

Economic Impact of Off-Highway Vehicle Recreation & Tourism in Southeast Ohio



American Motorcyclists Association Staff Photo

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Executive Summary

In May 2008, a number of stakeholders in the Off-Highway Vehicle (OHV) industry called for a study of the economic benefits of OHV recreation and tourism in southeast Ohio. With support from the Ohio Department of Natural Resources, the American Motorcyclists Association, and the Hocking Valley Motorcycle Club, a team of researchers from Ohio University answered the call. Two surveys were administered as a part of this study. The first was an expenditure log used to determine the economic impact of Off-Highway Vehicle (OHV) recreation and tourism in southeast Ohio. The second was a trail-use survey used to assess the level of consumer satisfaction with the available trail systems in southeast Ohio. The following is a summary of findings from these two surveys:

- Data from the expenditure logs were analyzed using the IMPAN modeling system, an input-output model that can be used to determine the impact of spending across economic sectors. The model can be used to determine total economic effects, total labor income and jobs that are generated as a result of direct and induced spending related to the OHV recreation and tourism in the region. OHV recreation and tourism generated a total of \$1,390,953.22 in direct spending, \$1,842,265.58 in total output, \$656,980.81 in total labor income, and 26.26 full-time equivalent (FTE) jobs in southeastern Ohio in 2008.

Table 1: Summary of Impacts

Direct Spending	\$1,390,953.22
Total Output	\$1,842,265.58
Total Earnings	\$656,980.81
Total Employment	26.26

- Importance-performance analysis was used to assess the survey participants' satisfaction with their OHV riding experiences in the region. The survey included a list of 42 attributes associated with OHV recreation and tourism, and these attributes were framed along two dimensions: (1) the importance of the attributes to the riders and (2) the extent to which their expectations concerning these attributes were fulfilled during their riding experiences. Seventeen attributes were considered high importance/high performance attributes; 13 attributes were considered low importance/low satisfaction; one attribute was considered low importance/high performance; and, 11 attributes were considered high importance/low performance. While the Wayne National Forest and Ohio State Forests are performing well on nearly half of the attributes considered important by riders, improvements can be made on nearly 31% of the attributes to increase the appeal of the trail systems in southeast Ohio to current and potential visitors to the region.
- Demographic characteristics of the survey participants were analyzed using descriptive statistics. Nearly 90% of survey participants were male. Nearly 94% were Caucasian. And, only 16% of survey participants had achieved a four-year baccalaureate degree.

The overall conclusion that can be drawn from this study is that the OHV recreation & tourism industry provides substantial economic benefits to southeastern Ohio. As facilities are improved and the industry grows in the region, so too will the economic benefits of the industry.

Introduction

In May 2008, a number of stakeholders in the Off-Highway Vehicle (OHV) industry called for a study of the economic benefits of OHV recreation and tourism in southeast Ohio. The twelve-county area surrounding the Wayne National Forest (WNF) is one of the most economically depressed and impoverished areas in Ohio. Measures of economic health and vitality in rural counties within and surrounding WNF continue to lag behind both national and state indicators (i.e., high unemployment rate, acute lower levels of income, and low population increase) (SRG 2003). A key assumption of stakeholders in the OHV industry in southeast Ohio is that attracting visitors to the area for outdoor recreation and tourism opportunities related to OHV trail riding can provide an economic boost to the area and create incentives for the development of facilities, support services, and jobs. OHV use has proven to be a valuable economic resource to communities adjacent to OHV trail systems in other areas of the United States. The Hatfield-McCoy Trail System in West Virginia, for example, has generated significant economic benefits since its creation in 1996 (Marshall University Center for Business and Economic Research [CBER], 2006). Following the example of the Hatfield-McCoy system and others like it, OHV advocates in southeast Ohio are exploring the potential value of a similar system on the Wayne National Forest and Ohio State Forests as a way to promote economic development in the region.

The purpose of this study was to determine the current economic impact of OHV recreation and tourism in the southeast Ohio and thereby provide information about the potential for economic development related to expansion of the industry in the region. Specifically, the researchers aimed to accomplish the following objectives:

1. To establish a baseline for future assessments of economic impact of OHV recreation and tourism in the region;
2. To provide a basis for determining the feasibility and potential benefits of an expanded trail system in the region; and,
3. To provide economic data that might be useful to current and prospective business owners in making decisions about the feasibility of investments in the OHV industry in the region.
4. To assess user satisfaction with existing OHV facilities on the Wayne National Forest and Ohio State Forests.

Two surveys were used in this study. The first was an expenditure log intended to document the amount of money the OHV riders spent during a typical visit to southeast Ohio to ride OHV trails in the area. Data from these logs were used to calculate direct spending, total economic outputs, total labor income, and the total number of jobs related to OHV recreation and tourism in southeast Ohio. The second survey was a trail-use survey intended to assess user satisfaction with the current OHV trail systems in the region. The reason for assessing user satisfaction with the trail system was to identify facility improvements that might be made to create a more appealing destination for current and potential OHV riders in the region.

Background

Off-Highway Vehicle Recreation & Tourism in Southeast Ohio

The Wayne National Forest consists of three separate units: Athens, Ironton, and Marietta. These units are managed under two ranger districts: the Athens ranger district (which includes the Athens and Marietta units) and the Ironton ranger district. The Wayne National Forest was originally established by the U. S. Congress in 1934 and was originally supposed to include nearly 834,000 acres. The Wayne National Forest has acquired only 241,004 acres of land, and the original proclamation boundary of the Forest now includes federally owned land as well as a large patch work of privately owned lands. The Forest occupies portions of the following counties: Athens, Gallia, Hocking, Jackson, Lawrence, Monroe, Morgan, Noble, Perry, Scioto, Vinton, and Washington.

The Wayne National Forest strives to accommodate a diversity of recreational interests through its approach to recreation resource management, including horseback riding, hiking and back packing, bird watching, picnicking as well as other nature based outdoor activities. One of the most popular outdoor recreation activities on the Wayne National Forest is Off-Highway Vehicle use. The Wayne currently manages three OHV trail systems: the 75-mile Monday Creek Trail, which is located on the Athens unit, and the 24-mile Hanging Rock Trail and 17-mile Pine Creek Trail, which are both located on the Ironton unit (See Figure 1 below). These trails are open to mountain bikes and foot traffic but are not typically used for anything other than motorized recreation.

Three State forests in the Ohio State Forest system have designated OHV trails: Perry State Forest, Pike State Forest, and Richland Furnace State Forest. Perry State Forest consists of 4,567 acres of land in Perry County and offers 16 miles of designated OHV trails. Pike consists of 12,084 acres of land in Pike County and offers 10 miles of OHV trails. Richland Furnace consists of 2,524 acres of land in Jackson and Vinton counties and offers eight miles of designated OHV trails. These 34 miles of state forest trails are designated for OHV use. Like on the Wayne Forest, these trails are open to non-motorized travel; however, the trails are typically used only by OHV riders.

Economic Impact Analysis

Consumer spending data collected through this study was analyzed using the Impact Analysis and Planning (IMPLAN) modeling system (Cordell, Bergstrom, & Watson, 1992). The IMPLAN model is a basic input-output economic model that was developed by the United State Forest Service in the 1980s as a resource management planning tool. The IMPLAN system is currently owned and operated by the IMPLAN Group in Stillwater, Minnesota. The IMPLAN Group licenses and distributes software and maintains a database with economic data on 528 industry sectors in the United States. This economic data can be provided at the county level, as well as in aggregates of multiple counties, to help determine local and regional economic impacts of particular industry sectors. The analysis in this study was based on the aggregate of counties included in the economic impact region.

Figure 1: Wayne National Forest Trail Systems

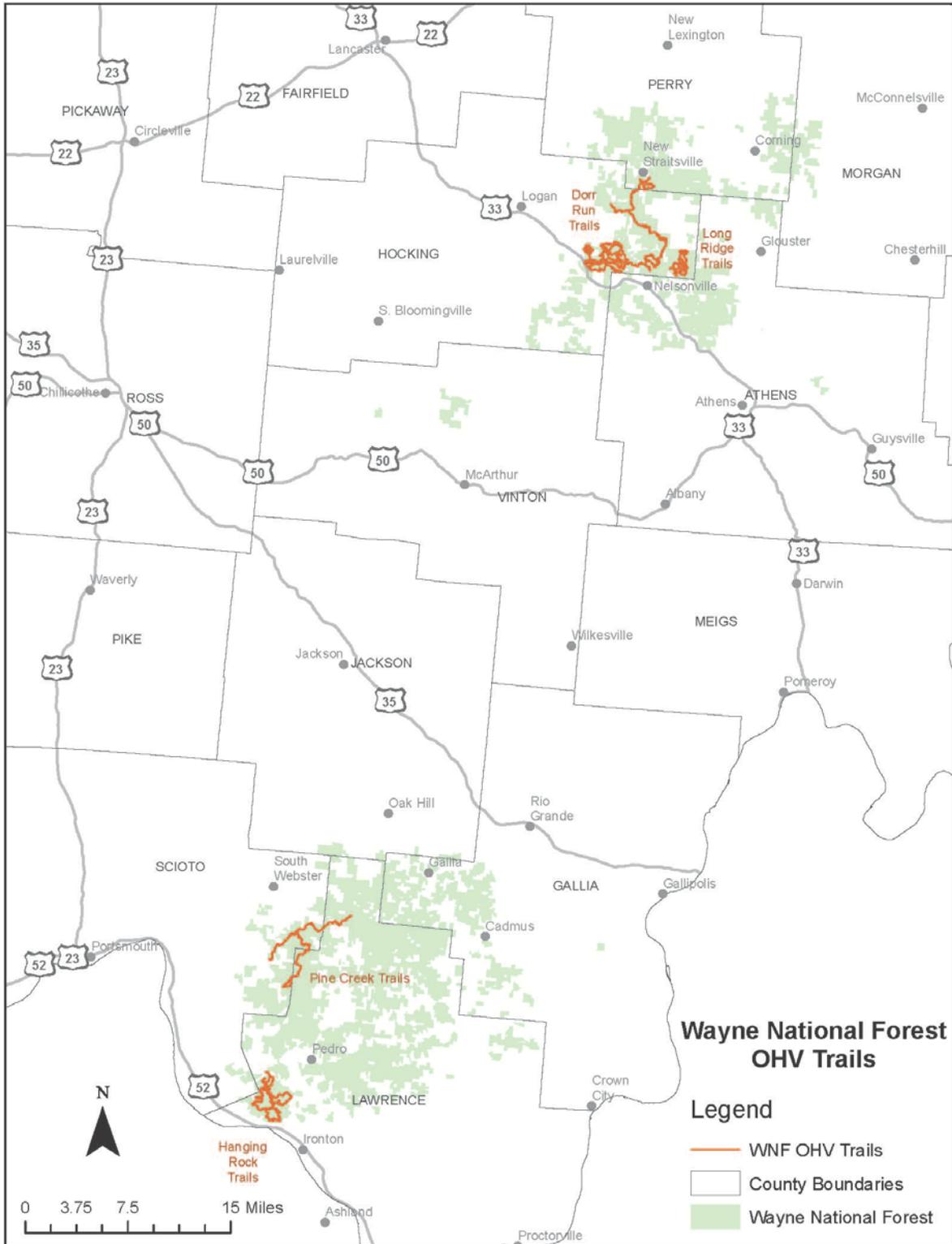


Figure 2: Perry State Forest Trail System

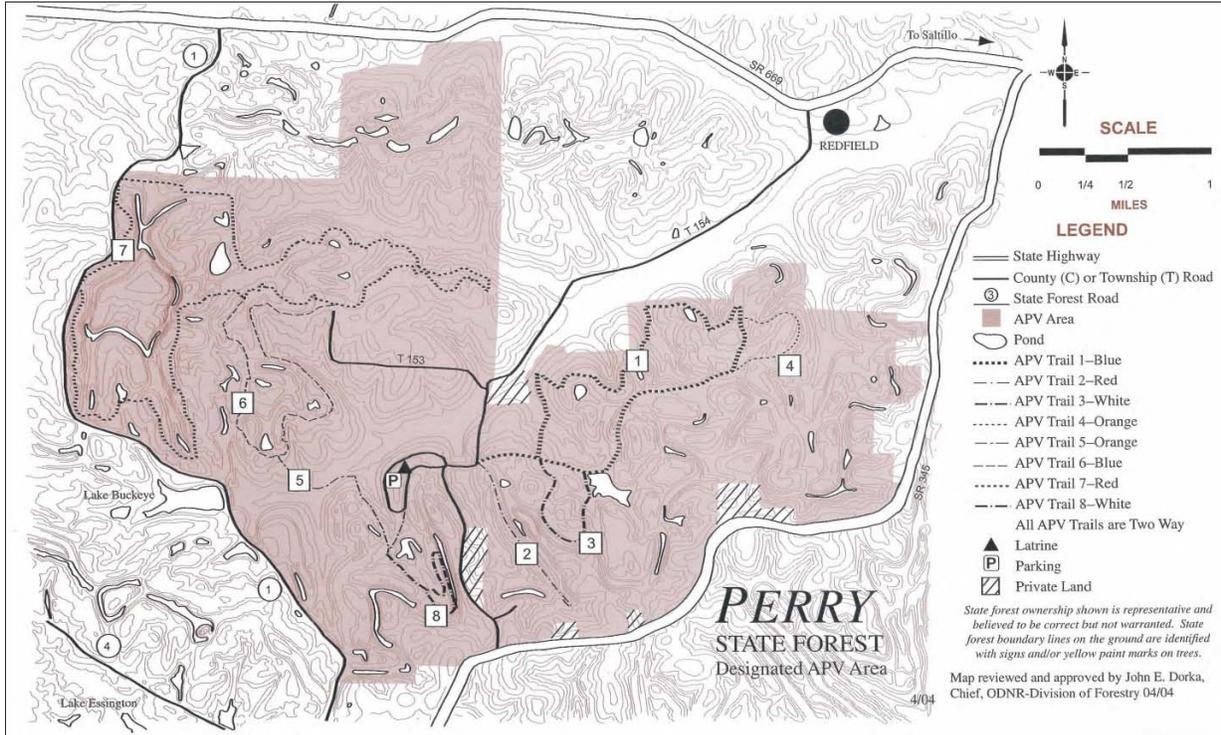


Figure 3: Pike State Forest Trail System

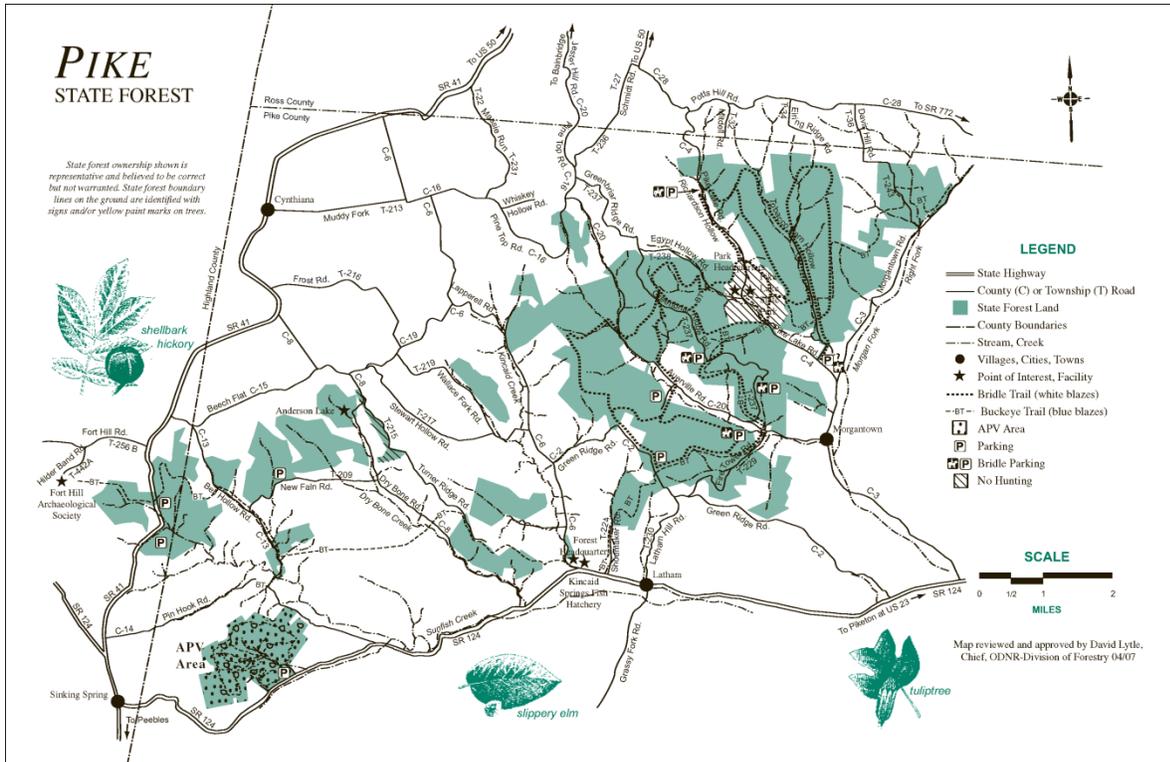
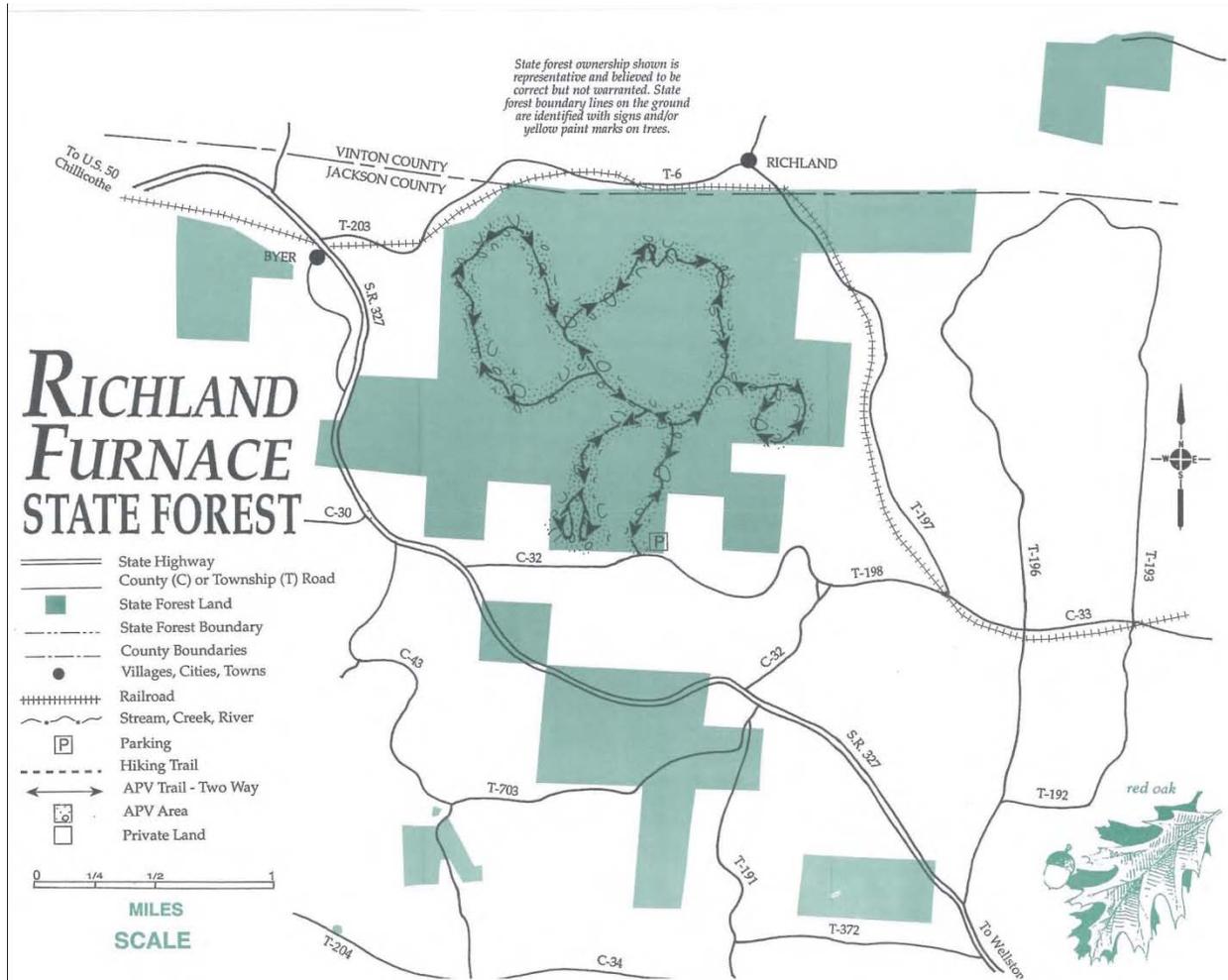


Figure 4: Richland Furnace State Forest Trail System



The IMPLAN model is based on export base theory, which construes local economies and the impacts of changes in local economies in terms of two types of economic activities: basic industries and service industries (Mulkey & Hodges, 2000). The distinction between these two types of industries can be thought of in terms of direct economic impacts versus induced economic impacts. A basic industry is any industry that draws money from outside an area into the local economy. A service industry is any industry through which money is redistributed within the local economy. While basic industries are typically considered to be manufacturing and agriculture, any local business can be considered a basic industry as long as its goods and services are sold to customers who live outside of the area. The point of divide is based on the location of the market rather than the type of economic activity. The distinction between these two industry types is based on the origins of the money that gets exchanged within the economy. Outside money constitutes basic industries, whereas local money constitutes service industries.

The industry on which this study focused was the OHV recreation and tourism industry in southeast Ohio. Because this industry attracts spending from both local residents and visitors,

the industry can be seen both as a basic industry and a service industry. The distinction between OHV recreation and tourism as a basic industry versus a service industry is important when estimating the relative impact of spending by local trail users versus visitors to the trails when analyzing data. The researchers were interested in determining only the amount of money spent by visitors to the region as well as the induced effects of this spending in the region. In this study, a visitor is considered any person living outside of the economic impact zone who visited the region to participate in OHV trail riding on designated trails on the Wayne National Forest or Ohio State Forests. The economic impact zone for this study includes the 10 Ohio counties surrounding the Athens and Ironton units of the Wayne National Forest as well as the Pike, Perry, and Richland Furnace State Forests. These counties include the following: Perry, Hocking, Athens, Morgan, Vinton, Lawrence, Gallia, Scioto, Jackson, and Pike Counties.

Another significant aspect of the IMPLAN model is the use of multipliers to track interactions between sectors within a local economy (e.g., recreation, lodging, food services, etc.) and to determine the value of goods and services that are exchanged between sectors. This is important because it helps to estimate the total effects of spending on OHV recreation and tourism across the economy. Multipliers were used to determine the total output, the total labor income, and the total number of jobs generated by the OHV recreation and tourism industry in southeast Ohio.

Importance-Performance Analysis

Importance-performance analysis (IPA) has been used for over 30 years to assess customer satisfaction with various products and services. Originally developed by Martilla and James (1977), IPA provides a way to measure customer satisfaction along two dimensions: (1) the importance of various attributes related to a product or service and (2) the performance of a company or agency in providing the product or service. IPA results are represented in a four-quadrant matrix that provides a visual illustration of overall satisfaction scores of the population surveyed. The vertical axis represents importance with “not at all important” at one end of the scale and “extremely important” at the other. The horizontal axis represents performance (or satisfaction) with “not at all satisfied” at one end of the scale and “extremely satisfied” at the other. The four quadrants within the IPA matrix are labeled to reflect the general implications of the findings regarding the various attributes of a product or service. Quadrant I is labeled “concentrate here” to reflect high importance yet low performance associated with attributes in the quadrant. Quadrant II is labeled “keep up the good work” to reflect high importance and high performance associated with the attributes found within this quadrant. Quadrant III is labeled “low priority” to reflect low importance and low performance associated with attributes in this quadrant. Quadrant IV is labeled “possible overkill” to reflect low importance yet high performance associated with attributes found in this quadrant. The overall aggregate of satisfaction scores for users of the Wayne National Forest and the Ohio State Forests for OHV recreation and tourism can provide management directives concerning the OHV trail systems managed by these agencies (Bruyere, Rodriguez, & Vaske, 2002).

Research has shown that IPA is limited in its usefulness unless it considers the perspectives of various types of consumers or user groups (Bruyere, Rodriguez, & Vaske, 2002; Vaske, Beaman, Stanley, & Grenier, 1996). This concern does not apply in the case of this study, because the target population was a homogeneous group defined by its participation in OHV trail riding. The

focus of the study was limited solely to OHV recreation and tourism and specifically assessed user satisfaction with existing OHV facilities on the Wayne National Forest and Ohio State Forests. However, as expansion of the trail systems on the Wayne National Forest and Ohio State Forests is considered, IPA should be used to assess all users of these forests for recreation and tourism related activities, not just OHV trail riding. By segmenting consumers according to specific variables (e.g., recreation activity types), resource managers can more effectively weigh the competing interests of various groups who rely on the same resource for different kinds of products and services (e.g., OHV recreation and tourism versus bird watching). Coupled with economic impact analyses of the various kinds of activities that occur in a given area, resource managers can weigh these competing interests based on the economic benefits that each generates for the region. IPA can help resource managers navigate the interests of various user-groups and work to accommodate the interests of each.

Analysis

Demographic Profile of Survey Participants

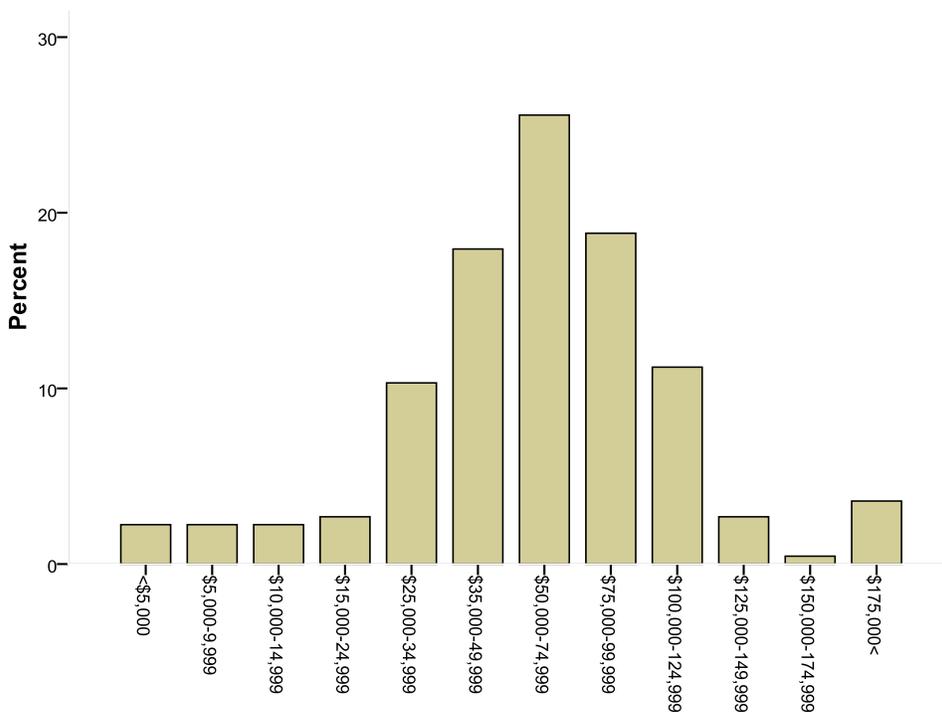
Demographic data were collected through both the expenditure log and the trail-use survey. However, the following description is based on the results of the trail-use survey rather than the expenditure log, because the sample size for the trail-use survey (n = 248) was much larger than the sample size for the expenditure log (n = 34). Larger sample sizes tend to be more reflective of the general population than smaller sample sizes. The following represent valid responses to survey items assessing various demographic characteristics of survey participants:

- Gender
 - 89% of survey participants (n = 211) were male;
 - 6.3% (n = 15) were female.
- Age – Survey participants ranged from 18 to 80 years of age, with an average age of 38.7.
- Race/Ethnicity
 - 93.7% of survey participants (n = 223) were Caucasian;
 - 0.4% (n = 1) were Hispanic/Latino;
 - 2.5% (n = 6) were Native American;
 - 0.8% (n = 2) were Asian/Pacific Islander.
- Marital Status
 - 60.3% (n = 143) were married;
 - 26.2% (n = 62) were single and never married;
 - 11.8% (n = 28) were divorced and single.

- Employment Status
 - 86.8% (n = 210) were employed fulltime;
 - 4.1% (n = 10) were employed part-time;
 - 1.6% (n = 4) were homemakers;
 - 3.7% (n = 9) were students;
 - 2.1% (n = 5) were retired;
 - 1.7% (n = 4) were seeking employment.

- Income Level (see Figure 5 below)
 - 9.4% (n = 21) reported earning less than \$25,000 per year;
 - 28.2% (n = 63) reported earning between \$25,000 and \$50,000 per year;
 - 25.6% (n = 57) reported earning between \$50,000 and \$75,000 per year;
 - 18.8% (n = 42) reported earning between \$75,000 and \$100,000 per year;
 - 11.2% (n = 25) reported earning between \$100,000 and \$125,000 per year;
 - 6.7% (n = 15) reported earning more than \$125,000 per year.

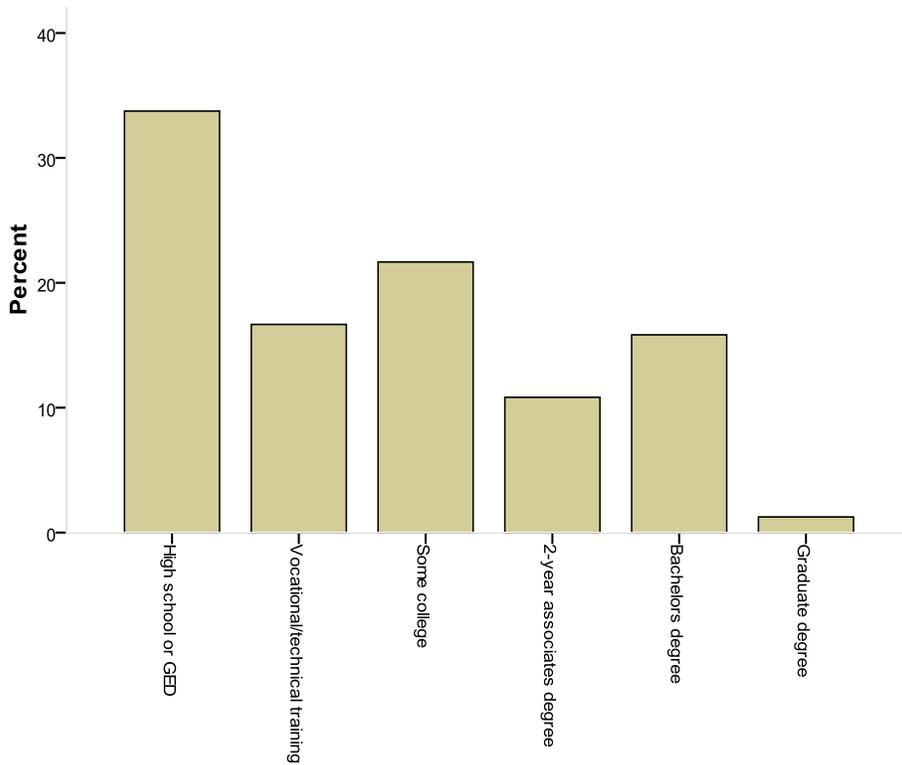
Figure 5: Income Level



- Highest Level of Education (see Figure 6 below)
 - 33.8% (n = 81) reported having completed high school or a GED;
 - 16.7% (n = 40) completed some form of vocational and/or technical training;
 - 21.7% (n = 52) reported having completed some college education;

- 10.8% (n = 26) reported having earned a two-year associate degree;
- 15.8% (n = 38) reported having completed a bachelor degree;
- 1.3% (n = 3) reported having completed a graduate degree.

Figure 6: Highest Level of Education



Economic Impact of OHV Recreation and Tourism

Expenditure logs were distributed to riders in three primary ways. First, permit vendors were recruited to help distribute expenditure logs to customers purchasing permits to use trail systems on the Wayne National Forest. Second, expenditure logs were placed in brochure cases at various points of interest related to OHV recreation and tourism in southeast Ohio (e.g., Wayne National Forest headquarters, various campgrounds, etc.). And, third, expenditure logs were distributed at various intercept points (usually trailheads) on the Wayne National Forest and Ohio State Forests by research assistants. After completing the expenditure log, respondents returned the logs to the research team via the US Postal Service. The first 100 participants to complete the log were promised a cash incentive of \$20 each.

Survey participants were asked to record the expense of each purchase they made in the economic impact zone during their OHV outings. They were asked to record expenses of each member of their group (i.e., the primary survey participant and his or her family members). Survey participants were also asked to itemize purchases of different types of goods when those goods were bought from the same store (e.g., gasoline, groceries, camping gear, etc...). Finally, survey participants were asked to provide information about the trails used, where they spent the

night for overnight trips, the length of stay, the number of children and adults in their groups, the number of permit holders per group, and their average number of visits.

Data from the expenditure logs were entered into a Microsoft Office Excel file and analyzed using the IMPLAN modeling system. Expenses were first categorized according to the various industry sectors that they represented. Spending occurred in a total of ten sectors: retail gasoline; retail food/beverage (e.g., grocery stores); food services and drinking places (e.g., fast food restaurants, bars, etc.); park entrance fees (i.e., trail permit fees); motels and hotels; camping; retail motor vehicle and parts; retail sporting goods (e.g., camping equipment); retail general merchandise; and, retail miscellaneous. Once spending was sorted into these various economic sectors, the level of direct spending in these sectors was totaled, and multipliers were used to

Table 2: Economic Impact of Visitor Spending

Economic Sectors	Direct Spending	Total Output	Total Earnings	Total Employment
Retail Gasoline	\$440,992.30	\$556,960.49	\$167,172.24	6.73
Retail Food/Beverage	\$211,123.64	\$281,188.61	\$106,736.30	4.47
Food Services/Drinking Places	\$4,964.96	\$6,409.28	\$1,828.94	0.13
Trail permit fees	\$325,053.00	\$449,396.82	\$197,175.85	7.15
Motels & Hotels	\$9,252.88	\$12,323.64	\$3,907.55	0.18
Camping	\$246,329.72	\$332,084.49	\$101,220.08	3.95
Retail Motor Vehicle & Parts	\$16,136.12	\$21,981.30	\$10,750.03	0.33
Retail Sporting Goods	\$75,264.28	\$99,362.32	\$35,352.76	1.93
Retail General Merchandise	\$59,523.10	\$79,482.21	\$31,420.88	1.31
Retail Misc	\$2,313.22	\$3,076.42	\$1,416.19	0.08
TOTAL	\$1,390,953.22	\$1,842,265.58	\$656,980.81	26.26

determine total outputs, total earnings and total employment generated within the region as a result of spending related to OHV recreation and tourism. Direct spending related to OHV recreation and tourism on the Athens unit of the Wayne National Forest in 2008 totaled \$1,390,953.22. The total economic output related to OHV recreation and tourism in southeastern Ohio was \$1,842,265.58. Total labor income earnings related the OHV recreation and tourism industry in southeastern Ohio was \$656,980.81. And, finally, 26.26 full-time equivalent jobs were supported by OHV recreation and tourism in the region.

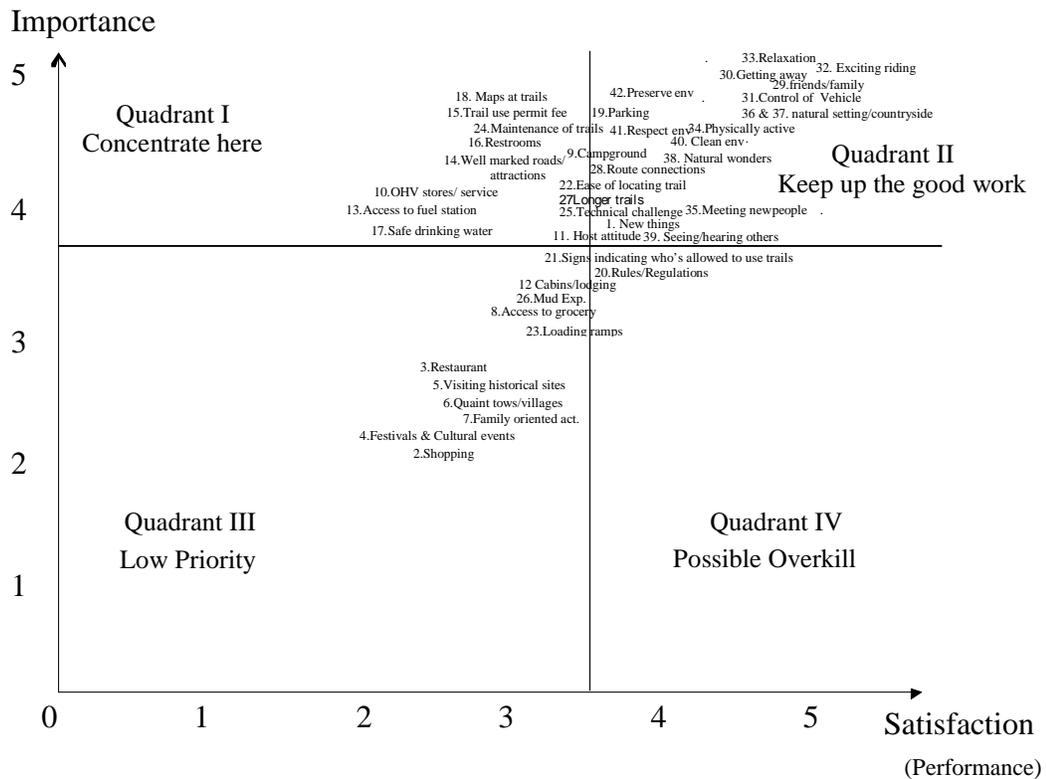
Nearly all of the respondents who completed the expenditure log were visitors to trails on the Athens unit of the Wayne National Forest. The average number of individuals per group was 3.3. The average number of permit holders per group was 2.8. The average length of stay per visit was 2.4 days and 1.7 nights. The average number of visits per group per year was 4.6.

Importance–Performance Action Grid

For this study, the research team generated a list of 42 attributes (see survey items in Appendix B) associated with OHV recreation and tourism in southeast Ohio and created a survey to assess the importance of these attributes to visitors to the OHV trail system as well as the satisfaction of visitors with these attributes after their riding experiences. Trail use surveys were administered to riders at the same intercept points used to distribute expenditure logs to riders. These were administered along with expenditure logs by research assistants and volunteers from the American Motorcyclists Association.

Results of the importance-performance analysis (IPA) were plotted on the two-dimensional grid with importance on the vertical axis and performance (satisfaction) on the horizontal axis (see Figure 7). The two axes formed crosshairs at the value of 3.95 (grand mean score of importance attributes) and 3.53 (grand mean score of performance attributes) out of a 5-point scale.

Figure 7: Importance-Performance Action Grid



Thirteen attributes (30.9%) fell within Quadrant I – “Concentrate Here” (high-import/low-sat):

- Maps at trailheads
- Reasonable trail use permit fees
- Maintenance of trails
- Restrooms at the trailheads
- Good campgrounds near the trailheads
- Well-marked roads and attractions

- OHV stores & service centers nearby
- Access to fuel stations from the trails
- Attitude of host communities toward OHVs
- Safe drinking water at the trailhead
- Ease of locating trailheads
- Longer trail lengths
- Technical challenges on the trails

Seventeen attributes (40.4%) fell within Quadrant II – “Keep up The Good Work” (high-import/high-sat):

- Getting away from it all
- Exciting riding experiences
- Being with friends and family
- Enjoying some relaxation
- Preserving the environment for future riders
- Parking at the trailheads
- Feeling in control of the vehicle
- Other riders’ respect for the environment
- Being in a natural setting
- Seeing beautiful countryside
- Being physically active
- Clean well-maintained environment
- Seeing natural wonders
- Routes connecting to other riding areas
- Meeting new people
- Seeing or experiencing new things
- Seeing or hearing few others on the trail

Eleven attributes (26.2%) fell within Quadrant III – “Low Priority” (low-import/ low-sat):

- Signs indicating who’s allowed to use trails
- Affordable cabins & other lodging
- Mud experience
- Access to good grocery stores
- Loading ramps at trailhead
- Having good restaurants nearby
- Visiting historical sites
- Visiting quaint towns/villages
- Variety of nearby family oriented activities
- Attending festivals and cultural events
- Shopping

One attribute (2.4%) fell within Quadrant IV – “Possible Overkill” (low-import/high-sat):

- Enforcement of rules and regulations

When comparing mean importance scores and mean performance scores (see Table 3), only eight

Table 3: Plotting the Mean Importance and Performance Scores

Attribute	Mean Imp.	Mean Per.	Quadrant
1. Seeing or experiencing new things	3.98	3.68	2
2. Shopping	2.11	2.75	3
3. Having good restaurants nearby	2.88	2.94	3
4. Attending festivals and cultural events	2.19	2.93	3
5. Visiting historical sites	2.69	3.00	3
6. Visiting quaint towns/villages	2.52	3.03	3
7. Variety of nearby family oriented activities	2.49	3.10	3
8. Access to good grocery stores	3.43	3.17	3
9. Good campgrounds near the trailheads	4.13	3.51	1
10. OHV stores & service centers nearby	4.10	2.89	1
11. Attitude of host communities toward OHVs	4.07	3.38	1
12. Affordable cabins & other lodging	3.51	3.12	3
13. Access to fuel stations from the trails	4.02	2.69	1
14. Well-marked roads and attractions	4.11	3.22	1
15. Reasonable trail use permit fees	4.30	3.10	1
16. Restrooms at the trailhead	4.23	3.24	1
17. Safe drinking water at the trailhead	3.97	2.63	1
18. Maps at trailheads	4.31	3.11	1
19. Parking at the trailheads	4.62	3.53	2
20. Enforcement of rules and regulations	3.87	3.54	3
21. Signs indicating who's allowed to use trails	3.90	3.49	4
22. Ease of locating trailheads	4.19	3.47	2
23. Loading ramps at trailhead	3.32	3.39	3
24. Maintenance of trails	4.25	3.33	1
25. Technical challenges on the trails	4.17	3.46	2
26. Mud experience	3.49	3.39	3
27. Longer trail lengths	4.19	3.47	2
28. Routes connecting to other riding areas	4.33	3.58	2
29. Being with friends and family	4.55	4.43	2
30. Getting away from it all	4.66	4.39	2
31. Feeling in control of the vehicle	4.52	4.29	2
32. Exciting riding experiences	4.63	4.42	2
33. Enjoying some relaxation	4.66	4.30	2
34. Being physically active	4.47	4.22	2
35. Meeting new people	4.01	4.01	2
36. Being in a natural setting	4.50	4.33	2
37. Seeing beautiful countryside	4.50	4.32	2
38. Seeing natural wonders	4.36	4.11	2
39. Seeing or hearing few others on the trail	3.96	3.78	2
40. Clean, well-maintained environment	4.44	3.93	2
41. Other riders' respect for the environment	4.52	3.80	2
42. Preserving the environment for future riders	4.64	4.00	2

attributes had higher perceived performance/satisfaction score than a perceived importance score. Thirty-three attributes had higher perceived importance score than perceived performance/satisfaction scores. This result indicates that respondents generally perceived that these attributes to be important, but performance related to these attributes was lower than they expected during their OHV trip in Southeast Ohio. Therefore, although the four quadrants were formed and some items were categorized as “low priority” (Quadrant III) or “possibly overkill” (Quadrant IV), these quadrant III and IV items should still be enhanced, though perhaps not at the same level of focus/emphasis as the attribute in Quadrant 1 (concentrate here).

Top Ten Importance Attributes

Mean importance for the 42 attributes ranged from 4.66 to 2.11 (shopping). The attributes ranked the highest were “Getting away from it all” and “Enjoying some relaxation” with a mean score of 4.66. This was followed by “Preserving the environment for future riders” (4.64), “Exciting riding experiences” (4.63), and “Parking at the trailheads” with a mean score of 4.62. Table 4 illustrates the ranking of the top ten importance attributes.

Table 4: Top Ten Importance Attributes

	1	2	3	4	5	Mean
	N	N	N	N	N	
	(%)	(%)	(%)	(%)	(%)	
1. Getting away from it all	0.0	3.0	12.0	50.0	182.0	4.66
	0.0	1.2	4.9	20.2	73.7	
2. Enjoying some relaxation	0.0	3.0	13.0	49.0	182.0	4.66
	0.0	1.2	5.3	19.8	73.7	
3. Preserving the environment for future riders	1.0	2.0	15.0	48.0	180.0	4.64
	0.4	0.8	6.1	19.5	73.2	
4. Exciting riding experiences	0.0	5.0	11.0	55.0	176.0	4.63
	0.0	2.0	4.5	22.3	71.3	
5. Parking at the trailheads	2.0	5.0	25.0	58.0	154.0	4.62
	0.8	2.0	10.2	23.7	62.9	
6. Being with friends and family	1.0	5.0	15.0	62.0	163.0	4.55
	0.4	2.0	6.1	25.2	66.3	
7. Feeling in control of the vehicle	1.0	2.0	27.0	53.0	163.0	4.52
	0.4	0.8	11.0	21.5	66.3	
8. Other riders’ respect for the environment	3.0	5.0	14.0	58.0	167.0	4.52
	1.2	2.0	5.6	23.4	67.3	
9. Being in a natural setting	1.0	4.0	19.0	70.0	154.0	4.50
	0.4	1.6	7.7	28.2	62.1	
10. Seeing beautiful countryside	1.0	5.0	18.0	68.0	156.0	4.50
	.4	2.0	7.3	27.4	62.9	

Note: 1=not at all important; 5=extremely important. Some of the percentages may not add up to 100% due to missing data.

Top Ten Satisfaction Attributes

Mean performance for the 42 attributes ranged from 4.35 to 3.95 (Preserving the environment for future riders). The attribute, which was ranked the highest, was “Exciting riding experiences” with a mean score of 4.35. This was followed by “Being with friends and family” (4.32), and “Getting away from it all” (4.28), “Enjoying some relaxation”, “Being in a natural setting”, and “Seeing beautiful countryside” (4.25). The following table shows the ranking of top 10 satisfaction attributes.

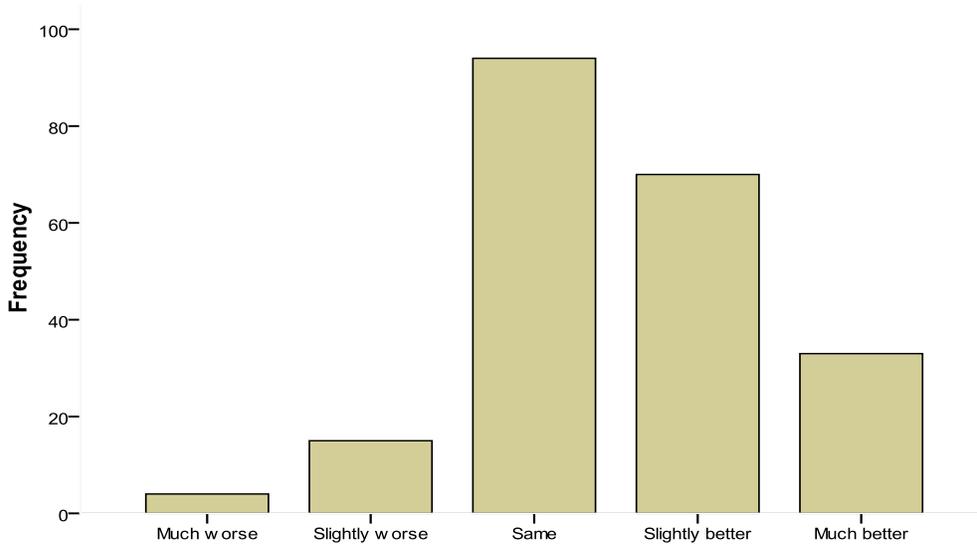
Table 5: Top Ten Satisfaction Attributes

	1	2	3	4	5	Mean
	N	N	N	N	N	
	(%)	(%)	(%)	(%)	(%)	
1. Being with friends and family	2.0	1.0	26.0	74.0	138.0	4.43
	0.8	0.4	10.5	30.7	57.3	
2. Exciting riding experiences	4.0	4.0	44.0	75.0	115.0	4.42
	1.6	1.6	18.1	30.9	47.3	
3. Getting away from it all	2.0	1.0	25.0	60.0	145.0	4.39
	0.8	0.4	10.1	24.2	58.5	
4. Being in a natural setting	0.0	7.0	30.0	84.0	125.0	4.33
	0.0	2.8	12.1	33.1	51.7	
5. Seeing beautiful countryside	0.0	6.0	31.0	84.0	121.0	4.32
	0.0	2.4	12.5	33.9	48.8	
6. Enjoying some relaxation	0.0	5.0	38.0	80.0	121.0	4.30
	0.0	2.0	15.3	32.3	48.8	
7. Feeling in control of the vehicle	1.0	7.0	39.0	67.0	127.0	4.29
	0.4	2.8	15.7	27.0	51.2	
8. Being physically active	1.0	6.0	48.0	70.0	116.0	4.22
	0.4	2.4	19.4	28.2	46.8	
9. Seeing natural wonders	2.0	10.0	47.0	84.0	99.0	4.11
	0.8	4.0	19.0	33.9	39.9	
10. Meeting new people	3.0	12.0	58.0	72.0	94.0	4.01
	1.2	4.8	23.4	29.0	37.9	

Note: 1=not at all satisfied; 5=extremely satisfied. Some of the percentages may not add up to 100% due to missing data.

Finally, survey participants were asked to compare the quality of the trail systems they visited in southeast Ohio to their initial expectations of those trail systems. Most survey participants responded that the trail systems met or exceeded their expectations (see Figure 5 below). 8.8% of survey participants reported that the trail system they visited was slightly or much worse than expected. 43.5% reported that the trail system met their expectations. 32.4% reported that the trail system slightly exceeded their expectations, while 15.3% reported that the quality of the trail system greatly exceeded their expectations.

Figure 8: Comparison of Quality of Trail System to Initial Expectations



Approximately 82% of respondents (n = 175) to the trail-use survey were visitors to the Monday Creek Trail. Approximately 7% (n = 15) were visitors to the Pine Creek trail system. Approximately 6% (n = 13) were visitors to the Hanging Rock trial system. Approximately 3.6% (n = 9) were visitors to the Perry State Forest trail system. Only one respondent (0.4%) was a visitor to the Pike State Forest trail system. There were no respondents who had visited the Richland Furnace State Forest trail system.

Comparisons to Other Trail Systems

Survey participants were asked to compare the trail systems they visited on the Wayne National Forest and Ohio State Forests to OHV trail systems they had visited in neighboring States. Specifically, they were asked to make comparisons between trails on the WNF and OSF and the following trail systems: the Hatfield-McCoy trail system in West Virginia; the trail systems on the Allegheny National Forest in Pennsylvania; the trail systems on Daniel Boone National Forest in Kentucky; and, the trail systems on Huron-Manistee National Forest in Michigan. These trail systems were selected, because they represent the most likely competitors to the trail systems in southeast Ohio. The goal is to effectively compete with these trail systems to avoid losing business to these areas.

Approximately 48% of survey participants (n = 120) reported a prior visit to the Hatfield-McCoy trail system. Of these survey participants, approximately 32% indicated that the trail system they visited in southeast Ohio was slightly worse or much worse than the Hatfield-McCoy trail system. Approximately 19% reported that the trail systems were of about the same quality, and approximately 49% reported that the trail systems they visited in southeast Ohio were slightly better or much better than the Hatfield-McCoy trail system.

Approximately 18.5% of survey participants (n = 46) reported a prior visit to trails on the Allegheny National Forest. Of these survey participants, approximately 15% reported that the trail system they had visited in southeast Ohio was slightly worse or much worse than the trails they had visited on the Allegheny National Forest. Approximately 28% reported that the trail systems were about the same. And, approximately 41% reported that the trail system they had visited in southeast Ohio was slightly better while approximately 15% reported the trails were much better than trails they had visited on the Allegheny National Forest.

Approximately 17% of respondents (n = 42) had visited the trail systems on the Daniel Boone National Forest in Kentucky. Of these respondents, approximately 24% reported that the trail system they had visited in southeast Ohio was slightly worse or much worse than the trails they had visited on the Daniel Boone National Forest. Approximately 24% reported that the trail systems were about the same. And, approximately 28% reported that the trail system they had visited in southeast Ohio was slightly better while approximately 24% reported the trails were much better than trails they had visited on the Daniel Boone National Forest.

Approximately 15% of respondents (n = 38) had visited the trail systems on the Huron-Manistee National Forest in Michigan. Of these respondents, approximately 21% reported that the trail system they had visited in southeast Ohio was slightly worse or much worse than the trails they had visited on the Huron-Manistee National Forest. Approximately 24% reported that the trail systems were about the same. And, approximately 40% reported that the trail system they had visited in southeast Ohio was slightly better while approximately 15% reported the trails were much better than trails they had visited on the Huron-Manistee National Forest.

OHV Riding Habits

Visitors to the OHV trail systems on the Wayne National Forest and Ohio State Forests had favorable perceptions of their OHV riding habits with regard to the environmental consequences of OHV trail riding. Survey participants were asked to rate their riding habits according to select principles and practices of the Tread Lightly campaign. Table 6 summarizes the results of this section of the trail-use survey.

Table 3: OHV Riding Habits

	1 N (%)	2 N (%)	3 N (%)	4 N (%)	5 N (%)	Mean
I stick to designated trails when riding.	2.0 0.8	6.0 2.4	48.0 19.4	88.0 35.6	102.0 41.3	4.13
I avoid riding near known sensitive animal habitat.	4.0 1.6	6.0 2.4	58.0 23.6	84.0 34.1	94.0 38.2	4.05
I always yield the right of way to non-motorized users of the trail.	4.0 1.6	2.0 0.8	31.0 12.7	79.0 32.2	129.0 52.7	4.33
I avoid riding on sensitive terrain when riding my OHV.	3.0 1.2	10.0 4.1	47.0 19.1	88.0 35.8	98.0 39.8	4.09
I avoid creating new trails when riding my OHV.	6.0 2.4	10.0 4.1	39.0 16.0	80.0 32.9	108.0 44.4	4.13

I avoid riding in streams, except at specific stream crossings.	9.0	13.0	45.0	78.0	100.0	4.01
	3.7	5.3	18.4	31.8	40.8	
I go around obstacles such as rocks and large puddles on the trail.	15.0	39.0	62.0	72.0	55.0	3.47
	6.2	16.0	25.5	29.6	22.6	
I like to spin my OHV's wheels on muddy and loose terrain.	22.0	41.0	75.0	54.0	52.0	3.30
	9.0	16.8	30.7	22.1	21.3	
I maintain a healthy distance from wildlife when riding my OHV.	4.0	3.0	39.0	93.0	107.0	4.20
	1.6	1.2	15.9	37.8	43.5	
I am aware of rules and regulations for trails that I plan to ride.	0.0	5.0	34.0	97.0	111.0	4.27
	0.0	2.0	13.8	39.3	44.9	
I collect artifacts and other neat stuff that I find when riding.	73.0	59.0	70.0	29.0	12.0	2.37
	30.0	24.3	28.8	11.9	4.9	
I volunteer to help with trail maintenance projects when I can.	30.0	41.0	115.0	38.0	23.0	2.93
	12.1	16.6	46.6	15.4	9.3	
I thoroughly clean my equipment before riding in a new area.	8.0	17.0	54.0	76.0	90.0	3.91
	3.3	6.9	22.0	31.0	36.7	
I always try to minimize my impact on the environment when riding.	5.0	3.0	52.0	92.0	95.0	4.09
	2.0	1.2	21.1	37.2	38.5	
Generally speaking, my OHV riding habits have a negative environmental impact.	84.0	43.0	49.0	41.0	29.0	2.54
	34.1	17.5	19.9	16.7	11.8	

Note: 1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = strongly agree. Some of the percentages may not add up to 100% due to missing data.

Survey participants reported an average of 13 years of riding experience. Approximately 4% of riders rated themselves as beginner riders, 24.7% of riders rated themselves as intermediate riders, 55.3% of riders rated themselves as advanced riders, and 15.7% of riders rated themselves as expert riders. Only 11.1% of riders reported belonging to an OHV riding club. Survey participants reported riding approximately 30 days per year on average. Survey participants reported spending approximately 64% of this time riding on the Wayne National Forest trails systems, approximately 22% of this time riding on the Ohio State Forest trail systems and approximately 14% of this time riding on trails in other States.

Other Visitor Activities

Survey participants were asked to identify other recreational activities in which they participated during their visit to southeast Ohio. The following is a list of activities in which riders participated along with the frequency of participation among the sample group:

- 26% (n = 63) participated in picnicking.
- 18.5% (n = 46) participated in hunting.
- 17.7% (n = 44) participated in hiking.
- 16.1% (n = 40) participated in fishing.
- 10.5% (n = 26) toured historical sites.
- 9.7% (n = 24) participated in shooting.
- 7.3% (n = 18) went shopping or antiquing.
- 7.3% (n = 18) participated in bird watching.

- 5.2% (n = 13) participated in mountain biking.
- 4.4% (n = 11) participated in rock climbing.
- 2.8% (n = 7) participated in boating or jet skiing.

Recommendations

There are a number of specific recommendations that can be made based on this study to help improve the appeal of OHV trail systems in southeast Ohio. These recommendations are based on the results of the importance-performance analysis discussed above. Specifically, the 13 items in Quadrant I of the Importance-Performance Action Grid warrant consideration for improvement:

- Maps at trailheads
- Reasonable trail use permit fees
- Maintenance of trails
- Restrooms at the trailheads
- Good campgrounds near the trailheads
- Well-marked roads and attractions
- OHV stores & service centers nearby
- Access to fuel stations from the trails
- Attitude of host communities toward OHVs
- Safe drinking water at the trailhead
- Ease of locating trailheads
- Longer trail lengths
- Technical challenges on the trails

All of these attributes relate directly to the riding experiences of visitors to the region and relate to the quality of the facilities needed for a pleasurable riding experience. According to the results from this study, the riding facilities in the region are currently falling short in the area of each of these attributes. Resource managers, entrepreneurs, and community members should focus on these points in considering ways to improve the appeal and potential economic benefits of OHV recreation and tourism in southeast Ohio.

The researchers recommend additional research to validate the results of the economic impact analysis generated through this study. Despite a \$20 incentive to complete the expenditure log, the response rate in this study was minimal. Fifty-four riders returned expenditure logs to the research team; however, only 34 expenditure logs were considered valid responses. While the researchers are confident that this study provides a valid assessment of the level of spending in the region related to OHV recreation and tourism, a larger response rate to the expenditure log would offer a better representation of consumer spending in the region.

The researchers also recommend that future studies focus on different trail systems in southeast Ohio separately. Riders who visited the Ohio State Forest trails comprised such a small segment of the sample that it is impossible to draw any meaningful conclusions regarding the quality of the Ohio State Forest trail systems. Because most of the survey participants in this study were visitors to trails on the Athens unit of the Wayne National Forest, the results of this study

primarily reflect the quality of the riding experience on these trails. Separate studies should be conducted to assess the quality of trails in the State Forest system and those on the Wayne National Forest. Doing so would allow for a better representation of the quality of riding experiences on each of the respective trail systems in the region and consequently recommendations for improvement that are more specifically targeted toward each of these trail systems.

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**Off-Highway Vehicle
Recreation & Tourism
in Southeast Ohio:
An Economic Impact Study**

**Personal
Expenditure Log**

Earn \$20 by filling this out!

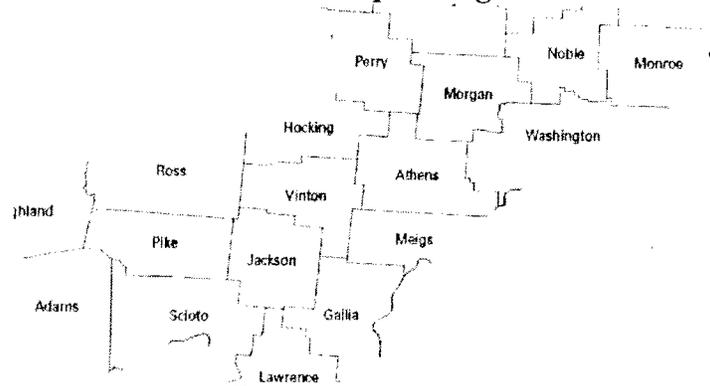
Purpose of Study

The purpose of this study is to determine the economic impact of current OHV recreation and tourism in southeast Ohio. Information from this study will (1) help determine the feasibility of expanded trail systems in the region and (2) help current and new business owners make decisions about the feasibility of investments in the OHV industry in the region.

We hope that you will contribute to this study by completing this expenditure log. The log is intended to document the amount of money that you spend on a typical OHV outing in southeast Ohio.

The first 100 people to complete and return this expenditure log will each receive \$20 from the study's sponsors.

Economic Impact Region



Instructions

1. Each time you make a purchase during your OHV outing, please record the expense in this expenditure log.
2. Record purchases made only within the economic impact region – counties surrounding the OHV trail systems that you are riding (see map on previous page for outline of the economic impact region).
3. Record purchases made by all members of your group (i.e., you and your family members).
4. If you purchase multiple types of items from the same store (e.g., groceries, gas, camping gear), list the different types of items as well as the amount spent on each type of item.
5. With each purchase, record the date, the type of item(s) purchased, and the amount spent on each type of item (see example below). Examples of different types of items include expenses related to lodging, dining out, souvenirs, etc.

Date	Item(s)	Amount
5/15	<i>Gasoline</i>	\$ 44.00
5/15	<i>Groceries</i>	\$ 31.00
5/15	<i>Camping gear</i>	\$ 17.00

Which trail system(s) did you use during this visit? (Indicate the number of days spent on each trail)

- Wayne Forest Monday Creek
- Wayne Forest Hanging Rock
- Wayne Forest Pine Creek
- Pike State Forest
- Richland Furnace State Forest
- Perry State Forest

Where did you stay while you were on your trip? (Name of hotel, campground, site, etc.)

Including yourself, how many individuals are in your OHV recreational riding group during this visit?

_____ Children (ages 15 and under) _____ Adults (ages 16+)

Including yourself, how many individuals in your group are permit holders during this visit? _____

How many trips do you typically make each year to southeast Ohio to ride OHVs? _____ Times

Of these, how many are overnight? _____ Overnight

How many days or nights is your typical OHV recreational riding experience? _____ Days OR _____ Nights

Off-Highway Vehicle Recreation & Tourism in Southeast Ohio



2008 User Survey

for users of trails on the

Wayne National Forest & Ohio State Forests

Sponsored by:

Ohio University

Ohio Department of Natural
Resources

American Motorcyclists
Association

Hocking Valley Motorcycle Club

Ohio Motorized Trails Association



This survey is intended to assess your perceptions of the trail system(s) that you used during this trip. Please check the trail system(s) that you visited during this OHV trip:

<u>Wayne National Forest</u>	() Monday Creek	<u>Ohio State Forests</u>	() Pike
	() Pine Creek		() Perry
	() Hanging Rock		() Richland Furnace

You must be 18 years of age or older to complete this survey.

Please rate each item listed. First rate the *importance* of each item in your decision to ride the trail system(s) that you visited during this OHV trip. Second, rate your *satisfaction* with each item during your visit. Rate importance in the IMPORTANCE block. Rate satisfaction in the SATISFACTION block. (Circle one answer in the Importance column and one answer in the satisfaction column for each item).

Items	Importance					Satisfaction					
	Not at all Important		Extremely Important			Not at all Satisfied		Extremely Satisfied		Don't Know	
Seeing or experiencing new things	1	2	3	4	5	1	2	3	4	5	DK
Shopping	1	2	3	4	5	1	2	3	4	5	DK
Having good restaurants nearby	1	2	3	4	5	1	2	3	4	5	DK
Attending festivals and cultural events	1	2	3	4	5	1	2	3	4	5	DK
Visiting historical sites	1	2	3	4	5	1	2	3	4	5	DK
Visiting quaint towns/villages	1	2	3	4	5	1	2	3	4	5	DK
Variety of nearby family oriented activities	1	2	3	4	5	1	2	3	4	5	DK
Access to good grocery stores	1	2	3	4	5	1	2	3	4	5	DK
Good campgrounds near the trailheads	1	2	3	4	5	1	2	3	4	5	DK
OHV stores & service centers nearby	1	2	3	4	5	1	2	3	4	5	DK
Attitude of host communities toward OHVs	1	2	3	4	5	1	2	3	4	5	DK
Affordable cabins & other lodging	1	2	3	4	5	1	2	3	4	5	DK
Access to fuel stations from the trails	1	2	3	4	5	1	2	3	4	5	DK
Well-marked roads and attractions	1	2	3	4	5	1	2	3	4	5	DK
Reasonable trail use permit fees	1	2	3	4	5	1	2	3	4	5	DK
Restrooms at the trailhead	1	2	3	4	5	1	2	3	4	5	DK
Safe drinking water at the trailhead	1	2	3	4	5	1	2	3	4	5	DK
Maps at trailheads	1	2	3	4	5	1	2	3	4	5	DK
Parking at the trailheads	1	2	3	4	5	1	2	3	4	5	DK
Enforcement of rules and regulations	1	2	3	4	5	1	2	3	4	5	DK
Signs indicating who's allowed to use trails	1	2	3	4	5	1	2	3	4	5	DK
Ease of locating trailheads	1	2	3	4	5	1	2	3	4	5	DK
Loading ramps at trailhead	1	2	3	4	5	1	2	3	4	5	DK
Maintenance of trails	1	2	3	4	5	1	2	3	4	5	DK
Technical challenges on the trails	1	2	3	4	5	1	2	3	4	5	DK
Mud experience	1	2	3	4	5	1	2	3	4	5	DK
Longer trail lengths	1	2	3	4	5	1	2	3	4	5	DK
Routes connecting to other riding areas	1	2	3	4	5	1	2	3	4	5	DK
Being with friends and family	1	2	3	4	5	1	2	3	4	5	DK
Getting away from it all	1	2	3	4	5	1	2	3	4	5	DK
Feeling in control of the vehicle	1	2	3	4	5	1	2	3	4	5	DK
Exciting riding experiences	1	2	3	4	5	1	2	3	4	5	DK
Enjoying some relaxation	1	2	3	4	5	1	2	3	4	5	DK
Being physically active	1	2	3	4	5	1	2	3	4	5	DK
Meeting new people	1	2	3	4	5	1	2	3	4	5	DK
Being in a natural setting	1	2	3	4	5	1	2	3	4	5	DK
Seeing beautiful countryside	1	2	3	4	5	1	2	3	4	5	DK
Seeing natural wonders	1	2	3	4	5	1	2	3	4	5	DK
Seeing or hearing few others on the trail	1	2	3	4	5	1	2	3	4	5	DK
Clean well-maintained environment	1	2	3	4	5	1	2	3	4	5	DK
Other riders' respect for the environment	1	2	3	4	5	1	2	3	4	5	DK
Preserving the environment for future riders	1	2	3	4	5	1	2	3	4	5	DK

1. What is the most appealing part of the trail systems in southeast Ohio to you?
2. What additional facilities are needed or should be improved at this site?
3. What were the most useful sources of information in planning your OHV trip to southeast Ohio?
4. What, if anything, interferes with your OHV riding experience in southeast Ohio?
5. What other activities did you participate in while you were on your OHV trip (*please check all that apply*)?

<input type="checkbox"/> Hunting	<input type="checkbox"/> Bird watching	<input type="checkbox"/> Picnicking
<input type="checkbox"/> Fishing	<input type="checkbox"/> Rock climbing	<input type="checkbox"/> Touring historical sites
<input type="checkbox"/> Shooting	<input type="checkbox"/> Mountain biking	<input type="checkbox"/> Shopping or Antiquing
<input type="checkbox"/> Boating or Jet Skiing	<input type="checkbox"/> Hiking	<input type="checkbox"/> Other _____
6. How would you compare the OHV trail system(s) that you visited during this OHV trip to...

	Much worse	Slightly worse	Same	Slightly better	Much better	Don't Know
...what you expected?	1	2	3	4	5	DK
...the Hatfield-McCoy trail system in West Virginia?	1	2	3	4	5	DK
...the trail systems on the Allegheny National Forest in Pennsylvania?	1	2	3	4	5	DK
...the trail systems on Daniel Boone National Forest in Kentucky?	1	2	3	4	5	DK
...the trail systems on Huron-Manistee National Forest in Michigan?	1	2	3	4	5	DK

7. Please indicate the extent to which the following statements characterize your OHV riding habits.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I stick to designated trails when riding.	1	2	3	4	5
I avoid riding near known sensitive animal habitat.	1	2	3	4	5
I always yield the right of way to non-motorized users of the trail.	1	2	3	4	5
I avoid riding on sensitive terrain when riding my OHV.	1	2	3	4	5
I avoid creating new trails when riding my OHV.	1	2	3	4	5
I avoid riding in streams, except at specific stream crossings.	1	2	3	4	5
I go around obstacles such as rocks and large puddles on the trail.	1	2	3	4	5
I like to spin my OHV's wheels on muddy and loose terrain.	1	2	3	4	5
I maintain a healthy distance from wildlife when riding my OHV.	1	2	3	4	5
I am aware of rules and regulations for trails that I plan to ride.	1	2	3	4	5
I collect artifacts and other neat stuff that I find when riding.	1	2	3	4	5
I volunteer to help with trail maintenance projects when I can.	1	2	3	4	5
I thoroughly clean my equipment before riding in a new area.	1	2	3	4	5
I always try to minimize my impact on the environment when riding.	1	2	3	4	5
Generally speaking, my OHV riding habits have a negative environmental impact.	1	2	3	4	5

8. About how many days do you ride OHVs for recreation and fun each year? _____
9. About what percent of this time is spent riding on the Wayne National Forest trails? _____
10. About what percent of this time is spent riding on Ohio State Forest trails? _____
11. About what percent of this time is spent riding on trails in other states? _____
12. What other OHV trail systems do you typically like to visit (e.g., Hatfield-McCoy)? _____

- | | |
|---|--|
| <p>13. How many years have you been riding OHVs?</p> <p>14. How would you rate your skill level as an OHV rider? <i>(please circle)</i></p> <p style="padding-left: 40px;">Beginner Intermediate Advanced Expert</p> <p>16. Do you belong to an OHV club? ___Yes ___No
If yes, which ones?
_____</p> | <p>17. What is your gender? ___ Male ___ Female</p> <p>18. In which year were you born? _____</p> <p>19. Marital Status <i>(Please check one)</i></p> <p>___Married ___Single/never married
___Separated/divorced ___Widowed
___Other _____</p> |
|---|--|

20. What is the highest level of education you have completed? *(Please check one)*
- | | | |
|----------------------------------|-----------------------------|---------------------|
| ___High school or GED | ___Some college | ___Bachelors degree |
| ___Vocational/technical training | ___2-year associates degree | ___Graduate degree |

21. What is your race and/or ethnicity?
- | | | |
|---------------------|-----------------------|---------------------------|
| ___Caucasian | ___Hispanic or Latino | ___Asian/Pacific Islander |
| ___African American | ___Native American | ___Other _____ |

22. What is your employment status? *(Please check all that apply)*
- | | | |
|-----------------------|------------------------|-----------------------|
| ___Employed fulltime | ___Housewife/Homemaker | ___Retired |
| ___Employed part time | ___Student | ___Seeking employment |

23. What is your annual household income (before taxes)? *(Please check one)*
- | | | |
|----------------------|--------------------|----------------------|
| ___Less than \$5,000 | ___\$25,000-34,999 | ___\$100,000-124,999 |
| ___\$5,000-9,999 | ___\$35,000-49,999 | ___\$125,000-149,999 |
| ___\$10,000-14,999 | ___\$50,000-74,999 | ___\$150,000-174,999 |
| ___\$15,000-24,999 | ___\$75,000-99,999 | ___\$175,000 or more |

24. What is your primary occupation?

25. What is your zip code?

Thank you for completing this survey!