

USE AND USERS OF THE PERE MARQUETTE RAIL-TRAIL IN MIDLAND COUNTY MICHIGAN



Prepared by:

Charles Nelson, Ph.D., Associate Professor
Joel Lynch, Ph.D., Research Specialist
Christine Vogt, Ph.D., Assistant Professor
Afke van der Woud, Graduate Student

Department of Park, Recreation and Tourism Resources

Michigan State University
East Lansing, Michigan 48824-1222
517-353-5190

prtr@msu.edu

www.prr.msu.edu/trails/pere_marquette_rail

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EXECUTIVE SUMMARY
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Introduction

This study quantified spring, summer, and early fall visits to the Pere Marquette Rail-Trail (PMRT) in Midland County by section of the trail, type of use, timing of use and type of user group. A visit is defined as one person using one section of the PMRT for any portion of a day. Besides the output measure of visits, it also assesses outcomes of the trail experience in terms of visitor motivation and satisfaction. Finally, it provides a methodology that others can effectively use to assess rail-trail use and users.

Methods

Observations

To estimate visits, observations were made on selected days and times during April through September 2000 and 2001 from intercept points in each rail-trail section. Observations are done in four hour periods designed to be representative of a time of the day (morning, midday and afternoon/early evening) and day of the week. The counts are then extrapolated to represent all days and times within the study timeframe (April - September) for each trail segment. Finally, use estimates are segmented based on the type of trail use, weekend or weekday, and adult or children.

Survey

A one-page self-administered survey was distributed once every 10 minutes to a trail user passing the intercept point during each observation period. This intercept elicited information concerning motivation for trail use, frequency of use on an annual basis, time of use, trail section(s) used, level of satisfaction with current experience and demographic information.

Results

Use Estimates

The two sections in the City of Midland (Tridge to Emerson and Emerson to Dublin Ave.), which cover the three miles of the 22-mile trail in Midland County, accounted for 51 percent of the estimated 178 thousand visits annually during April through September across the five PMRT sections in Midland County. The other three sections outside of the Midland City limits (Dublin Ave. to Sanford, Sanford to North Bradley and North Bradley to Coleman) accounted for 49 percent of the visits.

On weekends (Saturday - Sunday), the sections outside the Midland City limits accounted for 54 percent of weekend visits, while sections inside the City limits accounted for 46 percent. During the week (Monday - Friday), sections outside the Midland City limits accounted for 55 percent of visits, while sections outside the Midland City limits had 45 percent of visits. For all sections, weekdays accounted for 61 percent of visits and weekend days for 39 percent.

Bicycling comprised the most visits by type of trail use in every section. For all sections combined bicycling was 54 percent of visits, walking/running 23 percent, in-line skating 22 percent, and 1 percent for other uses such as fishing access and use of mechanical conveyances for those with mobility impairments. A smaller proportion of visits involved bicycling inside the Midland City limits than in the sections outside the limits through Coleman. Children accounted for 24 percent of trail visits and adults for 76 percent.

Survey Results

Of the 942 adults intercepted on the trail, 710 (75%) completed the survey. Seventy-seven percent resided and/or worked in Midland County and 23 percent were tourists. However, on weekends, almost one-third (31%) were tourists. About half (54%) of visits involved use of a trailhead parking area with the rest accessing the rail-trail from surface streets, sidewalks or adjacent property. Four percent of the visits involved persons with "an impairment that significantly impacted their ability to perform major life functions," defining a disabled person under the Americans with Disabilities Act.

The typical rail-trail user spent about 2 hours on the trail per use, with users on weekends staying about 2.3 hours and weekday users about 1.7 hours. Almost two-thirds of trail users (61%) cited exercise as their primary reason for trail use, with 35 percent reporting recreation and 3 percent reporting transportation. On weekends, the proportion primarily using the trail for recreation was higher than during the week, while the proportion of exercise and transportation uses was lower.

Trail users were highly satisfied with their experience as 97 percent rated their experience as satisfied and 3% as neutral or dissatisfied. Sources of dissatisfaction were asphalt stretches (which have been paved over with regular asphalt since the study), potholes and desire for more bathrooms and drinking fountains along the trail.

Weighting to control for bias due to frequency of visit, the typical trail user had 15 visits to the trail in the past 12 months, with an average of 7.2 during summer (June - August), 4.0 in the spring (March - May), 3.1 in fall (September - November) and 0.7 during winter (December - February). During winter months the rail-trail is only plowed within the Midland City limits and no grooming is done of snow-covered trail outside the Midland City limits.

Conclusion

Use of the PMRT is extensive, with an estimated 178 thousand section visits from April through September. The trail serves County residents and visitors, providing satisfying experiences for bicyclists, in-line skaters, walkers and runners. Exercise and recreation are the primary motivations for use. Ninety-seven percent of users are satisfied with their trail experiences. The three percent not satisfied were concerned about asphalt sections (now gone after repaving), potholes (which demand continual repair) and a desire for more restroom/drinking fountain facilities. Crowding was not noted as a problem, indicating additional capacity for use.

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INTRODUCTION

The Pere Marquette Rail-Trail (PMRT) of Midland County Michigan extends 22 miles from the City of Midland to Coleman (Figure 1). Developed from 1992 to 1995, the paved PMRT serves a variety of non-motorized activities such as walking/running, bicycling, and in-line skating. Throughout its length in Midland County the PMRT traverses communities of Midland, Sanford, North Bradley, and Coleman, running through a variety of settings. From its beginning in the urbanized setting of Midland Michigan, less than a mile from the Michigan operations headquarters of the Dow Chemical Company, the trail passes through densely wooded riparian areas adjoining the Tittabawassee River before terminating in the largely agricultural environment surrounding Coleman. Beyond linking communities, the PMRT also connects with a number of park and recreation facilities, historical and natural sites as well as numerous service/retail and light industrial businesses (Vogt et al., 2002). As of August of 2001 the paved portion of the PMRT has been extended an addition 6 miles through adjoining Isabella County, from just northwest of Coleman to the eastside of Clare. The Pere Marquette State Trail then begins on the west side of Clare and runs through Red City and onward to Baldwin. Other than at Reed City, the trail is unpaved and primarily serves snowmobilers. Together these trails provide a major recreational and transportation network in mid-Michigan spanning nearly a hundred miles and connecting to other regional rail-trails such as the White Pine Trail State Park. That trail runs from the northern suburbs of Grand Rapids to Cadillac and intersects with the Pere Marquette State Trail in the parking lot of Yoplait, Reed City's largest employer.

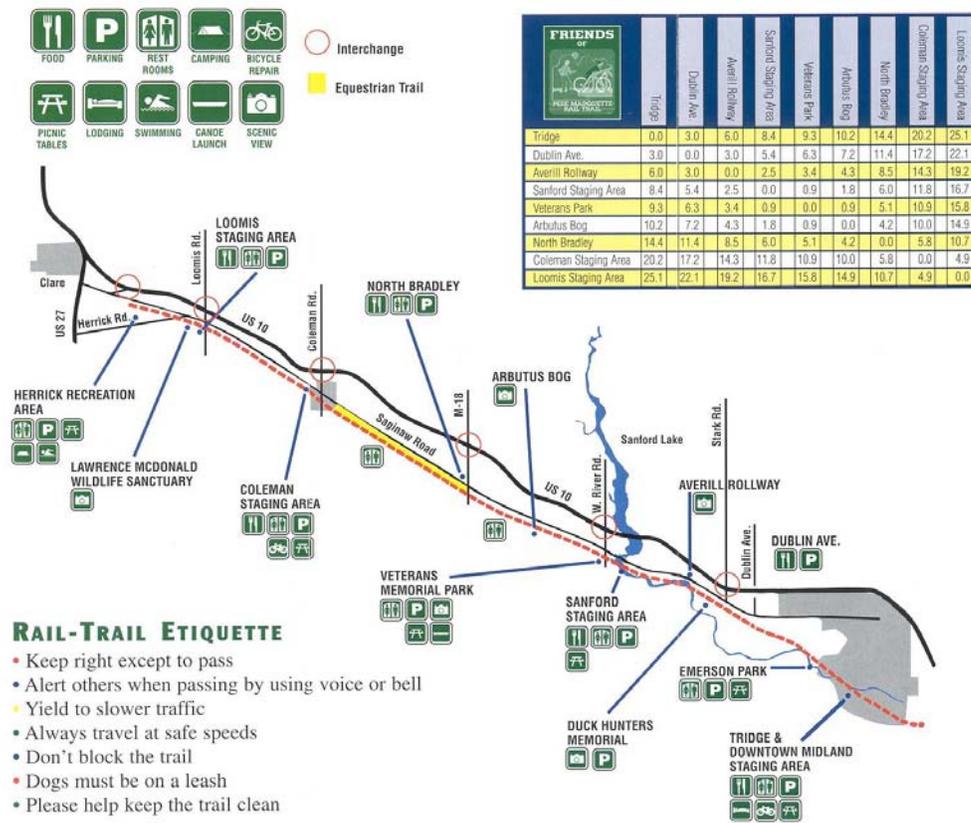


Figure 1.

In 2000, the Department of Park, Recreation and Tourism Resources at Michigan State University (MSU), cooperating with the Michigan Department of Transportation and others, launched a multi-year case study of the impact of the Pere Marquette Rail-Trail in Midland County. The purpose of this research was to better understand the range of benefits provided by a rail-trail and develop methodologies to assist other communities evaluating multi-purpose trails. One component, onsite trail user observations and an accompanying self-administered survey, was conducted in 2000/2001 to better understand the amount, type, distribution, and characteristics of trail users. This report details the results of those onsite observations and the survey.

METHODS

The observation and survey data were collected using a stratified sampling technique involving three criteria. First, the 22 mile rail-trail was divided into five segments with six intercept points (two in the North Bradley to Coleman section) corresponding to recognized public trailhead access points that included vehicle parking (Figure 1). The segments were not of equal length, with the segments to the northwest being longer than the segments to the southeast in and near the City of Midland. Dividing the rail-trail into segments was done to account for users who can access the trail at a number of developed and undeveloped points as well as to help characterize the magnitude and composition of users at various locations along the PMRT.

Second, it was assumed that visitation was likely to be influenced by whether it was a weekday (Monday – Friday) or weekend day/holiday (Saturday, Sunday and holiday Mondays) and sampling days were segmented into these distinctions. Third, the time of day that sampling was conducted was segmented into three periods, morning (8:00 AM to 12:00 PM), afternoon (12:00 PM to 4:00 PM), and evening (4:00 PM to 8:00 PM). Sampling procedures consisted of systematically selecting a segment of trail, day, and time of day for data collection. These procedures ensured that each trail segment was sampled a similar number of times during each of the three time periods for both weekend days/holidays and weekdays.

Tables 1 and 2 document the months, day of the week (weekend or weekday) and the time of day intercepts were conducted at sample points on the Pere Marquette Rail-Trail. Sampling took place for a period of six months from May 19 through September 30, 2000 and from April 1 to May 18, 2001. Of the possible sampling days, data were gathered for 25 (45.5%) of the 55 weekend days/holidays and 66 (51.6%) of the 128 weekdays (Table 1). During the six-month period, on 91 (49.7%) of the possible 183 days for sampling, observations were conducted and surveys distributed on one of the six trail segments.

On a sampling day, a researcher was positioned adjacent to the rail-trail approximately 50 yards inside the segment from the access point. The researcher would then count all individuals going one direction (northwest, except at the Coleman intercept in the North Bradley to Coleman section where they were observed and sampled going southeast because the trail was not paved northwest of Coleman during the sample period), classifying them as adults or children and noting their mode of travel (bike, in-line, foot). The observation recording form is found in Appendix A.

Table 1. Distribution of Pere Marquette Rail-Trail sample days by trail intercept.

PMRT Intercept	Weekday						Weekend/Holiday						Total
	April	May	June	July	August	Sept.	April	May	June	July	August	Sept.	
Tridge	2	2	3	2	1	1	1	0	1	1	0	1	15
Emerson Park	2	2	3	2	1	2	1	1	0	1	0	1	16
Duck Hunter	1	1	2	2	2	2	0	0	0	0	3	0	13 (a)
Sanford	2	2	2	2	2	1	1	1	1	1	1	0	16
North Bradley	2	1	2	2	2	1	1	1	1	1	1	0	15
Coleman	2	3	3	1	2	1	0	0	1	0	1	2	16
Total	11	11	15	11	10	8	4	3	4	4	6	4	91

(a) Due to scheduling problems with field survey administrators, two sampling dates were missed at Duck Hunters.

Table 2. Distribution of Pere Marquette Rail-Trail sample times by trail intercept.

PMRT Intercept	Number			Total
	8AM to 12PM	12PM to 4PM	4PM to 8PM	
Tridge	6	4	5	15
Emerson Park	4	6	6	16
Duck Hunter	4	4	5	13(a)
Sanford	6	6	4	16
North Bradley	3	6	6	15
Coleman	6	4	6	16
Total	29	30	32	91

(a) Due to scheduling problems with field survey administrators, two sampling dates were missed at Duck Hunters.

At ten-minute intervals, the researcher would select the next adult who was passing going northwest and ask them to respond to a self-administered one-page 14-item questionnaire that was likely to take less than four minutes to complete. The instrument elicited data about the number of people in the respondent's group, the activities in which they engaged during their visit, the amount of time they spent on the trail, and the respondent's satisfaction with their experience, history of use, demographics, and other information. The survey is in Appendix B. For those who refused, observational data were gathered about their mode of travel and they were asked about their reason for refusal.

ESTIMATE OF USE

Use was estimated by visit, with one visit being defined as a one person using one section of the PMRT on a given day. Visit estimates were derived for each of the six trail intercepts. This estimation was done by type of day (weekend/holiday or weekday) and later segmented by adult/child and mode of travel. To calculate the total number of visits by type of day, the observations of trail users for each section was segmented by weekend/holiday and weekday. Each four-hour sample period represents 1/3 of a day (12 possible use hours from 8AM to 8PM). One-third is multiplied by the proportion sample days made up of all days of that type (weekend days/holidays and weekdays). For example, for the Tridge on weekdays 11 of a possible 128 weekdays were sampled. Multiplying this fraction (11/128) by 1/3 = .02862. Then this product (.02862) is divided into 1, in this case yielding an extrapolation factor of 34.94 for Tridge intercept (Tridge to Emerson Park section) observations on weekdays (Table 3).

Table 3. Extrapolation factors by intercept on the PMRT based on sampling intensity.

PMRT Intercept	Proportion of Weekdays Sampled	Percentage of Sample Day Sampled	Weekday Extrapolation Factor	Proportion of Weekends/Holidays Sampled	Percentage of Sample Day Sampled	Weekend/Holiday Extrapolation Factor
Tridge	11/128	0.333	34.94	4/55	0.333	41.29
Emerson Park	12/128	0.333	32.03	4/55	0.333	41.29
Duck Hunter	10/128	0.333	38.44	3/55	0.333	55.06
Sanford	11/128	0.333	34.94	5/55	0.333	33.03
North Bradley	10/128	0.333	38.44	5/55	0.333	33.03
Coleman	12/128	0.333	32.03	4/55	0.333	41.29

Once the extrapolation factor is determined, it is then multiplied by the sum of the observations for each section for that type of day (weekend/holiday or weekday) to provide a total visitation estimate for the sample period of April – September for that type of day. Again, considering the Tridge intercept, the 798 trail users observed on the 11 sample weekdays were multiplied by 34.94, to yield 27,882 estimated visits on weekdays during April – September (Table 4).

Table 4. Estimated weekday and weekend/holiday visits to Pere Marquette Rail-Trail intercepts and sections during April - September.

PMRT Intercept (Section)	Weekday		Weekend/Holiday		Total
	Observations	Estimated total visits (%)	Observations	Estimated total visits (%)	Estimated Visits (%)
Tridge (Tridge to Emerson)	798	27,882(25.9)	232	9,579(13.7)	37,461(21.1)
Emerson Park (Emerson to Dublin Ave.)	971	31,101(28.9)	543	22,420(32.1)	53,521(30.2)
Duck Hunter (Dublin Ave. to Sanford)	500	19,220(17.8)	269	14,811(21.2)	34,031(19.2)
Sanford (Sanford to North Bradley)	467	16,317(15.2)	459	15,161(21.7)	31,478(17.7)
North Bradley (North Bradley to Coleman) (a)	95	3,652(3.4)	140	4,624(6.6)	8,276(4.7)
Coleman (North Bradley to Coleman) (a)	296	9,481(8.8)	79	3,262(4.7)	12,743(7.2)
All	3,127	107,653(100.0)	1,722	69,857(100.0)	177,510(100.0)

(a). North Bradley to Coleman estimated weekday visits (North Bradley intercepts + Coleman intercepts) is 13,133 (12.2% of weekday visits for all sections). Weekend visit estimate is 7,886 (11.3% of weekend visits for all sections). Total visit estimate is 21,019 (11.8% of visits for all sections).

Considering estimated total use by section, the Emerson to Dublin section had the highest level of use on weekends/holidays and weekdays. Conversely, the North Bradley to Coleman section was the least used during both time segments. All total, the sections within the City of Midland had slightly more than half the estimated visits. Putting the weekend/holiday and weekday estimates from Table 4 on a per day basis, each weekend day/holiday (Saturday and Sunday) accounted for 19.7% of estimated total visits and each weekday (Monday - Friday) accounted for 12.1%. In total, the 69,857 weekend days/holidays visits accounted for 39.4% of total visits and weekdays 107,653 visits accounted for 60.6% of total visits.

Adding the visit estimates for each section does not suggest that the PMRT system considered as a whole in Midland County had this many visits from April through September. Many survey respondents reported visiting more than one section on the day they were sampled (see Table 12 ahead). However, for businesses in a particular section, such as a restaurant, it is vital to understand what is happening in their section in terms of magnitude of use, type of user, composition of user group and whether that use occurs on the weekend or during the week. Further, for trail managers, a sectional approach to understanding use is valuable as few use the entire trail during any given day. Also, with two jurisdictions providing management (City of Midland and Midland County) this sectional approach in reporting allows them to examine their respective portions of the trail. Finally, for adjacent municipalities such as Coleman and Sanford, which have adjoining recreation facilities, even though they have no direct trail management responsibilities, understanding the potential for use of their facilities (e.g. roller hockey arena in Coleman related to in-line skating in the Coleman to North Bradley section) is helpful.

Sectional use, when additionally segmented by adult and children, provides additional valuable insights (Table 5). Adults comprise the majority of the visits in all sections, weekend and weekday. However, at the Coleman intercept, the proportion of use by children is almost similar to that of adults. This is likely to be related to the roller hockey arena adjacent to the rail-trail. It may also relate to the proximity of the rail-trail to the majority of the residential areas and businesses in Coleman. Considering weekend/weekday, children make up a smaller proportion of uses on weekends than weekdays in all segments except Sanford and North Bradley. These segments are furthest from large population bases and are more likely to have users that are on longer distance outings using multiple trail segments. Thus, weekends, which may provide longer riding opportunities (no school or work) may be more attractive to families (adults with children on weekends). Conversely, the Tridge, Emerson and Duck Hunters are relatively near the largest population base in the Midland County, and are easily accessible to children after school. Pre-school children accompanying a parent on a weekday outing either to Emerson Park, the Tridge or just for trail use also find these sections easily accessible.

Table 5. Estimated weekday and weekend/holiday visits to Pere Marquette Rail-Trail sections segmented by adult/youth during April - September.

PMRT Intercept (Section)	Weekday Estimate		Weekend/Holiday Estimate		Total Estimate (%) (a) (b)		
	Adult	Children	Adult	Children	Adult	Children	Total
Tridge (Tridge to Emerson)	21,128	6,743	7,061	2,519	28,167(75.3)	9,263(24.7)	37,430(100.0)
Emerson Park (Emerson to Dublin Ave)	23,447	8,617	17,218	5,203	40,665(74.6)	13,820(25.4)	54,485(100.0)
Duck Hunter (Dublin Ave. to Sanford)	15,875	3,383	13,103	1,707	28,978(85.1)	5,090(14.9)	34,067(100.0)
Sanford (Sanford to N. Bradley)	14,642	1,677	10,736	4,426	25,378(80.6)	6,103(19.4)	31,481(100.0)
N. Bradley (N. Bradley to Coleman) (b)	2,614	1,038	3,402	1,222	6,016(72.7)	2,260(27.3)	8,276(100.0)
Coleman (N. Bradley to Coleman) (b)	4,997	4,420	1,734	1,528	6,731(53.1)	5,948(46.9)	12,679(100.0)

(a) Percentages add by row

(b) Totals differ slightly from Table 4 due to rounding.

(c) North Bradley to Coleman weekday adult visit estimate (North Bradley intercepts + Coleman intercepts) is 7,611. Weekday children visit estimate (North Bradley intercepts + Coleman intercepts) is 5,458. Weekend adult visit estimate is 5,136. Weekend child visit estimate is 2,750. Total adult visit estimate is 12,747 (60.9% of total section visits). Total child visit estimate is 8,202 (39.1% of total section visits). Total section visit estimate is 20,955.

Bicycling was the most common transportation mode on all trail sections for both adults and children (Table 6). In-line skating was the second most common transportation mode for adults/children combined at Emerson to Dublin Ave., Dublin to Sanford and Sanford to N. Bradley. These results may be influenced by the speed of a bicycle versus other transportation modes. For example, if a typical bicycle goes 10 miles per hour, a typical in-line skater 7 miles per hour and a typical walker 3 miles per hour and each is out for the same length of time, bicyclers are more likely to show up in more than one trail section than the other groups. Those segments furthest from population centers (Midland and Coleman) had the highest proportion of bicyclists to other transportation modes for both adults and children. Again, these segments are furthest from population centers and received a higher proportion of their use on weekends/holidays than other sections (see Tables 4 and 5). This suggests that users needed the time to reach these segments more remote from population centers.

ONSITE USER SURVEY

Overview of Trail Sections

The Pere Marquette Rail-Trail sections each have a distinct character. The Tridge is the intercept point for the Tridge to Emerson section. The area adjacent to the trail has the Farmers Market, the Tridge, the junction of the Tittabawassee and Chippewa Rivers and is overlooked by the Ashmun Court Hotel. This is the closest trail section to Midland's downtown and has undergone extensive renovation from its days as an active railway corridor.

Emerson is the intercept point for the Emerson to Dublin Ave section. The Tittabawassee River borders the section. The City of Midland's Emerson Park, their roller hockey arena and interpretive exhibits about Dow Chemical are linking recreation facilities. The trail then goes further northwest, cutting through the campus of Northwood University and near Midland Dow High School. This section contains some high value residential development and open space within the Midland City limits.

The Duck Hunters Memorial is the intercept point for the Dublin Ave. to Sanford section. This section has a distinctly more rural character than the sections in the City of Midland, which end at Dublin Ave. The area has some light industrial and service businesses along Saginaw Road and sand and gravel mine operations are active on the south side of the rail-trail. One overlook area is at the site of the Averill Rollway, where thousands of white pine logs were rolled into the Tittabawassee River annually during the late 1800s on to float to sawmills in Midland and Saginaw on the spring floods. The Village of Sanford provides a popular stopping place with restaurants and stores for trail users.

Just northwest of Midland County's trailhead in Sanford is the intercept point for the Sanford to North Bradley section. Here there is easy access to the Tittabawassee River, with opportunities for fishing and a chance to study the railroad bridge over the river. Further along there is a connection to Veteran's Memorial County Park, another bridge over the Big Salt River and the Arbutus Bog. The density of housing is relatively sparse and sand and gravel operations are active on the south side of the rail-trail.

Table 6. Estimated adult and child visits to PMRT sections segmented by transportation mode during April - September.

PMRT Intercept (Section)	Adult				Children				Total (a)				Total
	Bike	Inline	Foot	Other (b)	Bike	Inline	Foot	Other (b)	Bike	Inline	Foot	Other (b)	
Tridge (Tridge to Emerson)	12,319	6,017	9,756	76	4,784	2,065	2,344	70	17,103	8,081	12,100	146	37,430
Emerson Park (Emerson to Dublin Ave.)	19,268	9,982	11,384	32	7,029	4,520	2,270	0	26,267	14,502	13,654	32	54,485
Duck Hunters (Dublin Ave. to Sanford)	19,595	6,844	2,539	0	3,056	1,303	115	615	22,652	8,147	2,654	615	34,067
Sanford (Sanford to N. Bradley)	13,809	5,156	6,063	349	3,483	742	1,879	0	17,292	5,898	7,941	349	31,481
North Bradley (N. Bradley to Coleman) (b)	4,642	610	764	0	1,771	319	105	66	6,413	929	868	66	8,276
Coleman (N. Bradley to Coleman) (b)	4,021	577	2,133	0	3,127	1,768	1,053	0	7,148	2,345	3,186	0	12,679

(a) Totals differ slightly from Table 4 due to rounding.

(b) Includes walking a pet, viewing the Duck Hunters Memorial, fishing access and use of motorized and non-motorized devices for those with mobility impairments.

(c) North Bradley to Coleman section (North Bradley + Coleman intercepts) estimated visits by category. Adult bicycle use visits 8,663. Child bicycle visits 4,898. Total bicycle visits 13,561. Adult in-line visits 1,187. Children in-line visits 2,087. Total in-line visits 3,274. Adult foot visits 2,897. Child foot visits 1,158. Total foot visits 4,055. Total North Bradley to Coleman section visits 20,955.

The North Bradley intercept site is on the southeast end of the North Bradley to Coleman section. The intercept site is 50 yards northwest of Midland County’s trailhead parking and staging area. This area is different than other county trailhead areas as the parking lot is designed to accommodate horse trailers and tow vehicles, as well as passenger cars. This lot serves the equestrian trail that winds through the woods and fields, 20 – 40 feet off the paved rail-trail. This unique use of the full PMRT right of way provides an equestrian trail opportunity in a manner that is compatible with other non-motorized trail uses of the rail-trail. At the other end of the North Bradley to Coleman section, an intercept site is located 50 yards southeast of the Midland County trailhead in Coleman. This site was chosen to assess use in the Coleman area for those that did not that take the 6-mile journey from North Bradley.

PMRT Survey Results Segmented by Intercept Location

The focus of this survey is to primarily describe the characteristics of visits, not visitors to the PMRT. The distinction is important. A visit is an event that one may do once a year, ten times or one hundred times. Conversely, a visitor is one person, whether he or she visits one or one hundred times a year. For businesses, trail managers and others, the characteristics of visits are most critical. Managers need to know the magnitude of use (visits) and businesses need to understand when the most opportunities exist to serve customers (visits). However, if the focus of this study was to determine public support for a trail related policy question, such as would voters approve of a measure on the ballot related to the trail, visitors would be the focus, as each person gets one vote.

The self-administered questionnaire distributed to trail users had a strong response rate (Table 7). Response rates were highest in and near the City of Midland and lower in the northwestern sections of the rail-trail. However, only in the North Bradley section was the response rate less than two of three sampled. There was no opportunity for non-response follow-up as there was no way of identifying those who refused to complete the survey when it was initially offered to them.

Table 7. Trail user survey distribution and response rate at PMRT intercepts during April - September.

PMRT Intercept	Surveys distributed	Responses (%)
Tridge	187	150(80.2)
Emerson Park	256	195(76.2)
Duck Hunter	185	157(84.9)
Sanford	152	103(67.8)
North Bradley	76	47(61.8)
Coleman	86	58(67.5)
Total	942	710(75.4)

In-line skaters and walkers had the highest response rate, while runners had the lowest (Table 8). Considering the purpose of running was often endurance and speed, stopping to be surveyed was likely to be antithetical to the runner’s purpose for visiting the trail. By contrast, walkers may be involved in a somewhat more leisurely activity where socializing, such as completing a survey, is a positive part of their experience. The high response rate by in-line skaters is more difficult to explain, as in-line skating is often portrayed in advertisements as a speed/fitness oriented activity. It may be that the rail-trail atmosphere promotes more interest in socializing or that skaters are taking their activity at a more leisurely pace than runners.

Table 8. Trail user survey distribution and response rate by mode of transportation on sample day during April-September.

Number Responding/Number Distributed (% responding)					
Total	Other	Biking	Running	Walking	In-Line Skating
710/942(75.4)	16/16 (100.0)	374/513(72.9)	36/82(43.9)	159/188(84.6)	125/143(87.4)

Those who live and/or work in Midland County accounted for the majority of the visits at all intercept points (Table 9). Their proportion was highest in the City of Midland and lowest at North Bradley.

Table 9. Proportion of PMRT survey respondents by intercept who live and/or work in Midland County by trail intercept point during April - September.

PMRT Intercept	Percent		
	Midland County Residents/Workers	Other County Residents	Total
Tridge	78.0	22.0	100.0
Emerson	82.1	17.9	100.0
Duck Hunter	77.7	22.3	100.0
Sanford	70.9	29.1	100.0
North Bradley	63.8	36.2	100.0
Coleman	75.9	24.1	100.0

For all intercepts, exercise was the most frequently cited main reason for trail use (Table 10). It was highest at the Tridge, where over two-thirds of respondents cited exercise. Recreation was the main reason for one-fourth to one-half of the users, with North Bradley having the highest percentage noting recreation. Transportation was reported as the main reason for trail use by two to four percent at each intercept. Concerning use of the PMRT for transportation, sampling times would have consistently missed those going to work or school in the morning as no sampling was done prior to 8AM. The afternoon/early evening sampling however, may have captured the return trip home for those going to work or school before 8AM. Hence, the data may underreport transportation use to some extent. In addition, we asked the user to note what one reason best described their use of the rail-trail. While many people may have been using the rail-trail for transportation purposes, they cited exercise as the main reason since this is the highest purpose of their use of the PMRT.

Table 10. Main reason for visiting PMRT survey respondents visiting the trail on sample day by intercept point during April – September.

PMRT Intercept	Percent				Total
	Recreation	Exercise	Transportation to work/school	Transportation other than to work/school	
Tridge	26.8	69.8	0.7	2.7	100.0
Emerson Park	39.6	57.8	1.6	1.0	100.0
Duck Hunter	35.1	61.0	1.9	1.9	100.0
Sanford	37.3	58.8	1.0	2.9	100.0
North Bradley	46.8	51.1	2.1	0.0	100.0
Coleman	31.0	65.5	1.7	1.7	100.0

Different intercept points had distinctly different activity patterns (Table 11). Bicycling was the most common type of use at all access points, and it increased to the majority of use northwest of the Midland City limits. The highest proportion of walking visits was in city/village areas with Sanford and Coleman intercepts showing much higher levels of walking than less populated North Bradley and Duck Hunters. In-line skating declined as one left the City of Midland area and participation remained low in the smaller villages.

Table 11. Primary trail activity of PMRT survey respondents on sample day by intercept point during April – September.

PMRT Section	Percent				
	Biking	Walking (a)	In-line skating	Running/Jogging	Other
Tridge	34.0	33.3	21.3	9.3	2.0
Emerson Park	42.6	30.8	17.9	7.2	1.5
Duck Hunter	62.4	5.1	26.1	1.9	4.5
Sanford	68.9	17.5	9.7	1.9	1.9
North Bradley	83.0	8.5	8.5	0.0	0.0
Coleman	55.2	34.5	5.2	5.2	0.0

(a) Includes walking a pet, viewing the Duck Hunters Memorial, fishing access and use of motorized and non-motorized devices for those with mobility impairments.

As would be expected, at the two ends of the paved trail (Tridge and Coleman) during the study period, use of increasingly distant sections declined in a rather steady pattern (Table 12). For those intercepts more in the middle, the direction of use is interesting. Those sampled at Emerson were almost equally likely to use the Tridge end of the trail as they were the Dublin Ave. to Sanford section. Users surveyed at Duck Hunters (in the Dublin Ave. to Sanford section) were more likely to use the adjacent Sanford to North Bradley section than the Emerson to Dublin Ave. section nearer Midland. For those sampled at Sanford, the trend to the northwest was even more pronounced as nine in ten were headed toward North Bradley while less than three in ten were going toward Midland (some were on round trips). Concerning the number of sections used by access point, those intercepted at Duck Hunters, Sanford and North Bradley were more likely to be on longer trips as they averaged using more sections during their visit and those sections are longer.

Table 12. Percent of PMRT survey respondents that used all or part of a trail section on the day they were sampled on the Pere Marquette Rail-Trail during April - September.

PMRT Intercepts	Percent					Mean Number of sections used (a)
	Tridge to Emerson Park	Emerson Park to Dublin Ave.	Dublin Ave. to Sanford	Sanford to N. Bradley	N. Bradley to Coleman	
Tridge	100.0%	71.3%	36.0%	10.0%	4.0%	2.2
Emerson Park	79.4	100.0	36.6	12.9	4.6	2.1
Duck Hunter	56.4	75.6	100.0	27.6	14.1	2.6
Sanford	43.7	52.4	76.7	100.0	19.4	2.5
North Bradley	34.0	38.3	44.7	89.4	100.0	2.8
Coleman	14.0	14.0	15.8	24.6	100.0	1.6

(a) Sections are of different length. Tridge to Emerson is 1 mile; Emerson to Dublin is 2 miles; Dublin to Sanford is 6 miles; Sanford to N. Bradley is 6 miles and N. Bradley to Coleman is 6 miles.

Group size and the average number of adults and children were similar for all intercepts (Table 13). Hours of use were more likely to vary with people intercepted at North Bradley having the longest average time of PMRT use on the day sampled. The shortest length of use was in the city/village areas of Midland and Coleman.

Table 13. Group composition and hours of trail use by PMRT survey respondents by intercept during April-September.

PMRT Intercept	Mean			Hours of Use
	Adults	Children	Total	
Tridge	1.69	0.25	1.94	1.42
Emerson Park	1.65	0.31	1.96	1.59
Duck Hunter	1.92	0.11	2.03	2.21
Sanford	1.75	0.21	1.96	2.22
North Bradley	1.83	0.44	2.27	2.86
Coleman	1.62	0.21	1.83	1.75

Trail users were highly satisfied with their trail experience at all intercepts (Table 14). At no intercept were more than five percent less than satisfied. This is an exceptionally high level of satisfaction. Those that were not satisfied were likely to cite glass on the trail from the glasphalt paving in some sections, potholes and the need for more restroom/drinking fountains. (*Since this survey was conducted the glasphalt sections have been repaved with regular asphalt.*) See Appendix C for a complete listing of reasons for respondents' satisfaction rating.

Table 14. Satisfaction of PMRT survey respondents with PMRT visit on the day sampled.

PMRT Section	Mean (a)	Percent		
	Rating	Not Satisfied	Neutral	Satisfied
Tridge	2.97	0.7%	2.0%	97.3%
Emerson Park	2.97	0.0	2.6	97.4
Duck Hunter	2.95	0.0	4.5	95.5
Sanford	2.98	0.0	1.9	98.1
North Bradley	2.98	0.0	2.1	97.9
Coleman	2.95	1.7	1.7	96.6

a. Rating scale: 1 = not satisfied, 2 = neutral, and 3 = satisfied.

To estimate annual days of PMRT use by respondent, the data were weighted to remove bias related to frequency of use. For example, if one person used the PMRT 30 times from April – September and another used it one time, the person who used it 30 times would have a 30 times greater chance of being surveyed. This would not provide an accurate picture of how many times the typical trail user was on the trail. Frequent users would skew the results. To counteract this bias, responses were weighted by the reciprocal of the respondents frequency of use the past year. Hence, the respondent who visited once last year was weighted 1/1, while the respondent who visited 30 times last year was weighted 1/30.

Average seasonal use by respondents was greatest during summer for all intercepts (Table 15). The Coleman intercept had the highest level of use per user while North Bradley had the lowest on an annual basis. At the three intercepts where efforts are made to provide trail opportunities during the winter, Tridge, Emerson and Coleman, winter use was slightly higher than other intercepts. When combined, average spring and fall use per respondent exceeded average summer use per respondent at every intercept except Coleman, suggesting that spring and fall are important trail use seasons and that the trail needs to be in good condition and businesses ready to receive trail related customers over a much longer season than summer.

Table 15. Estimated annual days of PMRT use by PMRT survey respondents during the past year by season. (a) (b)

PMRT Intercept	Mean				Total (c)
	Winter	Spring	Summer	Fall	
Tridge	0.6	4.1	6.1	2.8	14.1
Emerson Park	1.0	5.2	7.8	4.2	18.3
Duck Hunter	0.6	3.3	6.8	2.6	13.3
Sanford	0.6	4.4	8.2	3.6	16.8
North Bradley	0.2	2.0	4.6	1.9	8.6
Coleman	0.8	4.6	11.5	3.7	20.6

(a) Winter: (Dec. Jan. Feb.), Spring: (Mar. Apr. May), Summer: (Jun. July Aug.), Fall: (Sept. Oct. Nov.).

(b) Data were weighted to account for frequency of use bias.

(c) Seasons may not add to total due to rounding.

The composition of PMRT trail users by visit differs by intercept point in a number of ways (Table 16). Women were the majority of visits at the Tridge and were least prevalent at Duck Hunters and North Bradley. All sections of the trail were used by those with impairments that seriously limit their ability to perform a major life function, hence falling under the purview of the American's with Disabilities Act. The mean age of trail users by visit steadily rises as one goes northwest, with the youngest average age in Midland and the oldest in Coleman. Those intercepted in North Bradley were most likely to be furthest from their home, while those intercepted in nearby Coleman were most likely to be closest to their home. This suggests that North Bradley has a high proportion of users on lengthy trail uses, while use in Coleman is much more localized. About half of the users by visit accessed the rail-trail from a designated parking lot. The intercepts with the highest proportions of visits using parking lots were at the Tridge and North Bradley and lowest at Duck Hunters and Coleman.

Table 16. Selected demographic characteristics of PMRT survey respondents.

PMRT Section	Percent		Group Member with Impairment	Mean	Median	Percent Used parking lots
	Female	Male		Age	Miles from home to trail	
Tridge	61.1%	38.9%	3.3%	42.1	5.0	67.1%
Emerson Park	45.4	54.6	4.1	43.9	4.0	54.4
Duck Hunter	39.5	60.5	3.2	47.0	4.0	41.4
Sanford	47.6	52.4	1.9	45.3	5.0	55.9
North Bradley	34.8	65.2	6.4	47.8	10.0	63.8
Coleman	49.1	50.9	3.4	48.0	3.0	44.8

Implications of Segmentation by Intercept Location

The character and use of each intercept location are illuminated by the data. The Tridge is a gathering place where the trail is one of many attractions. It has the greatest diversity of use and the highest proportion of foot related uses (Table 11). Per visit, it has the shortest time of use of any intercept, partially because of its brief length. For managers this presents a tremendous opportunity to constantly showcase the trail to new users. The proximity to the Ashmun Court hotel, which hosts visitors from around the globe to Midland is advantageous. For businesses further down the trail, finding ways to inform users starting their experience at the Tridge about goods and services they may enjoy as they travel the trail would be valuable.

Emerson intercept is the most heavily used portion of the PMRT. It provides a link to downtown Midland and to the rural areas and small villages of Midland County further northwest. Use of this section and the Tridge for commuting to Dow, downtown Midland, Dow High School and Northwood University should be further encouraged. The linkage to Emerson Park, with its skating facilities (roller hockey and skate park) should also be clearly visible to users. The parking area at Dublin Ave., in comparison to other access points in the City of Midland, is less appealing, being dark and only having a portable bathroom. This may be an access point to improve as a more positive gateway into the city. Again, businesses need to assure riders heading toward Sanford and beyond, that desired goods and services are available down the trail.

Duck Hunters is a transition point, where bicycling becomes the majority trail use and many are headed out on significant journeys. This section ends at Sanford, which has the potential to link to better link local parks and businesses to trail users. The Sanford trailhead provides a positive glimpse of the partnerships and themes of the trail, with involvement by master gardeners with plantings and railroad depot appearance to the restroom building.

At the Sanford intercept and beyond on the Sanford to North Bradley section, new features appear that can broaden the trail's appeal. Fishing is an option at the bridges over the Tittabawassee and Big Salt Rivers. However, there is not adequate opportunity for bank fishing. The trail would also provide excellent access to the riverside for disabled anglers if an appropriate fishing structure could be located adjacent to the trail.

At the North Bradley intercept, use is lightest bicycling accounts for over 80% of visits (Table 11). The establishment of a bed and breakfast and other reasons to stop may encourage more users to access the rail-trail from this point and to stop on their journey toward Coleman or Sanford. The equestrian staging area and trail represent another strong partnership that needs to be better recognized.

At the Coleman intercept, the rail-trail had a different character than any other intercept point on the PMRT. It literally was at the center of town, with residential areas just south and just north and most businesses visible from the trail and some with a direct trail theme. The renovation of Coleman over the last few years is highly visible from the trail and is eye catching. Users surveyed at this point had the highest average number of summer trail uses of any access/intercept location (Table 15). With the extension of the paved trail through Coleman, the paving over of glassphalt with regular asphalt and the 6 miles of new trail connecting Clare and Loomis, Coleman is positioned to gain even more traffic from the trail.

PMRT Survey Results Segmented by Weekend/Weekday Use

The distinction between weekend and weekday use is important, as the influence of work, school, and other obligations during the week can limit time for recreation, health/fitness activities and transportation. Conversely, weekends may offer more leisure time and opportunities for families and friends to unite and enjoy recreational activities.

Those who work or reside in Midland County accounted for the majority of visits during weekdays and weekends (Table 17). However, their proportion declined during weekends/holidays, where almost one-third of visits were by visitors to the county. In total, almost one in four rail-trail visits was by a non-resident who did not work in Midland County.

Table 17. Proportion of PMRT survey respondents who live and/or work in Midland County segmented by weekend/weekday visit.

Period of Week	Number (%) (a)		Total
	Midland County	Other County	
Weekday	393(80.9)	93(19.1)	486(100.0)
Weekend/Holiday	153(68.3)	71(31.7)	224(100.0)
Total	546(76.9)	164(23.1)	710(100.0)

(a) Percents are by row.

While exercise is the reason the majority of visits occur on weekdays and weekends/holidays, recreation becomes a more common main reason on weekends (Table 18). This is likely to relate to a more relaxed free time atmosphere. Conversely, PMRT use may be an important aspect of many people’s health/exercise regimen during the workweek. Conversely, transportation use, especially related to work and school, was reported to be solely during weekdays.

Table 18. Main reason for rail-trail use by PMRT survey respondents segmented by weekend/weekday visit.

Period of Week	Number (%)				Total
	Recreation	Exercise	Transportation to work/school	Transportation other than to work/school	
Weekday	145(30.2)	315(65.6)	9(1.9)	11(2.3)	486(100.0)
Weekend/Holiday	103(46.4)	116(52.3)	0.0	3(1.4)	224(100.0)
Total	248(35.3)	431(61.4)	9(1.3)	14(2.0)	702

Foot-related activities are the majority of uses during the week, while bicycling accounts for most visits on the weekend (Table 19). Weekends may provide the time to travel considerable distances, while weekday schedules may limit time devoted to trail activities, thus encouraging shorter duration, minimum preparation/equipment uses such as walking.

Table 19. Primary activity of PMRT survey respondents during sample visit segmented by weekend/weekday visit.

Period of Week	Percent				
	Biking	Walking (a)	In-line skating	Running/Jogging	Other (a)
Weekday	46.9%	25.7%	19.3%	5.6%	2.5%
Weekend/Holiday	65.2	15.2	13.8	4.0	1.8
Total	52.7	22.4	17.6	5.1	2.3

(a) Includes walking a pet, viewing the Duck Hunters Memorial, fishing access and use of motorized and non-motorized devices for those with mobility impairments.

Weekday visits were more likely to be on trail sections in the City of Midland and to use fewer sections than weekend/holiday visits (Table 20). The greatest proportional increase in visits by segment on weekends/holidays was in the Sanford to North Bradley section, where proportion of visits using this section almost doubled on weekends. The increase in the North Bradley to Coleman section was over 40 percent from weekday to weekend.

Table 20. Percent of PMRT survey respondents that used all or part of a trail section on the day they were sampled segmented by weekend/weekday visit.

Period of Week	Percent					Mean
	Tridge to Emerson Park	Emerson Park to Dublin Ave.	Dublin Ave. to Sanford	Sanford to N. Bradley	N. Bradley to Coleman	Number of sections (a)
Weekday	65.7%	64.3%	49.0%	22.5%	18.2%	2.2
Weekend/Holiday	60.1	66.8	62.3	38.1	26.0	2.5
Total	63.9	65.1	53.2	27.4	20.7	2.3

(a) Sections are of different length. Tridge to Emerson is 1 mile; Emerson to Dublin is 2 miles; Dublin to Sanford is 5.4 miles; Sanford to N. Bradley is 6 miles and N. Bradley to Coleman is 6 miles.

Weekend/holiday visits involved larger groups and spent more time on the trail than weekday visits (Table 21). The average number of children in weekend/holiday groups was double the number during weekday visits. The mean length of time the trail was used on a weekend/holiday was 36 percent longer than on a weekday.

Table 21. Group composition and hours of use by PMRT survey respondents segmented by weekday and weekend visit during April - September.

Period of Week	Mean Number			Hours
	Adults	Children	Total	
Weekday	1.61	0.21	1.81	1.69
Weekend/Holiday	2.02	0.42	2.44	2.29
Total	1.74	0.27	2.01	1.88

There was little difference in the high satisfaction level experienced by those visiting on weekends/holidays and weekdays on the PMRT (Table 22). For either group, no more than four percent was less than satisfied.

Table 22. Satisfaction with PMRT survey respondents on the day sampled by weekend/holiday and weekday visit during April – September.

Period of Week	Mean (a)		Percent	
	Rating	Not Satisfied	Neutral	Satisfied
Weekday	2.97	0.4%	2.1%	97.5%
Weekend/Holiday	2.96	0.0	4.0	96.0
Total	2.97	0.3	2.7	97.0

a. Rating scale: 1 = not satisfied, 2 = neutral, and 3 = satisfied.

Those sampled on weekdays, when weighted to account for frequency of use bias, use the PMRT more than twice as much annually as those sampled on weekends (Table 23). This 2:1 ratio is found throughout all seasons.

Table 23. Estimated annual days of PMRT use during the past year by season for weekend/holiday and weekday users. (a)

Period of Week	Mean				
	Winter	Spring	Summer	Fall	Total
Weekday	0.9	5.4	9.2	4.2	19.7
Weekend/Holiday	0.4	2.5	4.9	2.0	9.6
Total	0.7	4.0	7.2	3.1	15.0

(a) Winter: (Dec. Jan. Feb.), Spring: (Mar. Apr. May), Summer: (Jun. July Aug.), Fall: (Sept. Oct. Nov.).

(b) Data were weighted to account for frequency of use bias.

(c) Seasons may not add to total due to rounding.

Weekday and weekend visitors were similar in their demographic characteristics considered over the whole length of the PMRT (Table 24). Weekday visits were slightly more likely than weekend visits to be by women, for the visitor to have an impairment that would qualify them under the ADA, to be younger, to be closer to their home and to not use trailhead parking areas.

Table 24. Demographic characteristics of survey respondents per PMRT visit for weekend/holiday and weekday users April - September.

Period of Week	Percent		With impairment	Mean	Median	Percent Used parking lots
	Female	Male		Age	Miles from home to trail	
Weekday	50.8%	49.2%	4.1%	44.3	4.0	53.2%
Weekend/Holiday	47.8	52.2	2.2	46.6	5.0	56.5
Total	49.9	51.1	3.5	45.0	4.0	54.2

Implications of Segmentation by Weekend/Holiday and Weekday Use

Those sampled on weekends tended to be less frequent users, more focused on recreation than exercise and more likely to visit the more northwestern ends of the trail at Sanford, North Bradley and Coleman. They are also more likely to use the trail as a larger group and more likely to have children in the group. This suggests that providing family friendly activities, goods and services near the trail would be attractive to this segment. Weekday users are more focused on exercise benefits and are more likely to be local residents. For them, fitting into their exercise routine and providing health conscious goods and services may be effective business strategies. For managers, this is an excellent group to recruit volunteers as these folks know the trail

intimately and are likely to have a strong attachment to it as they spend a considerable amount of time there. They are also good "eyes and ears" for changes, problems, etc.

PMRT Survey Results Segmented by Primary Trail Activity

Understanding the primary trail activity by visit is revealing for a number of reasons. One is that for tourism and business interests it shows which activities are likely to involve the highest proportion of non-residents. This may in turn provide a new market for services, bring additional money and jobs to the county and allow the trail and the people and businesses along it to become the "face" of the county to visitors.

While residents of Midland County or those who work in the County were the majority of visits for each primary activity, bicycling and in-line skating had more than one quarter of their respondents who were neither residents or employed in the County (Table 25). Walking and running/jogging were more dominated by residents. This suggests that bicycling and in-line skating opportunities may be less prevalent in other areas than walking or running/jogging options.

Table 25. Proportion of PMRT survey respondents by residents or workers in Midland County segmented by activity during April - September.

Activity	Percent		
	Midland County	Other County	Total
Biking	272(72.7)	102(27.3)	374(100.0)
Walking	137(86.2)	22(13.8)	159(100.0)
In-Line Skating	93(74.4)	32(25.6)	125(100.0)
Running/Jogging	32(88.9)	4(11.1)	36(100.0)
Other Activity (a)	12(75.0)	4(25.0)	16(100.0)
Total	546(76.9)	164(23.1)	710 (100.0)

(a) Includes walking a pet, viewing the Duck Hunters Memorial, fishing access and use of motorized and non-motorized devices for those with mobility impairments.

Those visits primarily focused on bicycling or in-line skating were more likely to be characterized as recreational than those that involved walking or running/jogging (Table 26). Bicycling was the sole activity used for transportation to work or school and the primary one used for other transportation purposes.

Table 26. . Main reason for rail-trail use by PMRT survey respondents segmented by activity during April - September.

Activity	Percent				Total
	Recreation	Exercise	Transportation to work/school	Transportation other than to work/school	
Biking	152(41.2)	199(53.9)	9(2.4)	9(2.4)	100.0
Walking	33(21.0)	123(78.3)	0.0	1(0.6)	100.0
In-Line Skating	48(38.7)	76(61.3)	0.0	0.0	100.0
Running/Jogging	6(16.7)	30(83.3)	0.0	0.0	100.0
Other Activity(a)	9(56.6)	3(18.8)	0.0	4(25.0)	100.0
Total	248(35.3)	431(61.4)	9(1.3)	14(2.0)	702

(a) Includes walking a pet, viewing the Duck Hunters Memorial, fishing access and use of motorized and non-motorized devices for those with mobility impairments.

Visits for bicycling were more likely to travel greater distances on the trail and to use trail sections outside of the Midland City limits than other activities (Table 27). Conversely, runners and walkers were least likely to leave the Midland City limits. In-line skaters were most likely to use the trail from Midland to Sanford.

Table 27. Percent of PMRT survey respondents that used all or part of a trail section on the day they were sampled segmented by activity during April - September.

Activity	Percent					Mean Number of sections
	Tridge to Emerson Park	Emerson Park to Dublin Ave.	Dublin Ave. to Sanford	Sanford to N. Bradley	N. Bradley to Coleman	
Biking	62.6%	70.7%	69.4%	40.6%	29.6%	2.7
Walking	62.0	45.6	17.1	12.0	13.3	1.5
In-Line Skating	68.8	73.6	55.2	14.0	8.8	2.2
Running/Jogging	66.7	66.7	36.1	5.6	8.3	1.8
Other Activity(a)	68.8	56.3	56.3	25.0	6.3	2.1
Total	63.9	65.1	53.2	27.4	20.7	2.3

(a) Includes walking a pet, viewing the Duck Hunters Memorial, fishing access and use of motorized and non-motorized devices for those with mobility impairments.

Those involved in bicycling were likely to be in larger groups and use the trail for a longer period of time on the day they were sampled (Table 28). On average, walkers were in the smallest groups and used the trail for the shortest period of time.

Table 28. Group composition and hours of use by PMRT survey respondents segmented by activity during April - September.

Activity	Mean Number			Hours
	Adults	Children	Total	
Biking	1.83	0.32	2.15	2.31
Walking	1.60	0.18	1.78	1.24
In-Line Skating	1.72	0.20	1.92	1.51
Running/Jogging	1.53	0.39	1.92	1.28
Other Activity (b)	1.69	0.25	1.94	2.50
Total	1.74	0.27	2.01	1.88

(a) Includes walking a pet, viewing the Duck Hunters Memorial, fishing access and use of motorized and non-motorized devices for those with mobility impairments.

All activity groups were highly satisfied with their PMRT experience on the day they were sampled (Table 29). The lowest level of satisfaction (5.6% less than satisfied) was found in in-line skaters. Their chief concerns focused on glasphalt being a difficult surface for skating and concerns about potholes in a couple of locations. *(Since this survey was conducted, all glasphalt sections have been repaved.)*

Table 29. Satisfaction of PMRT survey respondents on the day sampled by activity during April – September.

Activity	Mean (a)	Percent		
	Rating	Not Satisfied	Neutral	Satisfied
Biking	2.97	0.3	3.0	96.8
Walking	2.98	0.6	0.6	98.7
In-Line Skating	2.94	0.0	5.6	94.4
Running/Jogging	3.00	0.0	0.0	100.0
Other Activity(a)	3.00	0.0	0.0	100.0
Total	2.97	0.3	2.7	97.0

(a) Rating scale: 1 = not satisfied, 2 = neutral, and 3 = satisfied.

(b) Includes walking a pet, viewing the Duck Hunters Memorial, fishing access and use of motorized and non-motorized devices for those with mobility impairments.

Walkers and runners appear to be the most regular trail users, on a per person basis accounting for two to three times as many visits as bicyclers and in-line skaters (Table 30). Walkers and runners are also likely to have a greater proportion of their use during the "shoulder" seasons of spring and fall than bicyclers or skaters.

Table 30. Estimated annual days of PMRT use during the past year by season for weekend/holiday and weekday users. (a)

Activity	Mean				Total
	Winter	Spring	Summer	Fall	
Biking	0.4	2.9	5.7	2.3	11.2
Walking	1.8	9.0	12.9	7.0	30.7
In-Line Skating	0.6	4.3	8.7	3.2	16.8
Running/Jogging	2.6	8.8	10.7	6.4	28.5
Other Activity (c)	Too few				
Total	0.7	4.0	7.2	3.1	15.0

(a) Winter: (Dec. Jan. Feb.), Spring: (Mar. Apr. May), Summer: (Jun. July Aug.), Fall: (Sept. Oct. Nov.).

(b) Data were weighted to account for frequency of use bias.

(c) Includes walking a pet, viewing the Duck Hunters Memorial, fishing access and use of motorized and non-motorized devices for those with mobility impairments.

Participants demographically differed in many ways when segmented by activity (Table 31). Almost two-thirds of bicyclists were male, while less than one-quarter of walkers were male. Those participating in other activities included a sizeable cadre of disabled persons enjoying the outdoors and trail in their wheelchair or other adaptive means of locomotion that allowed them to use the trail. Those involved in the most vigorous activities, in-line skating and running, tended to be almost a decade younger than bicycling respondents. Those who ran or skated were most likely to use the designated parking lots at trailheads, while bicyclists and others were least likely to use such parking areas.

Table 31. Demographic characteristics of survey respondents per PMRT visit by activity during April - September.

Activity	Percent		With impairment	Mean Age	Median Miles from home to trail	Percent Used parking lots
	Female	Male				
Biking	37.4	62.3	3.7	46.7	5.0	44.7
Walking	76.1	23.9	3.8	48.6	3.0	61.4
In-Line Skating	57.7	42.3	1.6	37.3	5.0	71.2
Running/Jogging	41.7	58.3	0.0	37.4	4.0	72.2
Other Activity (a)	37.5	62.5	18.8	48.9	3.5	33.3
Total	49.9	51.1	3.5	45.0	4.0	54.2

(a) Includes walking a pet, viewing the Duck Hunters Memorial, fishing access and use of motorized and non-motorized devices for those with mobility impairments.

Implications of Segmentation by Activity

Bicyclists are most likely to be focused on recreation during their trail experience. This differs from foot related activities, which are more often done primarily for exercise. Bicyclists are also most likely to go the greatest distances on the trail, be in the largest groups and to visit the sections outside of the Midland City limits. This suggests that businesses that cater to bicyclists would be benefited by being open on weekends and considering folks to whom a more leisurely experience would be appealing than intense foot related activities such as running.

In terms of year round trail use and the most frequent use, walkers and runners are the people with a presence across every month. Because of their familiarity and use of the trail, they may be especially valuable as volunteers in early spring and late fall to respectively prepare the trail for heavier use and "put it to bed" in some respects for winter. Their value as "eyes and ears" to managers is enormous. For businesses, fitting into this regular use pattern with goods and services that meet this group's health conscious lifestyle would be advantageous.

Other activities, which often do not register well in surveys of this type are nevertheless important. Those who are mobility impaired have found a tremendous resource in the trail that provides a safe way to enjoy the natural environment and socializing in a safe atmosphere suitably adapted to their condition and mechanical aids. Fishing opportunities exist and could be enhanced, especially at Sanford.

In-line skaters represent a group with a quarter who are non-residents who have recognized the value to traveling to the PMRT to enjoy their activity. This group of younger adults was more likely to recognize problems with the PMRT than others in terms of potholes and glasphalt in their satisfaction. Now that the glasphalt problem is literally covered over, this group is likely to expand with improved trail conditions. This may be especially valuable for Coleman, which was once a terminus of the trail but now is linked with Clare. A twelve mile ride from Clare, with a stop in Coleman and a return trip to Clare can provide a reasonable distance for a two hour skate with a halfway rest point and expressway access. The new pavement in the Isabella County section is likely to be highly attractive to this user segment also.

PMRT Survey Results Segmented by Group Composition

The composition of groups that use trail facilities can greatly influence their needs and the opportunities of businesses along the trail. For example, groups with children are likely to need to stop more frequently, to have restaurants with menus that in some manner specifically cater to the needs to children who are thirsty, tired and often excited and ready to eat rapidly so they can get back out on the trail. Conversely, groups of adults may seek the opportunity of a gathering place where they can socialize with others of similar persuasions, such as other runners or walkers. They are likely to build up routines that they appreciate being able to maintain over considerable periods of time. This requires a level of predictability on the part of service businesses that cater to such customers.

In the analysis of this data, a group without children may contain one or more persons, none of whom is under 18. A group with children contains one or more adults (18 years of age or more) and one or more children less than 18 years of age.

While Midland County residents and/or workers are the majority of PMRT survey respondents, almost three in ten groups with children are tourists (Table 32). In total, groups with children comprise 14 percent respondents, while those without children in their party are 86percent.

Table 32. Proportion of PMRT survey respondents by residents or workers in Midland County segmented by group composition during April - September.

Type of Group	Number (%)		
	Midland County	Other County	Total
Group without Children(s)	476(77.9)	135(22.1)	611(100.0)
Group with Children(s)	70(70.7)	29(29.3)	99(100.0)
Total	546(76.9)	164(23.1)	710 (100.0)

Groups with children were much more likely to cite recreation as the main reason for their visit than groups without children (Table 33). Exercise the most frequent main reason for the trail visit cited by groups without children. Transportation as the main reason for the visit was almost solely by groups without children.

Table 33. Main reason for rail-trail use by PMRT survey respondents segmented by group composition April – September.

Type of Group	Number (%)				Total
	Recreation	Exercise	Transportation to work/school	Transportation other than to work/school	
Group without Children(s)	182(30.2)	399(66.2)	9(1.5)	13(2.2)	611(100.0)
Group with Children(s)	66(66.7)	32(32.3)	0.0	1(1.0)	224(100.0)
Total	248(35.3)	431(61.4)	9(1.3)	14(2.0)	702

Groups with children are more likely to be bicyclers, while adult only groups are more likely to be walkers (Table 34). The proportion of use is similar for all other activities.

Table 34. Primary activity of PMRT survey respondents during sample visit segmented by group composition April - September.

Type of Group	Percent				
	Biking	Walking	In-line skating	Running/Jogging	Other (a)
Group without Children(s)	51.9	23.2	17.7	5.1	2.1
Group with Children(s)	57.6	17.2	17.2	5.1	3.0
Total	52.7	22.4	17.6	5.1	2.3

(a) Includes walking a pet, viewing the Duck Hunters Memorial, fishing access and use of motorized and non-motorized devices for those with mobility impairments.

Groups without children were likely to use more sections of the trail, especially those longer sections outside the Midland City limits than those with children (Table 35). Only in the Tridge to Emerson Park section did a higher percentage of groups with children use the trail than those without children.

Table 35. Percent of PMRT survey respondents that used all or part of a trail section on the day they were sampled segmented by activity during April - September.

Type of Group	Percent					Mean Number of sections
	Tridge to Emerson Park	Emerson Park to Dublin Ave.	Dublin Ave. to Sanford	Sanford to N. Bradley	N. Bradley to Coleman	
Group without Children(s)	63.8	66.3	56.1	28.5	20.9	2.4
Group with Children(s)	64.6	57.6	35.4	21.2	19.2	2.0
Total	63.9	65.1	53.2	27.4	20.7	2.3

Groups with children were considerably larger than those without children (Table 36). This is logical considering that all groups with children by definition had at least two people, where groups with adults could be one adult. Both groups had a similar length of stay on the trail.

Table 36. Group composition and hours of use by PMRT survey respondents segmented by type of group during April - September.

Type of Group	Mean Number			Hours
	Adults	Children	Total	
Group without Children(s)	1.7	0.0	1.7	1.9
Group with Children(s)	1.8	2.0	3.8	1.8
Total	1.7	0.3	2.0	1.9

Both groups were highly satisfied with their PMRT trail experience (Table 37). Of those few (5%) groups with children who were not satisfied or neutral, they most often mentioned concerns about a lack of drinking fountains and rest rooms. For few adult groups not satisfied or neutral (2.7%), the concerns related more to trail conditions, including glasphalt and a few potholes

Table 37. Satisfaction of PMRT survey respondents on the day sampled by group composition during April – September.

Type of Group	Mean (a)	Percent		
	Rating	Not Satisfied	Neutral	Satisfied
Group without Children(s)	2.97	0.2%	2.5%	97.4%
Group with Children(s)	2.94	1.0	4.0	94.9
Total	2.97	0.3	2.7	97.0

a. Rating scale: 1 = not satisfied, 2 = neutral, and 3 = satisfied.

Respondents who were part of groups with children were less frequent users of the trail than respondents from adult only groups (Table 38). Summer also accounted for 55 percent of the trail use by respondents from groups with children, where it only accounted for 47 of respondents from groups without children.

Table 38. Estimated annual days of PMRT use during the past year by season by group composition. (a)

Type of Group	Mean				Total
	Winter	Spring	Summer	Fall	
Group without Children(s)	0.8	4.5	7.7	3.5	16.4
Group with Children(s)	0.3	2.2	5.3	1.9	9.7
Total	0.7	4.0	7.2	3.1	15.0

(a) Winter: (Dec. Jan. Feb.), Spring: (Mar. Apr. May), Summer: (Jun. July Aug.), Fall: (Sept. Oct. Nov.).

(b) Data were weighted to account for frequency of use bias.

The survey respondent in groups with children was likely to be female and to have an average age about a decade younger than the respondent for a group without children (Table 39). Over two-thirds of groups with children accessed the trail through a parking lot, while only slightly more than half of groups without children did so.

Table 39. Demographic characteristics of survey respondents per PMRT visit by activity during April - September.

Type of Group	Percent			Mean	Median	Percent
	Female	Male	With impairment	Age	Miles from home to trail	Used parking lots
Group without Children(s)	47.6%	52.4%	3.8%	46.2	4.0	52.0%
Group with Children(s)	63.6	36.4	2.0	37.9	5.0	68.4
Total	49.9	51.1	3.5	45.0	4.0	54.2

Implications of Segmentation by Group Composition

Those from groups with children tend to be less frequent visitors to the PMRT who are more likely to be using the trail for recreational purposes than adult only group members who are more focused on exercise benefits. Leaders of groups with children also tend to be almost a decade younger than members of adult only groups and are much more likely to be female than adult

only group members. Managers need to be certain the leaders of groups with children are aware of the location of restroom facilities, drinking fountains and other items that children may need more frequently than adults. Security may also be more important than it is to adult only groups as often groups with children have only one adult who is most likely to be female with multiple children.

PMRT Survey Respondents Segmented by Amount of Annual Use

Park and recreation facilities have regular users that attend on almost a daily basis, some who come on a weekly or monthly basis and some who may visit only once or twice a year. It is critical to understand each of these user segments. Infrequent users are often especially easy to overlook as they may be new to an activity such as in-line skating and either shy away from contact with managers or be intent on succeeding. Conversely, frequent users may often give managers the impression that they represent essentially all the user, when they may only comprise a relatively small proportion. In the political arena, such as in a millage election, the casual user has the same number of votes as the daily user, one.

PMRT respondents have been segmented into three levels of use frequency, low (1-30 uses during the past year), medium (31-90 uses during the past year) and high (91 or more uses the past year). This sample is influenced by the frequency of visit, hence those who visited 91 times a year have considerably more chance to be sampled than a person visiting one time a year. Hence, medium and high use visitors are over sampled, while low use visitors are under sampled. To understand each group however, it is appropriate to have these relatively equal sized segments and focus on the percentage in each group who do or do not have a certain key characteristic.

Frequent (high use) patrons are more likely to live and/or work in Midland County than other users (Table 40). Conversely, visitors to Midland County are more likely to be infrequent users. Their minimal contact annually with the trail, coupled with not being residents of the area makes it very important to have accurate information available on-site and emphasizes the importance of trail managers and nearby service businesses being able to answer trail related questions accurately.

Table 40. Proportion of PMRT survey respondents by residents or workers in Midland County segmented by group composition during April - September.

Frequency of Use (a)	Number (%)		Total
	Midland County	Other County	
Low Use	141(68.8)	64(31.2)	205(100.0)
Medium Use	180(87.4)	26(12.6)	206(100.0)
High Use	207(95.0)	11(5.0)	218(100.0)
Total	546(76.9)	164(23.1)	710

a. Low use = 1 to 30 days per year, Medium= 31 to 90 days per year, and High = 91+ days per year.

(b) Data were weighted to account for frequency of use bias.

Infrequent (low use) patrons are more likely to use the PMRT for recreation than more frequent users (Table 41). However, all groups reported that the majority used the trail on the day of their visit primarily for exercise. Frequent (high use) patrons were most likely to use the trail for transportation purposes.

Table 41. Main reason for rail-trail use by PMRT survey respondents segmented by frequency of use during April – September.

Frequency of Use (a)	Number (%)				Total
	Recreation	Exercise	Transportation to work/school	Transportation other than to work/school	
Low Use	91(45.0)	107(53.0)	2(1.0)	1(1.0)	205(100.0)
Medium Use	65(31.6)	138(67.0)	0.0	3(1.5)	206(100.0)
High Use	52(24.3)	148(69.2)	7(3.3)	7(3.3)	218(100.0)
Total	248(35.3)	431(61.4)	9(1.3)	14(2.0)	702

a. Low use = 1 to 30 days per year, medium = 31 to 90 days per year, and high = 91+ days per year.

Low use patrons were the most likely to bicycle on the PMRT, while high use patrons were most likely to walk and run (Table 42). Medium use patrons had the highest percentage involved with in-line skating during their PMRT visit when sampled.

Table 42. Primary activity of PMRT survey respondents during sample visit segmented by frequency of use during April - September.

Frequency of Use (a)	Percent				
	Biking	Walking	In-line skating	Running/Jogging	Other (b)
Low Use	56.6	19.0	18.5	3.4	2.4
Medium Use	49.5	22.8	22.3	3.4	1.9
High Use	46.3	27.1	14.7	9.6	2.3
Total	52.7	22.4	17.6	5.1	2.3

(a) Low use = 1 to 30 days per year, medium = 31 to 90 days per year, and high = 91+ days per year.

(b) Includes walking a pet, viewing the Duck Hunters Memorial, fishing access and use of motorized and non-motorized devices for those with mobility impairments.

Differing frequency of use did not appear to be associated with using a different number of trail sections (Table 43). However, high use patrons were less likely to use the Tridge to Emerson Park section and were more likely to use the two most rural sections to the northwest. Medium use patrons reported the highest use of the Emerson Park to Dublin Ave. and the Dublin Ave. to Sanford sections.

Table 43. Percent of PMRT survey respondents that used all or part of a trail section on the day they were sampled segmented by frequency of use during April - September.

Frequency of Use (a)	Percent					Mean Number of sections
	Tridge to Emerson Park	Emerson Park to Dublin Ave.	Dublin Ave. to Sanford	Sanford to N. Bradley	N. Bradley to Coleman	
Low Use	66.3	59.5	52.7	23.4	19.5	2.2
Medium Use	65.5	70.4	55.3	26.2	17.0	2.3
High Use	56.5	64.4	49.1	29.2	22.7	2.2
Total	63.9	65.1	53.2	27.4	20.7	2.3

a. Low use = 1 to 30 days per year, medium = 31 to 90 days per year, and high = 91+ days per year.

Low use patrons reported the longest length of stay on their PMRT sample visit and also were most likely to have children in their group and have the largest group (Table 44). Conversely, high use respondents had the smallest group size and the shortest stay on the day they were sampled.

Table 44. Group composition and hours of use by PMRT survey respondents segmented by activity during April - September.

Frequency of Use (a)	Mean Number			Hours
	Adults	Children	Total	
Low Use	1.80	0.47	2.28	2.05
Medium Use	1.68	0.17	1.85	1.72
High Use	1.48	0.14	1.62	1.65
Total	1.74	0.27	2.01	1.88

a. Low use = 1 to 30 days per year, medium = 31 to 90 days per year, and high = 91+ days per year.

All groups were highly satisfied with their PMRT experience on the day they were sampled (Table 45). Of those not satisfied or neutral, low use respondents were most concerned about a perceived lack of bathrooms and drinking fountains, while medium and high use respondents focused on concerns about glaspphalt and potholes. (*Since this data was gathered, all glaspphalt sections have been repaved.*)

Table 45. Satisfaction of PMRT survey respondents on the day sampled by frequency of use during April – September.

Frequency of Use (a)	Mean (b) Rating	Percent		
		Not Satisfied	Neutral	Satisfied
Low Use	2.96	0.5%	3.4%	96.1%
Medium Use	2.98	0.0	2.5	97.5
High Use	2.98	0.0	2.3	97.7
Total	2.97	0.3	2.7	97.0

a. Low use = 1 to 30 days per year, medium = 31 to 90 days per year, and high = 91+ days per year.

b. Rating scale: 1 = not satisfied, 2 = neutral, and 3 = satisfied.

Those in the low use category had an average number of visits last year that was four percent of the average number of visits for those characterized as high users (Table 46). High use group members were unique in that they actively used the trail year round, with over 10 days of use during the winter and use on more than half the days during the summer.

Table 46. Estimated annual days of PMRT use during the past year by season by frequency of use. (a) (b)

Frequency of Use (c)	Mean				Total
	Winter	Spring	Summer	Fall	
Low Use	<0.1	1.5	3.2	0.8	5.6
Medium Use	0.6	3.2	5.6	2.4	11.9
High Use	10.7	39.6	54.9	35.4	140.6
Total	0.7	4.0	7.2	3.1	15.0

(a) Winter: (Dec. Jan. Feb.), Spring: (Mar. Apr. May), Summer: (Jun. July Aug.), Fall: (Sept. Oct. Nov.).

(b) Data were weighted to account for frequency of use bias.

(c). Low use = 1 to 30 days per year, medium = 31 to 90 days per year, and high = 91+ days per year.

As the frequency of use increases the proportion of respondents is increasingly male, users are slightly more likely to have a physical impairment that qualifies them under the ADA and they are likely to be older (Table 47). Conversely, as the frequency of use increases, the distance of the trail from home declines as does the use of parking lots to access the trail.

Table 47. Demographic characteristics of survey respondents per PMRT visit by activity during April - September.

Frequency of Use (a)	Percent		With impairment	Mean	Median	Percent Used parking lots
	Female	Male		Age	Miles from home to trail	
Low Use	52.7	47.3	3.4	42.3	6.0	60.8
Medium Use	50.5	49.5	3.4	44.8	4.0	55.3
High Use	47.7	52.3	4.1	47.8	2.6	43.6
Total	49.9	51.1	3.5	45.0	4.0	54.2

a. Low use = 1 to 30 days per year, medium = 31 to 90 days per year, and high = 91+ days per year.

Implications of Segmentation by Frequency of Use

The most frequent users spend more than 100 days a year on the trail. They become fixtures, whether they are commuters or have a daily fitness regimen. The focus on fitness appears to best describe most of them. They are more likely to be runners or walkers than less frequent users and seven in ten are there for exercise. They are also likely to live closer to the trail, making it convenient, even if time for their activity is short. Indeed, they also had the shortest length of stay on the visit in which they were surveyed.

This group may provide a key study group to better understand the relationship between regular, cardio-vascular exercise and health. It may also contain those who have been prescribed a fitness regimen by a physician or physical therapist.

CONCLUSION

This profile and segmentation of PMRT trail visits and visitors provides a rich data set for managers to better understand trail users and their management concerns. It also provides excellent marketing data for businesses to better understand potential and current market segments, whether they provide a good or service. Trail related recreation equipment and clothing retailers, restaurants, convenience stores and others can directly benefit from the information contained. Transportation and trail funding and planning agencies can also benefit by better understanding reasons for satisfaction or the lack of it and the use of the trail for transportation. Finally community residents and local officials can adapt the procedures used to assess use and segment visits and visitors to plan studies of their own trail systems or in the conceptual phases as they discuss with members of the community what they want in a proposed trail.

LITERATURE CITED

Vogt, C., Van der woud, A., Lynch, J., and Nelson, C. 2002. *Midland County Nearby Businesses and Adjacent Residential Landowners Opinions Concerning and Use of the Pere Marquette Rail-Trail in Michigan*. Submitted to Michigan Department of Transportation, Lansing MI and Midland County Parks and Recreation Department, Midland, MI.

APPENDIX A

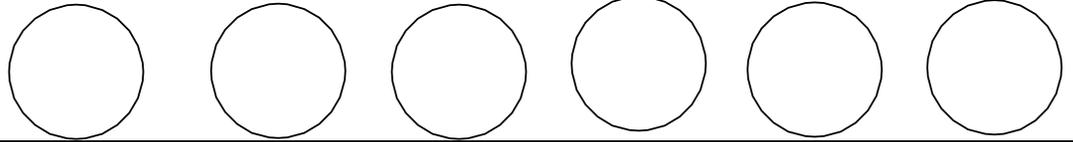
PERE MARQUETTE RAIL-TRAIL OBSERVATION SHEET

Pere Marquette Rail-Trail Observation Sheet

Day and Date: _____

Weather conditions: _____

Surveyor: _____



	Number of Adults			Number of Children (babies to 18 years old)			Record Refusals
	biking	in-line skating	foot	biking	in-line skating	foot	
site: _____ time start : _____ time finish: _____							Count: Type of User: Why?
site: _____ time start: _____ time finish: _____							Count: Type of User: Why?

Directions:

1. Count during the entire time at each site.
2. Count only in a east to west direction for all site except Coleman, count in a west to east direction for Coleman.
3. Try to count everyone just once - do your best at visually placing people in adult/children categories.
4. At end of site or day, count markings and place a number in each cell.
5. Complete a sheet each day. Mail to MSU each week with completed on-site surveys.

Totals for the day _____ number of attempted on-sites _____ number of completed on-sites _____ number of refusals

APPENDIX B

PERE MARQUETTE RAIL TRAIL USE ASSESSMENT SURVEY

Pere Marquette Rail Trail Use Assessment _____ Date _____ Site (A-F) _____ Time _____ Id No.

Dear Trail User:
Michigan State University, the Michigan Department of Transportation and Midland County Parks are cooperating to assess use of the Pere Marquette Rail-Trail. Please take the 4 minutes needed to complete this survey. Your name will be confidential and won't be connected with any results. You indicate your voluntary agreement to participate by completing and returning this questionnaire.

1. Are you a full-time resident of or do you work in Midland County? *(check one)*
 YES, GO TO QUESTION 2
 NO-- *please provide name, address, town/state, zip* -----

2. What reason best describes your use of the trail today? *(check one)*
 RECREATION TRANSPORTATION TO WORK/SCHOOL
 EXERCISE TRANSPORTATION OTHER THAN TO WORK/SCHOOL

3. What activities related to the Rail-Trail have you or members of your group done today?
(check all that apply)
 BICYCLING FISHING ACCESS USE WHEELCHAIR/WALKER
 WALKING NATURE STUDY HORSEBACK RIDING
 WALKING WITH PET VISIT CULTURAL SITES EATING AT RESTAURANT
 IN-LINE SKATING PICKING BERRIES/MUSHROOMS SHOPPING
 RUNNING/JOGGING OTHER (DESCRIBE _____)

4. Which activity is the primary reason for being on the Rail-Trail today? *(fill in)*

5. Considering the Pere Marquette Rail-Trail in segments, please check the segments you will use all or part of today? *(check all that apply)*
 TRIDGE/FARMER'S MARKET TO EMERSON PARK (AB) SANFORD TO N. BRADLEY (DE)
 EMERSON PARK TO DUBLIN AVE (BC) N. BRADLEY TO COLEMAN (EF)
 DUBLIN AVE. TO SANFORD (CD)

6. Did you use any of the designated Rail-Trail parking lots today? *(check one)* YES NO

7. How many total hours will you use the trail today?*(fill in)* _____ NUMBER OF HOURS

8. Including yourself, how many people are in your group today? *(fill in)*
 _____ NUMBER OF ADULTS _____ NUMBER OF CHILDREN (0-18)

9. Please rate on a scale of 1-9 (1 highly dissatisfied; 5 neutral; and 9 highly satisfied), how satisfied you are with your experience on the Pere Marquette Rail-Trail today. _____ RATING

10. What is the one most important reason for your rating?*(provide a few words)*

11. In the past 12 months, how many days have you used the Pere Marquette Rail-Trail? *(fill in by season)*
 WINTER (DEC, JAN, FEB) _____ SPRING (MARCH, APR., MAY) _____
 SUMMER (JUNE, JULY, AUG) _____ FALL (SEPT, OCT, NOV) _____

12. What is your zip code? _____

13. How far is it from where you started the trail today from your home? *(fill in)* _____ NUMBER OF MILES

14. Are you? MALE FEMALE
15. What is your age? (*fill in*) _____ YEARS
16. Do you have an impairment that seriously limits your participation in work or recreation?
 YES NO
17. Have you been surveyed another day by Michigan State University on the Pere Marquette Rail-Trail?
(*check one*) NO YES, how many times? _____

Thanks for your help in improving Michigan trails. Chuck Nelson, Assoc. Prof., Dept. Park, Recreation & Tourism Resources, Michigan State University, East Lansing, MI 48824 (517) 353-5190

APPENDIX C

REASONS FOR SATIFICATION RATING

“Not Satisfied” rating 2 persons explained

too much glass in surface	1 time(s)
no directions/signs	$\frac{1}{2}$

“Neutral” rating 13 persons explained

DESIGN

glass and potholes in surface	1 time(s)
glass in pavement	1
holes in Sanford area	1
needs resurfacing for rollerblading	1
needs smoother surface	1
needs to be resurfaced	2
rough surface for rollerblading	$\frac{1}{8}$

AMENITIES

more bathrooms	1 time(s)
water fountain not always on	$\frac{1}{2}$

GENERAL

first time skating here	1 time(s)
just starting ride	1
great trail	$\frac{1}{3}$

“Satisfied” rating 630 persons explained (note multiple answers allowed)

DESIGN

Length and width

length of trail	11 time(s)
smooth wide path	1
width of the trail	<u>3</u>
	15

Amenities

excellent facilities	3 time(s)
good facilities	1
nice restrooms	<u>1</u>
	5

Trail surface conditions

asphalt	1 time(s)
awesome flat trail	1
condition of surface	1
condition of trail surface	1
excellent condition of the trail	3
fast surface	1
flat surface	5
excellent shape of pavement	1
good road bed	1
good skating conditions	1
good surface	5
great surface	2
nice biking surface	1
nice flat trail	1
nice pavement	1
nice surface	3
nice though some parts a bit rough	1
nicely paved	1
not totally smooth	1
paved surface	8
quality of surface	3
road condition	1
smooth surface of trail	14
smooth trail	6
smoothness of trail	20
some areas could be smoother	2
surface condition	2
trail surface quality	<u>1</u>
	89

Total Design 109 mentions

NATURAL ENVIRONMENT AND ATMOSPHERE

beautiful	2 time(s)
beautiful scenery	1
beautiful surroundings	2
beautiful trail	2
blooming of wildflowers	2
country feeling	1
enjoy being outdoors	1
flora along the trail	1
peaceful	5
peaceful area	1
peacefulness	1
good scenery	1
interesting view	1
location of trail	6
natural environment	2
nice atmosphere	1
nice view	1
quiet	5
scenery	54
setting	2
surroundings	11
view on trail	1
wildlife	<u>2</u>
	106

SAFETY AND FREE FROM MOTORIZED TRAFFIC

safe	4 time(s)
safe for the children	1
safe place to exercise	1
safe without cars	1
safety	82
good safe place to walk/bike	1
little traffic	2
low # of intersections	1
low traffic	2
no cars	25
no motorized vehicles	11
no traffic	33
not crowded	6
not much traffic	<u>3</u>
	173

ACCESS AND CONVENIENCE

access	2 time(s)
access to river	1
accessibility	9
accessibility of other towns by bike	1
able to get off main roads	1
always available	1
availability	1
connections to other areas	1
convenience	11
convenient	8
close to home	2
easy access	2
easy accessible	<u>1</u>
	41

CLEANLINESS AND MAINTENANCE

clean rest rooms	1 time(s)
cleanliness	60
clear of debris	1
good overall condition of the trail	1
good condition	10
condition of the trail	15
good quality of trail	2
maintenance of trail	1
overall condition of the trail	2
quality of the trail	4
trail condition	2
trail not always clean	1
well maintained	<u>53</u>
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RECREATION AND FITNESS

exercise	2 time(s)
fitness	1
excellent trail for biking	1
good for bike riding	2
good for exercising	12
good for running	1
good for walking	1
great for biking	2
great for exercising	6
great for skating	1
great for walking	1
lovely trail for walking	1
nice for skating	1

nice for walking	2
nice to bike	1
nice to walk	1
nice trail for biking	1
nice trail to walk	1
no place else to bike	1
personal level of fitness	1
relaxing	<u>1</u>
	41

EASE OF USE AND ENJOYMENT OF THE TRAIL

easy riding	1 time(s)
easy to walk on	1
ease of use	3
ease for walking	1
comfortable ride	1
enjoy trail	3
enjoyable bike ride	1
enjoyed trail	1
enjoyment	2
best trail in the State	2
best place around for skate skiing	1
fun	1
like the trail	1
like trail	1
excellent trail	1
good trail	3
great facility	2
great trail	7
like hills	1
love the rail trail	7
my enjoyment	2
nice trail	16
pleasant	1
pleasant to walk	1
smooth uninterrupted cycling	1
smooth walking	1
super easy to use	1
we had fun	1
wonderful facility	1
wonderful trail	<u>1</u>
	67

SOCIAL INTERACTION ON THE TRAIL

friendly people	3 time(s)
good opportunity to meet others	1
good place for meeting others	1
nice people on trail	1
opportunity to meet new people	1
the company	<u>1</u>
	8

OTHER

accomplished riding to Sanford	1 time(s)
answers my needs	1
bridge boards need repairs	1
good experience with trails	1
great concept	1
great day to be outside	1
great improvement for community	1
it is free	1
nice conditions	1
nice day	1
nice weather	1
no dogs	2
one of midland finest features	1
provides off street activity	1
signage	1
to keep trail open	1
too far from home	1
uninterrupted time	1
was in a good mood today	1
weather	19
weather today	<u>3</u>
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