

CHAPTER 2

**SOCIOECONOMIC ASSESSMENT**



## **2. A SOCIOECONOMIC OVERVIEW OF NORTHEAST MICHIGAN COUNTIES**

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### **2.1 INTRODUCTION**

An integrated assessment (IA) brings together policy makers, scientists, and key stakeholders to address a common issue of concern through collaboration and a formal analysis process. An IA is an approach to synthesizing and delivering relevant, independent scientific input to decision making through a comprehensive analysis of existing natural and social scientific information in the context of a policy or management question (Michigan Sea Grant [MSG], 2005). The goal of an IA is to link existing natural and social scientific knowledge about a problem with policy options in order to help decision makers evaluate possible actions.

The Northeast Michigan Integrated Assessment (NEMIA) was conducted for the three-county region of Presque Isle, Alpena, and Alcona Counties in Northeast Michigan. This coastal area in along Lake Huron includes rich natural and cultural resources. Historically, the region has depended on its natural resources and accessibility to the Great Lakes for economic development. However, in recent years, as the traditional economic base (lumbering, mining, manufacturing, agriculture, hunting, and fishing) has declined, community leaders have turned to tourism to boost the economy by promoting the natural and cultural resources unique to the area, especially those associated with the coast. Despite the potential for economic development, the communities located here wish to proceed cautiously to avoid overdevelopment and destruction of the area's unique resources. A desire to strike a balance between these two interests is reflected in this IA's key policy question, as developed by the NEMIA stakeholders:

How can coastal access be designed, in a regional context for sustainable tourism that stimulates economic development while maintaining the integrity of natural and cultural resources and quality of life?

#### **2.1.1 Purpose**

Socioeconomics is the selected focus of this technical assessment report, prepared by economists at the National Oceanic and Atmospheric Administration's National Marine Sanctuary Program (NMSP). The research for this report was done in coordination with the Management Plan Review Process currently taking place at Thunder Bay National Marine Sanctuary (TBNMS).

The purpose of this document is to present the necessary background information on the local social and economic (socio-economic) environment for which changes in policy actions in the northeast Michigan study area can be analyzed in a socioeconomic impact analysis. We will examine all direct uses potentially impacted (i.e. tourist/recreational use) by policy actions. With respect to the local economies, these uses will have ripple or multiplier effects as measured by market economic values (i.e. output/sales, income, employment and tax revenues). In this report, we review available information to assess how important these industries are to the local economies. The information presented here is what we have found to date to be the "best

available information”. In addition to the socioeconomic characterization, we will provide discussion on gaps in the data.

## 2.1.2 Background

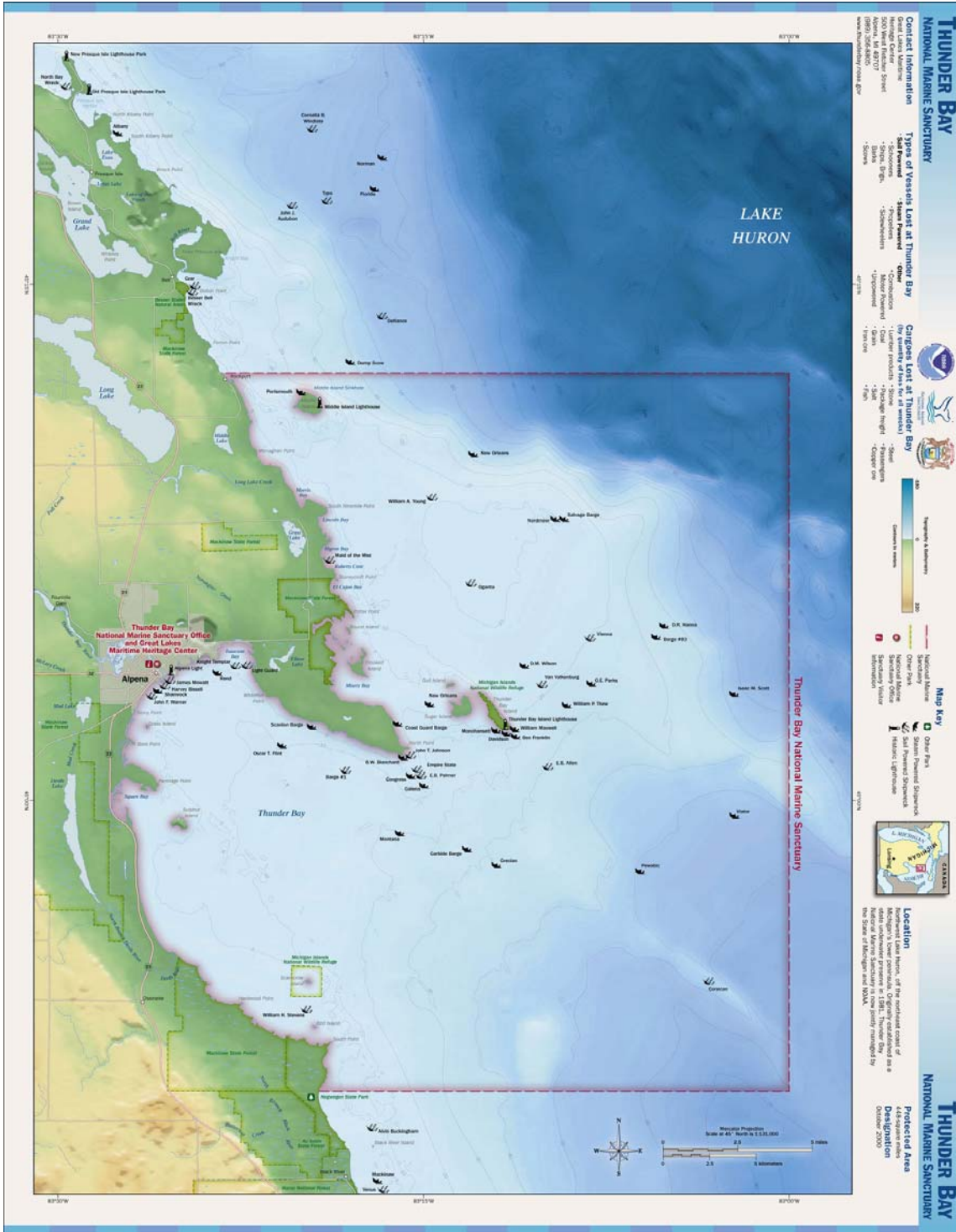
The Northeast Michigan study area is rich in history and natural resources. Figure 2.1 is a reference map of Northeast Michigan and Figure 2.2 is a detailed map of TBNMS.

“The region’s position along the Great Lakes coast has been vital to its economic development. The lakes have served as the regional highway, allowing people and goods to move freely even when roads and other infrastructure was lacking or rudimentary. During the last half of the twentieth century, the rugged and relatively undeveloped coast began to attract tourists, who come for the area’s hunting, fishing and natural beauty, and to visit the network of historic lighthouses and dive the many shipwrecks” (Michigan Sea Grant, 2005).

**Figure 2.1. Northeast Michigan**



Figure 2.2. Thunder Bay National Marine Sanctuary



### 2.1.3 Methods

Linking the economy and the environment is the principal objective of the Socioeconomic Team's task. We need to be able to answer the question, if the use of the natural resources in the northeast Michigan study area are changed, what will be the impact on the income and employment in the local economies? Our approach here is to first look at the most aggregated information, and then proceed to evaluate information collected by other institutions and how it maps into the more aggregated statistics. For each step along the way our objective is to see how close we can get to linking the economy with the environment and assessing the relative importance to the economy of natural resource base uses.

To accomplish the above requires collecting all relevant socioeconomic data and pointing out any significant gaps in the data. The socioeconomic data is collected and compiled in a manner so as to capture both the temporal and spatial variation in activities. The information is linked with economic parameters from existing studies to develop estimates of economic impacts as measured by changes in market economic values (i.e. sales/output, income and employment).

This includes reviewing the existing literature and databases available. In some cases, available information will not support certain aspects of the proposed analyses. In addition, supplemental data collection and analysis may not be feasible with time and resources available. What we are left with is what is commonly referred to as the "best available information".

Initially, the background demographic data for the northeast Michigan study area is presented. This includes historical and projected population data and race, age, and gender data. In addition to this, the economic indicators of the region are profiled. The key economic indicators are labor force, per capita income, unemployment, proprietor's income, and income and employment by industry.

The main focus of this report is an assessment on the relative importance of tourism and recreation to the northeast Michigan study area economy. Data was collected from the Tourism Center at Michigan State University (MSU), the Michigan Economic Development Corporation, the National Survey on Recreation and the Environment (Leeworthy & Wiley, 2000), the Michigan Department of Transportation, and the 1998 Michigan Welcome Center Visitor Survey.

A Michigan tourism spending and economic impact model (MITEIM), developed by Dan Stynes (2000) at MSU, is used to estimate the total visitor spending in Northeast Michigan and the associated economic effects in terms of sales, income, jobs, and tax receipts. The model is also used to forecast the economic effects of various scenarios related to tourism in Northeast Michigan (i.e. the region receives 1,000 more/less visitors a year; visitors to the region spend more/less money per visit).

Also presented in this report is a case study that examines the development of the Blackstone River Valley in Rhode Island/Massachusetts. This region was selected because it has similarities with the northeast Michigan study area, and has experienced significant growth due to the development of the tourist market. This case study serves as an example of how tourism

development has impacted a specific region, which is similar in aspects to the northeast Michigan study area. This case study focuses on the socioeconomic impacts of tourism development.

A conclusive section at the end of the report discusses the prevalent trends in the data. Recommendations are given on the next steps that should be taken after the completion of this process.

## 2.2 DEMOGRAPHIC AND ECONOMIC PROFILE OF NORTHEAST MICHIGAN

### 2.2.1 Population

Historical population estimates presented here are from the U.S. Department of Commerce, Census Bureau (2007) while population projections are from the State of Michigan (2007).

**Historical and Projected Population.** Alcona, Alpena, and Presque Isle Counties account for 0.6 percent of Michigan’s total population. Alpena County is the largest in the three county study area, with a population of 30,428 in 2005.

**Table 2.1a. Population, Historical and Projected, for Northeast Michigan**

Geographic Area	U.S. Census Bureau Actual				
	1970	1980	1990	2000	2005
Alcona	7,113	9,740	10,145	11,719	11,653
Alpena	30,708	32,315	30,605	31,314	30,428
Presque Isle	12,836	14,267	13,743	14,411	14,330
Study Area Total	50,657	56,322	54,493	57,444	56,411
Michigan Total	8,881,826	9,262,044	9,295,287	9,938,444	10,120,860
USA Total	203,302,037	226,542,250	248,790,925	281,421,906	296,410,404

Geographic Area	Michigan.gov Projections		
	2010	2015	2020
Alcona	10,900	11,000	11,000
Alpena	30,100	29,600	29,000
Presque Isle	14,800	15,000	15,200
Study Area Total	55,800	55,600	55,200
Michigan Total	10,121,300	10,285,000	10,454,700
USA Total	308,936,000		335,805,000

Sources: Population: U.S. Department of Commerce, Census Bureau (<http://www.census.gov>). Population Projections: Michigan.gov

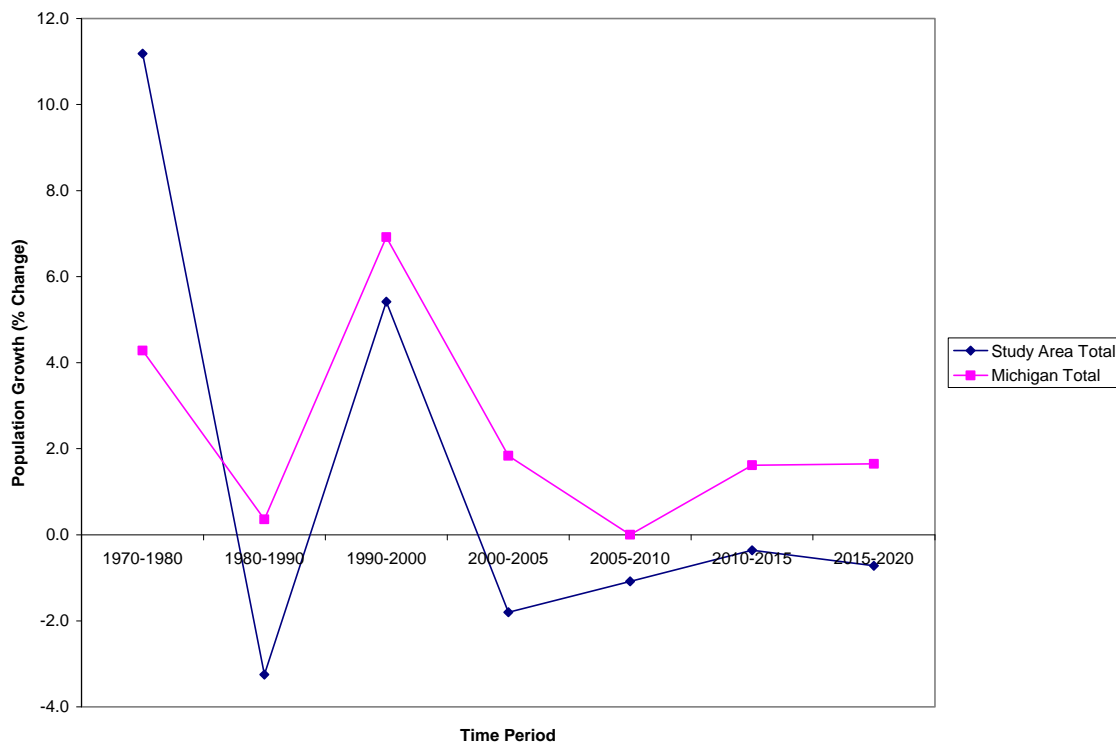
Overall from 1970 to 2005 Michigan experienced a growth rate of 13.9 percent compared to 11.4 percent in the study area. Michigan experienced a higher growth rate in each decade during this time period, except for 1970-1980, when Michigan grew by 4.3 percent and the study area grew by 11.2 percent. Michigan’s population is projected to grow slightly over the next 15 years, whereas the study area’s population is expected to decrease slowly.

**Table 2.1b. Population Growth (% Change), Historical and Projected, for Northeast Michigan**

Geographic Area	U.S. Census Bureau Actual				Michigan.gov Projections		
	1970-1980	1980-1990	1990-2000	2000-2005	2005-2010	2010-2015	2015-2020
Alcona	36.9	4.2	15.5	(0.6)	(6.5)	0.9	0.0
Alpena	5.2	(5.3)	2.3	(2.8)	(1.1)	(1.7)	(2.0)
Presque Isle	11.1	(3.7)	4.9	(0.6)	3.3	1.4	1.3
Study Area Total	11.2	(3.2)	5.4	(1.8)	(1.1)	(0.4)	(0.7)
Michigan Total	4.3	0.4	6.9	1.8	0.0	1.6	1.6
USA Total	11.4	9.8	13.1	5.3	4.2		

Sources: Population: U.S. Department of Commerce, Census Bureau (<http://www.census.gov>). Population Projections: Michigan.gov

**Figure 2.3. Population, Historical and Projected, for Northeast Michigan**



**Race.** In terms of race, the demographic composition of the study area does not vary throughout the counties. All counties are predominantly White, with proportions greater than 98 percent. This proportion is much higher in the study area (98.1%) compared to the state of Michigan (80.2%), where there are more diverse urban areas such as Detroit.

**Table 2.2a. Demographic Profile of Northeast Michigan – Race, 2000 (%)**

Geographic Area	Total Pop.	One Race						Two or more races	Hispanic or Latino (of any race)
		White	Black or African American	American Indian and Alaska Native	Asian	Native Hawaiian and Other Pacific Islander	Some other race		
Alcona	11,719	98.0	0.2	0.6	0.2	0.0	0.1	0.9	0.7
Alpena	31,314	98.2	0.2	0.4	0.3	0.0	0.1	0.7	0.6
Presque Isle	14,411	98.1	0.3	0.6	0.2	0.0	0.1	0.8	0.5
Study Area Total	57,444	98.1	0.2	0.5	0.3	0.0	0.1	0.8	0.6
Michigan Total	9,938,444	80.2	14.2	0.6	1.8	0.0	1.3	1.9	3.3
USA Total	281,421,906	75.1	12.3	0.9	3.6	0.1	5.5	2.4	12.5

Source: U.S. Department of Commerce, Census Bureau (<http://www.census.gov>).

**Age and Gender.** The study area has a higher proportion of people 65 years and older (19.9%), compared to Michigan (12.3%). Within the study area, Alpena County has a lower proportion of this age group (17.1%), compared to Alcona (24.5%) and Presque Isle (22.3%).

The study area has a lower proportion of people 18 to 24 years old (6.8%), compared to Michigan (9.4%). The study area also has a lower proportion of people 25 to 44 years old (24.3%), compared to Michigan (29.8%). This implies that the younger generations entering the workforce are finding jobs outside of Northeast Michigan.

There is some variation in gender among the county populations in the study area. Alcona County has more males than females (102 males to every 100 females), whereas Alpena County (94 males to every 100 females) has more females than males. Presque Isle County is evenly distributed between males and females.

**Table 2.2b. Demographic Profile of Northeast Michigan – Age and Gender, 2000**

Geographic Area	Total Population	Percent of Total Population					Median age (years)	Males per 100 females	
		Under 18 years	18 to 24 years	25 to 44 years	45 to 64 years	65 years and over		All ages	18 years and over
Alcona	11,719	19.0	4.6	20.9	31.0	24.5	49.0	102.2	99.2
Alpena	31,314	23.7	7.8	26.5	24.9	17.1	40.4	94.6	92.5
Presque Isle	14,411	20.9	6.5	22.4	27.8	22.3	45.1	99.2	97.1
Study Area Total	57,444	22.0	6.8	24.3	26.9	19.9	43.3	97.3	95.0
Michigan Total	9,938,444	26.1	9.4	29.8	22.4	12.3	35.5	96.2	93.2
USA Total	281,421,906	25.7	9.6	30.2	22.0	12.4	35.3	96.3	93.4

Source: U.S. Department of Commerce, Census Bureau (<http://www.census.gov>).



## 2.2.2 Labor Force

Total labor force includes all people classified in the civilian labor force plus members of the U.S. Armed Forces (people on active duty with the United States Army, Air Force, Navy, Marine Corps, or Coast Guard). The civilian labor force consists of people classified as employed or unemployed. In 2005, the study area counties accounted for 0.5 percent of Michigan's total labor force. From 2000-2005, Michigan's labor force decreased by 0.9 percent, whereas the study area's labor force decreased by 3.1 percent. The Alcona County labor force experienced very high growth (23.7%) from 1990-1995, but has declined 13.6% from 1995-2005..

**Table 2.3. Labor Force and Labor Force Growth in Northeast Michigan**

Geographic Area	Labor Force						
	Labor Force				Growth (%)		
	1990	1995	2000	2005	1990-1995	1995-2000	2000-2005
Alcona	3,934	4,866	4,465	4,225	23.7	(8.2)	(5.4)
Alpena	14,329	15,319	15,536	15,144	6.9	1.4	(2.5)
Presque Isle	6,063	6,273	6,497	6,305	3.5	3.6	(3.0)
Study Area Total	24,326	26,458	26,498	25,674	8.8	0.2	(3.1)
Michigan Total	4,620,000	4,835,000	5,144,000	5,097,000	4.7	6.4	(0.9)
USA Total	125,840,000	132,304,000	142,583,000	149,320,000	5.1	7.8	4.7

Source: U.S. Department of Labor, Bureau of Labor Statistics, Division of Labor Force Statistics.

## 2.2.3 Income and Employment

Income is reported from two perspectives; by place of residence and by place of work. Income and employment by place of work are further reported by industry, and for wage and salary workers versus proprietors (business owners). Differences in these measurements often reveal important differences about the nature of the local economies that are important for socioeconomic impact analyses. For example, a large difference between income by place of residence and income by place of work might reveal that the economy of the area under study is largely driven by income earned from sources unrelated to work in the area and this will dampen the impacts of management changes that impact local work related income and employment. In general, a large number of proprietors indicate the prevalence of small businesses that receive special treatment under Federal Regulatory Impact Reviews.

***Income by Place of Residence and Income by Place of Work.*** There is wide variation in the study area when comparing income by place of residence and place of work. In 1990, net income (the difference between income by place of residence and income by place of work) in the study area counties was 68.7 percent of the income by place of work. In 2000, this ratio was 78.9 percent in the study area counties. Both these ratios were much higher than the state of Michigan ratios which were 30.2 percent of income by place of work in 1990 and 27.3 percent of income by place of work in 2000. This means that generally, more people work in the study area counties they live in, as compared to the average for Michigan.

There are several sources of income unrelated to work in a county that are recorded and they are generally referred to as transfer payments and property income. Social security and pensions are two of the most important transfer payments and dividends, interest and rent are the most important sources of property income. Social Security and Medicare deductions from current workers are recorded as a deduction in income by place of work in deriving income by place of residence. The other difference between income by place of work and residence is called the residence adjustment. The residence adjustment is the net flow of income to a county that results from some residents that work outside the county of residence and bring income into the county (inflow of income) versus residents from other counties that work inside the county but take their incomes home to their counties of residence (outflow of income).

**Table 2.4. Personal Income by Place of Residence and by Place of Work for Northeast Michigan**

Geographic Area	1990						2000					
	A	B	A-B=C	D	C/B	D/B	A	B	A-B=C	D	C/B	D/B
	Income by Place of Residence (\$000's)	Income by Place of Work (\$000's)	Income Not Earned in the County/Study Area	Adjustment for Residence	Net Income as % of Income by Place of Work	Adjustment for Residence as % of Income by Place of Work	Income by Place of Residence (\$000's)	Income by Place of Work (\$000's)	Income Not Earned in the County/Study Area	Adjustment for Residence	Net Income as % of Income by Place of Work	Adjustment for Residence as % of Income by Place of Work
Alcona	138,436	38,211	100,225	23,022	262.3	60.2	236,406	72,226	164,180	37,290	227.3	51.6
Alpena	465,072	331,059	134,013	-14,546	40.5	-4.4	730,198	512,810	217,388	-31,626	42.4	-6.2
Presque Isle	184,692	98,052	86,640	9,616	88.4	9.8	289,035	116,818	172,217	47,738	147.4	40.9
Study Area Total	788,200	467,322	320,878	18,092	68.7	3.9	1,255,639	701,854	553,785	53,402	78.9	7.6
Michigan Total	176,188,551	135,305,369	40,883,182	457,041	30.2	0.3	294,226,742	231,180,799	63,045,943	1,004,516	27.3	0.4
USA Total	4,861,936,000	3,702,139,000	1,159,797,000	-737,000	31.3	0.0	8,422,074,000	6,504,679,000	1,917,395,000	-1,060,000	29.5	0.0

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System (REIS).

**Proprietors Income and Employment.** Proprietors (small businesses) account for a significant proportion of both income and employment in study area counties. Proprietors Income is defined by the Bureau of Economic Analysis as the current production income of sole proprietorships, partnerships, and tax-exempt cooperatives. This value excludes dividends, monetary interest received by non-financial business, and rental income received by persons not primarily engaged in the real estate business. In 1990, proprietors in the northeast Michigan study area counties accounted for 8.4 percent of income and 23.0 percent of employment. These were higher percentages than the state of Michigan. In 2000, proprietors in the northeast Michigan study area counties accounted for a lower percent of the income (5.7%) and a higher percent of employment (23.1%). In 2000, the percent of total income from proprietors was lower in the study area counties than the state of Michigan; however the percent of employment from proprietors in the study area counties was higher than the state of Michigan. This is a fairly good indicator that small businesses are an important component of the northeast Michigan study area counties, as they employ a large percentage (23.1%) of the labor force.

**Table 2.5. Proprietors Income and Employment for Northeast Michigan**

Geographic Area	1990				2000			
	Proprietors Income (\$000's)	% of Total Personal Income	Proprietors Employment	% of Total Employment	Proprietors Income (\$000's)	% of Total Personal Income	Proprietors Employment	% of Total Employment
Alcona	10,644	7.7	1,177	43.0	17,274	7.3	1,671	43.7
Alpena	39,990	8.6	2,889	18.9	44,396	6.1	3,380	18.7
Presque Isle	15,784	8.5	1,296	24.5	9,517	3.3	1,239	23.2
Study Area Total	66,418	8.4	5,362	23.0	71,187	5.7	6,290	23.1
Michigan Total	10,374,652	5.9	675,581	14.0	17,999,716	6.1	804,885	14.3
USA Total	382,049,000	7.9	21,786,900	15.6	730,458,000	8.7	27,756,800	16.6

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System

## 2.2.4 Indicators of Economic Health and Wealth

**Unemployment Rates and Per Capita Income.** Unemployment rates and per capita incomes are probably the two most popular measures used as indicators of the health and wealth of communities, states, or nations. In 2005, the unemployment rate for the study area (8.7%) was higher than for the state of Michigan (6.7%). The differences were wider in 1995 (11.7% in the study area versus 5.3% in Michigan) and 2000 (6.4% in the study area versus 3.7% in Michigan). In general, during this time period, the unemployment rate for the United States has been similar to that of Michigan; however in 2005 the United States' rate was significantly lower at 5.1 percent.

Per capita income is defined by the Census Bureau as the average obtained by dividing aggregate income by total population of an area. The per capita income for the study area counties in 2000 was \$21,211. This is significantly lower than the per capita incomes for Michigan (\$29,552) and the United States (\$29,845).

Over the past 15 years (1990-2005), the relatively high unemployment rates and relatively low per capita incomes in the Northeast Michigan Study Area means this area is an economically distressed area.

**Table 2.6. Unemployment Rates and Per Capita Incomes for Northeast Michigan**

Geographic Area	Unemployment Rate (%)			
	1990	1995	2000	2005
Alcona	13.1	10.2	6.7	10.1
Alpena	10.2	10.4	5.5	7.4
Presque Isle	11.7	16.0	8.2	10.7
Study Area Total	11.0	11.7	6.4	8.7
Michigan Total	7.7	5.3	3.7	6.7
USA Total	5.6	5.6	4.0	5.1

Geographic Area	Per Capita Income			Adjusted Per Capita Income (2000 \$s)		
	1990	1995	2000	1990	1995	2000
Alcona	13,614	17,112	20,195	17,834	19,337	20,195
Alpena	15,162	18,625	23,334	19,862	21,046	23,334
Presque Isle	13,422	15,994	20,105	17,583	18,073	20,105
Study Area Total	14,066	17,244	21,211	18,426	19,485	21,211
Michigan Total	18,922	23,508	29,552	24,788	26,564	29,552
USA Total	19,477	23,076	29,845	25,515	26,076	29,845

Sources: Unemployment rates: U.S. Department of Labor, Bureau of Labor Statistics, Division of Labor Force Statistics; Income: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System (REIS).

Figure 2.4. Unemployment in Northeast Michigan

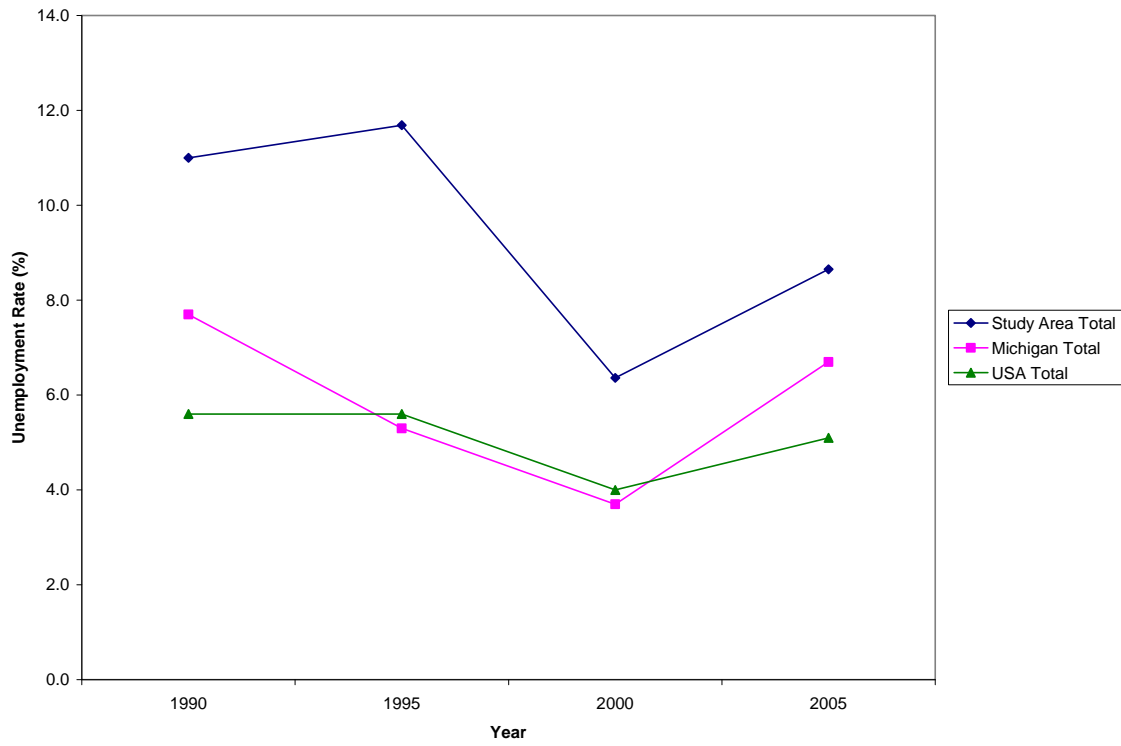
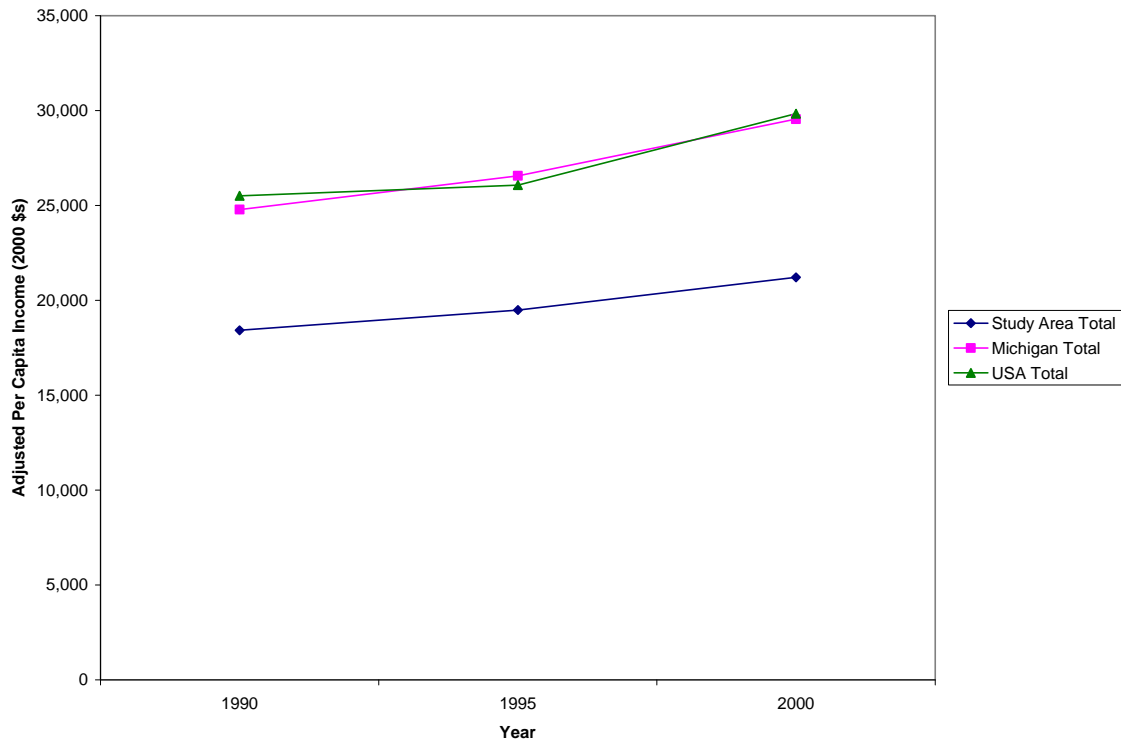


Figure 2.5. Per Capita Income for Northeast Michigan



***Income and Employment by Industry.*** For purposes of economic impact analyses, income and employment by industry is critical because it provides the necessary control totals in the economic accounting system. A limitation of this accounting system is that it is still based on the old industrial economy and generally is not designed to yield direct insights into how the use of natural resources and the environment are connected to the economy. Linking the economy and the environment is the principal objective of the Socioeconomic Team's task. We need to be able to answer the question, if the use of the natural resources in the northeast Michigan study area are changed, what will be the impact on the income and employment in the local economies? To answer this question requires supplemental information organized so that it maps directly into the current system of accounting. In some cases, the income and employment by industry statistics can give us upper bound estimates of the direct portion of impact (i.e., not counting multiplier impacts) for particular uses. Our approach here is to first look at the most aggregated information, and then proceed to evaluate information collected by other institutions and how it maps into the more aggregated statistics. For each step along the way our objective is to see how close we can get to linking the economy with the environment and assessing the relative importance to the economy of natural resource base uses.

Tables 2.7 and 2.8 show the values and percentages of income and employment by industries to counties in the study area. The counties in the study area and the state of Michigan are driven by the Manufacturing sector, the Services sector, and the Government and Government Enterprises sector.

The Retail Trade and Services sectors are where the direct impacts of tourism/recreation are included. However, these categories are broad and can only provide a general range for the estimation of the direct impacts for tourism/recreation. The accounts, as stated above, were simply not designed for this purpose. This is why the economics profession has been doing surveys of tourism/recreation where recreation activities and expenditures made while undertaking these activities are obtained. These expenditures are then mapped back into the economic accounts (see section 2.3).

**Table 2.7. Personal Income by Industry (\$000s), 2000**

Geographic Area	Total	Farm	Ag. Services, Forestry, Fishing, & Other	Mining	Construction	Manufacturing	Transportation and Public Utilities	Wholesale Trade	Retail Trade	Finance, Insurance, and Real Estate	Services	Government and Government Enterprises
Alcona	72,226	-344	(D)	147	7,682	15,014	3,526	(D)	9,911	2,523	17,362	14,401
Alpena	512,810	-2,944	(D)	(D)	37,682	130,145	31,770	23,251	55,958	16,760	89,476	124,215
Presque Isle	116,818	1,458	(D)	(D)	5,659	10,202	10,018	3,242	16,890	3,992	21,604	25,181
Study Area Total	701,854	-1,830			51,023	155,361	45,314	26,493	82,759	23,275	128,442	163,797
Michigan Total	231,180,799	560,225	1,152,526	809,521	13,340,130	71,827,586	11,477,630	14,293,138	18,467,500	13,387,107	56,139,941	29,725,495

**Personal Income By Industry (% of total), 2000**

Alcona		-0.5		0.2	10.6	20.8	4.9		13.7	3.5	24.0	19.9
Alpena		-0.6			7.3	25.4	6.2	4.5	10.9	3.3	17.4	24.2
Presque Isle		1.2			4.8	8.7	8.6	2.8	14.5	3.4	18.5	21.6
Study Area Total		-0.3		0.0	7.3	22.1	6.5	3.8	11.8	3.3	18.3	23.3
Michigan Total		0.2	0.5	0.4	5.8	31.1	5.0	6.2	8.0	5.8	24.3	12.9

(D) Not shown to avoid disclosure of confidential information, but the estimates for this item are included in the totals.

(L) Less than \$50,000, but the estimates for this item are included in the totals.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System (REIS).



**Table 2.8. Employment by Industry (number of jobs)**

Geographic Area	Total	Farm	Ag. Services, Forestry, Fishing, & Other	Mining	Construction	Manufacturing	Transportation and Public Utilities	Wholesale Trade	Retail Trade	Finance, Insurance, and Real Estate	Services	Government and Government Enterprises
Alcona	3,823	260	(D)	(L)	331	347	81	(D)	731	389	1,062	454
Alpena	18,045	541	(D)	(D)	1,125	2,577	728	712	3,324	999	4,443	3,345
Presque Isle	5,352	387	(D)	(D)	282	388	263	129	1,116	317	1,272	781
Study Area Total	27,220	1,188			1,738	3,312	1,072		5,171	1,705	6,777	4,580
Michigan Total	5,629,498	73,525	54,304	13,819	296,266	1,005,158	209,221	254,510	964,405	371,878	1,688,170	698,242

**Employment By Industry (% of jobs), 2000**

Alcona		6.8			8.7	9.1	2.1		19.1	10.2	27.8	11.9
Alpena		3.0			6.2	14.3	4.0	3.9	18.4	5.5	24.6	18.5
Presque Isle		7.2			5.3	7.2	4.9	2.4	20.9	5.9	23.8	14.6
Study Area Total		4.4			6.4	12.2	3.9		19.0	6.3	24.9	16.8
Michigan Total		1.3	1.0	0.2	5.3	17.9	3.7	4.5	17.1	6.6	30.0	12.4

(D) Not shown to avoid disclosure of confidential information, but the estimates for this item are included in the totals.

(L) Less than \$50,000, but the estimates for this item are included in the totals.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System (REIS).

In 2000, the largest industry in the study area was the Government and Government Enterprises sector which accounted for approximately \$164 million (23.3 % of the total income in the study area). Alpena County earned \$124 million, or 76 percent of the income to this sector. The next largest industry was the Manufacturing sector which accounted for approximately \$155 million (22.1% of the total income in the study area). Alpena County earned 84 percent of the \$155 million income to this sector. The third largest industry was the Services sector which accounted for approximately \$128 million (18.3% of the total income in the study area). Alpena County earned 70 percent of the \$128 million income to this sector. These three industries have had steady growth since 1970.

In contrast, the largest industry in Michigan in 2000 was the Manufacturing sector which accounted for approximately \$72 billion (31.1% of the total income in Michigan). The next largest industry was the Services sector which accounted for approximately \$56 billion (24.3% of the total income in Michigan). The third largest industry was the Government and Government Enterprises sector which accounted for approximately \$30 billion (12.9% of the total income in Michigan). These three industries have had steady growth in Michigan since 1970.

***Relative Importance of Tourism/Recreation to the Northeast Michigan Economy.*** To place tourism and recreation in context with the larger economy, we estimate the relative importance of tourism/recreation to the Northeast Michigan economy. The U.S. Department of Commerce, Bureau of Economic Analysis (BEA) web site provided the income and employment by industry data for the three counties in Northeast Michigan for 2005.

For 2005, BEA estimates the income for the three-county Northeast Michigan Area to be the following:

Place of residence: \$1,387,206 (thousands of \$)

Place of Work: \$785,335 (thousands of \$)

We estimate income generated from tourism/recreation at \$35,849 (thousands of \$). So the proportion of relative contribution/importance of tourism/recreation of the three-county Northeast Michigan economy is:

Place of Residence: 2.58%

Place of Work: 4.56%

For 2005, BEA estimates the employment for the three-county Northeast Michigan Area to be the following 26,269 full and part-time jobs.

We estimate the number of full and part-time jobs generated by tourism/recreation to be 1,704. So 6.5% of employment in the three-county Northeast Michigan economy is related to tourism/recreation.

## 2.3 TOURISM AND RECREATION IN NORTHEAST MICHIGAN

This section presents a preliminary assessment on the relative importance of tourism/recreation to the northeast Michigan study area economy. Relevant data has been compiled from previous studies on tourism and recreation in Michigan and in the study area (where available). Marine recreation uses in the northeast Michigan study area are a sub-set of these estimates.

### 2.3.1 Michigan Travel and Recreation Trends

For this study, a visitor to Michigan is anybody who has taken a day or overnight trip to a place at least 50 miles from home.

**Where Visitors are Coming From and Where Visitors are Going.** In 1995, Michigan received 21.9 million household trips (one or more visitors originating from a single household), of which 13.6 million (61.9%) originated in state. Over 80 percent of Michigan-destined household trips originate in Michigan, Illinois, Indiana, Ohio, and Wisconsin. This indicates that Michigan is primarily a regional travel destination.

**Table 2.19. Distribution of Domestic Travel to Michigan by Visitor Origin, 1995**

State of Origin	Number of Household Trips	Percentage of Total Household Trips
Michigan	13,561	61.9
Illinois	1,388	6.3
Ohio	1,297	5.9
Indiana	1,043	4.8
Wisconsin	748	3.4
Florida	388	1.8
California	377	1.7
New York	284	1.3
Minnesota	253	1.2
Kentucky	238	1.1
Pennsylvania	227	1.0
Other States	2,136	9.6

Source: Holecek, Donald F., "Travel, Tourism, and Recreation in Michigan," 2003.

The Michigan Travel Market Survey (MTMS), prepared by Michigan State University, breaks down visitor origins by designated market areas (DMAs). This delineation is often used so that marketers can concentrate their promotion activities in specific market areas. Five of the top ten DMAs are within Michigan, with Detroit being number one.

The MTMS cites two potential problems with the high regional characterization of Michigan's travel market. "First, this prime market region is an area of slow population growth compared with other U.S. regions. Second, Michigan's tourism industry depends on a relatively small geographic area, making it highly vulnerable to local economic fluctuations. These limit the

industry's long-term growth potential and create an environment conducive to significant year-to-year fluctuations in tourism business volume" (Holecek, Herbowicz, Nikoloff, and Alexander, 2000).

**Table 2.20. Top 10 Designated Market Areas Generating Pleasure Trips to Michigan, 1996-1998**

Rank	Designated Market Area
1	Detroit
2	Chicago
3	Grand Rapids-Kalamazoo-Battle Creek
4	Flint-Saginaw-Bay City
5	Cleveland
6	Traverse City-Cadillac
7	South Bend-Elkhart
8	Indianapolis
9	Toledo
10	Lansing

Source: Tourism Center, Michigan State University, "Michigan Travel Market Survey," August 2000.

The primary destination county in Michigan by respondents to the MTMS between 1996 and 2001 is Wayne County, with an estimated 9.48 percent of the market share. This is followed by Grand Traverse County (6.16%) and Saginaw County (4.66%). The Northeast Michigan counties of Alpena (0.78%), Alcona (0.42%), and Presque Isle (0.27%) have a much smaller percent of the market share, but they are still dependent upon tourism as a source of income.

**Table 2.21. Estimated Michigan Pleasure Trip Market Share by County, 1996-2001**

County	Estimated Market Share (%)
Alpena	0.78
Alcona	0.42
Presque Isle	0.27
...	
Wayne	9.48
Grand Traverse	6.16
Saginaw	4.66
Mackinac	3.95
Cheboygan	2.54

Source: Holecek, Donald F., "Travel, Tourism, and Recreation in Michigan," 2003.

***How Visitors are Getting There.*** The large majority (88.0%) of pleasure trip visitors to Michigan, between 1996 and 1998, used a car or truck without camping equipment as their mode of transportation.

**Table 2.22. Mode(s) of Transportation Used on Respondents' Most Recent Pleasure Trips in Michigan, 1996-1998**

Mode of Transportation	Percent of Respondents
Car/Truck without camping equipment	88.0
Car/Truck with camping equipment	3.2
Motorcoach/Bus	2.0
Airplane	1.9
Self-contained recreation vehicle	1.2
Ship/Boat	1.2
Other	1.2
Rental car	0.7
Motorcycle	0.5
Train	0.1
Bicycle	0.1

Source: Tourism Center, Michigan State University, "Michigan Travel Market Survey," August 2000.

**When Visitors are Coming.** Visitation to Michigan is highest in months of June through September, with 52.6 percent of visitors to Michigan coming during those months. August and July are the most popular months to visit, with 17.1 percent and 15.8 percent of visitors respectively.

**Table 2.23. Monthly Distribution of Pleasure Trips Generated by Residents of Michigan's Prime Market Area, 1996-1998**

Month in Which Trip Began	Percent of Trips to Michigan
January	4.4%
February	5.8%
March	4.2%
April	4.2%
May	6.2%
June	9.9%
July	15.8%
August	17.1%
September	9.8%
October	8.4%
November	7.1%
December	7.0%
Total	100.0%

Source: Tourism Center, Michigan State University, "Michigan Travel Market Survey," August 2000.

**Where Visitors are Staying.** An estimate of the distribution of lodging used on overnight pleasure trips in Michigan, "Travel, Tourism, and Recreation in Michigan" (Holecek, 2003) is illustrated in Table 24.

**Table 2.24. Distribution of Lodging Used on Overnight Michigan Pleasure Trips**

Hotel/motel/resort	43%
With friends or relatives	27%
Owned or rented second home	15%
Campground	9%
Bed & Breakfast	2%
Other	4%

Source: Holecek, Donald F., "Travel, Tourism, and Recreation in Michigan," 2003.

The lodging sector is an important part of any tourism system. Destinations with greater lodging capacity are clearly better positioned to attract a larger share of tourists' dollars. The Tourism Resource Center at Michigan State University completed a survey in 2001 of commercial lodging establishments in Michigan counties. Although the number of rooms available in commercial lodging establishments is much lower in the three county study area, compared to other more developed tourism destinations in Michigan, this does not necessarily mean that tourism is not a significant factor in their economies. Each of these counties has a significant number of second homes, indicating that the influx of dollars from these second home owners is vital to the local economies.

**Table 2.25. Distribution of Second Homes and Commercial Lodging Accommodations in Michigan by County**

County	No. Second Homes (2000 Census)	Distribution of Rooms				
		No. Lodging Establishments	No. Available Rooms	Hotel/Motel/Lodge/ Historic Inn (%)	Cabin/Cottage/ Condo/Rental (%)	Bed and Breakfast (%)
Alcona	5,067	23	125	30	46	23
Alpena	1,658	22	485	90	8	2
Presque Isle	3,278	18	196	58	36	7
...						
Wayne	2,448	137	15,574	99	0	1
Grand Traverse	3,026	102	3,500	67	27	6
Saginaw	301	64	3,459	87	10	3
Mackinac	3,945	123	3,245	81	12	6
Cheboygan	4,777	99	2,919	89	11	1

Source: Holecek, Donald F., "Travel, Tourism, and Recreation in Michigan," 2003.

**What Visitors are Doing.** Pleasure travelers account for over 85 percent of the visitors to Michigan. Business accounts for only 9 percent of all Michigan trips and about 6 percent of trips include a mix of business and pleasure and therefore cannot be classified as either. Forty eight percent of visitors to Michigan come for recreational purposes and approximately 37 percent of visitors come to visit friends or relatives.

**Table 2.26. Distribution of Trip Purposes in Michigan's Prime Market Area, 1996-1998**

Trip Purpose	Percent of Respondents
Recreation	48
Visiting friends or relatives	37
Business	9
Other	6

Source: Tourism Center, Michigan State University, "Michigan Travel Market Survey," August 2000.

Looking at the activities that Michigan tourists partake in can provide valuable insight to why visitors are coming to Michigan. The following tables present this information in a variety of ways. From 1996-2001, the top three activities done by Michigan tourists on pleasure trips were general touring or driving for pleasure, outdoor recreation, and shopping, all with participation rates above 50 percent. The one activity that has seen an increase in participation rate over this time period is attending a festival or event.

**Table 2.27. Participation in Selected Activities by Michigan Tourists on Pleasure Trips (1996-2001)**

Activity	Participation Rate (%)	Trend
General touring or driving for pleasure	53.0	-
Outdoor recreation	50.9	-
Shopping	54.9	NC
Explore small city or town	49.7	NC
Dine at unique restaurant	46.4	NC
Visit other attraction	40.9	NC
Night life	29.7	NC
Visit state or national park	27.4	-
Visit historic site	25.0	-
Attend festival or event	24.8	+
Visit museum or hall of fame	12.4	NC
Casino gambling	11.5	NC
Fall color touring	9.4	NC

Source: Holecek, Donald F., "Travel, Tourism, and Recreation in Michigan," 2003.

From 1996-1998, the most popular form of outdoor recreation engaged in on a respondents' most recent pleasure trip to Michigan was hiking (11.3%), followed by swimming (10.2%) and fishing (8.8%).

**Table 2.28. Most Popular Forms of Outdoor Recreation Engaged in on Respondents' Most Recent Pleasure Trips in Michigan, 1996-1998**

Form of Outdoor Recreation	Percent of Respondents Who Engaged in This Recreational Form
Hiking/Day-hiking	11.3
Swimming	10.2
Fishing	8.8
Walking	6.5
Golfing	5.6
Other/Outdoor Sports	5.4
Boating	5.3
Camping	4.8
Bicycling	4.6
Snowmobiling	3.4
Canoeing/Kayaking	2.2
Jet Skiing	1.8

Source: Tourism Center, Michigan State University, "Michigan Travel Market Survey," August 2000.

The number of registered recreationalists in Michigan also shows the relative importance of various activities in Michigan. Hunting and fishing licenses by far account for the largest amount of registered recreationalists in Michigan.

**Table 2.29. Number of Registered Recreationalists in Michigan**

Registered watercraft	829,210
Registered snowmobiles	278,473
Hunting and fishing licenses sold of all types	4,987,048

Source: Holecek, Donald F., "Travel, Tourism, and Recreation in Michigan," 2003.

**What Visitors are Spending Money On.** Although the tourism industry in Michigan has grown significantly since 1985, there is evidence that Michigan has lost market share of both domestic and international travelers' spending in the United States. The following table shows this decline in market share for Michigan. From 1985 to 1999 Michigan has dropped its rank from 8<sup>th</sup> to 13<sup>th</sup> in terms of capturing domestic travelers' expenditures and from 12<sup>th</sup> to 16<sup>th</sup> in terms of international travelers' expenditures.

**Table 2.31. Michigan's Rank in Capturing Domestic and International Travelers' Expenditures in Selected Years**

Year	Expenditure Rankings	
	Domestic	International
1985	8	12
1995	13	14
1999	13	16

Source: Holecek, Donald F., "Travel, Tourism, and Recreation in Michigan," 2003.



However, the trends in Michigan tourism spending show that total spending increased each year from 1995 to 2000. This is in direct relation to the growing number of party nights each year, and the increase in spending per party night each year. A travel party constitutes a group of people traveling together (same room, vehicle) and sharing expenses. The unit of activity here is party days for day trips and party nights for overnight stays.

**Table 2.32. Trends in Michigan Tourism Activity and Spending, 1995-2000**

	1995	1997	1998	1999	2000
Party nights (000's) <sup>1</sup>	76,063	81,670	84,624	86,000	89,349
Spend \$ per party night	\$86.74	\$89.95	\$90.20	\$93.00	\$98.23
Total spending (\$ Millions) <sup>2</sup>	\$6,598	\$7,346	\$7,633	\$7,998	\$8,777

<sup>1</sup> A travel party constitutes a group of people traveling together (same room, vehicle) and sharing expenses. The unit of activity here is party days for day trips and party nights for overnight stays.

<sup>2</sup> Spending within 60 miles of the destination. Excludes airfares, most car rentals and some other en route expenses.

Source: Stynes, Daniel J, "Michigan Statewide Tourism Spending and Economic Impact Estimates 1998-2000," 2002.

The distribution of travel expenditures in Michigan provides valuable insight into what type of visitors are coming to Michigan, and how they spend their money. The distribution of Michigan's direct total travel expenditures by type of expenditure is presented in the following table. The breakdown of travel expenditures by type of expenditure is something we will look at in much more depth and detail later in this report.

**Table 2.33. Distribution of Direct Total Travel Expenditures by Type of Expenditure for Michigan, 1999 (%)**

Type of Expenditure	Michigan
Public transportation	26.8
Auto transportation	20.3
Lodging	15.5
Food service	22.5
Entertainment/recreation	7.0
General trade	7.9

Source: Holecek, Donald F., "Travel, Tourism, and Recreation in Michigan," 2003.

**How Visitors Rate Their Trip.** It is important to know how Michigan is perceived as a travel destination. Understanding the impressions that Michigan leaves on its visitors is fundamental to promoting tourism and designing effective marketing strategies. The two top ranked attributes that visitors to Michigan rated were the scenic appeal of Michigan, and the fact that Michigan is great for summer activities.

**Table 2.34. Mean Ratings of Attributes of Michigan as Pleasure Trip Destinations, 1996-1998**

Attribute	Mean Rating (1=Do not agree at all; 10=Agree completely)
Much scenic appeal	8.1
Great for summer activities	8.0
Everyone should visit	7.9
Great for winter activities	7.8
Great for family vacation	7.8
Close enough	7.6
Good place to meet people	7.4
Excellent vacation value	7.2
High Quality Lodging	7.2
Safeplace	7.2
Many historic sites	6.9
Exciting place	6.9
Popular destination	6.9
Exciting nightlife	6.4
Many museums	6.2

Source: Tourism Center, Michigan State University, "Michigan Travel Market Survey," August 2000.

The following table lists positive impressions that visitors to Michigan have had, and the percentage of respondents who had that impression. The top three positive impressions were about lakes/lakeshores/water resources (16%), scenery (12%), and natural attractions (7%).

**Table 2.35. Most Frequently Mentioned Positive Impressions of Michigan as a Pleasure Trip Destination, 1996-1998**

Positive Impression	Percent of Respondents Who Had Positive Impression (%)
Lakes/lakeshores/water resources	16
Scenery	12
Natural attractions	7
Manmade attractions	4
Sports-related	4
Other	4
Upper Peninsula	4
Great Lakes	4
Straits of Mackinac	4
Cities	3
Fishing	3
Lots to do	3
Winter sports	3
Lakefront-related	3
Climate	3
North country	2
Visiting friends and relatives	2
Hospitality	2
Relaxation	2
Events/festivals	2
Camping	1
Shopping	1
Detroit	1
Distance	1

Source: Tourism Center, Michigan State University, "Michigan Travel Market Survey," August 2000.

***How Visitors Planned Their Trip.*** Also important for the marketing of a region as a tourism destination, is being able to understand how visitors plan for their trips. The following table shows that the most frequently cited information sources used while planning a pleasure trip to Michigan, between 1996 and 1998, were a travel agency (20.1% of respondents), AAA/CAA/auto club publications (18.0%), and friends/relatives/co-workers (15.1%).

**Table 2.36. Most Frequently Cited Information Sources Used In Pleasure Trip Planning, 1996-1998**

Information Source	Percent of Respondents Who Used This Source
Travel agency	20.1%
AAA/CAA/Auto club publications	18.0%
Friends/Relatives/Co-workers	15.1%
No source	14.0%
Other source	8.0%
Internet/On-line Service	5.8%
Chamber of Commerce	3.8%
Other travel guide	3.7%
Magazine(s)	3.3%
State travel office/Call state 800 number	2.7%
Travel section of newspaper	2.1%
Convention/Visitors bureau	1.7%
Mobil travel guide	1.0%
Travel show	0.3%
CD Rom	0.2%
Highway welcome centers	0.2%

Source: Tourism Center, Michigan State University, "Michigan Travel Market Survey," August 2000.

It is also important to assess which advertisements and messages are getting through to potential visitors to Michigan. The following table shows the medium through which the most recent Michigan travel advertisement was seen or heard, during the time period 1996-1998.

**Table 2.37. Medium Through Which Most Recent Michigan Travel Advertisement Was Seen or Heard, 1996-1998**

Medium	Percent of Respondents Who Saw or Heard an Ad Through This Medium
TV	63.1%
Magazine	14.7%
Newspaper	11.6%
Radio	5.3%
Billboard/Outdoors	1.3%
Other	1.2%
Travel guide	0.8%
Highway welcome center	0.5%
Travel show	0.4%
Direct mail advertisement	0.4%
Convention and visitors bureau	0.3%
Chamber of Commerce	0.2%
Internet/On-line service	0.1%
CD-Rom	0.1%
At the destination	0.1%

Source: Tourism Center, Michigan State University, "Michigan Travel Market Survey," August 2000.

The tourism and recreation data presented in this section is the best available information. Most of the data is not current, dating back to 1995-2001. This is an important factor to consider, as the tourism landscape in Northeast Michigan has changed and new visitor trends may exist. This shows the need of obtaining current visitor data to the northeast Michigan region, as well as the associated economic impacts of the visitation.

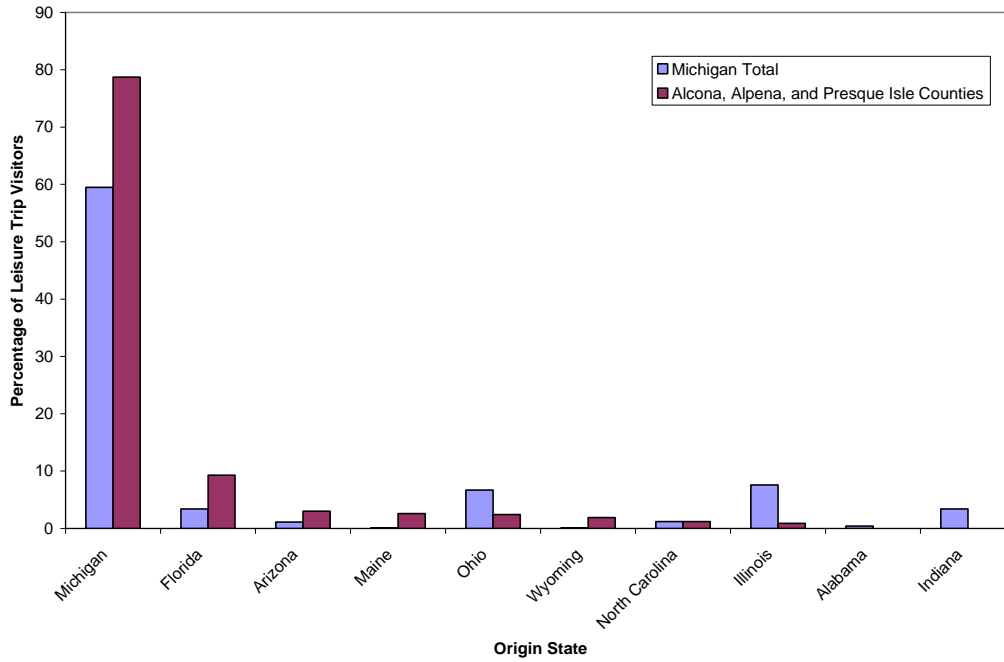
### 2.3.2 Updates to Michigan Travel and Recreation Trends

As mentioned previously, the travel data that has been presented in this report is five to ten years old. This report was designed to be a working document in which updates and current data can be added as they become available. This section of the report presents data that was just made available to the authors in April 2007.

David Morris at the Michigan Economic Development Corporation provided updated Michigan travel data and analysis for the combined years 2003-2005. The data is from a national Claritas phone survey that targets marketing research and customer segmentation profiling. It must be noted that this travel data, for the Northeast Michigan study area specifically, is based on a small sample size and therefore has limitations to its use. The total number of respondents for the study area is about 100 visitors, representing 280 distinct person-trips. This is a bit thin, but it is still enough to make some larger picture observations. The statewide sample size is about 6,400 visitors, representing 27,000 person-trips. The following analyses are taken from personal communication with David Morris on May 7, 2007..

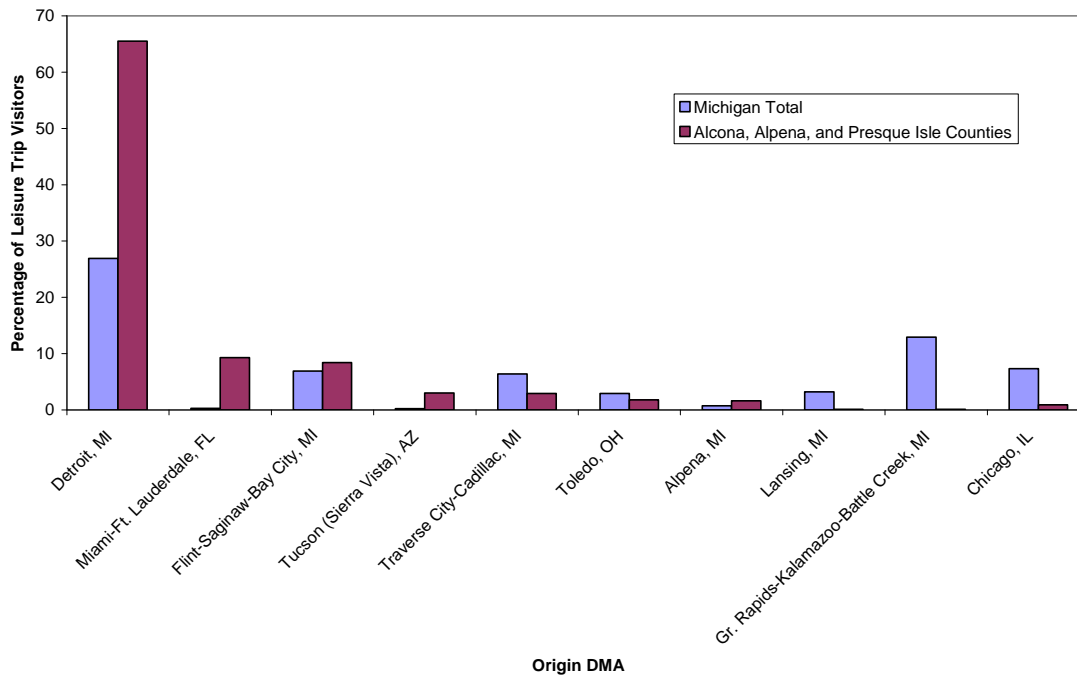
**Where Visitors are Coming From.** The data indicates that the northeast Michigan study area is exceptionally dependent on Michigan residents for travel, with almost 80 percent of the visitors to the region being from Michigan. Florida and Arizona show up high on the list of origin states because of “snowbird” travel from those who live in those states in the winter months and return for the warm weather. Other states that are good origin states for the rest of Michigan (Illinois, Ohio, and Indiana) are not represented well in the study area. Therefore, there is a lot of room for growth from traditional, nearby states.

**Figure 2.6. Origin State of Leisure Trip Visitors to Michigan, 2003-2005**



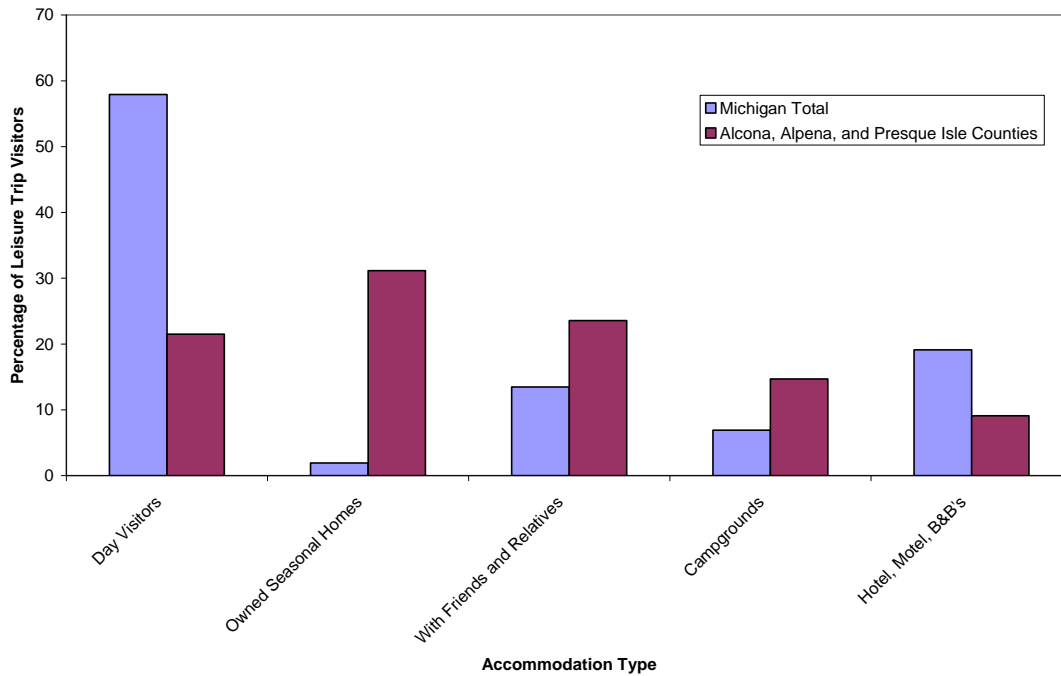
Again, Designated Market Areas (DMAs) are another way of looking at the origin location of visitors. This breakdown is often used so that marketers can concentrate their promotion activities in specific market areas. The data here shows similar patterns to what the origin state profile shows. There are a limited number of out of state visitors to the northeast Michigan region. The strongest markets to this region are Detroit, MI and Flint/Saginaw/Bay City, MI. The markets that are underperforming, compared to the rest of Michigan, are Lansing, MI and Grand Rapids/Kalamazoo/Battle Creek, MI and Chicago, IL. These latter markets represent areas that may have room for growth.

**Figure 2.7. Origin Designated Market Area (DMA) of Leisure Trip Visitors to Michigan, 2003-2005**



**Where Visitors are Staying.** The accommodation type of visitors to Michigan was broken down into the same lodging segments as the Holecek (2003) study. The northeast Michigan study area is very dependent on travelers using second homes that they own, rent, or borrow from friends or relatives. Visitors staying in owned seasonal homes account for 32 percent of visitors to Northeast Michigan, compared to only 1.9 percent in all of Michigan. Visitors staying with friends and relatives comprise 23.6 percent of visitors to Northeast Michigan, and approximately 13.5 percent in all of Michigan. The Northeast Michigan region is above the statewide average for campground usage (14.7% compared to 6.9%), but significantly lower than the rest of the state in hotel/motel/B&B usage (9.1% compared to 19.7%). The data shows that Northeast Michigan is an overnight travel destination without much day-trip activity compared to the statewide average (21.5% compared to 57.9%). This is most likely due to the long distance from primary markets.

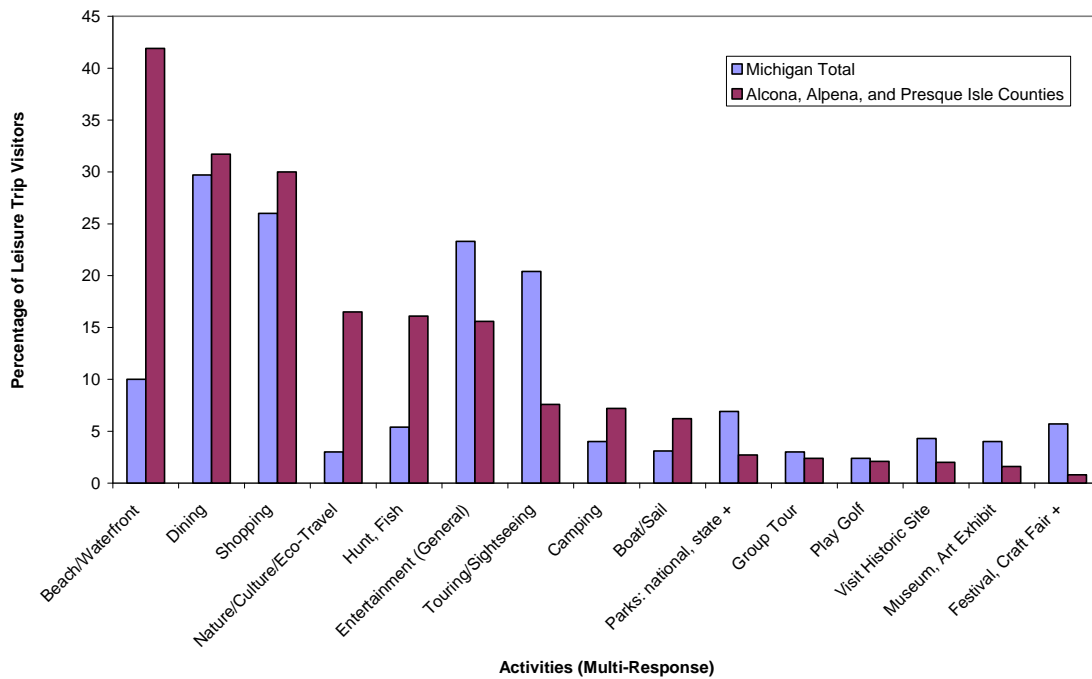
**Figure 2.8. Accommodation Type of Leisure Trip Visitors to Michigan, 2003-2005**





**What Visitors are Doing.** The data indicates that the Northeast Michigan study area is primarily a beach/waterfront vacation destination area, with 41.9 percent participation compared to the statewide average of 10%. This beach/waterfront activity is not limited to only Lake Huron but also the large inland lakes. The study area is also a popular fishing/hunting destination (with 16.1% participation in Northeast Michigan compared to the statewide average of 5.4%) and a popular nature/culture/eco travel destination (with 16.5% participation in Northeast Michigan compared to the statewide average of 3.0%). The Northeast Michigan study area underperforms in the touring/sightseeing category, with only 7.6 percent participation compared to the statewide average of 20.4 percent. This may indicate that people are coming to Northeast Michigan for a specific recreation activity as opposed to just visiting the overall destination because of its appeal as a general attraction. This could be related to a lack of branding issue for the Northeast Michigan study area.

**Figure 2.9. Activity Participation by Leisure Trip Visitors to Michigan, 2003-2005**



### 2.3.3 GIS Layers of Recreation and Tourism Resources in Northeast Michigan

This section of the report consists of an inventory of key recreation and tourism resources in the study area counties in Northeast Michigan. In addition to quantifying many of these resources, GIS layers that include all of Michigan are also included to show the relative comparison of these resources. Comparing Northeast Michigan with the entire state of Michigan will help developers, tourism professionals, public officials, and others make informed decisions regarding the travel and tourism industry in Northeast Michigan.

It is important to note that the data presented in this section has not been previously presented in this report. It is also important to note that this data was the most current available data at the date in which it was published (June 2001).

The resources in Table 2.38 are divided into two main categories: resources that pertain to tourism infrastructure and resources that pertain to recreation opportunities.

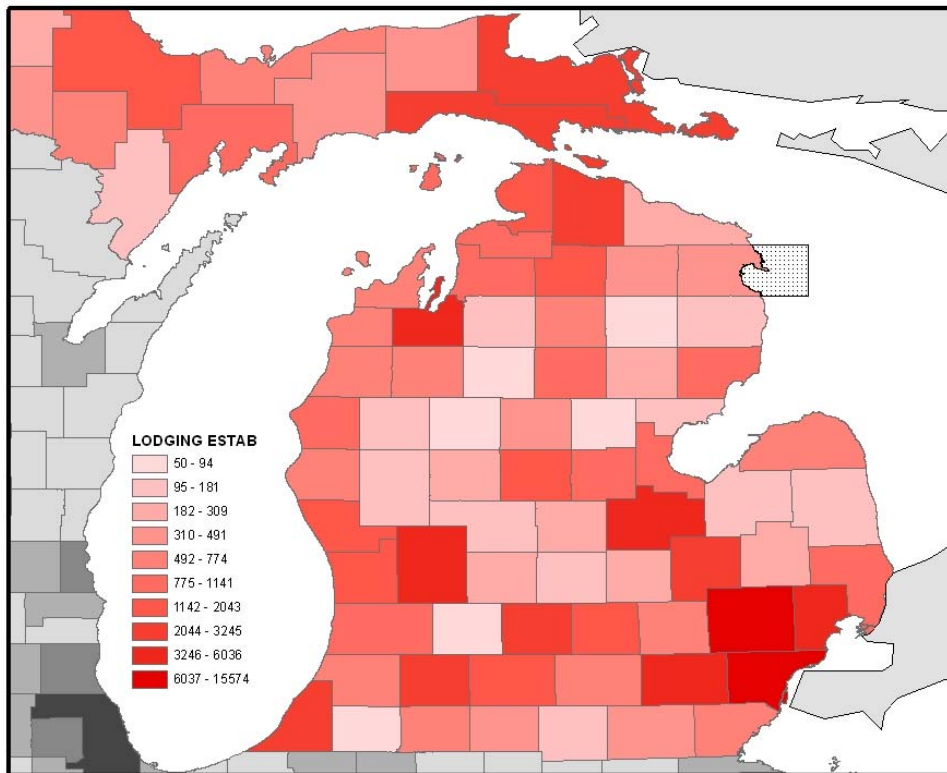
**Table 2.38. Inventory of Selected Recreation and Tourism Resources in Northeast Michigan (Study Area) Counties**

	Resource	(Year)	Alcona	Alpena	Presque Isle
<b>Tourism</b>	Total no. units in commercial lodging establishments	2000	125	485	196
	Total no. campsites	2000	997	412	535
<b>Infrastructure</b>	No. owned second homes	2000	5,067	1,658	3,278
	No. licensed food service establishments	1995	70	134	69
<b>Recreation Opportunities</b>	No. acres of public recreation land	1990	121,200	45,180	86,426
	No. acres of publicly or privately owned forest land	1994	333,000	236,200	311,400
	No. miles of hiking/skiing/mtn. biking trails	1994	50	15	49
	No. licensed charter boats	1996	10	8	4

Source: Holecek, Donald F. et al, "Alcona, Alpena, Presque Isle County Tourism Profiles," 2001.

**Lodging.** There were 107,380 units in commercial lodging establishments in Michigan in 2000. In the study area, Alpena County had the greatest number of units in commercial lodging establishments, with 485 units. Presque Isle County had 196 units and Alcona County had 125 units. Compared to western Michigan and the greater Detroit area, these numbers for Northeast Michigan are extremely low. The counties with the greatest amount of units in commercial lodging establishments include Wayne County (15,574 units), Grand Traverse County (3,500 units), Mackinac County (3,245 units), and Cheboygan County (2,919 units).

**Figure 2.10. Number of Units in Commercial Lodging Establishments in Michigan Counties, 2000**



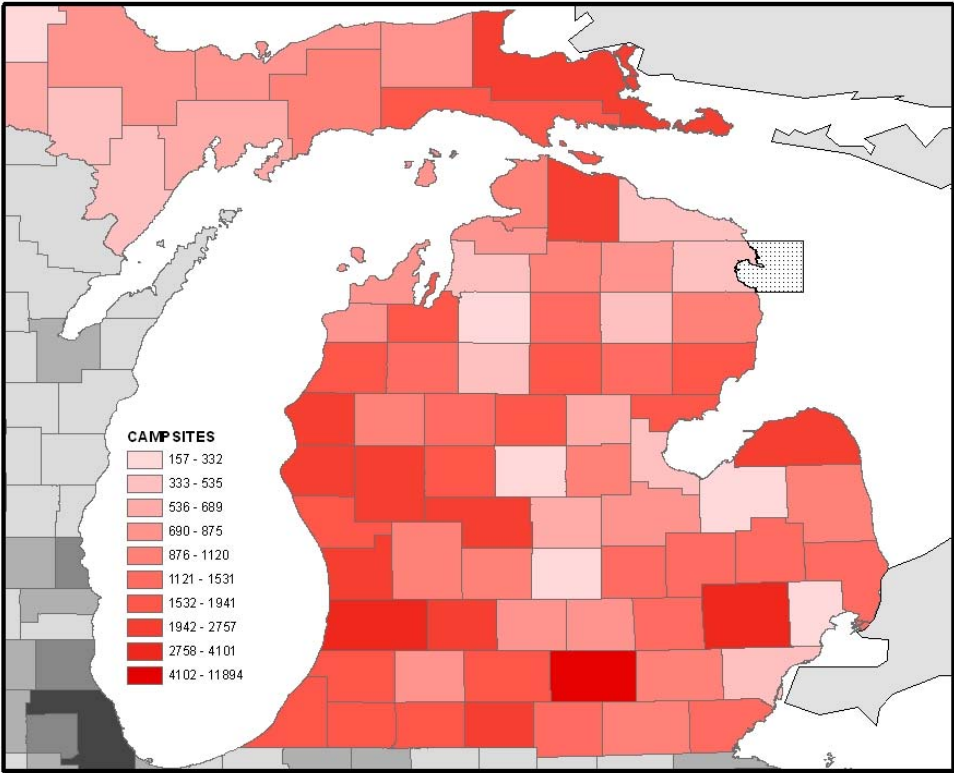
**Table 39. Direct Tourism Trip Expenditures in Northeast Michigan (Study Area) Counties, 1996**

	Alcona	Alpena	Presque Isle
Estimated direct tourism trip expenditures	\$13,679,000	\$38,254,000	\$15,298,000

Source: Holecek, Donald F. et al, "Alcona, Alpena, Presque Isle County Tourism Profiles," 2001.

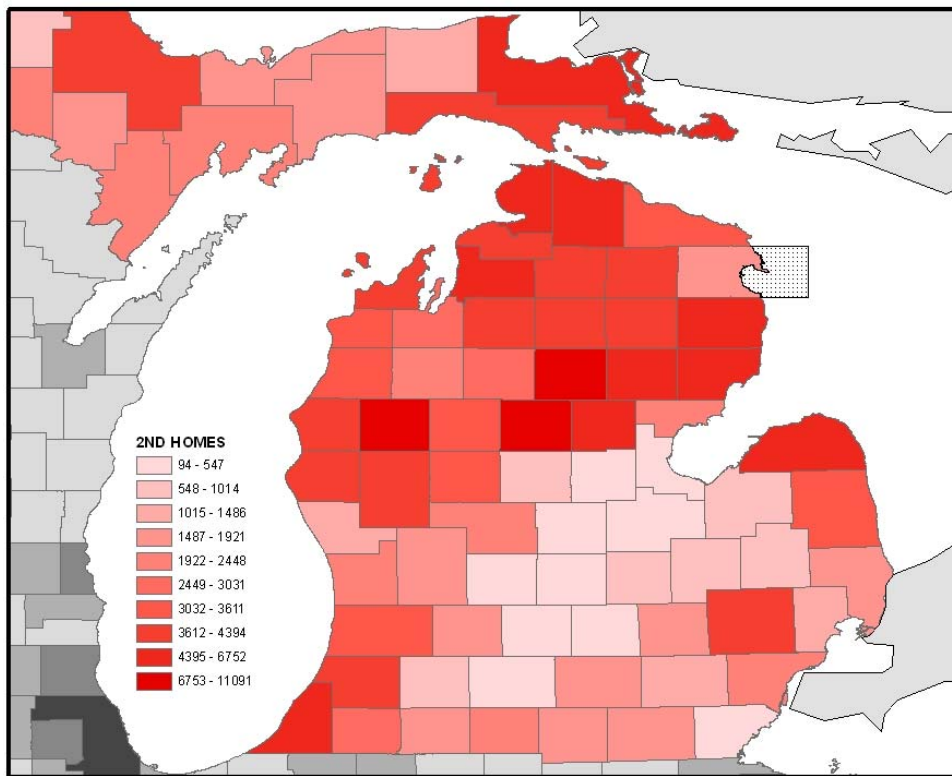
**Campsites.** There were 112,171 campsites in Michigan in 2000. In the study area, Alcona County had the most campsites, with 997 campsites. Presque Isle County had 535 campsites, and Alpena County had 412 campsites. These numbers are low compared to other areas in Michigan, particularly the western and northern coasts. Counties with high numbers of campsites include Jackson County (11,894 campsites), Oakland County (3,748 campsites), Oceana County (2,757 campsites), Cheboygan County (2,557 campsites), Mason County (2,273 campsites), and Chippewa County (2,049 campsites).

**Figure 2.11. Number of Camp Sites in Michigan Counties, 2000**



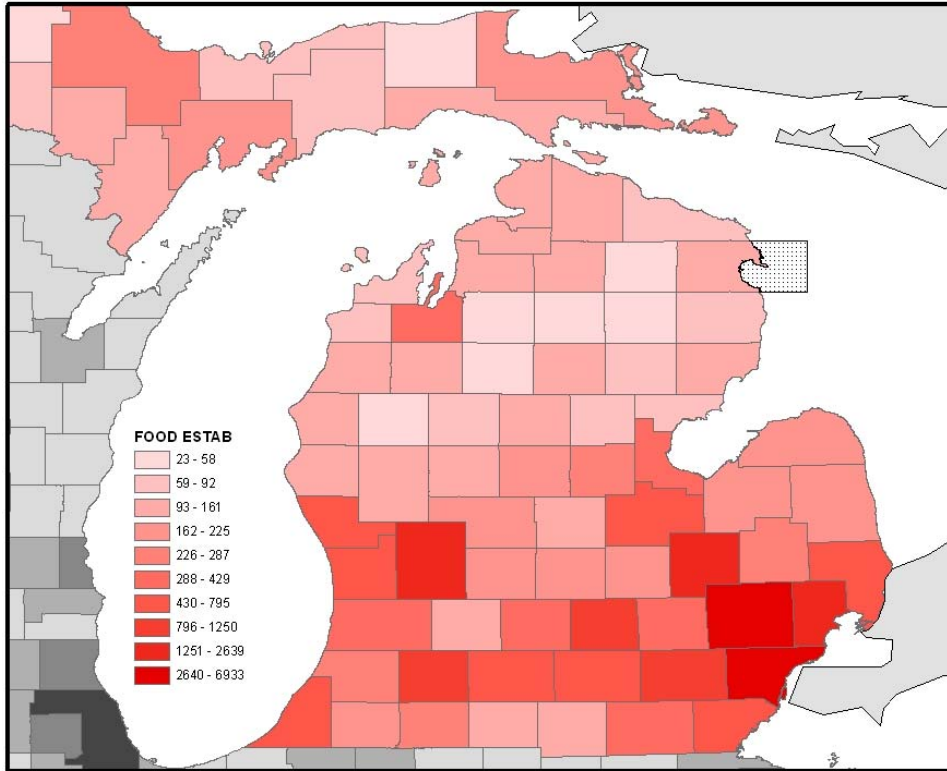
**Second Homes.** There were 233,922 owned second homes in Michigan in 2000. In the study area, Alcona County had the greatest number of owned second homes, with 5,067 homes. Presque Isle County had 3,278 owned second homes, and Alpena County had 1,658 owned second homes. These numbers are higher than for most counties in the greater Detroit area and in southern Michigan. They are about average with counties on the western and northern coasts of Michigan. There are a few counties in central Michigan where the number of second homes is much greater than anywhere else in Michigan. These counties include Roscommon County (11,091 second homes), Clare County (8,583 second homes), Lake County (8,235 second homes), and Iosco County (6,752 second homes).

**Figure 2.12. Number of Owned Second Homes in Michigan Counties, 2000**



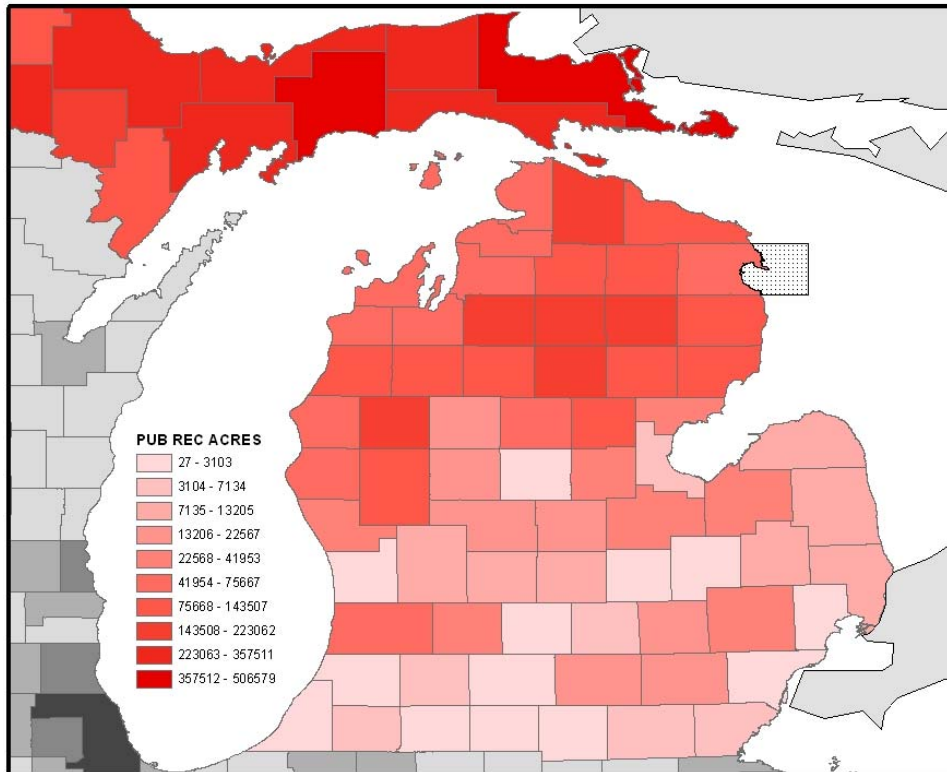
**Food Services.** There were 36,422 licensed food service establishments in Michigan in 1995. In the study area, Alpena County had the greatest number of food service establishments, with 134 establishments. Alcona County had 70 food service establishments, and Presque Isle County had 69 establishments. These numbers are extremely small when compared to counties in the greater Detroit area. Wayne County alone has 6,933 establishments. With the exception of a few counties, including Saginaw County (750 food service establishments), Bay County (422 food service establishments), and Grand Traverse County (342 food service establishments), all of the counties in northwest and Northeast Michigan have fewer than 150 food service establishments.

**Figure 2.13. Number of Food Service Establishments in Michigan Counties, 1995**



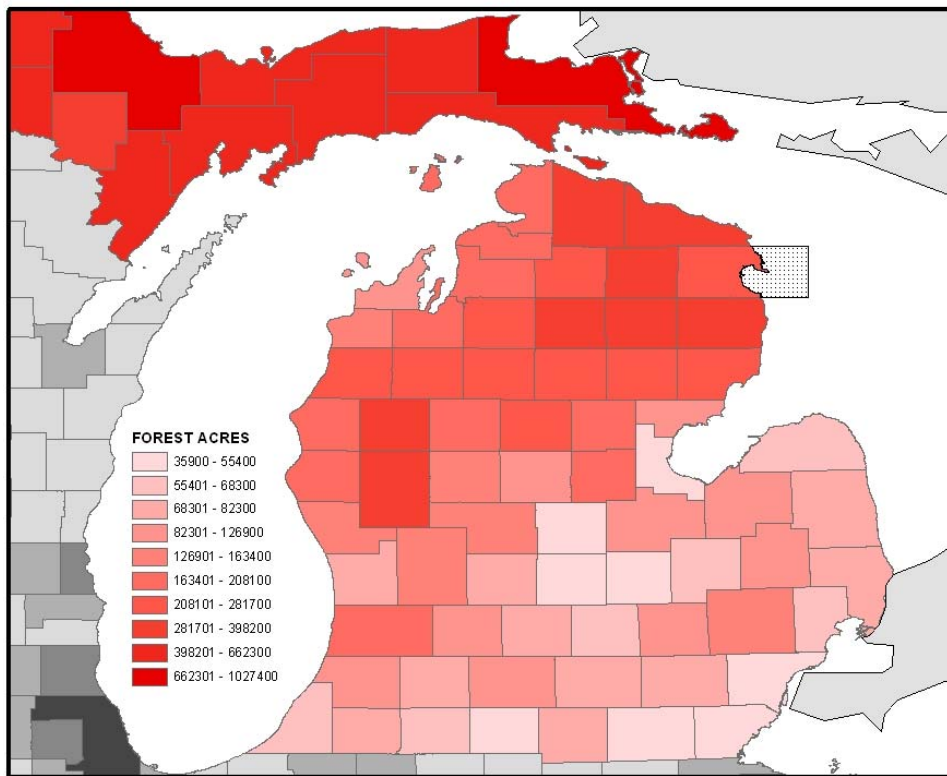
**Public Recreation Land.** There were approximately 7.6 million acres of public recreation land in Michigan in 1990. In the study area, Alcona County had the most public recreation land, with 121,200 acres. Presque Isle County had 86,426 acres of public recreation land, and Alpena County had 45,180 acres. Compared to southern Michigan, where there is very little public recreation land, these numbers are very high. The majority of public recreation land in Michigan is on the Upper Peninsula, with Schoolcraft County (506,579 acres), Chippewa County (458,003 acres), and Mackinac County (357,511 acres).

**Figure 2.14. Acres of Public Recreation Land in Michigan Counties, 1990**



**Forest Land.** There were approximately 19.3 million acres of publicly or privately owned forest land in Michigan in 1994. In the study area, Alcona County had the most public or private forest land, with 333,000 acres. Presque Isle County had 311,400 acres of public or private forest land, and Alpena County had 236,200 acres. Compared to southern Michigan, where there is very little public or private forest land, these numbers are very high. Compared to the rest of the northern and coastal counties in the Lower Peninsula, these numbers are a bit above average. A large amount of public recreation land in Michigan is on the Upper Peninsula, with Marquette County (1,027,400 acres), Chippewa County (749,000 acres), Mackinac County (558,400 acres), and Schoolcraft County (540,500 acres).

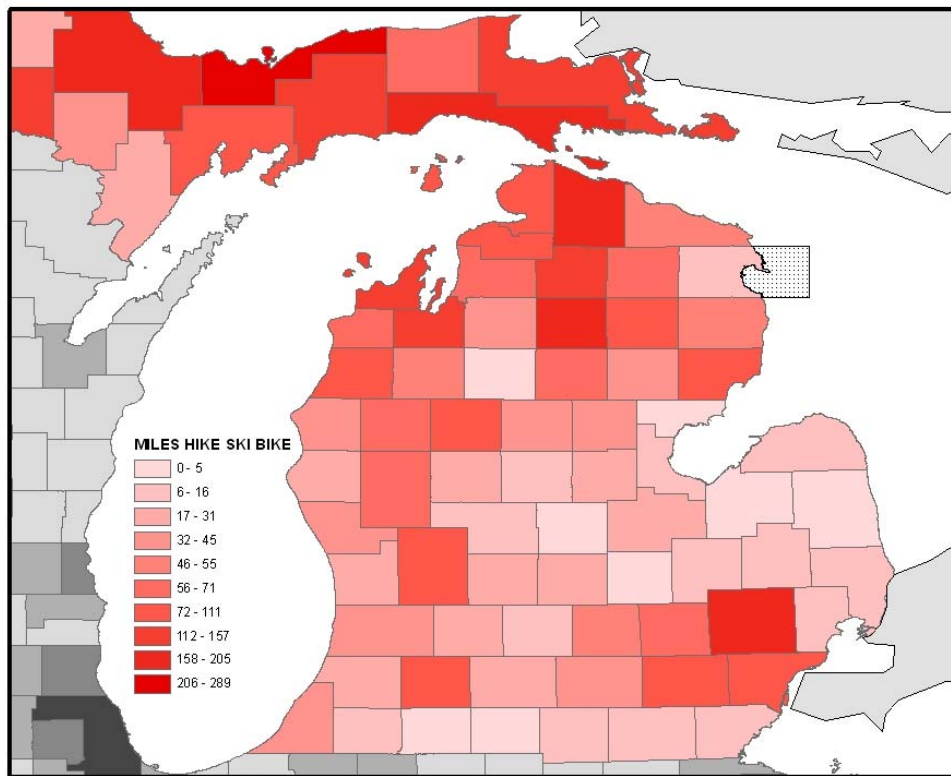
**Figure 2.15. Acres of Public or Private Forest in Michigan Counties, 1994**





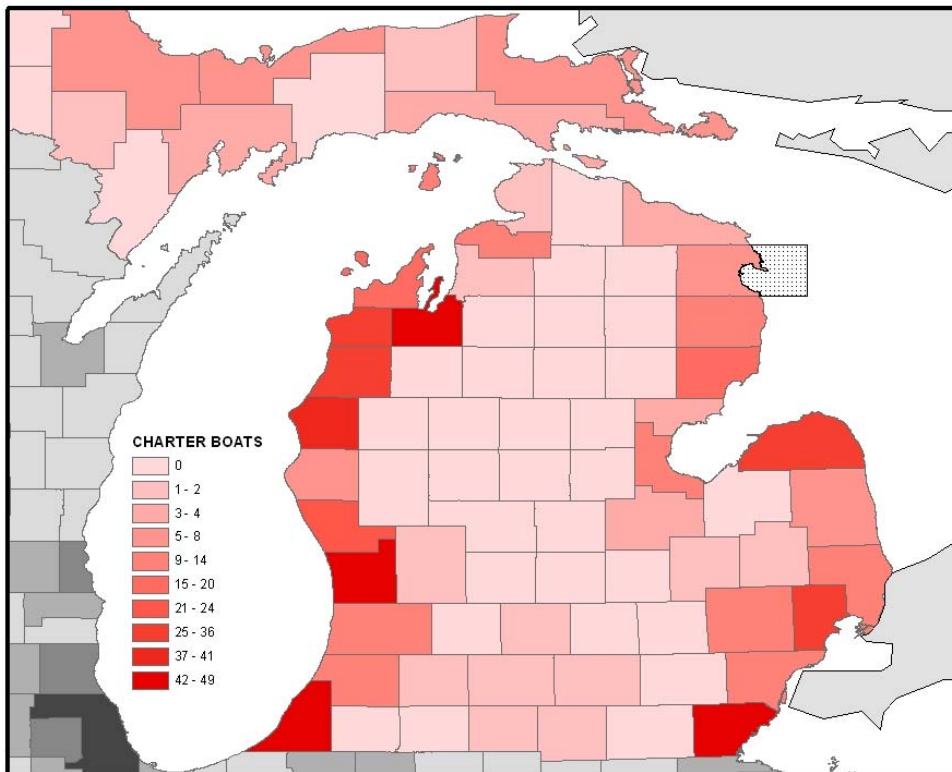
**Trails.** There were approximately 5,363 miles of hiking/skiing/mountain biking trails in Michigan in 1994. In the study area, Alcona County had the greatest amount of hiking/skiing/mountain biking trails, with 50 miles. Presque Isle County had 49 miles of hiking/skiing/mountain biking trails, and Alpena County had 15 miles. Alcona County and Presque Isle County have more miles of trails than most southern Michigan counties. However, when compared to a few counties in the northern Lower Peninsula, and almost every county in the Upper Peninsula, these numbers are very low. For instance, Gogebic County has 284 miles of hiking/skiing/mountain biking trails, Alger County has 230 miles of trails, Oakland County has 205 miles of trails, and Mackinac has 193 miles of trails.

**Figure 2.16. Miles of Hiking/Skiing/Mountain Biking Trails in Michigan Counties, 1994**



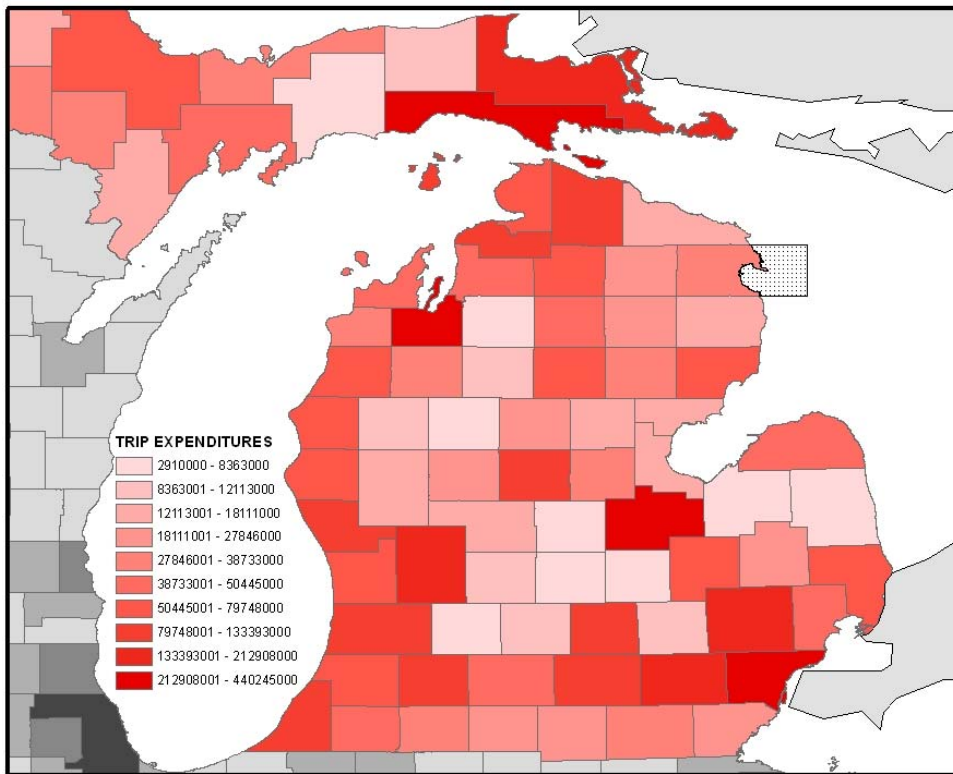
**Charter Boats.** There were 606 licensed charter boats in Michigan in 1996. In the study area, Alpena County had the greatest amount of licensed charter boats, with 10 boats. Alpena County had 8 licensed charter boats, and Presque Isle County had 4 boats. As would be expected, the number of licensed charter boats is greater in these counties than in almost every inland county in Michigan. There are many coastal Michigan counties, particularly on the western coast, that have larger numbers of licensed charter boats. For instance, Grand Traverse County (47 licensed charter boats), Berrien County (47), Ottawa County (45), and Mason County (41).

**Figure 2.17. Number of Licensed Charter Boats in Michigan Counties, 1996**



**Spending.** There was less spending on tourism trips in Northeast Michigan compared to the greater Detroit area and Western Michigan. Of the \$5.1 billion in direct tourism trip expenditures in Michigan in 1996, approximately \$38.3 million (0.75%) was spent in Alpena County, \$15.3 million (0.30%) was spent in Presque Isle County, and \$13.7 million (0.27%) was spent in Alcona County. Comparatively, Grand Traverse County received \$310 million (6.1%) in tourism trip expenditures, Saginaw County received \$280 million (5.5%), and Mackinac County received \$270 million (5.3%).

**Figure 2.18. Tourism Trip Expenditures in Michigan, 1996**



When analyzed together, the previous GIS layers show that there are many recreational opportunities in Northeast Michigan. They also show that there is significantly less tourism infrastructure in Northeast Michigan, compared to other areas of the state.

## 2.4 TRAFFIC FLOW PATTERNS IN MICHIGAN

The Michigan Department of Transportation (MDOT) collects monthly traffic data for 132 permanent counter locations in the state of Michigan. This data can be used to show monthly and annual travel trends for specific roads in Michigan. Given that one recent study in 2000 found that 91.2 percent of the respondents used a car or truck as their mode of transportation during their most recent pleasure trips in Michigan (Holocek, Spencer, Williams, and Herbowicz, 2000), this traffic count data can provide valuable insight into where some of these vehicles are traveling.

Figure 2.19 shows traffic flow patterns in Michigan for 2005. It is based on data obtained from T. Lower at the Michigan Department of Transportation (personal communication, June 28, 2006). The lines represent roads in Michigan, and the thickness of the lines proportionately represent the number of vehicles counted on that road in 2005 (i.e. the thicker lines represent higher vehicle counts). This analysis focuses on the major routes where traffic counters are present and that provide access to Northeast Michigan, specifically to Alcona, Alpena, and Presque Isle counties. Since the majority of visitors to Northeast Michigan come from southern points, this analysis looks at the traffic flow from south to north on June 28, 2006

Of the roads in this analysis, the road with the heaviest traffic in 2005 was I-75 North from Detroit to Saginaw (I-75 Carrollton NWB), with 10.1 million vehicle counts. This is to be expected, as Detroit is the number one designated market area for travel in Michigan (Holocek et al, 2000), and therefore many trips to other parts of Michigan originate in or around Detroit.

From Saginaw, most vehicles either continued on I-75 North to Arenac or they traveled up US-10 to Clare. Approximately 5.5 million vehicles were counted on I-75 North (I-75 Kawkawlin NB) and 4.2 million vehicles were counted on US-10 North (US-10, US-127 Clare NB) in 2005.

The traffic going north on US-10 thinned out significantly before the traffic counter in Roscommon (US-127 Houghton LK, NB), where approximately 1.8 million vehicles were counted driving north in 2005.

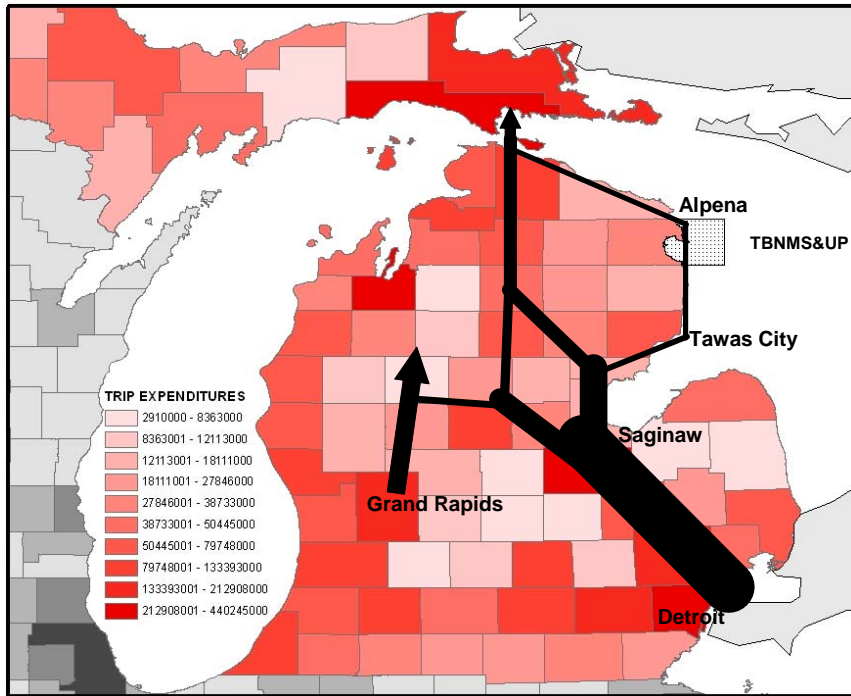
The traffic going north on I-75 has two main options when reaching Arenac. The vehicles can either continue on I-75 North towards Roscommon or they can take US-23 North along the northeast coast. The traffic counters indicate that 2.7 million vehicles traveled on I-75 North (I-75 Prudenville NB) and 1.1 million vehicles traveled on US-23 North (US-23 Au Gres EB) in 2005.

Of the 1.1 million vehicles traveling north on US-23 in 2005, approximately 1 million were counted going north through Alpena (US-23 Alpena NB).

The two roads, I-75 North and US-127 North, converge into one road, I-75 North and head north to Mackinac. The traffic counter located in Otsego County on I-75 (I-75 Vanderbilt NB) counted approximately 2.6 million vehicles traveling north in 2005.

As I-75 North approaches Mackinac, US-23 North merges into I-75. The traffic counter on I-75 going across the Mackinac Bridge after these two roads merge (I-75 Mackinac Bridge NB) indicates that there were 2.1 million vehicles traveling north to Mackinac in 2005.

**Figure 2.19. Michigan Department of Transportation Annual Traffic Flow Display with Trip Expenditures**



It is also helpful to break the data down in terms of seasonal fluctuations. Table 2.39 shows the 2005 total vehicle count at each traffic recorder location previously discussed, as well as the daily seasonal average at each location. Figure 16 also shows the seasonal differences in vehicle counts on these roads. From the numbers, it is clear that the heaviest vehicle traffic is in the summer months in Northeast Michigan, followed by the spring months, fall months, and winter months, in that order.

Many traffic counter locations experience large increases in traffic from the summer months compared to the next most heavily trafficked season, which are the spring months. For instance, the traffic counter location on I-75 North going over the Mackinac Bridge had an increase of 53 percent from the spring months to the summer months. The traffic counter location further north on I-75 in Otsego County (Vanderbilt counter location) had an increase of 40 percent from the spring months to the summer months. The traffic counter location on US-127 North in Roscommon County (Houghton counter location) had an increase of 39 percent from the spring months to the summer months.

Other traffic counter locations did not experience these large increases in traffic from the spring months to the summer months. For instance, the traffic counter location on US-23 in Arenac County (Au Gres counter location) had a 20 percent increase from the spring months to the summer months. The traffic counter location on US-23 in Alpena County had only a 5.7 percent increase in traffic from the spring months to the summer months.

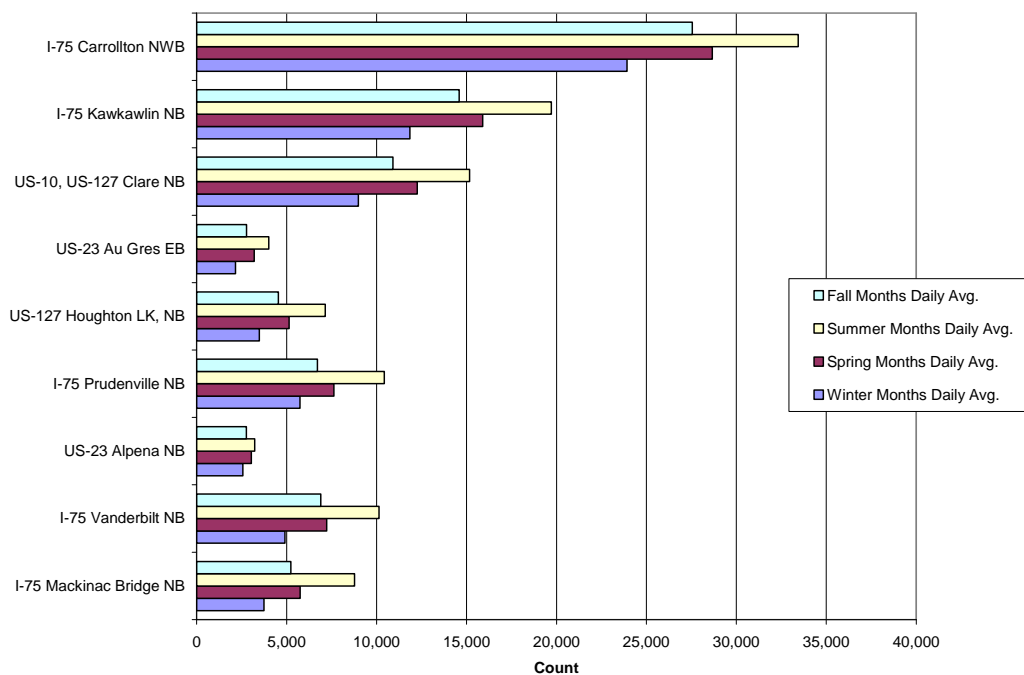
This data indicates that people are traveling more in Michigan in the summer, during the busier tourist season. Alpena County and the other study area counties are not experiencing much of this increase in tourist traffic. The potential for tourism growth in Northeast Michigan exists, as many more vehicles are traveling the roads in the summer time; however this growth will probably not be realized until more people begin traveling on US-23, through Alcona, Alpena, and Presque Isle counties.

**Table 2.39. MDOT Traffic Recorder Counts for Northeast Michigan Access Roads, 2005**

Traffic Counter Location	Total	Winter	Spring	Summer	Fall
		Months	Months	Months	Months
		Daily Avg.	Daily Avg.	Daily Avg.	Daily Avg.
I-75 Mackinac Bridge NB	2,071,140	3,743	5,751	8,776	5,243
I-75 Vanderbilt NB	2,566,380	4,911	7,230	10,140	6,895
US-23 Alpena NB	1,037,700	2,563	3,044	3,228	2,761
I-75 Prudenville NB	2,717,640	5,748	7,627	10,429	6,714
US-127 Houghton LK, NB	1,795,110	3,487	5,131	7,143	4,535
US-23 Au Gres EB	1,074,120	2,158	3,196	4,014	2,771
US-10, US-127 Clare NB	4,201,530	8,987	12,259	15,167	10,912
I-75 Kawkawlin NB	5,503,740	11,850	15,904	19,717	14,596
I-75 Carrollton NWB	10,114,050	23,924	28,669	33,443	27,553

Source: Michigan Department of Transportation, 2006.

**Figure 2.20. MDOT Traffic Recorder Counts for Northeast Michigan Access Roads, 2005**



## 2.5 NORTHEAST MICHIGAN TOURISM SPENDING AND ECONOMIC IMPACT MODEL

The Michigan tourism spending and economic impact model (MITEIM) can be used to estimate total visitor spending in an area and the associated economic effects in terms of sales, income, jobs, and tax receipts. This model was developed by Daniel J. Stynes (2000) at Michigan State University, in order to help estimate the economic impacts of tourism-related decisions in Michigan.

The model is based on the following equation:

$$\text{Economic Impact} = \text{number of visits} \times \text{average spending per visit} \times \text{multiplier}$$

Each part of this equation requires detailed and complex inputs, which can be estimated from local data. The more current the data is, the more accurate the model will be in portraying local economic impacts from tourism at the current time. However, data is often outdated, or not as specifically localized as an analyst would prefer. In these cases, the best available data must be used, and the possible differences in impacts due to not using the most optimal data must be discussed.

### 2.5.1 Number of Visits

The number of visits is organized by five types of visitors or market segments: day visitors, overnight visitors staying in motels, B&B's and other commercial lodging, overnight visitors staying in campgrounds, overnight visitors staying in owned seasonal homes, and overnight visitors staying with friends and relatives. Each market segment has a distinct spending profile. For instance, an overnight visitor staying in commercial lodging establishments will spend money differently than an overnight visitor staying in an owned seasonal home (i.e. the former will spend more money in restaurants and the latter will spend more money on groceries). When visitors are divided into these subgroups or market segments with distinct spending profiles a more accurate estimate of spending and impacts can be provided.

For estimates of visitors to Michigan, we combined data from "Travel, Tourism, and Recreation in Michigan" (Holecek, 2003) and Michigan Economic Development Corporation, 2003-2005. Overnight visitors staying in owned seasonal homes make up the largest visitor market segment with 386 thousand party-nights (31%), followed by overnight visitors staying with friends and relatives with 291 thousand party-nights (24%) and day visitors with 266 thousand party-nights (22%).

**Table 2.40. Annual Visitation Inputs (Alpena, Alcona, and Presque Isle Counties), 2003-2005**

<b>Market Segment</b>	<b>SHARE</b>	<b>Party-night</b>
Day Visitors	22%	266,063
Motels, B&B's, and Other Commercial Lodging	9%	112,613
Campgrounds	15%	181,913
Owned Seasonal Homes	31%	386,100
Visit Friends and Relatives	24%	290,813
<b>Total</b>	<b>100%</b>	<b>1,237,501</b>

Source: Travel, Tourism, and Recreation in Michigan” (Holecek, 2003) and Michigan Economic Development Corp. (2003-2005)

Obtaining reliable estimates of the number and type of visitors is vital to getting accurate impact estimates. The most common ways of obtaining these estimates of the number and types of visitors to an area is through local visitor surveys, various visitor counting methods, and secondary sources such as campsite inventories, motel occupancy rates, and room tax data (Stynes, 2001).

### **2.5.2 Average Spending Per Visit**

In this MITEIM model, spending is reported in up to 12 categories in order to show differences in spending across the subgroups of tourists and also to reveal which sectors of the economy are linked to tourism spending. The spending profiles for a range of tourist market segments are included in a database that can be adjusted or edited, as necessary. This database is designed so that as new data is collected it can easily be built into the model. For our preliminary assessment, the general tourism spending profiles were estimated based on the Michigan Welcome Center visitor survey (Vogt, Pennington-Gray, Xu, Stynes, and Fridge 1998) and selected other studies. Furthermore, spending will vary depending on local prices, quality, and spending opportunities, so low, medium, and high spending profile settings are available to handle these kinds of variations. Given the spending environment in Northeast Michigan, we used the low spending profile.

The spending profiles are presented on a per party-night scale. The market segment with the highest spending profile was visitors staying in motels, B&B's, and other commercial lodging establishments. These visitors spend an average of \$188 per party per night. Of this \$188, approximately \$73 (39%) was spent on the lodging establishment, and \$38 (20%) was spent on restaurants and bars. The two market segments with the lowest spending profiles were visitors staying in seasonal homes, and visitors staying with friends and relatives. Both these groups spend an average of \$77 per party per night. The sectors in which this money was spent differed between the two groups. The visitors staying in seasonal homes spent more money on restaurants and bars, vehicle expenses, local transportation, and clothing, whereas the visitors staying with friends and relatives spent more money on groceries, take-out food/drinks, and souvenirs and other expenses.



**Table 2.41. Visitor Spending by Lodging Segment in Michigan (\$2006)**

<b>CATEGORY</b>	<b>Day</b>	<b>Motel</b>	<b>Camp</b>	<b>Seas</b>	<b>VFR</b>
Motel, hotel cabin or B&B	0.00	73.09	0.00	0.00	0.00
Camping fees	0.00	0.00	14.62	0.00	0.00
Restaurants & bars	17.75	38.42	13.14	16.70	11.12
Groceries, take-out food/drinks	5.48	11.05	11.05	13.79	19.59
Gas & oil	21.34	26.41	25.01	19.45	20.34
Other vehicle expenses	0.48	1.72	2.09	5.09	0.25
Local transportation	1.22	5.84	2.58	3.63	0.58
Admissions & fees	9.90	10.24	5.29	3.79	3.96
Clothing	4.04	6.16	2.89	4.04	2.20
Sporting goods	0.32	0.80	0.86	1.18	1.18
Gambling	0.00	0.00	0.00	0.00	0.00
Souvenirs and other expenses	17.38	14.29	9.05	9.25	17.71
<b>Total</b>	<b>77.92</b>	<b>188.01</b>	<b>86.58</b>	<b>76.94</b>	<b>76.94</b>

Source: Vogt et al. "A Survey of Travel Michigan Welcome Center Visitors," 1998.

### 2.5.3 Multipliers

In the MITEIM model, tourist spending is converted to the income generated and the number of jobs supported by using sets of economic ratios and multipliers. These multipliers are derived from input-output models estimated with the IMPLAN economic database. This model uses a set of multipliers that is specific to each Northeast Michigan county.

### 2.5.4 Results of the MITEIM Model

Using this MITEIM model, the economic impacts of tourism in Northeast Michigan are summarized based on the data we just described to you. The results are presented in four different tables: (1) Spending and visits by segment, (2) Economic impacts of visitor spending, (3) Tax impacts of direct sales and income, and (4) Marginal impacts.

The three county study area of Alpena, Alcona, and Presque Isle counties hosted 1.2 million visitor party nights in 2000. These visitors spent \$110 million in the state. Visitors staying in owned seasonal homes account for 31 percent of party nights and 27 percent of spending. Visitors staying with friends and relatives account for 24 percent of party nights and 20 percent of spending. Day trip visitors account for 22 percent of party nights and 19 percent of spending.

**Table 2.42. Spending and Visits by Segment**

	Segment					Total
	Day	Motel	Camp	Seas	VFR	
Average spending (\$ per party night)	\$77.92	\$188.01	\$86.58	\$76.94	\$76.94	\$88.67
Party nights	266,063	112,613	181,913	386,100	290,813	1,237,500
Total spending (\$000's)	\$20,732	\$21,172	\$15,750	\$29,705	\$22,374	\$109,732
Pct of party nights	22%	9%	15%	31%	24%	100%
Pct of spending	19%	19%	14%	27%	20%	100%

Source: Stynes, Daniel J., 2001.

Of this \$110 million spent by visitors in the study area, the state captures approximately \$67 million (61%) in direct sales by tourism-related businesses. These sales directly support 1,365 jobs with a total payroll of \$27.4 million and \$36.9 million in value added. Every dollar of direct sales yields another \$.38 in secondary sales through indirect and induced effects. Total impacts including secondary effects are \$92 million in sales, \$35.8 million in personal income, \$51.3 million in value added, and 1,704 jobs.

**Table 2.43. Economic Impacts of Visitor Spending**

Sector/Spending category	Sales \$000's	Jobs	Personal Income \$000's	Value Added \$000's
<b>Direct Effects</b>				
Motel, hotel cabin or B&B	8,230	214	3,601	5,829
Camping fees	2,659	20	264	623
Restaurants & bars	21,123	471	9,273	10,452
Admissions & fees	7,365	137	2,636	4,410
Other vehicle expenses	2,739	19	550	1,256
Local transportation	3,024	75	1,594	1,800
Retail Trade	20,478	420	9,239	12,091
Wholesale Trade	691	7	257	449
Local Production of goods	546	0	0	0
<b>Total Direct Effects</b>	<b>66,856</b>	<b>1,365</b>	<b>27,413</b>	<b>36,909</b>
<u>Secondary Effects</u>	<u>25,112</u>	<u>340</u>	<u>8,435</u>	<u>14,412</u>
<b>Total Effects</b>	<b>91,968</b>	<b>1,704</b>	<b>35,849</b>	<b>51,321</b>
Multiplier	1.38	1.25	1.31	1.39

Source: Stynes, Daniel J., 2001.

Taxes on direct sales and income in the study area produce \$9.6 million in tax revenues to the state, and \$165 thousand to local governments.

**Table 2.44. Tax Impacts of Direct Sales and Income (\$000's)**

	Sales	Income	Total
Federal	3,266	4,003	7,269
State	8,662	932	9,595
<u>Local</u>	<u>165</u>	<u>0</u>	<u>165</u>
Total	12,093	4,935	17,029

Source: Stynes, Daniel J., 2001.

Another way of presenting this data, which may be particularly useful for analyzing different policy options, is shown in Table 2.45. This table shows the results of changing visitor spending by \$1,000 increments or changing party nights by increments of 1,000. The associated economic impacts for each situation are given. This could provide very useful information for policy makers who wish to understand what impacts are associated with a certain amount of tourism development.

For every increase of \$1,000 in visitor spending in the region, the economy can expect to capture an additional \$250 in direct personal income and \$336 in direct value added. Total impacts, including secondary effects, are \$327 in personal income and \$468 in value added.

For every increase of 1,000 party nights in visitation in the region, the economy can expect to capture an additional \$22 thousand in direct personal income and \$30 thousand in direct value added. This will support one additional job. Total impacts, including secondary effects, are \$29 thousand in personal income and \$41 thousand in value added. This will support one additional job.

**Table 2.45. Marginal Impacts**

	Change per \$1,000 of visitor spending	Change per 1,000 party nights
Direct personal income	\$250	\$22,152
Direct value added	\$336	\$29,825
Direct jobs	0	1
Total personal income	\$327	\$28,968
Total value added	\$467	\$41,470
Total jobs	0	1

Source: Stynes, Daniel J., 2001.

## 2.6 CASE STUDY: BLACKSTONE RIVER VALLEY

### 2.6.1 Background

The following case study examines the development of the Blackstone River Valley. This region was selected because it has similarities with the northeast Michigan study area, and has experienced significant growth due to the development of the tourist market. This case study serves as an example of how tourism development has impacted a specific region, which is similar in aspects to the northeast Michigan study area. This case study focuses on the socioeconomic impacts of tourism development.

The Blackstone River Valley is situated in New England, 200 miles north of New York City, 40 miles south of Boston, Massachusetts and 10 miles north of Providence, Rhode Island. “The Blackstone Valley rose to national prominence in 1790, when English immigrant Samuel Slater built the first successful water-powered cotton-spinning mill in America” (Billington, 2004). This event signifies the beginning of the American Industrial Revolution, and soon hundreds of

mills were built along the Blackstone River. These textile mills drove a significant part of the United States economy, and provided 150 years of growth and prosperity in the Blackstone Valley.

This was followed by a period of hard economic times. The mills began to shut down as the technology became outdated and labor and environmental troubles arose. By the 1940's, "the region was plagued with decaying mills, contaminated landscapes, a toxic river, and plunging community moral" (Billington, 2004). The region was characterized by high unemployment and economic free-fall for decades, with the people of the Blackstone Valley moving their homes and businesses away.

In the 1970's the people of the Blackstone Valley began to initiate change and organized a 10,000 person cleanup project which cleaned the Blackstone River of trash and pollution that had existed for years. This project spurred an effort by the community to reverse the 200 years of environmental degradation in the region and to develop a program to attract visitors to the Blackstone Valley. The program was based on the idea of establishing a linear park along the river which would include the important places of heritage that characterizes the Valley. "Tangible heritage includes all assets that have some physical embodiment of cultural values such as historic towns, buildings, archaeological sites, cultural landscapes, and cultural objects" (Billington, 2004). In 1986 the Blackstone Valley National Heritage Corridor Act was signed into law and the National Park Service was assigned responsibility to work in the Blackstone Valley.

The National Park status furthered the idea of Blackstone Valley becoming a visitor destination. This led to the creation of the Blackstone Valley Tourism Council. The lessons here are relevant to the prioritized actions of the NEMIA working group, including the desire to balance the region's tourism portfolio by maintaining traditional tourism opportunities and connecting natural resources, cultural resources, and maritime heritage. The unified approach of the Blackstone Valley Tourism Council has led to the communities in Blackstone Valley working in unison to develop the goals of tourism, historical preservation, and landscape planning.

## **2.6.2 Application**

### **Demographic, Economic, and Housing Characteristics.**

The Blackstone River Valley is similar to the northeast Michigan region in that both areas consist of smaller towns and communities that want to work together to achieve economic development and preservation of their area's history. The Blackstone Valley consists of a larger area and a greater number of communities but the comparison is still highly applicable. The Blackstone Valley region covers 22 communities located within Providence County in northern Rhode Island and 20 communities within Worcester County in central Massachusetts. The estimated total population in the Blackstone Valley Region was nearly 603 thousand in 2004. The population in the Rhode Island side was 315 thousand, 29.1 percent of Rhode Island's total. The population in the Massachusetts side was nearly 288 thousand, 4.5 percent of Massachusetts' total (Travel Industry Association of America, 2006). This case study will be

looking at the part of Blackstone Valley which is approximated by part of Providence County, Rhode Island and consists of Cumberland town, North Smithfield town, and Central Falls city.

Tables 2.46 and 2.47 present data on key economic indicators for the state of Rhode Island and the county of Providence, RI. The unemployment rates in Providence County tend to be slightly higher than those in Rhode Island (5.7% compared to 5.2% in 2004), and the per capita income has been lower in Providence County, compared to Rhode Island, since 1980 (\$31,259 compared to \$34,207 in 2004).

**Table 2.46. Economic Indicators in Rhode Island**

	1970	1980	1990	2000	2004
Population	949,723	947,154	1,003,464	1,048,319	1,079,916
Employment	440,434	485,684	555,265	583,826	604,011
Wage and Salary Employment	399,205	431,625	484,271	503,316	511,572
Proprietors Employment	41,229	54,059	70,994	80,510	92,439
Unemployment Rate		7.1	6.1	4.2	5.2
Total Personal Income (\$000's)	3,901,501	9,180,926	20,126,430	30,696,701	36,940,300
Per Capita Personal Income (\$)	4,104	9,677	20,006	29,214	34,207
Per Capita Personal Income, Percent of US	100	96	103	98	104

Source: U.S. Department of Commerce, Census Bureau (<http://www.census.gov>). U.S. Department of Commerce, Bureau of Economic Analysis.

**Table 2.47. Economic Indicators in Providence County, RI**

	1970	1980	1990	2000	2004
Population	581,470	571,349	596,270	621,602	641,874
Employment	292,764	317,063	343,242	353,387	354,536
Wage and Salary Employment	267,146	287,438	305,864	312,376	307,618
Proprietors Employment	25,618	29,625	37,378	41,011	46,918
Unemployment Rate			6.6	4.5	5.7
Total Personal Income (\$000's)	2,388,389	5,364,028	11,464,761	16,610,567	20,064,191
Per Capita Personal Income (\$)	4,107	9,370	19,181	26,670	31,259
Per Capita Personal Income, Percent of US	101	93	98	89	95

Source: U.S. Department of Commerce, Census Bureau (<http://www.census.gov>). U.S. Department of Commerce, Bureau of Economic Analysis.

Tables 2.48 and 2.49 present data on housing characteristics for the state of Rhode Island and the county of Providence, RI. The median value of owner-occupied housing is less in Providence County than in the state of Rhode Island (\$123,900 compared to \$133,000 in 2000). The median gross rent for renter-occupied housing is also less in Providence County than in the state of Rhode Island (\$527 compared to \$553 in 2000).

**Table 2.48. Housing Data for Rhode Island**

	1990	2000
Total Housing Units	414,572	439,837
Occupied Housing Units	377,977	408,424
Median Number of Rooms		5.3
Specified Owner-Occupied Housing Units	224,829	202,216
Median Value	133,500	133,000
Specified Renter-Occupied Housing Units	153,148	156,228
Median Gross Rent	489	553

Source: U.S. Department of Commerce, Census Bureau (<http://www.census.gov>).

**Table 2.49. Housing Data for Providence County, RI**

	1,990	2,000
Total Housing Units	243,224	253,214
Occupied Housing Units	226,362	239,936
Median Number of Rooms		5.1
Specified Owner-Occupied Housing Units	121,133	99,471
Median Value		123,900
Specified Renter-Occupied Housing Units	105,229	109,065
Median Gross Rent	465	527

Source: U.S. Department of Commerce, Census Bureau (<http://www.census.gov>).

Comparatively, Table 2.50 shows the median housing value and the median rent for the northeast Michigan counties in 2000. Both variables are significantly lower in the northeast Michigan counties than in Providence County, RI.

**Table 2.50. Housing Data for Northeast Michigan Counties**

	2000
<b><u>Median Housing Value</u></b>	
Alcona County	\$83,700
Alpena County	\$78,100
Presque Isle County	\$77,800
<b><u>Median Gross Rent</u></b>	
Alcona County	\$411
Alpena County	\$370
Presque Isle County	\$345

Source: <http://www.city-data.com/>.

The towns of Cumberland and North Smithfield, along with Central Falls City were chosen for this case study because they bear resemblance in size to the northeast Michigan counties. Table 2.51 shows the populations of these three Rhode Island towns.

**Table 2.51. Population of Central Falls City, Cumberland Town, and North Smithfield Town**

	1980	1990	2000
Central Falls City	16,995	17,586	18,928
Cumberland Town	27,069	29,434	31,840
North Smithfield Town	9,972	9,787	10,618

Source: Rhode Island Economic Development Corporation, <http://www.riedc.com/r/index.html>.

The Rhode Island Economic Development Corporation (RIEDC) has township level data dating back to 1980 for selected housing, employment, construction, and property tax variables. These tables are attached as Appendix A.

In terms of housing, it is apparent that this region was experiencing changes. The RIEDC measured housing value by the median selling price of existing single family homes. Each town experienced high growth with this housing value indicator. From 1980-1989, Cumberland Town

experienced growth of 154 percent, North Smithfield Town experienced growth of 190 percent, and Central Falls City experienced growth of 143 percent. The growth of the median selling price of existing single family homes subsided significantly from 1990-2000, when Cumberland Town experienced growth of 14.8 percent, North Smithfield Town experienced growth of 20.2 percent, and Central Falls City experienced growth of 8.5 percent.

In addition, Cumberland Town authorized 2,035 new housing units from 1980-1990 and 1,754 new housing units from 1991-2001. North Smithfield Town authorized 420 new housing units from 1980-1990 and 517 new housing units from 1991-2001. Central Falls City authorized 318 new housing units from 1980-1990 and 12 new housing units from 1991-2001.

There was also significant construction occurring in the region during this time period. From 1980-1989, Cumberland Town had new construction projects that were valued at \$9.5 million, and from 1990-2000 it had new construction projects that were valued at \$41.3 million. From 1980-1989 North Smithfield Town had new construction projects that were valued at \$4.3 million, and from 1990-2000 it had new construction projects that were valued at \$20.5 million. From 1980-1989 Central Falls City had new construction projects that were valued at \$6.5 million, and from 1990-2000 it had new construction projects that were valued at \$3.0 million.

In terms of employment in the region, it is also apparent that the region was changing. From 1980-1990, employment in the Service Industry in Cumberland Town grew 87.1 percent, and from 1991-2001 it grew 75.9 percent. From 1980-1990, employment in the Manufacturing Industry in Cumberland Town decreased by 42.0 percent, and from 1991-2001 it decreased 6.4 percent.

From 1980-1990, employment in the Service Industry in North Smithfield Town decreased 27.4 percent, and from 1991-2001 it grew 34.4 percent. From 1980-1990, employment in the Manufacturing Industry in North Smithfield Town decreased by 40.8 percent, and from 1991-2001 it decreased 51.9 percent.

From 1980-1990, employment in the Service Industry in Central Falls City decreased 31.3 percent, and from 1991-2001 it grew 30.14 percent. From 1980-1990, employment in the Manufacturing Industry in Central Falls City decreased by 44.4 percent, and from 1991-2001 it decreased 34.5 percent.

## **Visitor Data**

In February of 2006 the Travel Industry Association of America (TIA) conducted a study titled, *Economic Impact of Domestic Travel on the Blackstone Valley at Rhode Island/Massachusetts in 2004*. The study provides preliminary 2004 domestic traveler profile and estimates of domestic traveler expenditures on the Blackstone Valley Rhode Island/Massachusetts region, as well as the employment, payroll income, and state and local tax revenue directly generated by these expenditures. TIA uses the same Travel Economic Impact Model (TEIM) that is being used in the NEMIA project.

TIA categorized lodging in the Blackstone Valley region into three types. Among overnight visitors to the region, approximately half (48%) paid for hotels or motels; approximately 41 percent stayed in private homes or friends' homes; and around 11 percent stayed in vacation homes, camps or other places.

**Table 2.52. Overnight Travel in the Blackstone Valley Region by Accommodation Type, 2004**

Category	Share (%)
Total Overnight Person-Trips	100%
Hotel/Motel/B&B	48%
Private/Friend Home	41%
Vacation Home/Camp/Other	11%

Source: Travel Industry Association of America, 2006.

There were approximately 2.3 million person-trips to the Blackstone Valley Region in 2004. Domestic travelers to this region directly spent \$474.4 million during 2004 on transportation, lodging, food, entertainment and recreation, and incidentals. These traveler expenditures generated 6,400 jobs and \$124.6 million in payroll for the region's residents. These expenditures also contributed \$26.5 million and \$13.0 million in tax revenue to the Rhode Island and Massachusetts state governments and local governments, respectively (TIA, 2006).

**Table 2.53. Summary of Blackstone Valley Regional Travel and Tourism**

Total Person-Trips (Millions)	2.3
Travel Expenditures (\$ Millions)	\$474.40
Travel-Generated Employment	6,400
Travel-Generated Payroll (\$Millions)	\$124.60
Travel-Generated Tax Revenue for State and Local Governments (\$ Millions)	\$39.6

Source: Travel Industry Association of America, 2006.

Travel expenditures from domestic travelers totaled \$474.4 million in the Blackstone Valley region in 2004. The largest spending sector was the food service category, where travelers spent \$124.4 million (26.2% of total travel expenditures in the region). The next largest spending sector was lodging expenditures, which totaled \$117.5 million (24.8% of total).

During 2004, domestic traveler spending in the Blackstone Valley region generated 6,400 jobs. The total wage and salary earned by these 6,400 employees was \$124.6 million. The food service sector provided more jobs than any other sector during 2004, generating 2,400 jobs (37.5% of total). This also represented the largest payroll at \$36.1 million (29% of total). The lodging sector ranked second with 1,400 jobs (21.9%) and \$31.6 million in wage and salary



income (25.3%). The entertainment and recreation sector was the third largest with 1,100 jobs (17.2%) and \$19.2 million in payroll (15.4%).

**Table 2.54. Economic Impacts of Domestic Travel on the Blackstone Valley Region, 2004**

Sector/Spending Category	Expenditures (\$Millions)	Employment	Payroll (\$)
Public Transportation	33.6	200	5.7
Auto Transportation	105.7	300	6.8
Lodging	117.5	1,400	31.6
Food Service	124.4	2,400	36.1
Entertainment & Recreation	46.2	1,100	19.2
General Retail Trade	47.0	300	7.0
Travel Planning		700	18.2
<b>Total</b>	<b>\$474.4</b>	<b>6,400</b>	<b>\$124.6</b>

Source: Travel Industry Association of America, 2006.

In 2004, total tax revenue generated by domestic traveler spending in the Blackstone Valley region totaled \$39.6 million. Of this, \$26.5 million was tax revenue for Rhode Island and Massachusetts state treasuries and \$13.0 million was tax revenue for local governments.

**Table 2.55. Domestic Travel-Generated Tax Revenue in the Blackstone Valley Region by Level of Government, 2004**

2004 Tax Revenue	Domestic (\$ Millions)
State Government	26.5
Local Government	13.0
<b>Total</b>	<b>\$39.6</b>

Source: Travel Industry Association of America, 2006.

### **Federal Investment and Private Investment.**

One of the prioritized actions in the NEMIA process is to capitalize on the presence of the National Marine Sanctuary and to build complimentary enterprises. Similarly, the Blackstone Valley region utilized the National Park Service presence as a regional entity that could act as a magnet for both visitors and private investment. This effort has been well documented, and Table 2.57 shows that private investors are following the public investments in the region. The private investors' "funds are spilling-over into the riverfront downtowns, that are begging for revitalization dollars...and this could mean sustainability of the historic fabric of the Blackstone Valley, which is vital to residents, their cultural history, and the visitor industry" (Billington, 2004).

**Table 2.56. Blackstone River Valley National Heritage Corridor, National Park Service Investments Compared to Private Sector, River-related Heritage Project Investments in Rhode Island**

Year	NPS Annual	Private Sector in RI
1987	50,000	1,200,000
1988	350,000	
1989	325,000	2,000,000
1990	320,600	
1991	696,000	
1992	2,518,000	
1993	1,537,000	
1994	1,047,000	
1995	1,325,000	
1996	860,000	
1997	1,020,000	
1998	1,069,000	
1999	1,330,000	10,000,000
2000	1,727,000	1,300,000
2001	3,391,000	500,000
2002	2,106,000	1,000,000
2003	2,107,000	57,500,000
<b>TOTALS</b>	<b>\$21,778,600</b>	<b>\$73,500,000</b>

Source: Billington, Robert, “A Case Study – Federal Investment Attracts Private Investment in Industrial Historic Sites,” 2004.

“The work completed in the Blackstone Valley over the last several decades has created a generation with a new awareness of their natural, cultural, and historical resources. Community revitalization, based on education, historic preservation, landscape improvements, private and public investments, are causing this new found awareness to ensure the Blackstone Valley is not just a place to make a living, but a place worth living” (Billington, 2004).

## **2.7 CONCLUDING REMARKS AND RECOMMENDATIONS**

The NEMIA process has brought together members of the northeast Michigan community to discuss the desired future of the region, and potential local actions to reach this vision. The first step in the process was to document the social, economic, and environmental status and trends related to the central policy question on sustainable tourism, as well as the causes and consequences of the status and trends. Through a series of meetings, this information was presented to the NEMIA working group, by the four technical assessment teams. Each technical assessment team also prepared a report on their findings, which will be compiled into the final integrated assessment report.

The socioeconomic component of the process was designed to provide background information on the local socioeconomic environment of the northeast Michigan study area. The central focus of this report is an assessment of the tourism and recreation industry in the study area economy.

Tourism in Northeast Michigan is exceptionally dependent on Michigan residents. Almost 80 percent of the visitors to the region are from Michigan. This trend is prevalent, but not as

extreme, for the entire state of Michigan. Of all visitors in Michigan, 60 percent originate from Michigan.

Other traditional, nearby states that are good origin states for the rest of Michigan, such as Illinois, Ohio, and Indiana, are not represented well in Northeast Michigan. Therefore, these are areas that represent visitor markets that may have room for growth.

Visitation to Michigan is highest during the summer. Approximately 53 percent of visitors to Michigan come during the months of June through September.

The lodging data indicates that most visitors to Northeast Michigan have lower than average spending profiles. Over 55 percent of visitors to the region stay in owned seasonal homes or with friends and relatives, and approximately 15 percent stay in campgrounds. Visitors represented by these lodging segments tend to spend less money per visit than visitors staying in hotels, motels, and B&B's, which only account for 9 percent of visitors to Northeast Michigan.

A similar trend is represented in the data for key tourism resources in the study area. Compared to other parts of Michigan, the northeast Michigan counties have low numbers of commercial lodging and food service establishments, and high numbers of campsites.

The most popular recreation activities done by visitors to Northeast Michigan are visiting a beach/waterfront (42% of visitors), dining (32%), shopping (30%), nature/culture/eco travel (17%), and hunting and fishing (16%).

A Michigan tourism spending and economic impact model (MITEIM), designed by Dan Stynes (2000) at MSU, was used to estimate total visitor spending in the northeast Michigan region. The inputs to the model were estimated from the local tourism data we collected from various sources. The limitations to the use of this model must be noted, as the data used here is 5-10 years outdated or based on a small sample size. The more current the data is, and the more localized the inputs are, the more accurate the model will be in portraying local economic impacts from tourism at the current time.

The MITEIM model shows us the marginal impacts of a given scenario. If the northeast Michigan study area received 1,000 more visitors, they would experience an increase of \$103 thousand dollars in visitor spending. The economy could expect to capture \$77 thousand in direct sales, which would support an additional 2.15 jobs, with a total payroll of \$31 thousand and \$48 thousand in value added. Total impacts including secondary effects are \$98 thousand in total sales, \$37 thousand in personal income, \$60 thousand in value added, and 2.42 jobs.

If the visitors to the northeast Michigan study area increased their spending profiles, for every increase of \$1,000 in visitor spending, the economy could expect to capture \$748 in direct sales. This will support an additional .02 jobs with a total payroll of \$297 and \$464 in value added. Total impacts including secondary effects are \$948 in sales, \$362 in personal income, \$582 in value added, and .02 jobs.

Through the process of collecting this data and preparing this report, the Socioeconomic Team has compiled the best available data regarding tourism and recreation in Northeast Michigan. As previously mentioned, the data is either 5-10 years outdated or based on a small sample size. This points to the important need of collecting current visitor data in the northeast Michigan study area, so that we can refine the inputs to the economic impact model and say with more certainty what the true economic impact of visitors to the region is.

The first stage of implementing this recommendation is currently underway. The NMSP and NEMCOG are planning on administering a broad visitor survey effort in the northeast Michigan study area during the summer of 2007. This survey will focus mainly on visitors to the TBNMS Great Lakes Maritime Heritage Center, and depending on community resources will also include local marinas, lighthouses, parks, charter boat operations, and other key visitor sites.

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## APPENDIX A. SELECTED DATA FOR CENTRAL FALLS CITY, RHODE ISLAND.

Central Falls	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<b><u>Resident Labor Force</u></b>											
Total Employed	7,860	7,832	7,597	6,965	7,548	7,771	7,961	8,082	8,167	7,672	7,245
Unemployed	710	695	1,162	875	577	619	523	493	371	476	825
Labor Force	8,570	8,527	8,759	7,840	8,125	8,390	8,486	8,575	8,538	8,148	8,070
Unemployment Rate	8.3%	8.2%	13.3%	11.2%	7.1%	7.4%	6.2%	5.7%	4.3%	5.8%	10.2%
<b>Average Annual</b>											
<b><u>Private Industry Employment</u></b>											
Agriculture Forestry & Fisheries											
Construction	81	86	68	80	77	85	126	161	160	144	124
Manufacturing	3,965	3,811	3,509	3,587	3,748	3,604	3,822	3,768	3,724	3,403	2,206
Transportation Communications & Utilities	46	137	26	26	31	34	29	38	34	30	30
Wholesale Trade	137	590	141	144	184	202	214	243	241	225	197
Retail Trade	687	755	568	614	655	662	688	772	778	750	510
Finance, Insurance & Real Estate	89	74	68	70	73	80	79	85	85	104	97
Service Industries	809	755	848	860	866	902	931	912	998	739	556
<b><u>Total Covered Private</u></b>	<b><u>5,813</u></b>	<b><u>5,486</u></b>	<b><u>5,254</u></b>	<b><u>5,380</u></b>	<b><u>5,635</u></b>	<b><u>5,569</u></b>	<b><u>5,889</u></b>	<b><u>5,997</u></b>	<b><u>6,023</u></b>	<b><u>5,394</u></b>	<b><u>3,719</u></b>
% of State	1.71%	1.61%	1.59%	1.60%	1.58%	1.51%	1.54%	1.52%	1.51%	1.34%	0.96%
<b><u>Construction</u></b>											
Industrial Construction in Sq. Ft.	1,000	3,200	3,400	0	6,912	42,250	0	5,680	0	0	0
Commercial Construction in Sq. Ft.	5,583	0	2,500	0	8,500	11,296	7,262	3,294	0	0	0
<b>Total</b>	<b><u>6,583</u></b>	<b><u>3,200</u></b>	<b><u>5,900</u></b>	<b><u>0</u></b>	<b><u>15,412</u></b>	<b><u>53,546</u></b>	<b><u>7,262</u></b>	<b><u>8,974</u></b>	<b><u>0</u></b>	<b><u>0</u></b>	<b><u>0</u></b>
Industrial Construction (\$) Value	80,000	330,000	125,000	0	1,511,000	1,500,000	0	200,000	0	845,000	0
Commercial Construction (\$) Value	167,000	0	75,000	0	243,000	460,000	400,000	520,000	60,700	0	0
<b>Total (\$) Value</b>	<b><u>247,000</u></b>	<b><u>330,000</u></b>	<b><u>200,000</u></b>	<b><u>0</u></b>	<b><u>1,754,000</u></b>	<b><u>1,960,000</u></b>	<b><u>400,000</u></b>	<b><u>720,000</u></b>	<b><u>60,700</u></b>	<b><u>845,000</u></b>	<b><u>0</u></b>
Authorized New Housing Units											
Single Family	1	4	1	0	0	0	3	2	3	4	6
Multi Family	0	211	4	0	0	0	5	13	30	31	0
<b>Total</b>	<b><u>1</u></b>	<b><u>215</u></b>	<b><u>5</u></b>	<b><u>0</u></b>	<b><u>0</u></b>	<b><u>0</u></b>	<b><u>8</u></b>	<b><u>15</u></b>	<b><u>33</u></b>	<b><u>35</u></b>	<b><u>6</u></b>
<b>Median Selling Price of</b>											
<b><u>Existing Single Family Home</u></b>	\$44,000	\$42,500	\$41,750	\$43,500	\$46,500	\$56,900	\$75,000	\$95,000	\$91,000	\$107,000	\$79,500



<b>Central Falls</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>Change</b>	
<b>Resident Labor Force</b>												<b>1991 to 2001</b>	<b>1991 to 2001 %</b>
Total Employed	6,807	6,559	6,350	6,110	6,599	6,752	6,802	6,774	6,848	6,854	6,783	-24	-0.35%
Unemployed	882	928	708	660	703	540	574	517	415	444	633	-249	-28.23%
Labor Force	7,689	7,487	7,058	6,770	7,302	7,292	7,376	7,291	7,263	7,298	7,416	-273	-3.55%
Unemployment Rate	11.5%	12.4%	10.0%	9.7%	9.6%	7.4%	7.8%	7.1%	5.7%	6.1%	8.5%		
<b>Average Annual</b>												<b>Change</b>	<b>% Change</b>
<b>Private Industry Employment</b>												<b>1991 to 2001</b>	<b>1991 to 2001 %</b>
Agriculture Forestry & Fisheries													
Construction	87	114	138	155	143	156	168	168	178	167	160	73	83.91%
Manufacturing	2,805	2,594	2,524	2,545	2,424	2,277	2,203	2,035	2,031	1,903	1,525	-1,280	-45.63%
Transportation Communications & Utilities	29	13	12	17	21	21	19	21	20	19	19	-10	-34.48%
Wholesale Trade	185	205	178	184	179	226	238	230	205	183	190	5	2.70%
Retail Trade	597	596	615	538	496	422	424	406	486	536	560	-37	-6.20%
Finance, Insurance & Real Estate	111	94	99	105	102	127	148	157	185	130	124	13	11.71%
Service Industries	584	856	866	1,013	1,043	989	1,341	1,168	1,073	846	760	176	30.14%
<b>Total Covered Private</b>	<b>4,399</b>	<b>4,471</b>	<b>4,442</b>	<b>4,565</b>	<b>4,409</b>	<b>4,218</b>	<b>4,543</b>	<b>4,188</b>	<b>4,181</b>	<b>3,790</b>	<b>3,344</b>	-1,055	-23.98%
% of State	1.22%	1.24%	1.22%	1.24%	1.18%	1.13%	1.19%	1.08%	1.06%	0.90%	0.83%		
<b>Construction</b>												<b>Total 89 to 99</b>	
Industrial Construction in Sq. Ft.	0	0	0	0	0	0	0	0	0	0	0	0	0
Commercial Construction in Sq. Ft.	0	0	0	0	0	0	2,716					2,716	
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,716</b>					<b>2,716</b>	
Industrial Construction (\$) Value	0	0	0	0	0	0	0	0	0	0	0	845,000	
Commercial Construction (\$) Value	0	0	0	0	0	0	2,129,000					2,129,000	
<b>Total (\$) Value</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,129,000</b>					<b>2,974,000</b>	
Authorized New Housing Units												<b>Total 91 to 01</b>	
Single Family	1	0	0	0	0	0	0	0	0	0	3	4	
Multi Family	6	0	0	0	0	0	0	0	0	0	2	8	
<b>Total</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>12</b>	
<b>Median Selling Price of Existing Single Family Home</b>													
	\$76,000	\$88,000	\$75,000	\$61,450	\$58,500	\$56,000	\$67,500	\$66,900	\$68,100	\$77,500	\$86,250		

Source: Rhode Island Economic Development Corporation, <http://www.riedc.com/r/index.html>.

## APPENDIX A. SELECTED DATA FOR CUMBERLAND TOWN, RHODE ISLAND.

Cumberland	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<b><u>Resident Labor Force</u></b>											
Total Employed	12,520	12,475	12,101	12,933	14,016	14,430	14,783	15,009	15,165	15,075	15,118
Unemployed	803	937	1,298	1,094	701	741	638	604	520	659	1,129
Labor Force	13,323	13,412	13,399	14,027	14,717	15,171	15,421	15,613	15,685	15,734	16,247
Unemployment Rate	6.0%	7.0%	9.7%	7.8%	4.8%	4.9%	4.1%	3.9%	3.3%	4.2%	6.9%
<b>Average Annual</b>											
<b><u>Private Industry Employment</u></b>											
Agriculture Forestry & Fisheries	26	23	21	24	22	27	36	38	52	55	45
Construction	154	170	175	235	224	311	345	437	516	390	317
Manufacturing	3,159	3,356	3,217	2,876	2,922	2,810	2,707	2,454	2,160	1,824	1,832
Transportation Communications & Utilities	305	320	355	414	439	426	447	488	545	405	380
Wholesale Trade	525	481	429	420	409	456	576	676	705	672	190
Retail Trade	1,679	1,673	1,693	1,760	1,851	1,893	2,109	2,029	1,993	1,972	1,414
Finance, Insurance & Real Estate	38	59	67	89	115	98	127	144	145	142	66
Service Industries	606	603	624	689	776	954	1,045	1,134	1,119	1,265	1,134
<b><u>Total Covered Private</u></b>	<b><u>6,495</u></b>	<b><u>6,690</u></b>	<b><u>6,592</u></b>	<b><u>6,515</u></b>	<b><u>6,767</u></b>	<b><u>6,981</u></b>	<b><u>7,396</u></b>	<b><u>7,404</u></b>	<b><u>7,237</u></b>	<b><u>6,725</u></b>	<b><u>5,378</u></b>
% of State	1.91%	1.96%	1.99%	1.94%	1.89%	1.89%	1.94%	1.88%	1.81%	1.68%	1.39%
<b><u>Construction</u></b>											
Industrial Construction in Sq. Ft.	7,000	84,200	0	0	40,712	6,250	0	0	10,000	0	0
Commercial Construction in Sq. Ft.	10,224	4,806	9,600	0	33,267	42,907	6,250	10,000	26,630	0	1,680
<b><u>Total</u></b>	<b><u>17,224</u></b>	<b><u>89,006</u></b>	<b><u>9,600</u></b>	<b><u>0</u></b>	<b><u>73,979</u></b>	<b><u>49,157</u></b>	<b><u>6,250</u></b>	<b><u>10,000</u></b>	<b><u>36,630</u></b>	<b><u>0</u></b>	<b><u>1,680</u></b>
Industrial Construction (\$) Value	250,000	2,850,000	0	0	1,200,000	200,000	0	75,000	300,000	0	0
Commercial Construction (\$) Value	286,000	131,000	272,000	0	1,085,456	924,227	309,415	400,000	1,157,589	0	668,000
<b><u>Total (\$) Value</u></b>	<b><u>536,000</u></b>	<b><u>2,981,000</u></b>	<b><u>272,000</u></b>	<b><u>0</u></b>	<b><u>2,285,456</u></b>	<b><u>1,124,227</u></b>	<b><u>309,415</u></b>	<b><u>475,000</u></b>	<b><u>1,457,589</u></b>	<b><u>0</u></b>	<b><u>668,000</u></b>
<b>Authorized New Housing Units</b>											
Single Family	50	28	37	64	101	164	263	453	270	152	136
Multi Family	2	21	8	2	12	62	190	8	2	6	4
<b><u>Total</u></b>	<b><u>52</u></b>	<b><u>49</u></b>	<b><u>45</u></b>	<b><u>66</u></b>	<b><u>113</u></b>	<b><u>226</u></b>	<b><u>453</u></b>	<b><u>461</u></b>	<b><u>272</u></b>	<b><u>158</u></b>	<b><u>140</u></b>
<b>Median Selling Price of</b>											
<b><u>Existing Single Family Home</u></b>	\$56,000	\$58,000	\$51,500	\$64,000	\$70,000	\$82,000	\$118,000	\$137,500	\$140,500	\$142,000	\$142,000

<b>Cumberland</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>Change</b>	
<b><u>Resident Labor Force</u></b>												<b>91 to 01</b>	<b>91 to 01 %</b>
Total Employed	14,815	15,198	15,378	15,300	14,449	14,901	15,140	15,354	15,738	15,751	15,587	772	5.21%
Unemployed	1,674	1,401	1,143	983	908	725	710	697	567	532	752	-922	-55.08%
Labor Force	16,189	16,599	16,521	16,283	15,357	15,624	15,850	16,051	16,305	16,283	16,339	150	0.93%
Unemployment Rate	8.5%	8.4%	6.9%	6.0%	5.9%	4.6%	4.5%	4.3%	3.5%	3.3%	4.6%		
<b>Average Annual</b>												<b>Change</b>	<b>% Change</b>
<b><u>Private Industry Employment</u></b>												<b>91 to 01</b>	<b>91 to 01 %</b>
Agriculture Forestry & Fisheries	43	36	42	44	55	61	72	75	78	86	86	43	100.00%
Construction	244	246	502	533	490	485	565	555	603	667	682	438	179.51%
Manufacturing	1,486	1,371	1,358	1,392	1,368	1,827	1,540	1,519	1,351	1,424	1,391	-95	-6.39%
Transportation Communications & Utilities	322	327	358	374	484	502	474	511	591	566	381	59	18.32%
Wholesale Trade	176	190	219	248	460	265	286	325	322	336	346	170	96.59%
Retail Trade	1,424	1,504	1,536	1,399	1,584	1,834	1,850	1,769	1,853	1,933	1,757	333	23.38%
Finance, Insurance & Real Estate	111	117	135	152	142	168	187	190	144	170	189	78	70.27%
Service Industries	1,119	1,103	1,196	1,186	1,294	1,345	1,458	1,539	1,653	1,825	1,968	849	75.87%
<b>Total Covered Private</b>	<b>4,924</b>	<b>4,896</b>	<b>5,356</b>	<b>5,334</b>	<b>5,877</b>	<b>6,385</b>	<b>6,433</b>	<b>6,483</b>	<b>6,595</b>	<b>7,008</b>	<b>6,802</b>	<b>1,878</b>	<b>38.14%</b>
% of State	1.36%	1.36%	1.47%	1.45%	1.57%	1.70%	1.69%	1.67%	1.67%	1.73%	1.68%		
<b><u>Construction</u></b>												<b>Total 90 to 00</b>	
Industrial Construction in Sq. Ft.	0		4,800	0	0	4,800	71,865	0	0	11,000		92,465	
Commercial Construction in Sq. Ft.	11,400		116,435	54,516	2,800	1,978	40,084	0	1,400	155,666		385,959	
<b>Total</b>	<b>11,400</b>	<b>0</b>	<b>121,235</b>	<b>54,516</b>	<b>2,800</b>	<b>6,778</b>	<b>111,949</b>	<b>0</b>	<b>1,400</b>	<b>166,666</b>		<b>478,424</b>	
Industrial Construction (\$) Value	0	100,000	140,000	0	0	140,000	2,360,000			5,400,000		8,140,000	
Commercial Construction (\$) Value	627,000	185,000	3,000,000	1,863,000	110,000	16,100	2,400,000	0	465,800	23,863,930		33,198,830	
<b>Total (\$) Value</b>	<b>627,000</b>	<b>285,000</b>	<b>3,140,000</b>	<b>1,863,000</b>	<b>110,000</b>	<b>156,100</b>	<b>4,760,000</b>	<b>0</b>	<b>465,800</b>	<b>29,263,930</b>		<b>41,338,830</b>	
Authorized New Housing Units												<b>Total 91 to 01</b>	
Single Family	95	137	143	103	79	104	140	159	197	119	125	1,401	
Multi Family	2	0	6	0	4	18	0	0	290	33	0	353	
<b>Total</b>	<b>97</b>	<b>137</b>	<b>149</b>	<b>103</b>	<b>83</b>	<b>122</b>	<b>140</b>	<b>159</b>	<b>487</b>	<b>152</b>	<b>125</b>	<b>1,754</b>	
<b>Median Selling Price of Existing Single Family Home</b>													
	\$142,000	\$127,000	\$129,900	\$134,500	\$133,250	\$126,000	\$130,000	\$135,000	\$148,900	\$163,000			

Source: Rhode Island Economic Development Corporation, <http://www.riedc.com/r/index.html>.

## APPENDIX A. SELECTED DATA FOR NORTH SMITHFIELD TOWN, RHODE ISLAND.

North Smithfield	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<b><u>Resident Labor Force</u></b>											
Total Employed	4,612	4,596	4,458	4,769	5,168	5,321	5,451	5,534	5,592	5,509	5,147
Unemployed	266	305	405	371	201	233	203	183	108	146	339
Labor Force	4,878	4,901	4,863	5,140	5,369	5,554	5,654	5,717	5,700	5,655	5,486
Unemployment Rate	5.5%	6.2%	8.3%	7.2%	3.7%	4.2%	3.6%	3.2%	1.9%	2.6%	6.2%
<b>Average Annual</b>											
<b><u>Private Industry Employment</u></b>											
Agriculture Forestry & Fisheries	75	45	63	64	71	78	74	81	66	69	55
Construction	93	84	76	93	111	141	181	198	204	214	150
Manufacturing	2,678	2,506	2,490	2,543	2,218	1,804	1,586	1,408	1,084	1,667	1,586
Transportation Communications & Utilities	32	19	17	23	26	24	20	21	20	90	20
Wholesale Trade	245	257	225	230	236	255	275	288	275	279	270
Retail Trade	605	521	426	400	502	561	617	647	652	659	492
Finance, Insurance & Real Estate	12	32	34	34	34	46	54	52	49	48	11
Service Industries	935	896	929	941	969	1,037	976	1,006	1,064	1,159	679
<b><u>Total Covered Private</u></b>	<b><u>4,695</u></b>	<b><u>4,377</u></b>	<b><u>4,277</u></b>	<b><u>4,337</u></b>	<b><u>4,177</u></b>	<b><u>3,961</u></b>	<b><u>3,801</u></b>	<b><u>3,727</u></b>	<b><u>3,441</u></b>	<b><u>4,216</u></b>	<b><u>3,291</u></b>
% of State	1.38%	1.28%	1.29%	1.29%	1.17%	1.07%	0.99%	0.95%	0.86%	1.05%	0.85%
<b><u>Construction</u></b>											
Industrial Construction in Sq. Ft.	0	0	43,600	0	0	4,800	0	0	0	0	12,800
Commercial Construction in Sq. Ft.	0	5,542	0	0	24,000	0	22,520	3,020	11,200	5,100	0
<b><u>Total</u></b>	<b><u>0</u></b>	<b><u>5,542</u></b>	<b><u>43,600</u></b>	<b><u>0</u></b>	<b><u>24,000</u></b>	<b><u>4,800</u></b>	<b><u>22,520</u></b>	<b><u>3,020</u></b>	<b><u>11,200</u></b>	<b><u>5,100</u></b>	<b><u>12,800</u></b>
Industrial Construction (\$) Value	0	0	1,350,000	0	0	200,000	0	0	0	0	122,000
Commercial Construction (\$) Value	0	171,000	0	0	390,000	0	835,000	282,300	161,000	870,000	0
<b><u>Total (\$) Value</u></b>	<b><u>0</u></b>	<b><u>171,000</u></b>	<b><u>1,350,000</u></b>	<b><u>0</u></b>	<b><u>390,000</u></b>	<b><u>200,000</u></b>	<b><u>835,000</u></b>	<b><u>282,300</u></b>	<b><u>161,000</u></b>	<b><u>870,000</u></b>	<b><u>122,000</u></b>
Authorized New Housing Units											
Single Family	22	13	10	24	25	42	53	67	59	46	32
Multi Family					25					0	2
<b><u>Total</u></b>	<b><u>22</u></b>	<b><u>13</u></b>	<b><u>10</u></b>	<b><u>24</u></b>	<b><u>50</u></b>	<b><u>42</u></b>	<b><u>53</u></b>	<b><u>67</u></b>	<b><u>59</u></b>	<b><u>46</u></b>	<b><u>34</u></b>
<b>Median Selling Price of</b>											
<b><u>Existing Single Family Home</u></b>	\$49,900	\$47,500	\$45,500	\$52,900	\$55,000	\$67,200	\$94,000	\$115,750	\$145,000	\$144,750	\$158,000

North Smithfield												<u>Change</u>	
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	91 to 01	91 to 01 %
<b><u>Resident Labor Force</u></b>													
Total Employed	4,985	5,050	5,078	5,024	4,952	5,105	5,182	4,858	4,966	4,970	4,918	-67	-1.34%
Unemployed	456	455	374	288	235	141	174	212	192	162	174	-282	-61.84%
Labor Force	5,441	5,505	5,414	5,312	5,187	5,246	5,356	5,070	5,158	5,132	5,092	-349	-6.41%
Unemployment Rate	8.4%	8.3%	6.9%	5.4%	4.5%	2.7%	3.2%	4.2%	3.7%	3.2%	3.4%		
<b>Average Annual</b>												<b>Change</b>	<b>% Change</b>
<b><u>Private Industry Employment</u></b>												<b>91 to 01</b>	<b>91 to 01 %</b>
Agriculture Forestry & Fisheries	57	51	51	43	36	35	39	52	63	70	79	22	38.60%
Construction	94	118	127	149	194	166	180	190	199	232	247	153	162.77%
Manufacturing	1,404	1,216	1,077	1,129	1,170	1,012	677	961	798	687	675	-729	-51.92%
Transportation Communications & Utilities	86	165	172	186	164	167	181	177	224	236	201	115	133.72%
Wholesale Trade	244	248	288	317	334	335	338	358	377	393	191	-53	-21.72%
Retail Trade	500	466	519	563	587	644	785	932	1,048	1,147	1,095	595	119.00%
Finance, Insurance & Real Estate	40	42	58	61	57	61	63	44	51	52	78	38	95.00%
Service Industries	819	944	1,001	1,095	1,135	1,189	1,091	1,080	1,064	1,053	1,101	282	34.43%
<b>Total Covered Private</b>	<b>3,269</b>	<b>3,279</b>	<b>3,328</b>	<b>3,586</b>	<b>3,677</b>	<b>3,653</b>	<b>3,400</b>	<b>3,843</b>	<b>3,864</b>	<b>3,909</b>	<b>3,709</b>	<b>440</b>	<b>13.46%</b>
% of State	0.91%	0.91%	0.91%	0.97%	0.98%	0.97%	0.89%	0.99%	0.98%	0.97%	0.92%		
<b><u>Construction</u></b>												<b>Total 90 to 00</b>	
Industrial Construction in Sq. Ft.	0	0	660	1,600	0	0			0	20,200		35,260	
Commercial Construction in Sq. Ft.	90,142	126,920	0	356,000	0	1,840	0	0	31,586	0		606,488	
<b>Total</b>	<b>90,142</b>	<b>126,920</b>	<b>660</b>	<b>357,600</b>	<b>0</b>	<b>1,840</b>	<b>0</b>	<b>0</b>	<b>31,586</b>	<b>20,200</b>		<b>641,748</b>	
Industrial Construction (\$) Value	0	0	537,000	1,350,000	0	0	247,900			0	975,000	3,231,900	
Commercial Construction (\$) Value	3,180,000	3,489,000	0	7,400,000	0	107,405	0	0	3,100,000	0		17,276,405	
<b>Total (\$) Value</b>	<b>3,180,000</b>	<b>3,489,000</b>	<b>537,000</b>	<b>8,750,000</b>	<b>0</b>	<b>107,405</b>	<b>247,900</b>	<b>0</b>	<b>3,100,000</b>	<b>975,000</b>		<b>20,508,305</b>	
Authorized New Housing Units												<b>Total 91 to 01</b>	
Single Family	35	34	41	38	25	36	31	43	48	25	27	383	
Multi Family	35	23	0	0	0	0	0	0	76	0	0	134	
<b>Total</b>	<b>70</b>	<b>57</b>	<b>41</b>	<b>38</b>	<b>25</b>	<b>36</b>	<b>31</b>	<b>43</b>	<b>124</b>	<b>25</b>	<b>27</b>	<b>517</b>	
<b>Median Selling Price of</b>													
<b><u>Existing Single Family Home</u></b>	\$140,000	\$136,000	\$139,900	\$131,000	\$127,500	\$128,000	\$140,000	\$157,000	\$155,000	\$173,950	\$189,900		

Source: Rhode Island Economic Development Corporation, <http://www.riedc.com/r/index.html>.