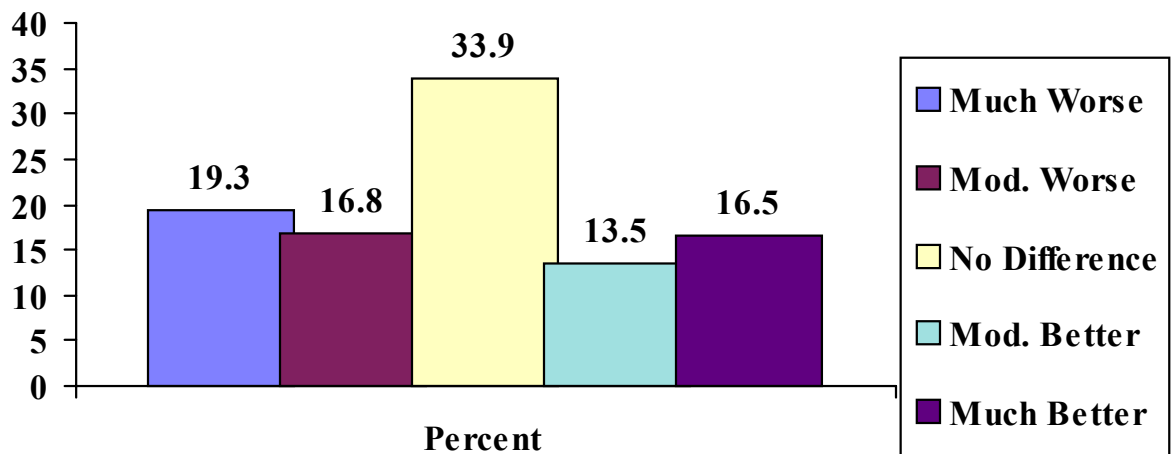


Figure 2-5- Property Owners-Is Living Near the Trail Better or Worse than Railroad?



Given the previously observed differences we have seen in the amount of opposition to trails in different locales, the items reflected in Figures 2-4 and 2-5 were cross tabulated by trail. These findings are illustrated in Figures 2-4a and 2-5a

respectively. An obvious feature of Figure 2-4a is the small percentage of property owners near the Wabash Trail who were unsatisfied with the trail (14.7 percent), compared with all other trails, where trail dissatisfaction was never below 50 percent.

Figure 2-4a- Four-Trail Comparison: Property Owners' Satisfaction with Trail in Your Community

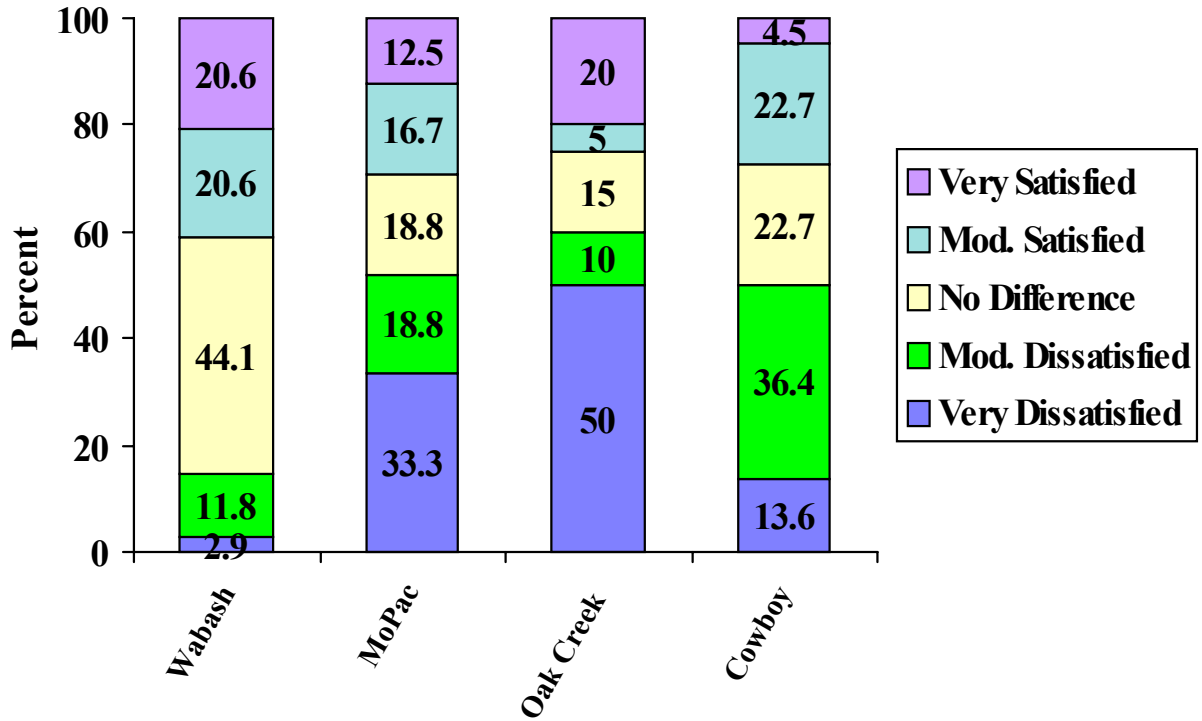
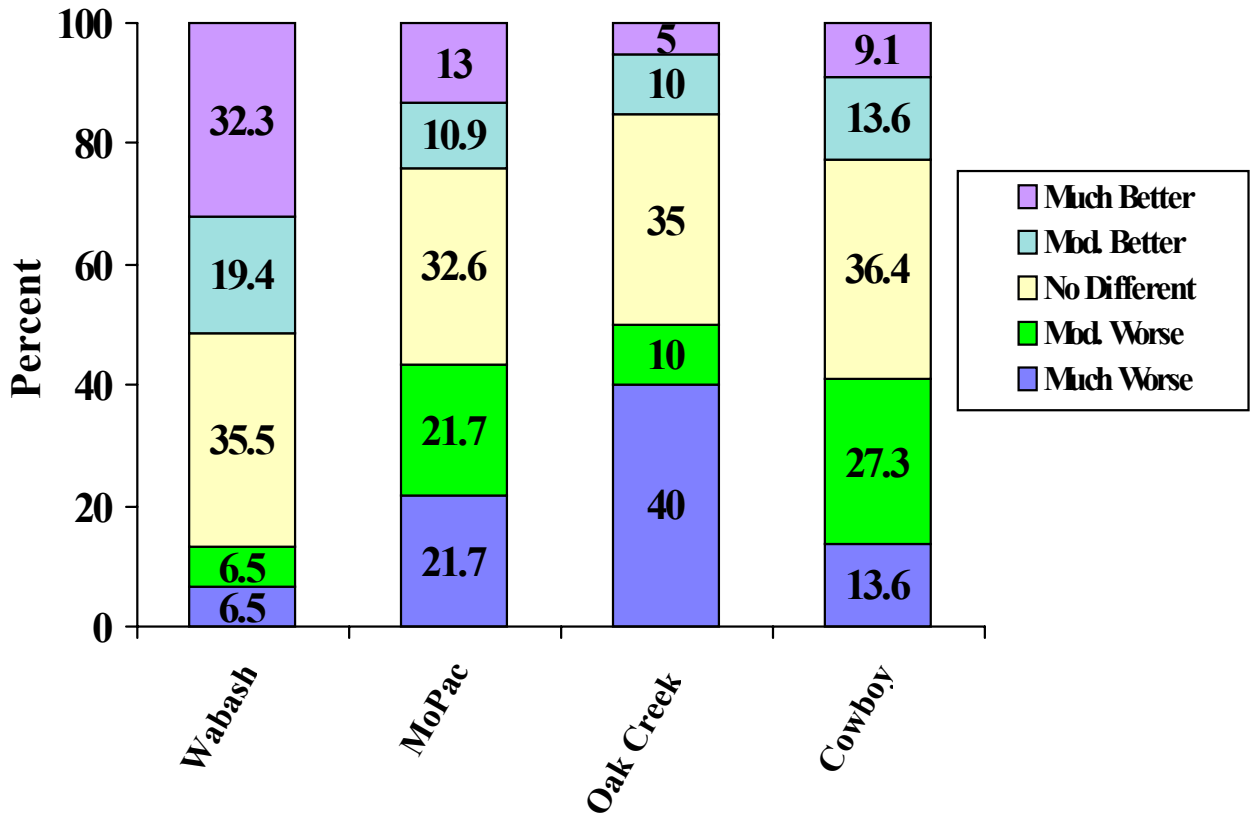


Figure 2-5a, comparing the trail to the railroad as a neighbor, reveals a similar pattern, with unfavorable comparisons of the trail with the railroad concentrated on the MoPac, Oak Creek, and Cowboy Trails only, while property owners near the Wabash Trace Trail expressed more favorable opinions. We will return to a consideration of these findings later in the discussion section of this paper.

Figure 2-5a- Four-Trail Comparison: Property Owners Percent Rating Living Near the Trail Better or Worse than Railroad

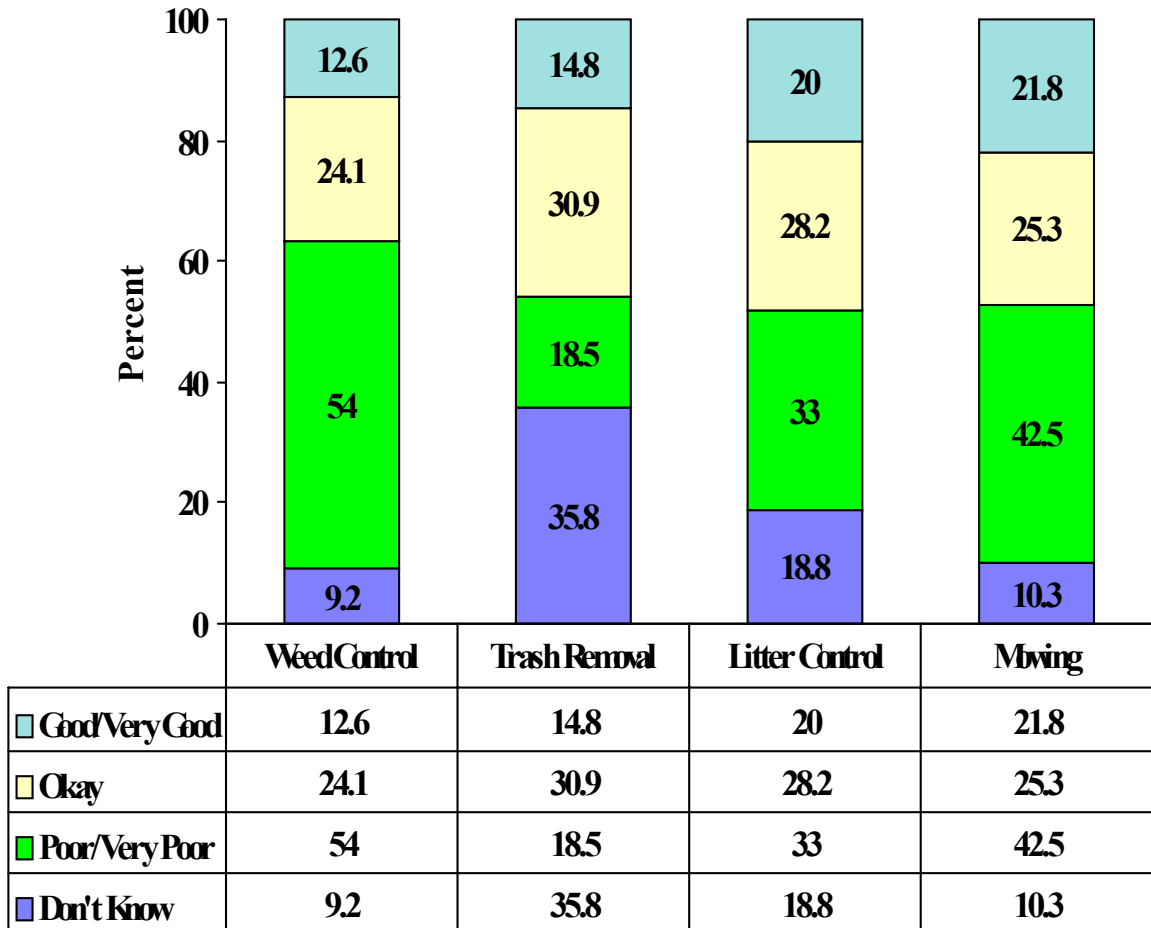


Trail Maintenance, Conditions and Crime

To better understand rural property owners’ perceptions of trail conditions, we included a large number of items in our surveys specifically relating to trail maintenance, general conditions, and crime. Reasoning that the most reliable information would be obtained from respondents who either had a view of the trail from their home or had a trail user in the family, only respondents who met those conditions were selected for these analyses. Eighty-nine respondents met these criteria, and Figure 2-6 shows our findings for four items specific to trail maintenance. Generally speaking, the rural property owners were much more critical of these practices than the small town residents we surveyed, where a clear majority of our respondents viewed the maintenance of the

trails as acceptable or better. Among the rural property owners, poor or very poor ratings were always more numerous than good or very good.

Figure 2-6- Trail Maintenance Item Ratings- Rural Property Owners



To learn as much as possible about how rural property owners viewed trail conditions, we asked them to respond to a large number of items relative to crime, personal experiences and nuisance behavior, aesthetic and experiential qualities, health and recreation, as well as community and economic issues. They were asked whether the trail had increased, decreased or made no difference in each of these items. Table 2-6 and Figures 2-7a through 2-7d show the results of these questions for the four trails combined.

Table 2-6- Property Owners' Ratings of Trail Conditions

Item/Category	Percent Ratings			
	Not Sure	Increase of	No Change	Decrease of
Crime				
Vandalism	15.9	22.1	60.2	1.8
Thefts	14.4	21.6	61.3	2.7
Damage to Crops, etc.	9.9	24.3	64.0	1.8
Trespassing	10.5	39.5	57.9	2.6
Liability Suits	25.0	0	75.0	0
Illegal Parking	11.4	28.1	58.8	1.8
Illegal Motor Vehicle Use	16.8	40.7	40.7	1.8
Loitering	18.6	27.4	54.0	0
Personal/Nuisance				
Privacy	5.4	3.6	40.2	50.9
Social Interactions	18.0	16.2	57.7	8.1
Rude Users	13.4	28.6	58.0	0
Noise	8.8	26.3	58.8	6.1
Roaming Pets	16.2	23.4	57.7	2.7
Aesthetic/Experiential				
Aesthetic Value	13.0	20.4	53.7	13.0
Preserve Natural Spaces	16.2	27.9	44.1	11.7
Health/Recreation				
Nature Education	17.0	15.2	63.4	4.5
Health and Fitness	9.1	29.1	56.4	5.5
Recreation Opportunities	9.8	37.5	47.3	5.4
Community/Economic				
Community Pride	15.3	26.1	47.7	10.8
Economic Opportunity	16.8	11.5	63.7	8.0

Looking at Table 2-6 first, it can be seen that the responses to these items among property owners were largely negative, particularly in the case of the crime and personal/nuisance

questions. For example, trespassing and illegal motor vehicle uses on the trails were particular concerns, along with a decrease in privacy. Such concerns were far less prevalent among our sample of small town residents (see Table 1-6, previous results section). The responses of property owners were somewhat more positive in the Aesthetic/Experiential, Health/Recreation, and Community/Economic categories, although not nearly so much so as the small town residents.

Figure 2-7a- Property Owners Perceived Trail Conditions: Crime

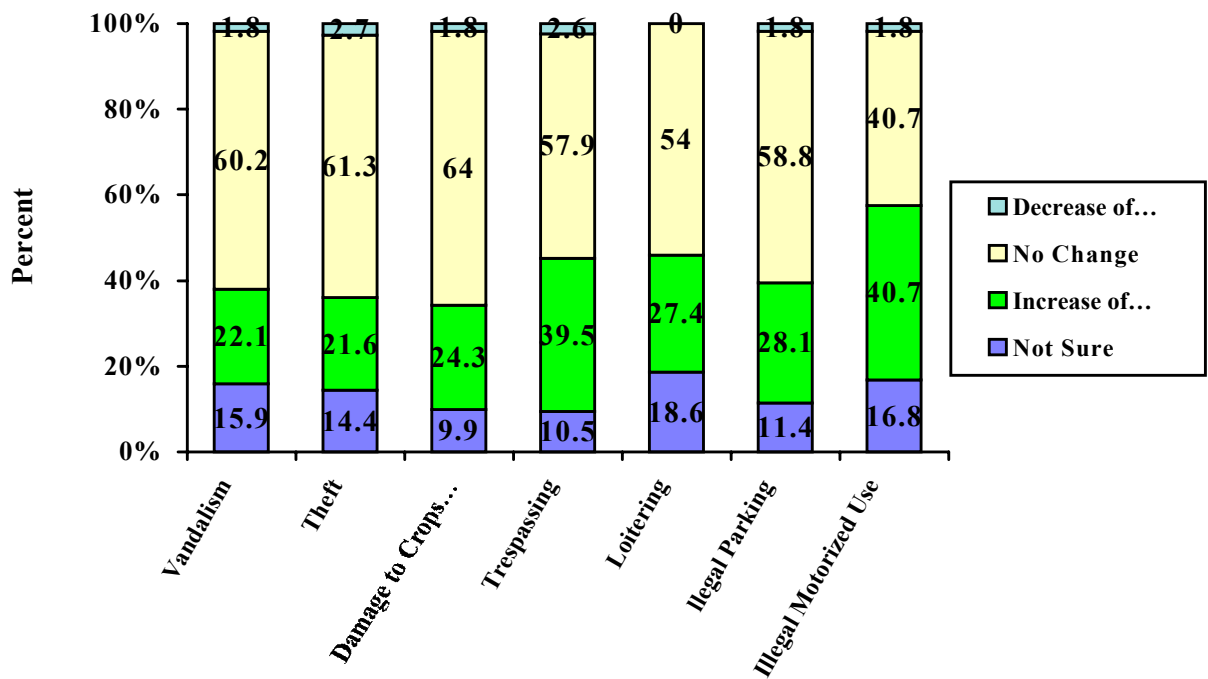


Figure 2-7a reveals that, in contrast with our results for small town residents, a substantial percentage of rural property owners reported negative change in these categories. While less than five percent of small town residents reported that there had been an increase in criminal behaviors such as vandalism, theft, and crop and livestock damage, over 20 percent of property owners reported increases in them. Figure 1-7a from the previous results section shows that between 10 and 16.8 percent of small town residents reported that the trails had led to an increases in loitering, trespassing, illegal

parking and illegal motorized trail use, but a much higher percentage of property owners (between approximately 28 and 40 percent) reported increases in these behaviors.

Figure 2-7b- Property Owners Trail Conditions: Personal/Nuisance

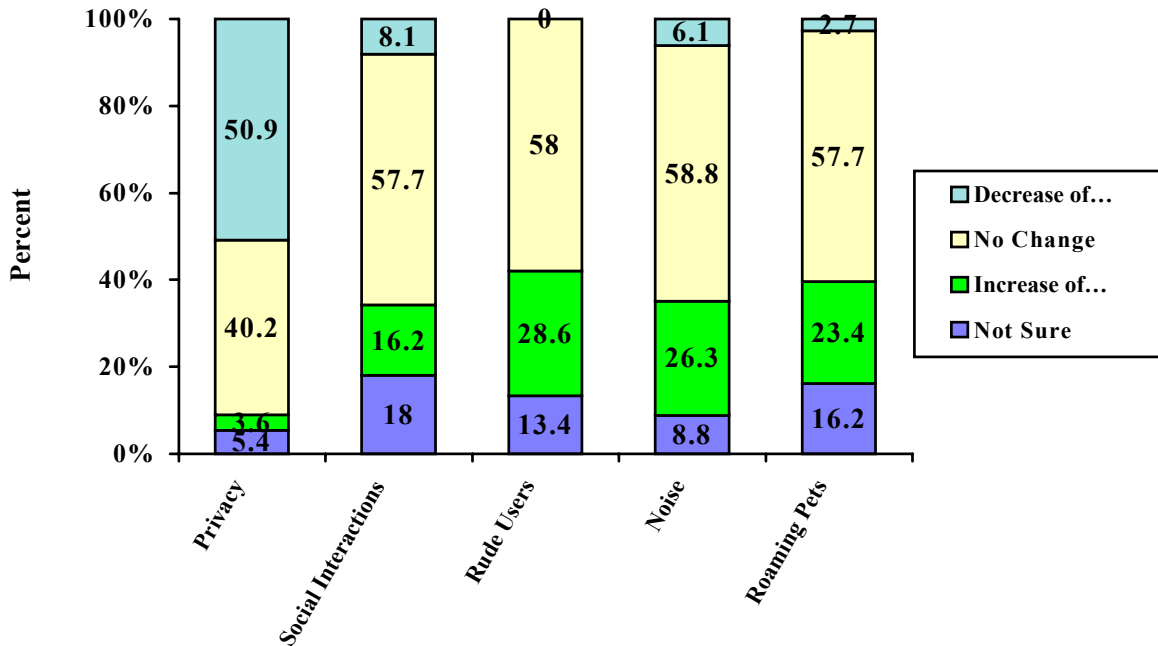


Figure 2-7b shows our findings on the group of items we have labeled “Personal/Nuisance” issues. Rude trail users (28.6 percent), increased noise (26.3 percent) and a reduction of privacy (50.9 percent) were reported by a noticeable percentage of the property owners, with a reported increase in roaming pets a somewhat smaller issue. The decrease in privacy, reported by only 21.2 percent of our small town residential respondents, was the largest single negative impact in the set of items shown in Table 2-6. Increased social interactions were reported over 40 percent of our small town residential respondents, but only 16.2 percent of rural property owners reported this impact.

Figure 2-7c- Property Owners Trail Conditions: Aesthetic/Experiential and Health/Recreation

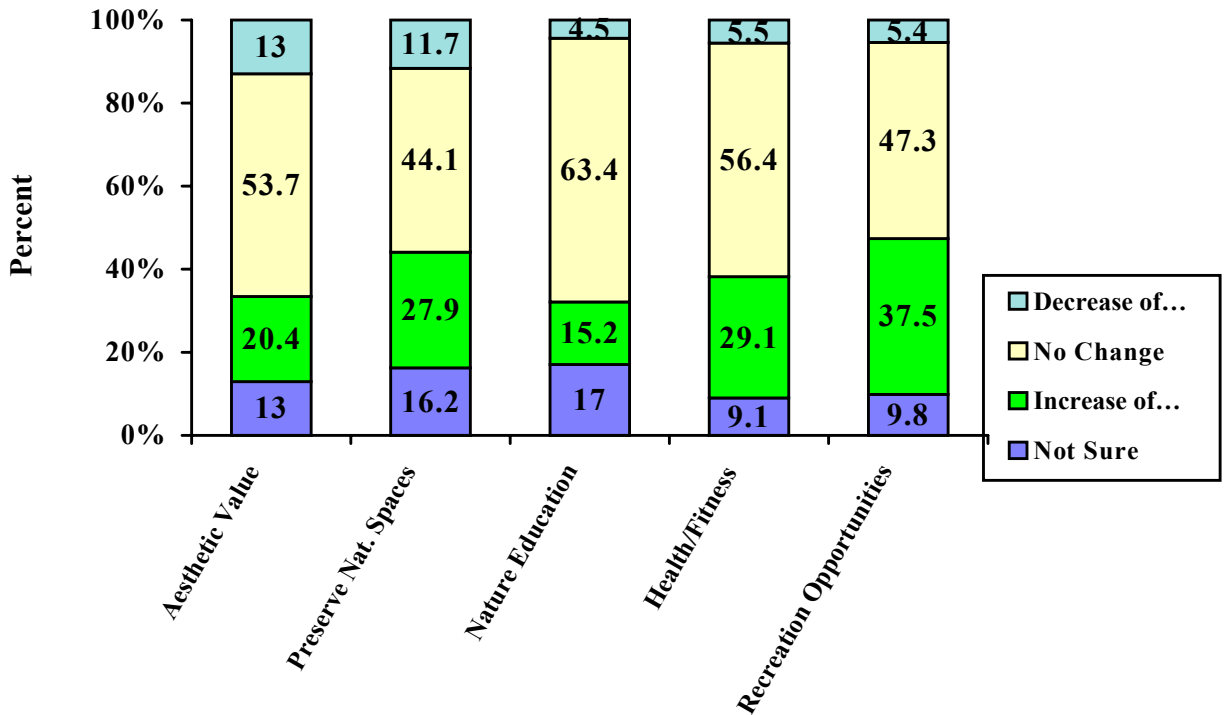


Figure 2-7c shows the combined results of two categories from Table 2-6: “Aesthetic/Experiential” and “Health/Recreation.” Only one item, aesthetic values, produced similar results among both small town residents and rural property owners. On the remaining items, rural property owners were about half as likely as small town residents to report that trail development produced improvements. Noteworthy in this regard are two areas in which our small town respondents reported the greatest increases, health and fitness, and recreation opportunities. In each case, over 60 percent of them reported that the rail to trail conversion resulted in an increase of opportunities in these areas. In contrast however, only 29.1 and 37.5 percent of rural property owners reported improvements in these areas.

Figure 2-7d- Property Owners Trail Conditions: Community/Economic

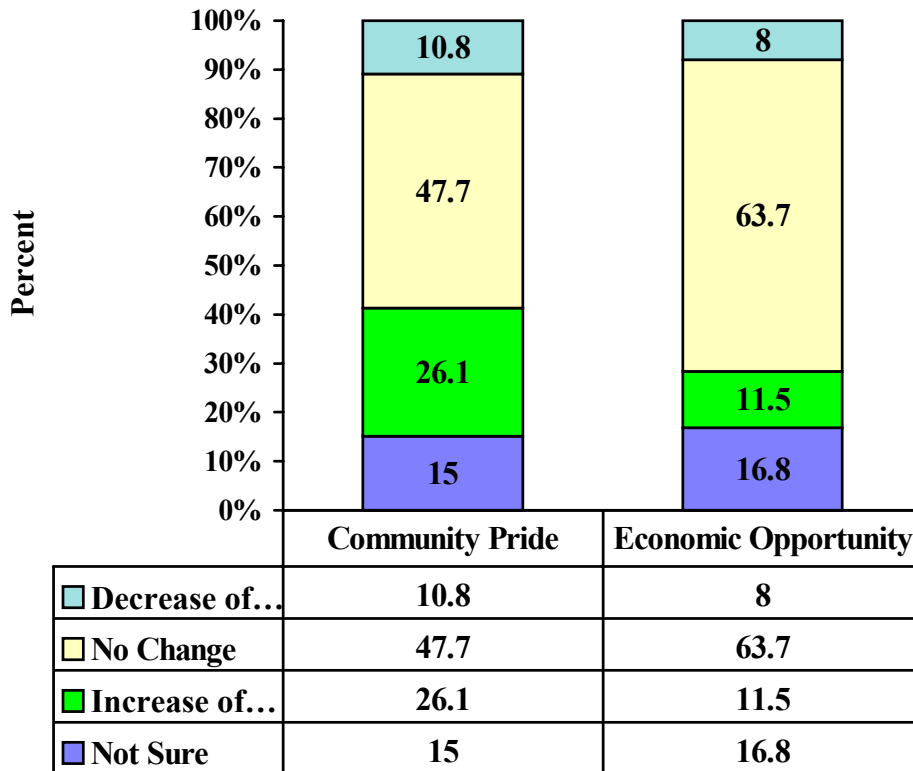


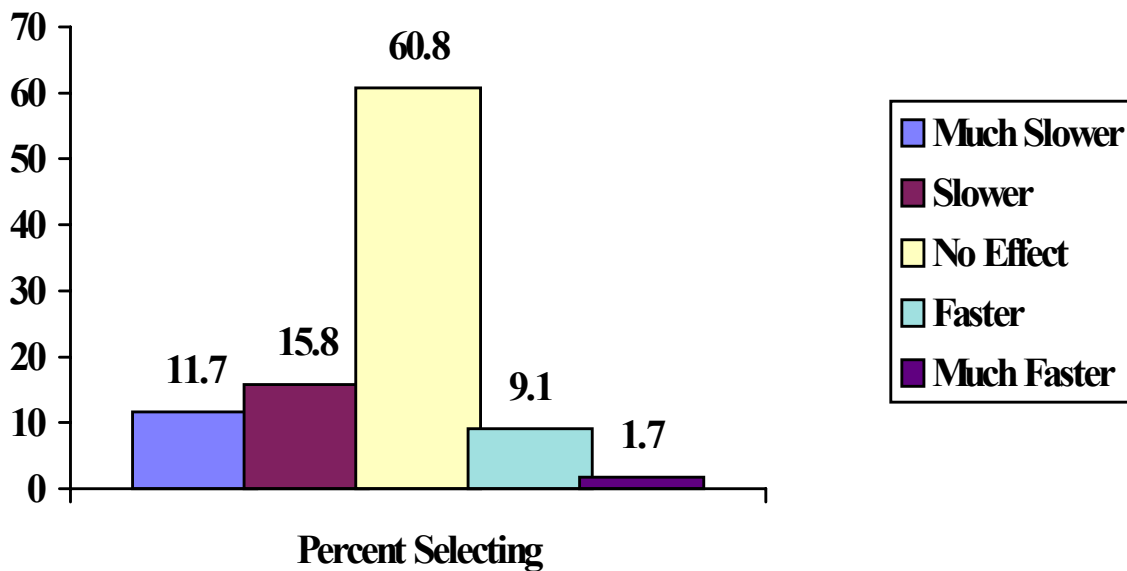
Figure 2-7d provides a graphic representation of the final two items from Table 2-6, the category we have called “Community/Economic”. Once again the data reveal a much less positive reaction to trail development among rural property owners. While 58.8 percent of small town residents believed that the trails increased community pride, only 26.1 percent of property owners were of that opinion. And while 42.3 percent of residential respondents believed that trails increased economic opportunity, only 11.5 percent of rural property owners shared that assessment.

Economics and Property Values

Previous trail research in urban and suburban settings (e.g. Greer, 2000) has given considerable attention to the perceived impact of trails on residential property values and marketability. To extend this focus in our investigation of rural settings, we asked rural

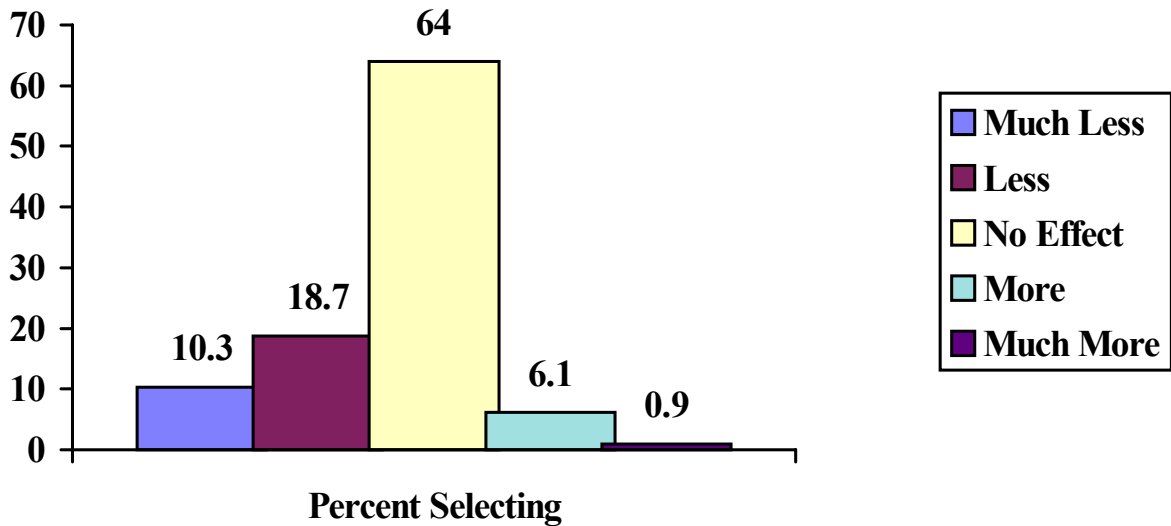
property owners to estimate the impact of the trails on the speed and price of property sale. Our findings on the issue of speed of sale are shown in Figure 2-8, where it is apparent that the results, though predominantly neutral, weigh somewhat in favor of a slower sale. An examination of the data for small town residents (Figure 1-8, previous results) generally favored the quicker sale of residential property located in small towns.

Figure 2-8- Impact of Trail on Speed of Rural Property Sale



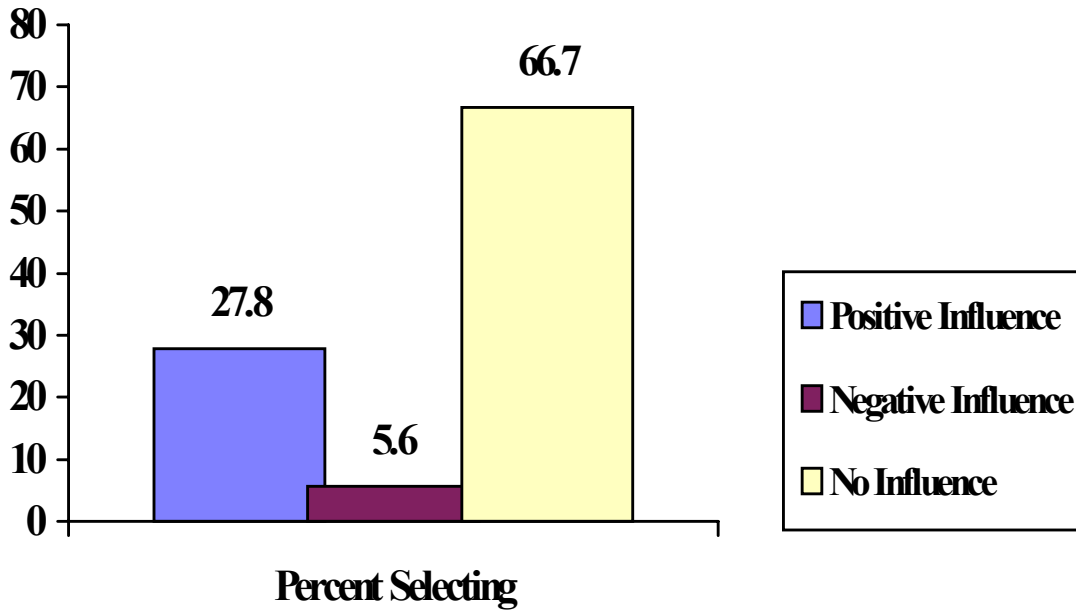
A look at trail impact on the value of rural property sales is provided in Figure 2-9. Here again the outcome is largely neutral, but with more property owners reporting negative than positive impacts. Again, this is in contrast with our finding that few residents of small towns perceived the trails to have a harmful economic impact on their residential property (see Figure 1-9, previous results).

Figure 2-9- Impact of Trail on Price of Rural Property Sale



The survey respondents were also asked if they first purchased or occupied their rural property before or during/after the conversion of the railroad to a trail. In the latter case we asked about the trail's impact on their purchase decision. As shown above in Table 2-1, only 18 of the respondents indicated that the trail was present or under construction when they purchased their rural property. Figure 2-10 shows that of the limited number of respondents who purchased their property during or after the rail to trail conversion, almost one in three (all on the Wabash and MoPac Trails) indicated that the trail positively influenced their decision, and only one respondent on the MoPac Trail indicated that the trail was a negative influence. A larger sample of rural property purchasers would improve our ability to generalize from these findings.

Figure 2-10- Impact of Trail on Rural Property Purchase Decision



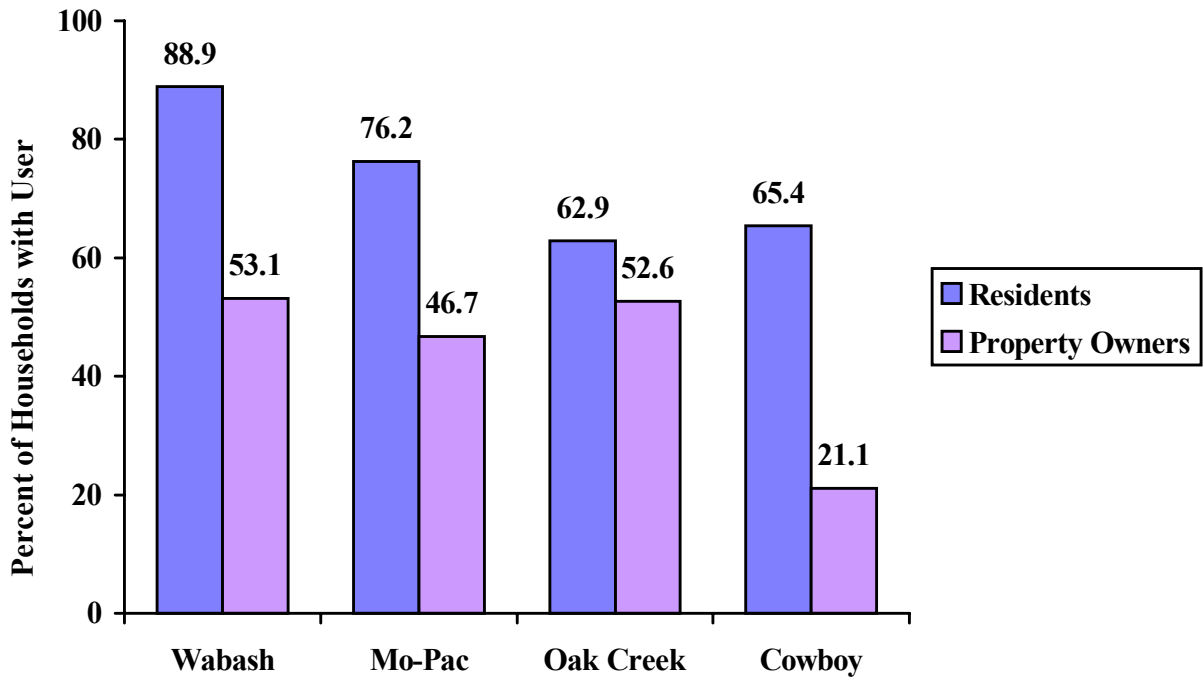
Trail Use

We asked rural property owners a variety of questions concerning trail usage, including whether or not any family member ever used the trail for recreation, the frequency of trail use by various household members, and whether or not the trail was ever used as a substitute transportation corridor. Among the small town residents we found that approximately three-fourths of families had someone who used the trail at least occasionally. But as shown in Table 2-7, less than half of the rural property owners had a household member who used the trail for recreational purposes. Again our results indicated that trail usage was not consistent from trail to trail. As shown in Figure 2-11, our data indicated that rural property owner households near the Wabash, Oak Creek and Mo-Pac Trails were more likely to have a trail user than those near the Cowboy Trail.

Table 2-7- Use of Trails for Recreation by a Family Member- All Property Owners

	Number	Percent
Yes	52	44.9%
No	64	55.1%

Figure 2-11- Four-Trail Comparison: Use of Trails for Recreation by a Family Member



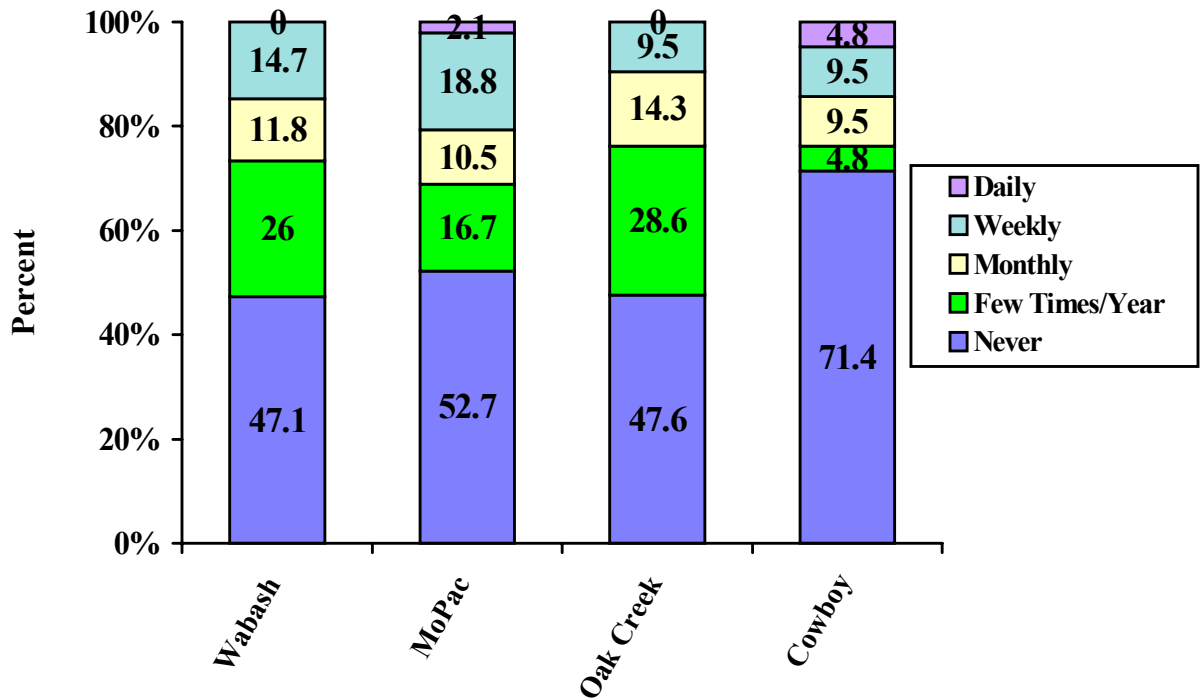
We also asked our respondents how frequently they themselves used the trails for recreation. As Table 2-8 reveals, trail use was far less frequent among rural property owners than small town residents. While only 25.5 percent of the latter group said they never use the trails, over half of the rural property owners were nonusers.

Table 2-8- Frequency of Respondent Trail Use- Small Town Residents and Rural Property Owners

	Small Town Residents		Rural Property Owners	
	Number	Percent	Number	Percent
Daily Use	17	7.4%	2	1.6%
Weekly Use	54	23.4%	18	14.5%
Once or Twice a Month	35	15.1%	14	11.3%
Few Times a Year	66	28.6%	24	19.4%
Never	59	25.5%	66	53.2%
Total	231	100%	124	100%

Figure 2-12 below shows that on all trails rural property owners were relatively infrequent trail users. This was particularly the case near the Cowboy Trail where over 70 percent of our respondents said they never use the trail. As pointed out previously, the different demographic characteristics of families (e.g. age, income and family composition) or the characteristics of the trails themselves (length and proximity to other local recreation amenities) may account for this.

Figure 2-12- Four-Trail Comparison: Frequency of Property Owner Trail Use



We also asked the rural property owners how frequently they or members of their families used the trails for transportation purposes. As shown below in Table 2-9, just fewer than 10 percent of small town residents reported that this occurred at least occasionally, while transportation uses of the trails were reported by 8.5 percent of the rural property owners. Follow up analysis revealed that transportation usage of the trails was approximately equally distributed between all four trails.

Table 2-9- Use of Trails for Transportation

	Small Town Residents		Rural Property Owners	
	Number	Percent	Number	Percent
Use Occasionally or Often	22	9.2	10	8.5
Don't Use for Transportation	216	90.8	107	91.5
Total	238	100%	127	100%

Why They Recreate

Finally, we asked rural property owners to rate the importance of twelve possible reasons for engaging in outdoor recreation on a five-point scale (1= not important to 5= extremely important). In Table 2-10, the mean rating on each of these items is shown for those in our sample (n=52) who reported that a member of their family used the trails for recreation. Because we found no significant gender differences in these recreation priorities, we have not reported the mean responses to these items separately for males and females.

Table 2-10- Mean Importance of Reasons for Engaging in Outdoor Recreation- Small Town Residents and Property Owners With Family Trail User

Reason for Outdoor Recreation	Small Town Residents		Rural Property Owners	
	Mean (174)	Item Rank	Mean (52)	Item Rank
Exercise	3.63	6	3.54	7
Promote health	4.03	3	3.98	4
Enjoy nature	4.16	1	4.17	1
Be outside	4.09	2	4.17	1
Relax	4.03	3	4.02	3
Be with others	3.17	9	3.29	8
Be alone	3.24	8	3.23	9
Spend free time	3.57	7	3.67	6
Train for sports	2.27	12	2.19	12
Study culture	2.34	11	2.54	11
Explore county	3.12	10	2.87	10
Have fun	3.99	5	3.92	5

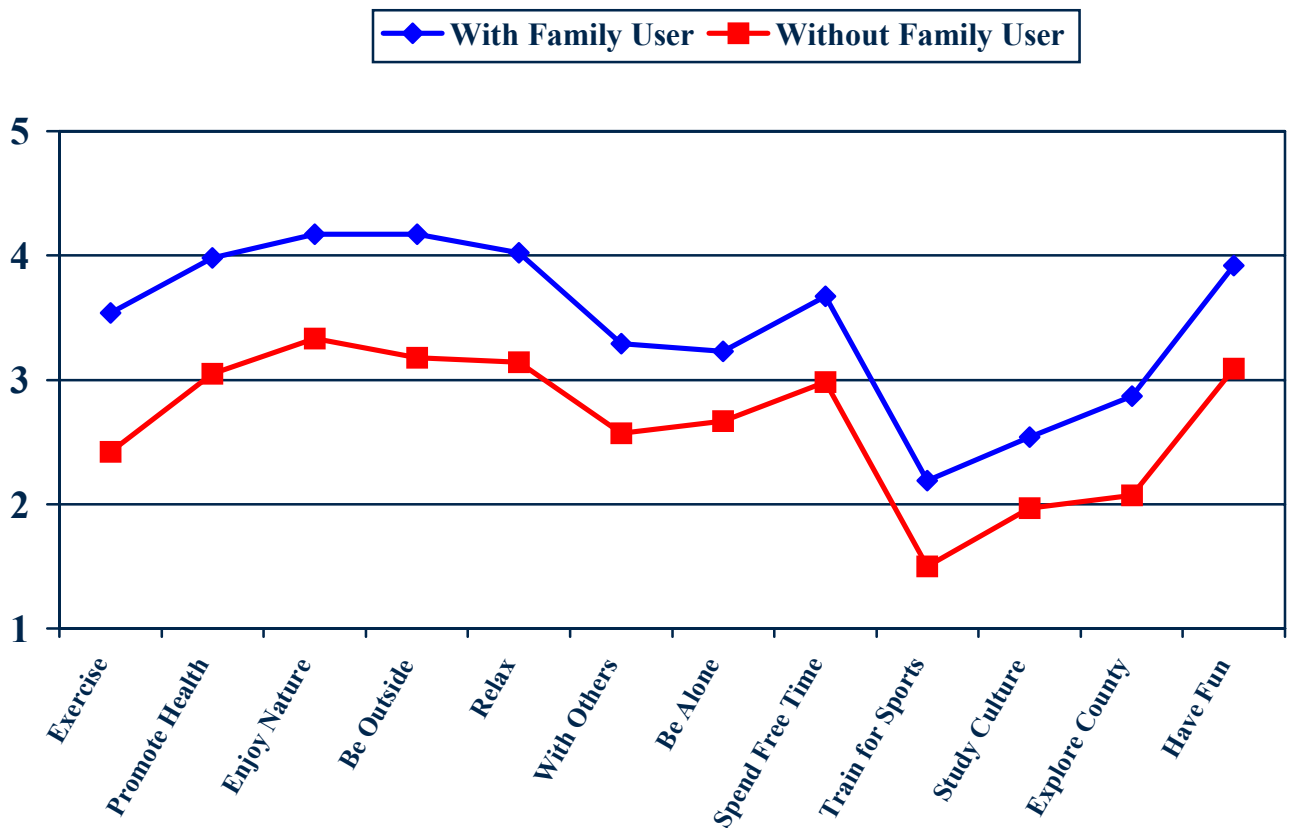
The data in Table 2-10 show strong similarities in recreation priorities of small town residents and rural property owners in the case where there was a trail user in the household. Nature and outdoor experiences were the most important reasons for trail-related outdoor recreation among our respondents, along with a desire for health promotion, relaxation, and simply having fun. Of only moderate importance to both groups were being alone or with others, and using the trails to explore their counties, and the least important reasons for recreation were studying culture and training for sports.

**Table 2-11- Mean Importance of Reasons for Engaging in Outdoor Recreation
- Property Owners With and Without a Family Trail User**

Reason for Outdoor Recreation	Rural Property Owners- No Family Trail Use		Rural Property Owners- Family Trail Use	
	Mean (59)	Item Rank	Mean (52)	Item Rank
Exercise	2.42	9	3.54	7
Promote health	3.05	5	3.98	4
Enjoy nature	3.33	1	4.17	1
Be outside	3.18	2	4.17	1
Relax	3.14	3	4.02	3
Be with others	2.57	8	3.29	8
Be alone	2.67	7	3.23	9
Spend free time	2.98	6	3.67	6
Train for sports	1.50	12	2.19	12
Study culture	1.97	11	2.54	11
Explore county	2.07	10	2.87	10
Have fun	3.09	4	3.92	5

Because the percentage of rural property owners with a trail user in the family was relatively small compared with the same group among the small town residents, we conducted a statistical comparison of reasons for engaging in outdoor recreation between those who had a trail user in the family and those who did not. The mean ratings for each group are shown above in Table 2-11, and all but two of them were significantly different at the .01 level. A graphic representation of this data is provided in Figure 2-13.

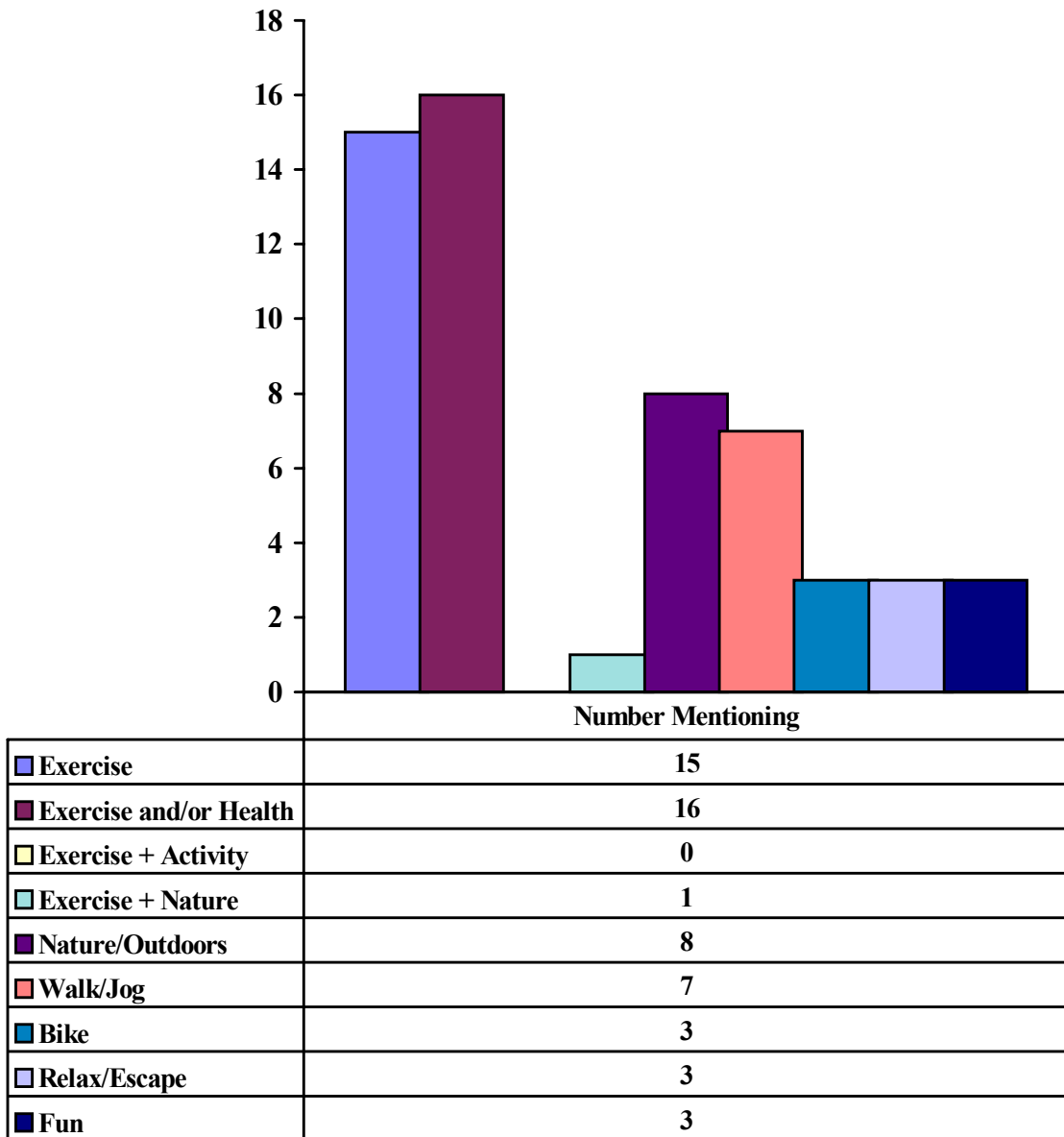
Figure 2-13- Reasons for Recreation Rated- Property Owners With and Without a Family Trail User



Taking a more subjective approach to understanding reasons for trail use, we provided an open-ended question asking rural property owners to name the most important reason or reasons for their engaging in outdoor recreation. As Figure 2-14 shows, the findings on this question yield a slightly different picture of their motivation.

Like the small town residents, the rural property owners rated exercise as only moderately important as a reason for participating in outdoor recreation (Table 2-11). But faced with naming only one or two reasons for recreating, they most frequently invoked the word “exercise”.

Figure 2-14- Reasons for Recreation Mentioned- All Property Owner Households with a Trail User (n=52)



Results

Study 3: Business Owners

Demographics and Sample Overview

We received 83 completed surveys out of 249 mailed, for a response rate of 33.3 percent. A breakdown by trail of surveys mailed and received is provided in Table 3-1.

Table 3-1- Surveys Mailed and Received by Trail

	Number Mailed	Number Returned	Percent Response Rate
Cowboy	197	67	34%
MoPac	23	7	30%
Oak Creek	15	6	40%
Wabash	14	3	21.4%
Total	249	83	33.3%

In the business survey, we also tracked the source of our survey respondents according to their town of origin, and Table 3-2 below provides that information.

Of the 83 businesses responding, 92.7 percent reported that they operated the business prior to the construction of the trail. With respect to the property's location relative to the trail, 82.9 percent said that the trail ran nearby their business, and 17.1 percent reported that the trail ran adjacent to it. The median length of operation of the business was 20 years, with a mean of 29 years. As shown in Table 3-3, most of the business owners (57.8 percent) described their businesses as consumer service/retail operations.

Table 3-2- Town of Origin of Business Survey Respondents

	Number	Percent
<i>Cowboy Trail</i>	<i>67</i>	
Battle Creek, NE	12	14.5
Meadow Grove, NE	5	6.0
Tilden, NE	18	21.7
Neligh, NE	31	37.3
Oakdale, NE	1	1.2
<i>MoPac Trail</i>	<i>7</i>	
Eagle, NE	3	3.6
Elmwood, NE	2	2.4
Walton, NE	2	2.4
<i>Oak Creek Trail</i>	<i>6</i>	
Valparaiso, NE	6	7.2
<i>Wabash Trace Trail</i>	<i>3</i>	
Mineola, IA	2	2.4
Malvern, IA	1	1.2

Approximately one in four (26.8 percent) of the businesses said that they provide some services to trail users but only about one in ten (10.8 percent) had done anything to attract trail users to their businesses. Sales to trail users consisted primarily of food and supplies.

Table 3-3- Breakdown of Respondents by Type of Business

	Number	Percent
Light Industrial	7	8.4
Not-for-Profit	8	9.6
Retail- Non-Recreation	48	57.8
Retail- Recreation	7	8.4
Other	13	15.7
Total	83	100.0

Most of the businesses responding to our survey were small businesses with few employees. The mean number of full-time employees was 6.5 with a median of 2.0, and the mean number of part-time employees reported was 3.15 with a median of 1.0. Approximately one-third of the respondents reported that they could observe trail users from their business. Of those who could do so, 22 of 23 (95.7 percent) said that they would describe trail user behavior as positive rather than negative.

Participation in Trail Development

Two questions in our business survey addressed whether or not the business owners had participated in trail development or had supported the trail financially. While only 6.2 percent of the small town residents reported that they or a family member had been actively involved in the planning, development or maintenance of the trail, business owner participation was somewhat greater, at 9.6 percent. With respect to financial support for trail development, we found that approximately one in four business owners indicated that they might have done so (see Table 3-4).

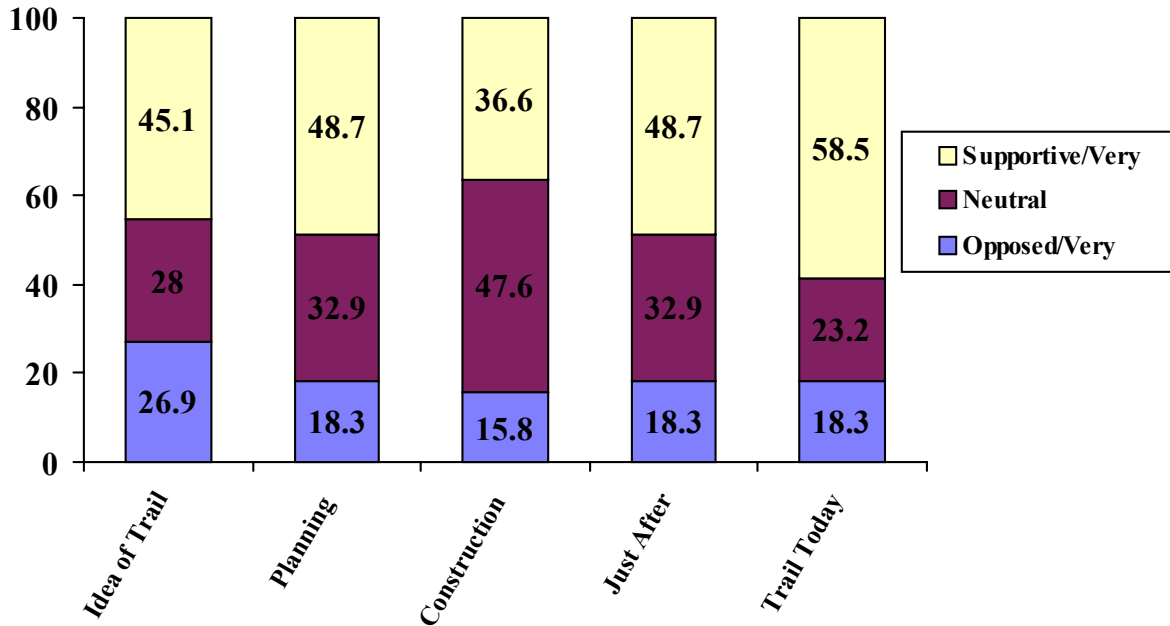
Table 3-4- Have You Ever Supported the Trail Financially?

	Number	Percent
Never	61	75.3
Not Lately	10	12.3
Yes	10	12.3
Total	81	100.0

Support for the Trail Over Time

To assess their attitudes toward the trails over time, we asked business owners to describe their level of support or opposition to their respective trails at several points in the trail conversion process. Like the small town residents and rural property owners we asked about trail support or opposition: 1. As an idea before it was built, 2. During planning and design, 3. During construction, 4. Shortly after built, and 5. As the trail exists today. As shown in Figure 3-1, the responses we received to this set of questions are indicative of a relatively small but stable level of opposition to trail development among business owners, a pattern also seen among rural property owners, where trail opposition was considerably greater, but also stable (see Figure 2-2, previous results). In common with the previous residential sample, we do, however, detect a pattern of escalating support for trails as the rail-trail conversion draws nearer to completion (see Figure 1-2, residential results).

Figure 3-1- Percent of Business Owners Supporting/Opposing Trail at Five Points in Time



Trail’s Influence on Self, Employees and Community

Next, we presented the business owners with a series of scales in which they were asked to rate the influence of the trail on their own life, on their employees, and on the community. These results are shown in Figure 3-2 below, and they generally indicate that a substantial percentage of business owners see the rail-trail conversions as beneficial influences. We would note here that one can again observe that the perceived benefits of trails tended to be greatest at the community level, as opposed to benefiting the respondent directly (see Figures 1-3 and 2-3 in previous results).

Figure 3-2- Perceived Influence of Trails to Business Owners

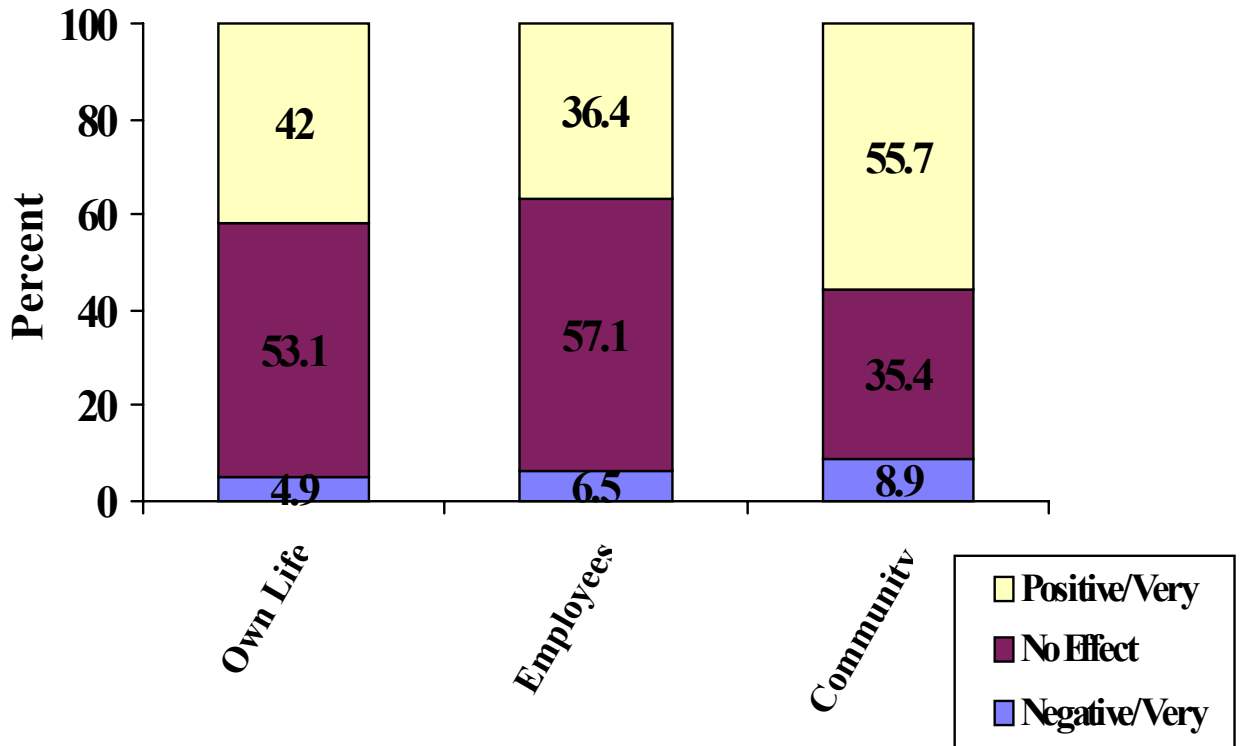
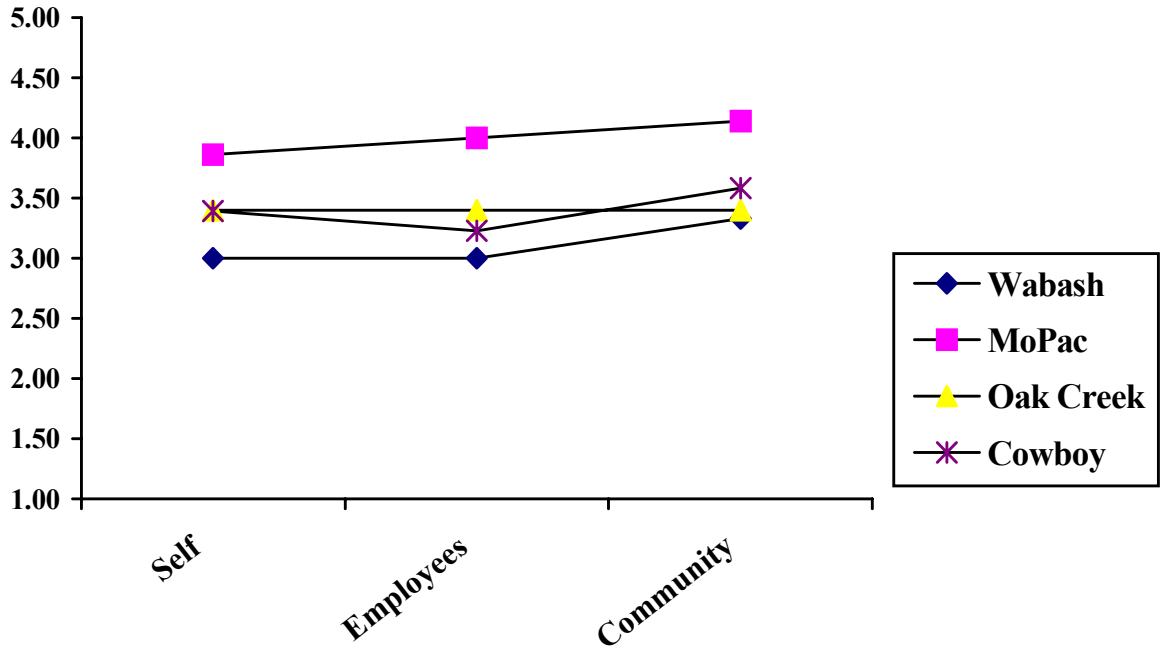


Figure 3-2a is based on the same data, and illustrates the mean level of benefit on a five-point scale (5= very positive to 1= very negative) our respondents expressed, broken down by specific trail. These results should be interpreted with caution due to the small number of respondents from the Wabash, MoPac and Oak Creek Trails, but they generally indicate moderately positive perceptions among the business owners, especially those near the MoPac East Trail.

**Figure 3-2a- Four-Trail Comparison of Business Owners:
Mean Perceived Influence of Trails**



We also asked the business owners to rate their level of satisfaction with the trail near their business, as well as whether operating a business near the trail is better or worse than operating one near the railroad. The results of these questions are shown in Figures 3-3 and 3-4 below. As shown in Figure 3-3, less than ten percent of the business owners were dissatisfied with trails, while almost 40 percent of them were moderately or very satisfied. The reader may recall that among our small town residents almost two-thirds were very or moderately satisfied with the trail, while less than 15 percent of them were very or moderately dissatisfied (Figure 1-4). And over 42 percent of rural property owners were very or moderately dissatisfied with the trails (Figure 2-4).

Figure 3-4 illustrates the responses of business owners with respect to the issue of operating a business near the trail versus near the railroad. Over one-third (39.0 percent)

of them were of the opinion that having a business near the trail is moderately or much better than having one near the railroad, while 7.3 percent believed that it is better to be

Figure 3-3- Satisfaction with Trail Near Your Business

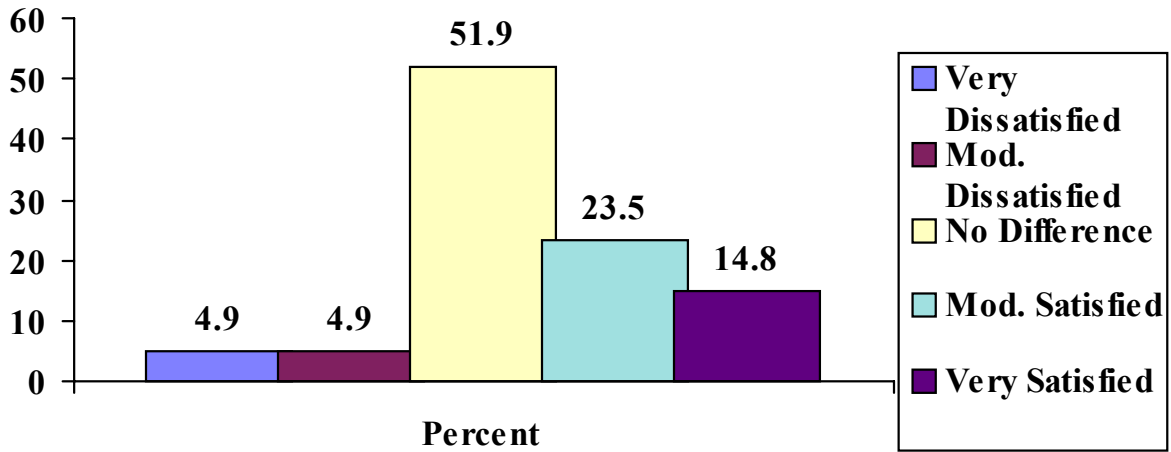
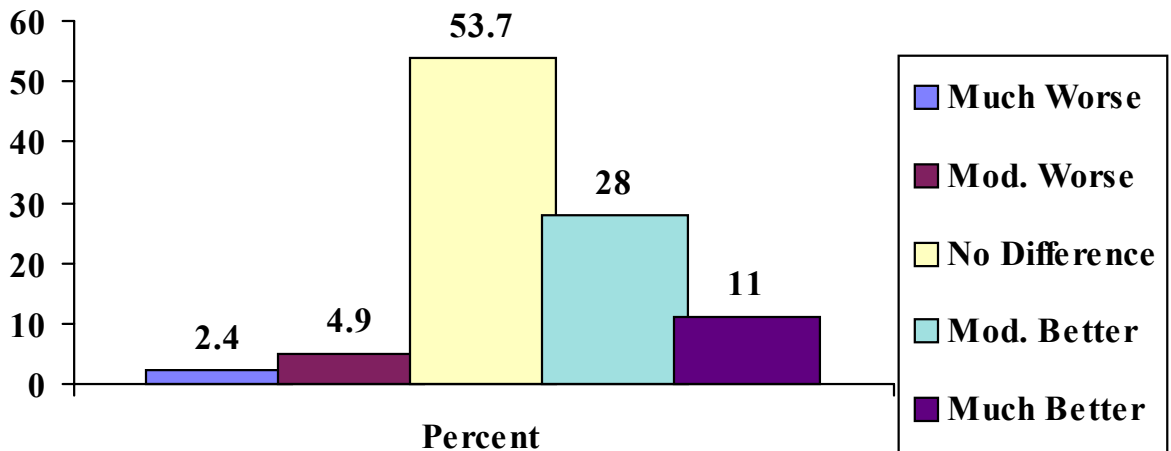


Figure 3-4- Is Operating a Business Near the Trail Better or Worse than Near the Railroad?



located near the railroad. These results are relatively similar to our findings for small town residents (Figure 1-5), but are quite unlike the opinions expressed by rural property owners (Figure 2-5).

Given the previously observed differences in the amount of opposition to trails in different locales, the items reflected in Figures 3-3 and 3-4 were cross tabulated by trail. These findings are illustrated in Figures 3-3a and 3-4a respectively. The reader is again cautioned about the small number of respondents from all but the Cowboy Trail, but Figure 3-3a clearly indicates that a small percentage of business owners in all locales were unsatisfied with the trails.

Figure 3-3a- Four-Trail Comparison: Business Owners' Satisfaction with Trail Near Your Business

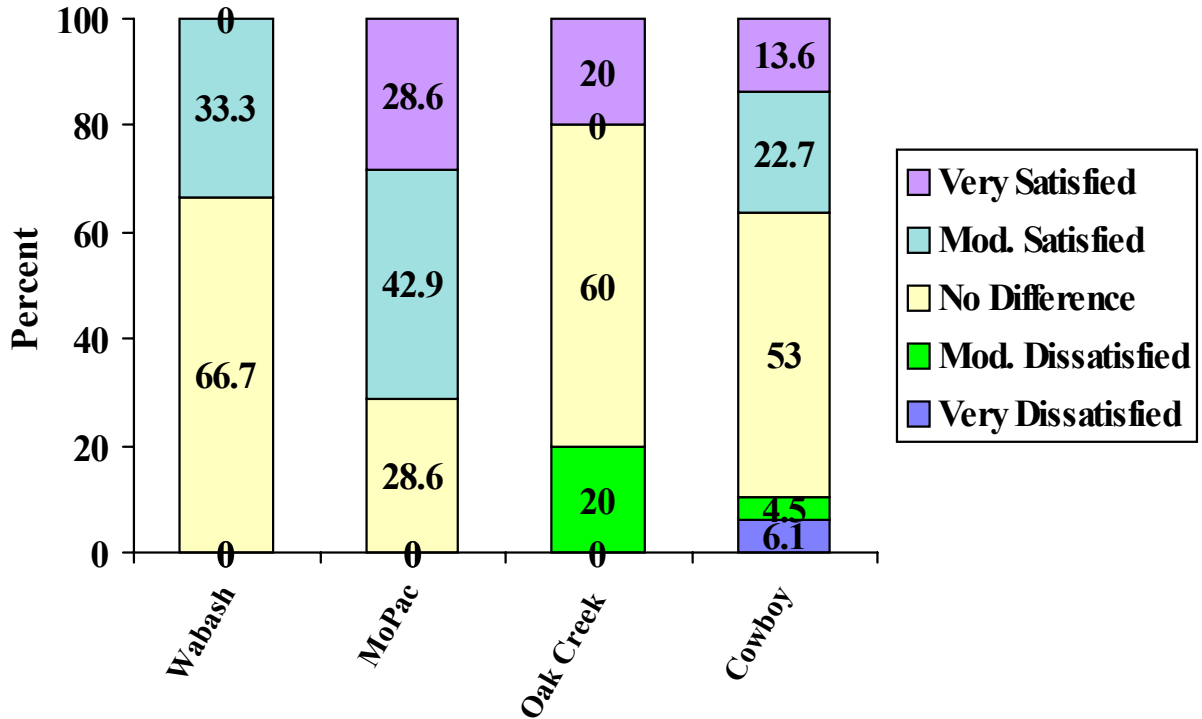
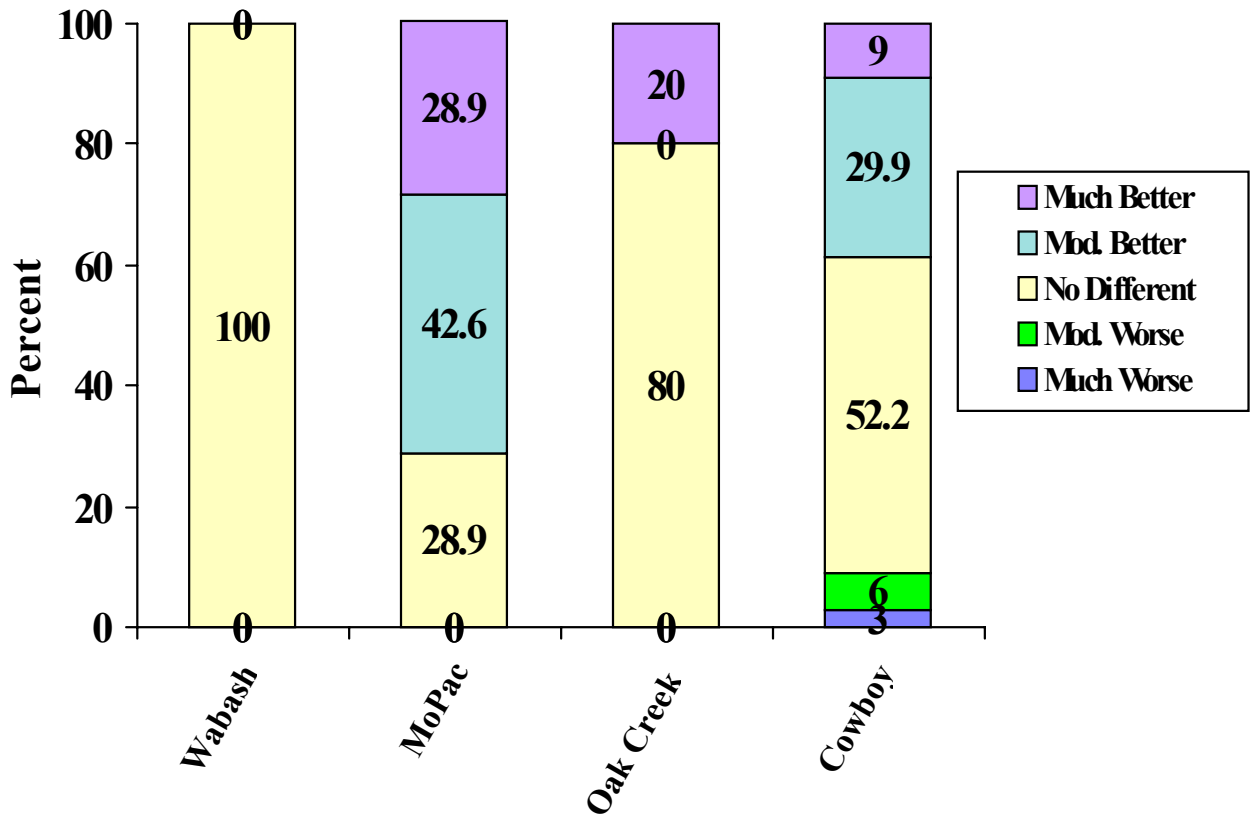


Figure 3-4a, comparing the trail to the railroad as a neighbor, reveals a similar pattern, with very few unfavorable comparisons of the trail with the railroad, save a small number near the Cowboy Trail.

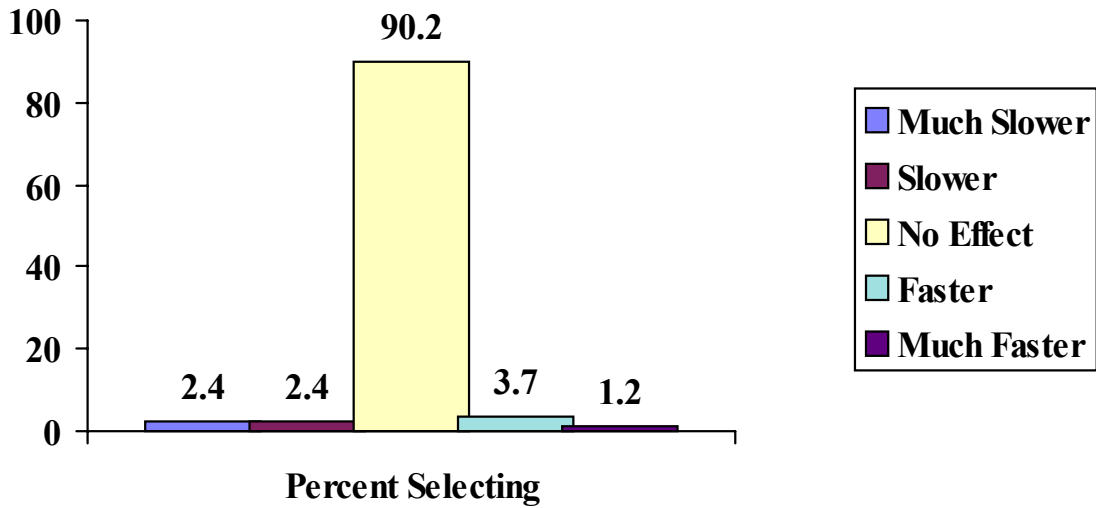
Figure 3-4a- Four-Trail Comparison: Business Owners Percent Rating Business Operation Near the Trail Better or Worse than Railroad



Economics and Property Values

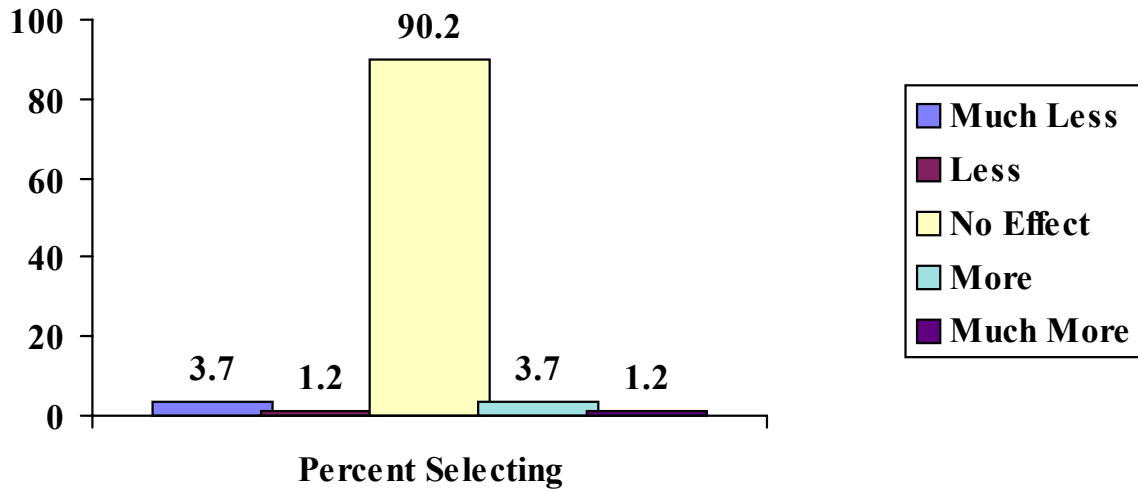
In many previous trail research studies, various types of economic impact have received considerable attention, including the perceived impact of trails on property values and marketability. Continuing this line of investigation, we asked small town business owners to estimate the impact of the trails on the speed and price of property sale. Our findings on the issue of speed of sale are shown in Figure 3-5, where it is apparent that the results are predominantly neutral, with little expectation of faster or slower business sales due to trail development. An examination of the data for small town residents (Figure 1-8, previous results) generally favored the quicker sale of residential property located in small towns.

Figure 3-5- Impact of Trail on Speed of Business Sale



A look at trail impact on the value of small town business sales is provided in Figure 3-6. Here again the outcome was largely neutral, with over 90 percent of business owners reporting that the trails would have no impact, and only very scattered expectations of negative or positive trail impact.

Figure 3-6- Impact of Trail on Price of Business Sale



The survey respondents were also asked if they first purchased or operated their business before or during/after the conversion of the railroad to a trail. Only six of the

respondents' businesses were purchased during or after trail development, and four of these reported that the trail was a positive influence, while the remaining two reported that it had been a negative factor. A larger sample of rural and small town business purchasers would improve our ability to generalize from these findings.

Given the possibility that rail to trail conversions might impact general business activity in an area without necessarily impacting a specific business, we asked business owner respondents about their perceptions of trail impact on general business activity in their towns. More specifically, we asked them about the trail's impact today, two years from now, and five years from now. These results are provided in Figures 3-7a through 3-7c. In all time frames we observe that less than 10 percent of business owners

Figure 3-7a- Trail Impact on Current Business Activity

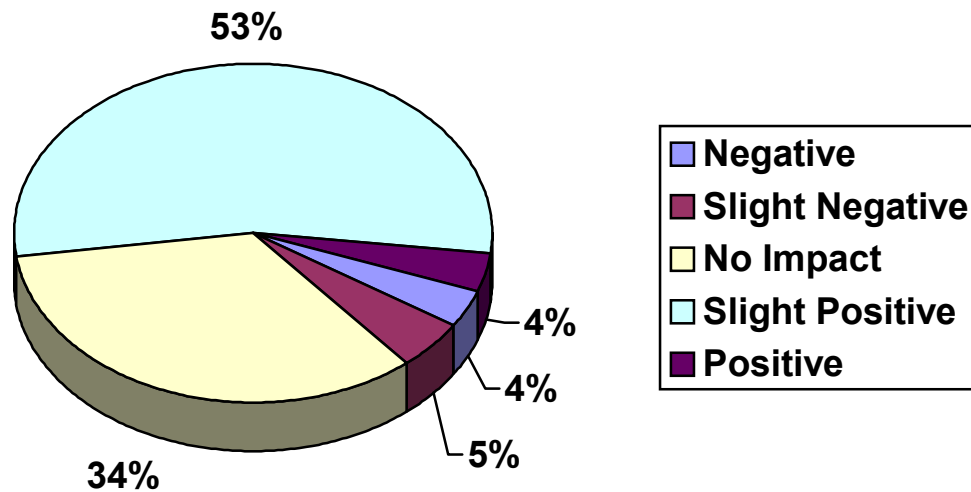


Figure 3-7b- Trail Impact on Business Activity in Two Years

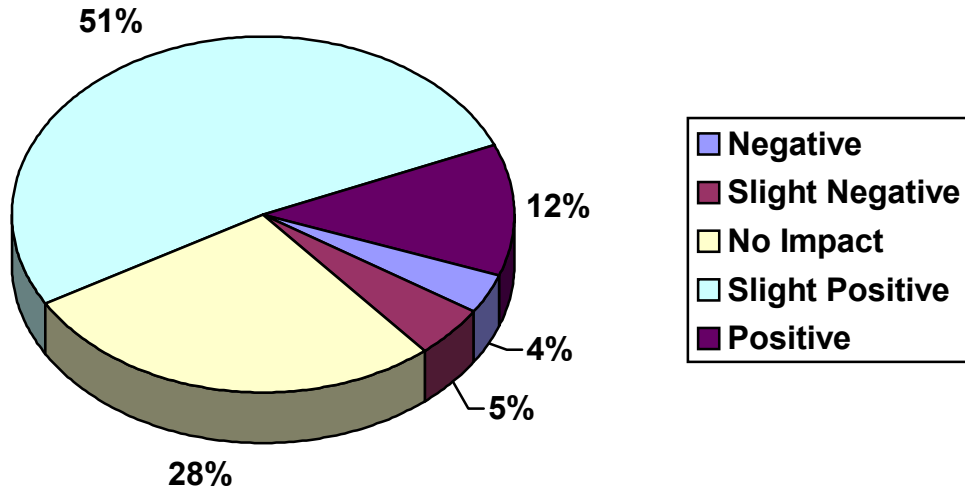
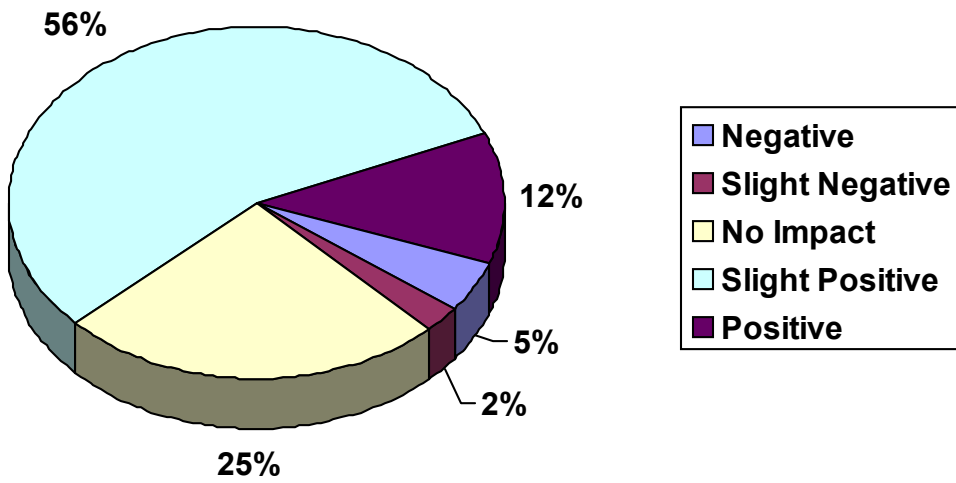


Figure 3-7c- Trail Impact on Business Activity in Five Years



believed the trails would have a negative impact on economic activity, and as we extended the time frame into the future the proportion expecting there to be a positive economic impact as a result of the trails grew from 57 to 68 percent.

Trail Use

Compared with our other survey groups, we asked our business owners a relatively limited set of questions concerning trail usage. As opposed to the lengthy number of items asked of the residents and property owners, we simply asked the business owners whether they or their employees used the trail before work, during breaks, or after work. The responses to these questions are shown below in Table 3-5. We found that about half of the respondents reported use of the trails by themselves or by an employee after work hours, while use of the trails before work or during breaks occurred less frequently.

Table 3-5- Rate of Trail Use Before, During and After Work

	Use Before Work?		Use on Breaks?		Use After Work?	
	Number	Percent	Number	Percent	Number	Percent
<u>Yes</u>	11	18.3	7	12.7	34	47.9
No	48	80	47	85.5	35	49.3
Plan To	1	1.7	1	1.8	2	2.8
Total	60	100	55	100	71	100

Conclusions and Discussion

The purpose of this research was to investigate the impact of the existing trail system among Nebraska and Iowa's small town residents, rural property owners, and rural and small town business owners. Based on the responses to a total of 466 mail surveys from four targeted trail segments on the Cowboy, Oak Creek, MoPac East, and Wabash Trace trails, we shall summarize our findings in a number of specific areas, including participation in trail development, support for the trail over time, trail maintenance, conditions and crime, the trails' influence on self, family and community, economics and property values, and trail use.

As the reader of this report may already have observed, a theme that will appear throughout these conclusions is the marked difference of opinion expressed by rural property owners. This difference obviously makes simple generalizations about our results more difficult, and it seems appropriate to comment on differences we observed in each group's responses as we progress through each respective issue.

1. Participation in Trail Development – Active involvement in trail planning and development was generally reported by about one in ten households responding to our surveys, with lower rates (6.2%) among small town residents, and slightly higher rates of involvement (14.6%) reported by rural property owners. Attendance at trail-planning meetings was also higher among this group, with 35.8 percent of them reporting that a member of their household had attended a trail-planning meeting, while this was true of only 19 percent of small town residents. Consistent with this is the tendency of rural property owners to be somewhat better informed about trail

development than small town residents (see [Table 1-4](#) and [Table 2-4](#)). These results may simply indicate that there are higher levels of interest in land use issues among rural property owners.

2. **Support for the Trail Over Time** – With the exception of rural property owners, the majority of rural Nebraska and Iowa residents are generally supportive of the rail-to-trail conversion process (see [Figures 1-2](#), [2-2](#) and [3-1](#)). Our data also indicate that support tends to be the weakest during the trail planning and construction phase, and reaches a high point at or near the time of trail completion. Opposition to trail development is clearly much stronger among rural property owners, where the level of support approaches the level of opposition only after trail completion ([Figure 2-2](#)). Among all three groups of respondents the level of trail opposition tends to remain relatively constant after a slight drop when planning begins, suggesting that trail developers have had more success at generating support among the undecided and uninformed, as opposed to changing the minds of early trail opponents.
3. **Trail Maintenance, Conditions and Crime** – Our respondents again had noticeably different opinions about *trail maintenance* practices along rural trails, with rural property owners reporting more serious problems than small town residents ([Figures 1-6](#) and [2-6](#)). Weed control and mowing were of greatest concern, as this comment by one rural property owner illustrates:

“I have to mow the ditch to keep weeds down. I have to pick up the trash and have dogs running loose. The dog and mowing problems need to be addressed. I live on the trail, farm near the trail and I have livestock near trail.”

But another rural property owner offered that:

“They spray for noxious weeds and keep the trail mowed. Railroads sprayed with machines which the weed killer drifted.”

By and large, our data indicate that a minority of rural and small town citizens expressed concerns about increased levels of crime due to trail development. Such concerns were, however, expressed far more often by rural property owners, with trespassing and illegal motorized use the most frequent complaints ([Figures 1-7a](#) and [2-7a](#)). One property owner commented that:

“When a person was on the railroad it was considered trespassing. Now persons can use it as means of access to our property. More activity- people- vehicles-snowmobiles, vandalism.”

In contrast, another rural resident said:

“Trail allows children to ride bikes without worrying about traffic. No more train traffic/noise on the trails”.

A similar difference of opinion between small town residents and rural property owners was expressed with regard to a number of *personal or nuisance issues* ([Figures 1-7b](#) and [2-7b](#)). While the majority of our respondents reported no significant change in the amount of rude trail users, noise, and roaming pets, one benefit observed disproportionately by small town residents was an increase in *social interactions*. Alternatively, the majority of rural property owners expressed concerns about a *loss of privacy* due to trail conversion. As one rural property owner observed:

“The trail makes our private yard public. We built into section for seclusion and privacy.”

A number of items in our survey dealt with trail impact issues we have labeled *aesthetic/experiential* and *health/recreation*. As shown in [Figures 1-7c](#) and [2-7c](#), we again discovered noteworthy differences of opinion between small town residents and rural property owners. Consistent with their position on several other issues, the rural property owner group was far more skeptical about the existence of positive trail impacts, while the small town residents said with far greater frequency that the trails

had improved natural space preservation, opportunities for nature education, health and fitness, and recreation opportunities.

4. **Trail's Influence on Self, Family and Community-** A substantial percentage of Nebraska and Iowa residents believe that the trails have had a positive impact on life in their community. As shown by Figures [1-3](#), [2-3](#), and [3-2](#), this perspective was shared by all groups of respondents, including the rural property owners, and positive opinions exceed negative ones about trail impact in nearly every case. It is interesting to note that all groups of respondents generally saw more positive impacts as the frame of reference for this question expanded beyond their own life. Although the rural property owners again expressed more skepticism than business owners and small town residents, more of them were actually positive than negative about the overall community and countywide impact of trails. One rural property owner along the MoPac East Trail observed:

“We have horses and wanted to be close to the trail to ride. It provides a beautiful outlet for many activities- running, walking, biking and horseback riding. It is wonderful.”

One curiously incongruous finding revealed by our data is the seeming failure of the trails' positive community impact to translate into trail satisfaction among the rural property owners. In a return to the previous theme of skepticism among that group, we found that 42 percent of them were dissatisfied with the trails, while this was true of only 12 percent of small town residents and 10 percent of business owners (see Figures [1-4](#), [2-4](#) and [3-3](#)).

When asked specifically about the trails' impact on *community pride*, almost 60 percent of the small town residents believed that the trails resulted in an increase, but this was true of only 26 percent of rural property owners.

5. **Economics and Property Values** – Nebraska and Iowa residents generally did not perceive the trails to be of direct economic benefit to them by increasing their residential, rural, or business property values (Figures [1-9](#), [2-9](#) and [3-6](#)), but they were much more optimistic about the general impact of trails on community wide economic opportunity (Figures [1-7d](#), [2-7d](#), [3-7a](#)). While over 40 percent of small town residents expected economic opportunities to grow due to trails (Figure [1-7d](#)), only 11.5 percent of rural property owners had that expectation (Figure [2-7d](#)). However 57 percent of nearby business owners expected the trails to improve general business activity in the short term, and over two-thirds of them expected business activity due to trails to grow in the next five years (Figures [3-7a](#) through [3-7c](#)).

With respect to actual *property purchase decisions*, of those respondents who had actually purchased residential or rural property since the completion of the trails in their area, we found that few of them reported that the trails had a negative influence, while about 25 percent said that the trails were an attraction (Figures [1-10](#) and [2-10](#)). This was true for both small town residents and rural property owners.

6. **Trail Use**- In a previous investigation of urban and suburban trails, we found that 85.2 percent of the households adjacent to Omaha recreational trails had a household trail user (Greer, 2000). The data from the current three studies indicate that rural trails, though not as frequently used, are used at least occasionally by a relatively high percentage of nearby residents. This was especially true of small town residents, where our results indicated that 73.6 percent of the households had a trail user (Table [1-7](#)). Much like the previous urban/suburban findings, we also discovered that trail usage varied somewhat from trail to trail, with the Wabash and MoPac having higher rates of use than the Oak Creek and Cowboy trails (Figure [1-11](#)).

Our rural property owner respondents did not use the trails as often as the small town residents however, with only 44.9 percent of the households reporting that a trail user was in residence (Table [2-7](#)). The low usage rate in this group was influenced considerably by an extremely low usage rate (21.1%) among rural property owners adjacent to the Cowboy Trail (see Figure [2-11](#)). Both residential and property owner usage frequencies were clearly lowest near the Cowboy and Oak Creek trails (Figures [1-12](#) and [2-12](#)).

Our results for the business owners are not strictly comparable due to the use of a shorter survey form, but approximately half of them indicated that they or their employees sometimes use the trails recreationally. This was mostly after-work use, with before work and break time usage occurring much less frequently (Table [3-5](#)).

Finally, the use of the trails for alternative transportation remains a relatively infrequent event in rural Nebraska and Iowa, with less than 10 percent of residents and property owners reporting even occasional transportation-related trail use (Tables [1-9](#) and [2-9](#)).

7. Outdoor Recreation Priorities- In hopes of better understanding the values and priorities of the respondents, and possibly explaining their trail usage patterns, we asked our small town residents and rural property owners to rate the importance of a number of possible reasons for engaging in outdoor recreation. As shown in Figures [1-13](#) and [2-13](#) the relative priorities of both groups were quite similar, with the highest priorities assigned to nature and outdoor experiences, as well as to relaxation and health maintenance. It is interesting to note that culture and exploration, two important ingredients in Nebraska's *A Network of Discovery* trail plan, were assigned relatively low importance by these rural respondents. Just as interesting are the consistent differences in priorities that surfaced when we divided the respondents into

those with and without a family trail user. From these results it would seem that a lack of family trail use is strongly related to a relatively low interest in general outdoor recreation participation.

Discussion

Although most of what we have learned from this research is undoubtedly good news for trail developers and managers, perhaps the most striking feature of our data is the rather substantial contrast between the way the Nebraska and Iowa trails are viewed by rural property owners versus small town residents and business owners. An awareness of the issues of loss of privacy, noise, vandalism etc., among adjacent property owners is not new to the trails literature, and previous researchers addressed these same issues nearly a decade ago (National Park Service, 1992). To give due credit, the authors of *A Network of Discovery* anticipated many of the concerns we have found among rural property owners, including

- Concern about trespassing and lack of privacy, damage to property, littering, or noise caused by trail users;
- Fear of increased crime
- Assumption of liability for injury to trail users, and
- Economic concerns, including fear of loss of property value. (p. 117)

Unfortunately, our results for Nebraska and Iowa trails are not unambiguously consistent with previous findings suggesting that "...the opening of the trail actually *decreased* the level of negative effects." Nor do they fully support the hope that such problems may "...disappear after a trail is developed" (p. 117). In fact, in the case of our rural property owners, we found that our respondents expressed higher levels of negative effects than most previous research would have predicted.

This divergence may well be due to differences between the rural cultural and political values of Nebraskans versus those in other locales where previous research was

conducted. Perhaps rural Nebraskans are more sensitive than adjacent landowners elsewhere about privacy, individual property rights, and the legitimacy of government involvement in recreation.

It should also be noted that the apparent severity of our findings is, at least to a small extent, a methodological artifact of the adjacent property owners we selected for analysis. We included only those who could view the trails from their homes, a group that would likely be the most vulnerable to loss of privacy, noise, and other trail-related intrusions.¹

In “A Vision for Nebraska Trails”, the authors of Nebraska’s *A Network of Discovery* trail plan, proposed five basic principles to guide future trail development:

1. The system should be statewide.
2. The system should benefit a wide variety of users.
3. The system should have multiple benefits.
4. The system should create economic opportunities.
5. The system should provide many levels of meaning and experience.

It may be many years before we can fully assess the degree to which the Nebraska Trail System fulfills each of these principles. But central to the plan is the concept that a *system of interconnected trails* should be developed for the state:

“Yet, a trails system for Nebraska should be statewide in scope, providing facilities for all parts of the state, not just the most heavily populated areas. Such a network will foster regional contacts among all Nebraskans and will make the state more accessible to visitors.” (p. 9)

In the seven years since *A Network of Discovery* was written, many miles of trail have been developed in Nebraska. The results of this and previous work (Greer, 2000) would suggest that the major successes of the plan to date lie in the widespread acceptance and

use of the trails in places where people live together- in Nebraska's cities and smaller communities. But the process of linking the various "hubs" of local trails together into a system that will bring the plan to full fruition will be a critical challenge, and the largest potential obstacle to its success. In some sense this process of connecting the local trail hubs together appears to be creating *contested terrain*, where that complex web of features and meanings that defines rural Nebraska is open to debate and reinterpretation. For some rural Nebraskans, this is obviously an uncomfortable process, but to others the trails have already brought new opportunities and meanings to life.

"Usage, the view much better than walking in the neighborhood,
stress relieved, healthy."
- *Mo-Pac East Landowner*

"Railroad ran trains past our house- noisy- then just rocks for
several years- now fully enjoy biking and walking on the trail."
- *Mo-Pac East Landowner*

¹ We conducted a follow-up analysis without this selection. It showed modest improvements in some trail ratings, but did not markedly alter our findings.

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