Social and Economic Assessment for Michigan's State Forests

Prepared for: Michigan Department of Natural Resources
Forest, Mineral, and Fire Management Division

Lansing, Michigan

September 5, 2006

Prepared by:
Tessa Systems, LLC
East Lansing, MI

Preface

Public Act 125 of 2004, Section 52505, requires the Michigan Department of Natural Resources (MiDNR) to seek and maintain third-party sustainable forestry certification. Forest certification requires that MiDNR forest management plans take into consideration social and economic parameters that affect future forest management operations. Currently, the MiDNR is preparing a statewide forest management plan, and each of three eco-teams are drafting ecoregional management plans. The social and economic information provided in this report will be used to assess current social and economic conditions and to develop future management directions within each of the plans.

The report focuses primarily on three ecoregions: the Western Upper Peninsula, Eastern Upper Peninsula, and Northern Lower Peninsula as defined by the MIDNR along county boundaries. It covers social and economic conditions within these ecoregions in aggregate and on a county-level basis. As a result data for the areas in and around Michigan state forests are highlighted.

The "Social and Economic Assessment for the Michigan National Forests" (July 25, 2003), by Larry Leefers, Karen Potter-Witter, and Maureen McDonough from Michigan State University, provides a general model for this report.

The assessment report is based on secondary data. No primary data collection was done. MiDNR personnel provided unpublished data from MiDNR records. The report presents analyses of existing data and discusses relationships and trends in the variables of interest, and contains some projections based on existing literature.

The authors would like to especially acknowledge Lawrence Pedersen and Thomas Haxby of the MiDNR for their cooperation and assistance in this project. We greatly appreciate the assistance of many individuals throughout the MiDNR who provided specific data: Jason Bau, Rick Bresnahan, Steve DeBrabander, Bob DeVilles, Lisa Dygert, Brian Frawley, Tom Hoan, Mike Koss, Susan Krusik, Lt. Tom Lennox, Mark MacKay, Pat Murley, David Price, Jim Radabaugh, Brandon Reed, William Schmidt, Jason Stephens, Anna Sylvester, Ada Takacs, and Eleanora Wehrwein.

All omissions and errors are the sole responsibility of the Authors.

This report was prepared by:

J. Michael Vasievich
Tessa Systems, LLC
mvasie@tessasys.com

and

Larry A. Leefers
Michigan State University
leefers@msu.edu

September 5, 2006

Citations: (primary report and appendix)

Tessa Systems, LLC. 2006. Social and Economic Assessment for Michigan's State Forests. A report prepared for the Michigan Department of Natural Resources, Forest, Mineral, and Fire Management Division, Lansing, Michigan. East Lansing, MI: Tessa Systems, LLC. 153 p.

Tessa Systems, LLC. 2006. Social and Economic Assessment for Michigan's State Forests: Appendix. A report prepared for the Michigan Department of Natural Resources, Forest, Mineral, and Fire Management Division, Lansing, Michigan. East Lansing, MI: Tessa Systems, LLC. 152 p.

Tessa Systems, LLC
1950 Wembley Way
East Lansing, MI 48823

Table of Contents

Chapter 4. Economic Vitality and Natural Resource Dependence

Introduction

Economic activity within a MiDNR ecoregion can be characterized by the structure of the economy, labor force and employment, forest-related economic activities, government activities and regional economic well-being. Combinations of economic snapshots and changes over time provide insights into the economies of the ecoregions and their respective counties. In this chapter, the economies of the individual counties surrounding the state forests and the larger ecoregions are described in terms of number of establishments[1] by economic sector[2], wages, labor force, unemployment, employment seasonality, forest products economic activity, recreation and tourism economic activity, government employment, payment in lieu of taxes, household income, housing characteristics and values and land values. These household and local economic factors help characterize the economic sectors and people who use, benefit from or have an impact on the areas surrounding the state forests. State forests along with private and federal forest lands play an important role in these regional economies and contribute directly or indirectly to the economic well-being of the people living in the WUP, EUP and NLP. The role of state forests has changed over the past 10 years, especially in terms of MiDNR employment. Additional related details on natural resource production are presented in Chapter 5.Structure of the Economy

The structure of the economy is commonly depicted by the number of establishments within economic sectors within a region. In addition, the amount of wages and employment within those sectors provide an absolute and relative depiction of the importance of various sectors in the regional economy. Nineteen main industrial sectors are used to describe the economy (Table 4.1). The Agriculture, Fishing and Hunting sector, the Mining sector, the Manufacturing sector, and the Accommodation and Food Services sector have economic sub-sectors directly associated with natural resources (e.g., Forestry and Logging sub-sector), and they are listed to emphasize the linkages to state forest activities. In addition, three government sectors are included to highlight the relative contributions of federal, state and local governments to the regional economies. Also, additional transportation, trade, and service sectors are directly or indirectly related to state forest activities, but these sectors are not split out. Industry and government data are additive.

Number of Establishments

Approximately 12% of the industrial establishments in Michigan were in the WUP, EUP and NLP in 2005 (Table 4.1). However, 29% of government establishments were located in northern Michigan—government, especially local government, is needed in more and less populated areas. Local Government establishments exceeded federal and state government establishments combined. A large majority of Forestry and Logging establishments were located in northern Michigan, especially in the WUP. Wood Products Manufacturing was concentrated in the NLP, and Paper Manufacturing was split between the WUP and NLP. Likewise, Accommodation and Food Services establishments, often associated with tourism, were concentrated in the NLP followed by the WUP. The number of establishments has been declining in all regions over the past six years (Appendix Tables A4.1-A4.4).

[1] Establishments are economic units, business or industrial, at a single geographic location, where business is conducted or where services or industrial operations are performed. An establishment is not necessarily identical to an enterprise or company, which may consist of one or more establishments.
[2] Sectors are groups of establishments by industry based on the activities in which they are primarily engaged, e.g. Agriculture, Forestry, Fishing and Hunting, Mining, Utilities, and so on. These sectors can be aggregated or disaggregated based on data availability. For NAICS sector definitions, see: http://www.census.gov/epcd/www/naicsect.htm.

Table 4.1. Number of establishments, for selected economic sectors by ecoregion, 2005.

Industry	WUP	EUP	NLP	State
Ag, forestry, fishing and hunting	228	81	429	2,217
>>Forestry and logging	174	55	91	378
>>Fishing, hunting and trapping		12	8	41
>>Ag and forestry support activities	7		14	253
Mining	11	8	134	441
>>Oil and gas extraction			25	77
>>Mining, except oil and gas	7	8	9	198
>>Support activities for mining	4		72	166
Utilities	19	6	46	406
Construction	880	325	3,624	28,859
Manufacturing	363	59	1,194	15,739
>>Wood product manufacturing	64	15	119	557
>>Paper manufacturing	3		5	257
Wholesale trade	219	54	643	15,622
Retail trade	1,096	408	3,463	35,001
Transportation and warehousing	213	78	474	5,522
Information	105	30	277	3,585
Finance and insurance	337	97	856	12,729
Real estate and rental and leasing	188	49	700	7,961
Professional and technical services	397	106	1,354	24,477
Mgmt. of companies and enterprises	6		10	765
Administrative and waste services	227	47	899	13,070
Educational services	21	3	92	2,113
Health care and social assistance	554	126	1,644	21,666
Arts, entertainment, and recreation	102	39	475	3,784
Accommodation and food services	723	370	2,083	18,651
>>Accommodation	137	142	439	1,847
>>Food services and drinking places	583	228	1,615	16,804
Other services, exc, public admin.	672	155	1,843	21,291
Total, All Industries	6,426	2,059	20,367	233,899
Federal Government	151	57	334	1,717
State Government	130	56	268	1,482
Local Government	333	137	884	4,946

Data Source: Michigan Department of Labor and Economic Growth (http://www.milmi.org/)

Note: Sectors marked with “>>” are subsets of the more aggregate sector above.

Wages

Over $1.2 billion in wages were paid by the Forestry and Logging, Wood Products Manufacturing, and Paper Manufacturing sectors in 2005 (Table 4.2). Most of these wages were in the SLP reflecting the heavy concentration of wood product and paper manufacturing in that region. Wage patterns reflected the pattern of establishments in 2005. Government wages exceeded industry wages in the EUP. Though wage patterns over the past six years vary by region, the statewide trend is less reliance on manufacturing and extractive industries (e.g., logging and mining) and more reliance on service sectors (Appendix Tables A4.5-A4.8).

Table 4.2. Total wages (million $) for selected economic sectors by ecoregion, 2005.

Industry	WUP	EUP	NLP	State
Ag, forestry, fishing and hunting	$29.0	$7.1	$73.3	$521.2
>>Forestry and logging	$21.4	$5.1	$15.9	$51.9
>>Fishing, hunting and trapping		$0.7	$0.2	$2.9
>>Ag and forestry support activities	$0.3		$3.3	$50.0
Mining	$87.9	$9.2	$69.9	$346.7
>>Oil and gas extraction			$11.5	$33.2
>>Mining, except oil and gas	$87.4	$9.2	$5.1	$238.4
>>Support activities for mining	$0.7		$35.4	$75.1
Utilities	$15.4	$6.8	$51.4	$1,562.1
Construction	$177.1	$30.7	$489.3	$8,102.5
Manufacturing	$455.5	$62.4	$1,403.1	$37,956.6
>>Wood product manufacturing	$58.8	$4.8	$73.0	$378.7
>>Paper manufacturing	$13.5		$21.2	$753.2
Wholesale trade	$62.5	$11.4	$174.3	$9,451.3
Retail trade	$220.4	$59.4	$782.5	$11,757.0
Transportation and warehousing	$51.0	$14.1	$144.7	$4,424.7
Information	$41.4	$6.7	$111.2	$3,515.4
Finance and insurance	$79.1	$24.5	$262.8	$8,470.2
Real estate and rental and leasing	$16.4	$2.1	$54.3	$1,680.5
Professional and technical services	$81.1	$11.0	$225.9	$15,867.8
Mgmt. of companies and enterprises	$1.4		$4.9	$6,203.3
Administrative and waste services	$41.9	$6.6	$177.8	$8,344.2
Educational services	$2.9	$1.9	$39.5	$1,696.6
Health care and social assistance	$398.3	$30.1	$950.3	$18,166.4
Arts, entertainment, and recreation	$12.9	$5.0	$71.6	$1,507.8
Accommodation and food services	$79.6	$50.8	$349.5	$4,192.7
>>Accommodation	$16.8	$26.6	$105.6	$572.6
>>Food services and drinking places	$62.2	$24.2	$226.7	$3,620.1
Other services, exc, public admin.	$62.9	$8.2	$157.5	$3,256.6
Total, All Industries	$1,972.0	$365.2	$5,680.9	$147,023.7
Federal Government	$79.1	$30.3	$116.7	$2,979.7
State Government	$229.3	$122.2	$235.5	$6,465.9
Local Government	$459.5	$232.7	$1,263.7	$16,143.0

Data Source: Michigan Department of Labor and Economic Growth (http://www.milmi.org/)

Note: Sectors marked with “>>” are subsets of the more aggregate sector above.

Average weekly wages in northern Michigan for the Forestry and Logging, Mining, Wood Products Manufacturing, and Paper Manufacturing sectors exceeded the average for all industries (Table 4.3). Mining and Paper Manufacturing had some of the highest weekly wages. Accommodation and Food Services wages were considerably lower than the average for all industries, reflecting both lower wages of many part-time employees. Statewide and regional trends indicate there has been more growth in extractive industry wages than in service sector wages over the past six years (Appendix Tables A4.9-A4.12). Government employees, on average, earn more per week than the average industry employee. State Government employees earn more than Local Government employees.

Table 4.3. Average weekly wages, for selected economic sectors by ecoregion, 2005.

Industry	WUP	EUP	NLP	State
Ag, forestry, fishing and hunting	$541	$500	$380	$402
>>Forestry and logging	$605	$509	$561	$572
>>Fishing, hunting and trapping		$518	$708	$398
>>Ag and forestry support activities	$458		$358	$419
Mining	$1,088	$1,170	$942	$986
>>Oil and gas extraction			$1,010	$1,150
>>Mining, except oil and gas	$1,087	$1,170	$914	$1,008
>>Support activities for mining	$1,308		$944	$873
Utilities	$1,251	$1,119	$1,262	$1,445
Construction	$689	$552	$614	$837
Manufacturing	$786	$731	$738	$1,076
>>Wood product manufacturing	$606	$434	$654	$639
>>Paper manufacturing	$1,140		$1,033	$980
Wholesale trade	$665	$616	$675	$1,074
Retail trade	$333	$361	$389	$452
Transportation and warehousing	$609	$467	$654	$837
Information	$527	$469	$680	$1,010
Finance and insurance	$598	$651	$714	$1,036
Real estate and rental and leasing	$380	$361	$406	$574
Professional and technical services	$649	$627	$686	$1,236
Mgmt. of companies and enterprises	$851		$1,257	$1,839
Administrative and waste services	$469	$418	$459	$582
Educational services	$271	$489	$435	$549
Health care and social assistance	$598	$485	$610	$710
Arts, entertainment, and recreation	$239	$370	$305	$462
Accommodation and food services	$165	$262	$227	$236
>>Accommodation	$197	$364	$289	$321
>>Food services and drinking places	$158	$200	$202	$226
Other services, exc, public admin.	$338	$274	$389	$471
Total, All Industries	$525	$459	$526	$776
Federal Government	$855	$955	$818	$1,051
State Government	$921	$895	$904	$901
Local Government	$563	$566	$604	$685

Data Source: Michigan Department of Labor and Economic Growth (http://www.milmi.org/)
Note: Sectors marked with “>>” are subsets of the more aggregate sector above.

Employment by sector

The Local Government sector was the largest employer in the WUP, EUP and NLP in 2005 (Table 4.4). Health Care and Social Assistance was the largest industrial sector in the WUP followed closely by Retail Trade and Manufacturing. Accommodation and Food Services and Retail Trade were the largest industrial sectors in the EUP. Retail Trade and Manufacturing were the largest industrial sectors in the NLP. Overall, employment in Michigan has been declining in the past six years; this trend is reflected in Manufacturing and extractive industries (Appendix Tables A4.13-A4.16).

Table 4.4. Average annual employment, for selected economic sectors by ecoregion, 2005.

Industry	WUP	EUP	NLP	State
Ag, forestry, fishing and hunting	1,032	271	3,703	24,955
>>Forestry and logging	679	192	545	1,743
>>Fishing, hunting and trapping		27	6	140
>>Ag and forestry support activities	13		175	2,293
Mining	1,554	152	1,427	6,759
>>Oil and gas extraction			219	555
>>Mining, except oil and gas	1,546	152	107	4,550
>>Support activities for mining	10		722	1,654
Utilities	236	117	783	20,787
Construction	4,945	1,071	15,321	186,221
Manufacturing	11,146	1,643	36,547	678,346
>>Wood product manufacturing	1,864	212	2,148	11,397
>>Paper manufacturing	227		395	14,779
Wholesale trade	1,806	355	4,964	169,189
Retail trade	12,733	3,167	38,635	500,621
Transportation and warehousing	1,608	581	4,254	101,624
Information	1,511	275	3,146	66,924
Finance and insurance	2,544	724	7,073	157,190
Real estate and rental and leasing	833	110	2,571	56,324
Professional and technical services	2,402	336	6,334	246,864
Mgmt. of companies and enterprises	31		75	64,881
Administrative and waste services	1,714	306	7,444	275,821
Educational services	205	73	1,747	59,387
Health care and social assistance	12,802	1,193	29,970	491,726
Arts, entertainment, and recreation	1,039	262	4,519	62,716
Accommodation and food services	9,288	3,728	29,596	341,713
>>Accommodation	1,642	1,406	7,026	34,282
>>Food services and drinking places	7,576	2,322	21,593	307,431
Other services, exc, public admin.	3,581	574	7,777	132,972
Total, All Industries	72,270	15,307	207,787	3,645,020
Federal Government	1,779	611	2,745	54,529
State Government	4,788	2,624	5,011	138,063
Local Government	15,690	7,910	40,241	452,939

Data Source: Michigan Department of Labor and Economic Growth (http://www.milmi.org/)
Note: Sectors marked with “>>” are subsets of the more aggregate sector above.

Labor Force and Employment

The employment in the NLP has been growing at 1.5% per year for the past 10 years. Over the same period, WUP employment has been growing at 1.0% per year and EUP employment has been stagnant (Figure 4.1). These trends are mirrored in the civilian labor force (Appendix Table A4.17). Unemployment peaked in 1992 in northern Michigan and declined until 2000, a census year often used for comparative purposes (Figure 4.2). Unemployment rates have increased since then. Unemployment rates are generally higher in northern Michigan than in the state as a whole with the highest rates in the EUP, but there is significant variation on a county-by-county basis.

In 2005, the unemployment rate exceeded 10% in three UP counties: Baraga, Keweenaw, and Schoolcraft, and four NLP counties: Alcona, Montmorency, Oscoda, and Presque Isle (Figure 4.3, Appendix Table A4.18). The statewide rate was 6.7%. Geographically, southern counties have lower unemployment rates than most northern counties, and overall unemployment was much higher in 2005 than in 2000. In the NLP in 2005, there is a much higher rate of unemployment in the northeast Lower Peninsula, centered around Alpena County when compared to the northwest NLP.

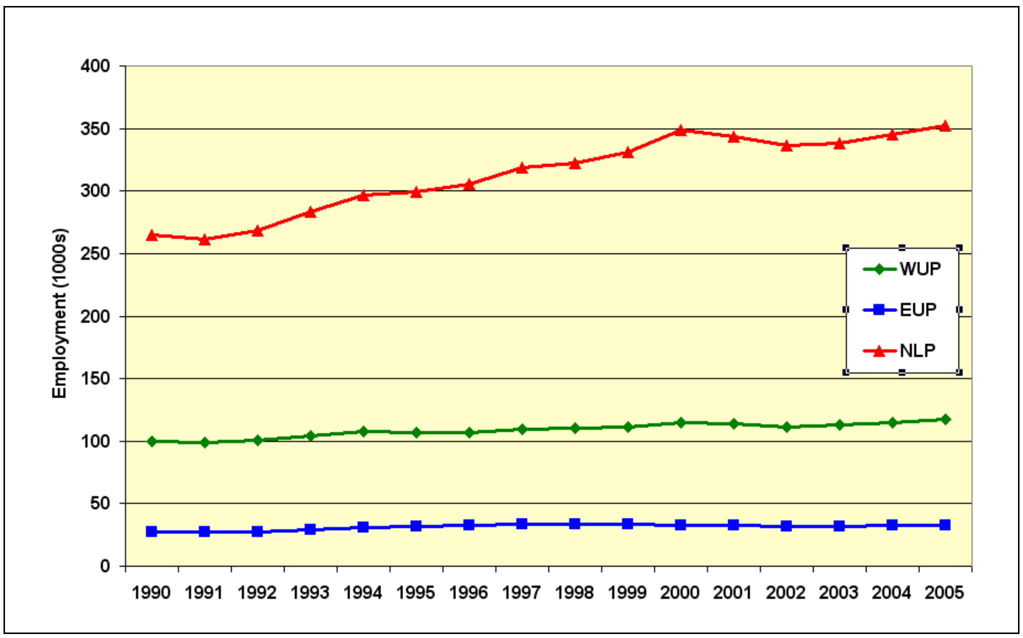

Figure 4.1. Employment by ecoregion, 1990 to 2005

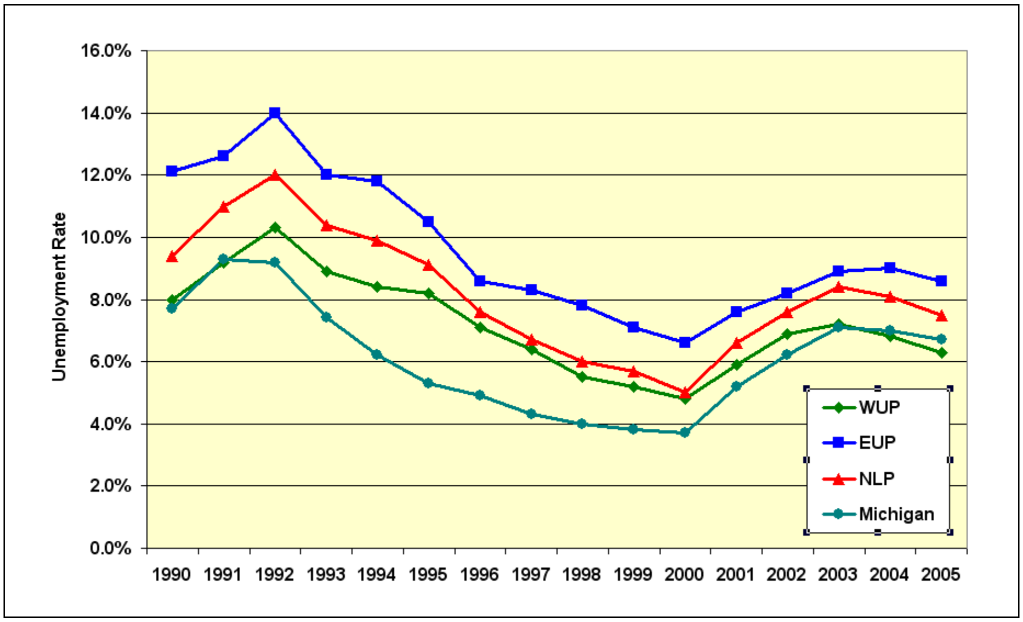

Figure 4.2. Unemployment rate by ecoregion and Michigan, 1990 to 2005

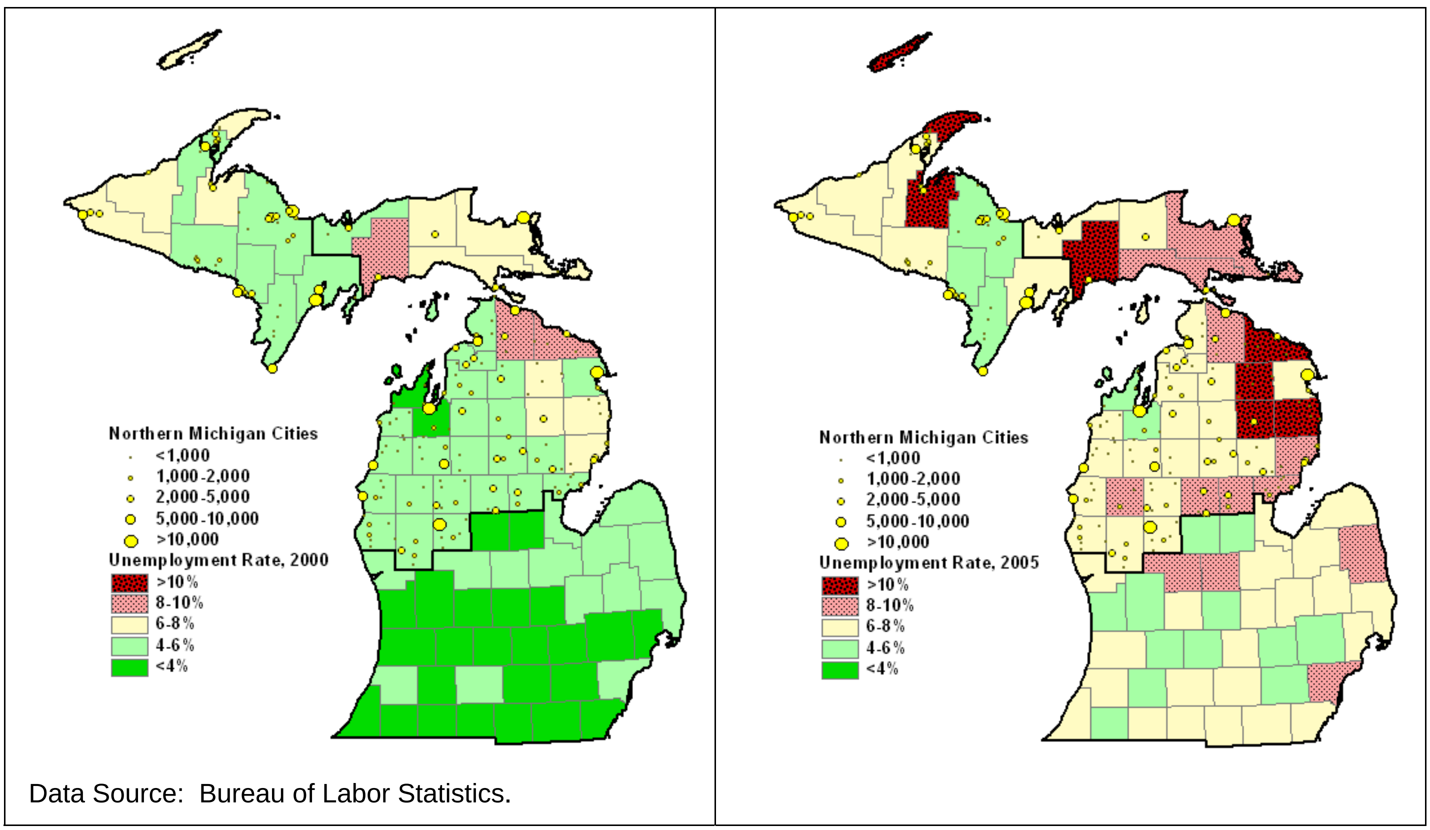

Figure 4.3. Unemployment rate by county, 2000 and 2005

Employment Seasonality

Seasonality is a distinct unemployment feature of northern Michigan (Figure 4.4, Appendix Table A4.19). High unemployment rates in the winter and spring are followed by relatively low rates during the summer and early fall. This corresponds with the tourist and seasonal home users visitation patterns. The seasonal trend is most pronounced in the EUP, followed by the NLP. Statewide trends are negligible. Another metric for seasonality is a measure of the month to month stability in employment (Figure 4.5). Stability is based on the standard deviation of monthly unemployment rates using the scale: Very Low (StDev < 1%), Low (1-2%), Medium (2-3%), High (3-4%), and Very High (> 4%). The counties near the Mackinac Straits have the highest variability. Variation in month-to-month unemployment is more pronounced in years with relatively high statewide unemployment (2005) and less in years with relatively lower statewide unemployment rates (e.g. 2000).

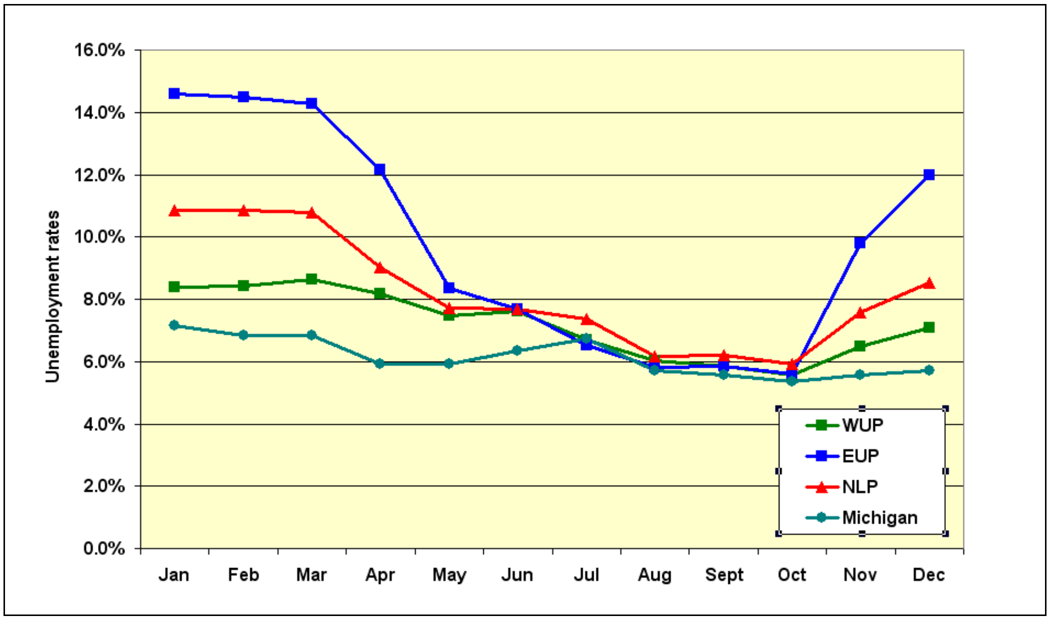

Figure 4.4. Average monthly unemployment rate by ecoregion, 1990 – 2005.

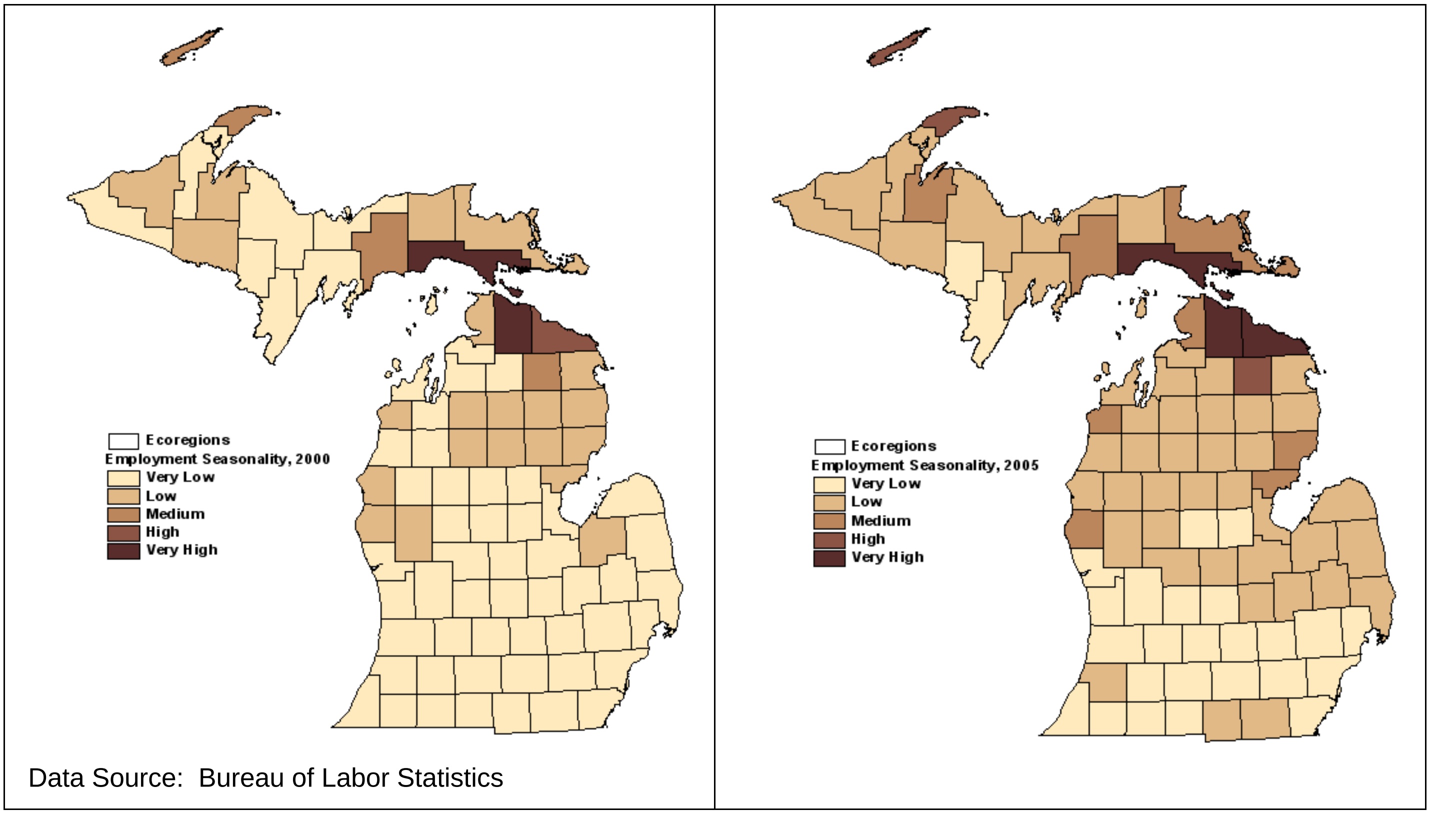

Figure 4.5. Variation in unemployment rate by county for 2000 and 2005.

Forest-related economic activities

Forest-related economic activities of primary interest include timber harvesting, wood products manufacturing, recreation and tourism, and minerals extraction.. For recreation and tourism and minerals extraction, forests often provide the settings for the activities. Due to data limitations, we can not distinguish between activities that are exclusively forest-related and those that are not. Hence, some portions of the activities are not associated with forests.

Timber and wood products

The MiDNR compiles data on employment of producers (logging/trucking firms), primary manufacturers, and secondary manufacturers (Table 4.5, Appendix Table A4.20). Primary manufacturers use products directly from the woods; secondary manufacturers add value to primary products (e.g., using boars to manufacture flooring). Some companies may have primary and secondary operations and do their own logging. In some cases, employment numbers are estimated and based on the employee range reported by firms. Most forest products employees are in the SLP, and are associated with secondary manufacturing. Logging operations are concentrated in northern Michigan where wood raw materials dominate the landscape. Delta County, home of NewPage Corporation's mill (formerly MeadWestvaco), has the largest number of employees.

The economic vitality of these industries is important regionally and for the State of Michigan. A recent study highlights some trends regarding the logging sector in Wisconsin and the Upper Peninsula of Michigan. (Rickenbach et al. 2005). Their findings regarding the business environment, timber production and supply, markets, and firm retention include

- The duration or length of ownership is fairly long, with the average number of years in which firms have been in business is over 20 years
- The average firm owner is 47 years old

- Most firms are characterized as one-person owner-operators
- Almost 2/3 's of the firms are fully mechanized
- Firms using feller-buncher systems and cut-to-length harvesting are the most productive, and chain-saw based firms are the least productive
- Most firms focus their harvest efforts on large timber sales
- Private, non-industrial forestlands are the primary source of stumpage for the region's logging sector
- Pulpwood is the primary output of the region's logging sector
- Almost 1/4 of the firms do not expect to be in business in five years.

Combined with large, recent sales of commercial forest program lands in the UP, the trends in the logging sector raise concerns about the long-term consequences of these changes. Older firm owners and expectations of leaving the industry may reduce the vitality of the logging sector and the firms that rely on timber supplies.

A Minnesota-based study provides some insights regarding Michigan's competitiveness with Minnesota's primary forest products industry (Minnesota Governor's Advisory Task Force. 2003). The Task Force findings indicated that Michigan was more competitive in the areas of wood and fiber availability and price, transportation (vehicle weight limits), wood and fiber quality, research and forestland productivity. Minnesota was viewed as more competitive in terms of energy costs and education. Neither state had a clear advantage in taxation and labor/construction costs.

Table 4.5. Employment and firms in the forest products industries by county and ecoregion, 2005.

Region/County	Estimated Employees	Logging/ Trucking Firms	Primary Manufacturing Firms	Secondary Manufacturing Firms
WUP total	10,397	335	61	87
EUP Total	1,976	111	19	21
NLP Total	7,092	287	147	169
Michigan	88,774	840	339	1,291

Data Source: Data compiled by Jack Pilon, Michigan DNR, Gaylord, MI.

Note: Data are generally based on 2005 information.

Recreation and Tourism

Recreation and tourism are important economic activities in northern Michigan. Unlike the forest products industries, recreation and tourism do not align well with governmental data collected on traditional economic sectors. Rather, their economic activities are scattered among many sectors including Retail Trade, Arts, Entertainments, and Recreation, and Accommodations (Table 4.4). Many recreation activities, including hunting and fishing, involve trips away from home. To account for travel, the standard definition used by the industry for tourism is all trips of 50 miles or more (one way), with minor exceptions (commuting for work or school). This definition includes business trips, visiting friends and relatives as well as pleasure trips (D. Stynes, Michigan State University, pers. com., August 8, 2006).

Michigan estimates of tourism-related expenditures drew on estimates of trips from those reported by D.K. Shifflet, Travel Industry Association, for spending and on tourism satellite accounts that were based on Minnesota IMPLAN Groups' IMPLAN model sales data for key tourism-related industries (Table 4.6, Figures 4.6 and 4.7). Estimates of the percentage of sales in each industry to tourists were used to adjust total visitation downward. Spending profiles developed from various sources were used in the final step of estimating expenditures, but these may provide an underestimate because some en route expenditures may be lost due to using a 30-mile (rather than 50-mile) distance from the destination for collecting data.

Spending profiles have been developed for different types of visitors based largely on where they stayed. The segments are Motel, Camping, Seasonal Home, Visit Friends and Relatives, and Day Trips. Based on empirical data, visitor segments spend more money if they stay in a hotel or motel than if they stay in other types of lodging. And people on day trips spend the least amount.

Tourism-related spending associated with Motels, followed by Seasonal Homes, provide the majority of spending in the WUP and EUP (Table 4.6). Interestingly, the WUP, which has a much larger population base than the EUP, has comparable tourism-related spending. This is due to the tourism associated with Mackinaw Island. The NLP, in contrast, has the highest level of spending associated with Seasonal Homes. Given the predominance of spending in the southeast SLP, statewide, Motels are the largest segment. Grand Traverse, Mackinac and Emmet counties had the highest tourism-related spending in northern Michigan in 2000 (Appendix Table A4.21).

Table 4.6. Tourism-related spending by segment and ecoregion, 1995, 1997, and 2000.

Year	Motel	Camping	Seasonal Home	Visit Friends and Relatives	Day Trips	Total
	Million dollars and percent					
Western Upper Peninsula						
1995	$115.0	$14.1	$91.6	$49.1	$23.3	$293.1
1997	$114.0	$16.0	$103.0	$53.0	$36.0	$322.0
2000	$135.8	$16.7	$105.2	$61.2	$39.8	$358.7
2000	37.9%	4.7%	29.3%	17.1%	11.1%	100.0%
Eastern Upper Peninsula						
1995	$172.9	$15.6	$56.0	$23.8	$31.1	$299.5
1997	$200.0	$17.0	$66.0	$15.0	$61.0	$362.0
2000	$184.6	$18.5	$68.3	$19.4	$52.9	$343.6
2000	53.7%	5.4%	19.9%	5.6%	15.4%	100.0%
Northern Lower Peninsula						
1995	$530.2	$113.4	$663.4	$127.4	$94.2	$1,528.5
1997	$555.0	$129.0	$633.0	$155.0	$162.0	$1,634.0
2000	$532.3	$129.2	$671.7	$190.3	$172.3	$1,695.5
2000	31.4%	7.6%	39.6%	11.2%	10.2%	100.0%
Michigan						
1995	$2,567.0	$340.0	$1,041.0	$1,860.0	$570.0	$6,378.0
1997	$2,708.0	$361.0	$1,042.0	$2,181.0	$938.0	$7,230.0
2000	$3,731.0	$373.0	$1,116.0	$2,519.0	$1,152.0	$8,891.0
2000	42.0%	4.2%	12.6%	28.3%	13.0%	100.0%

Note: Excludes air-related travel expenditures in counties with major airports.

Data Source: Stynes, D. Michigan county-level tourism spending estimates by lodging segments,

1995, http://www.msu.edu/course/prr/840/econimpact/michigan/MItsm95.htm;

1997, http://www.msu.edu/course/prr/840/econimpact/michigan/michtsm97.htm;

2000, http://www.prr.msu.edu/miteim/michtsm00.htm.

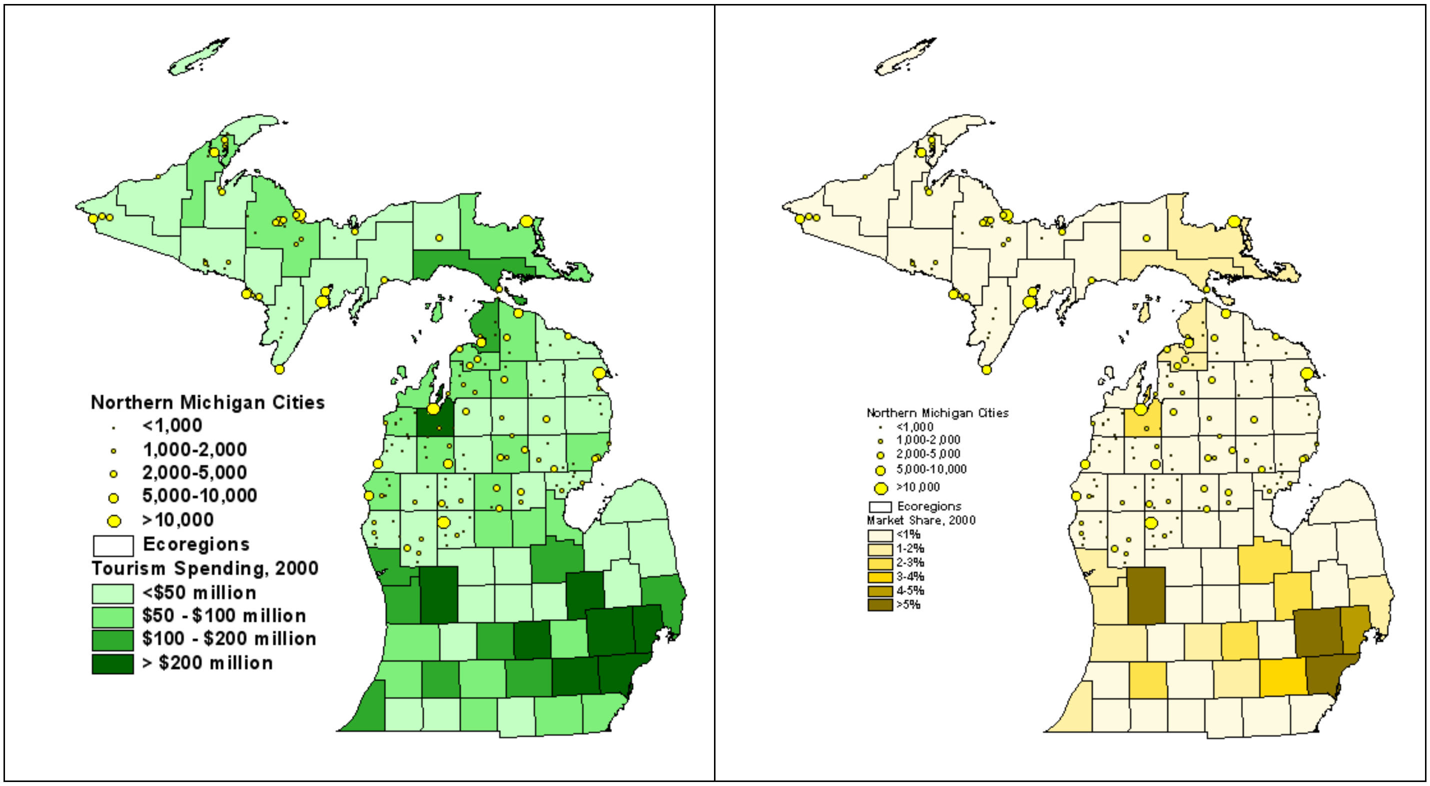

Figure 4.6. Tourism-related spending and state market share by county, 2000.

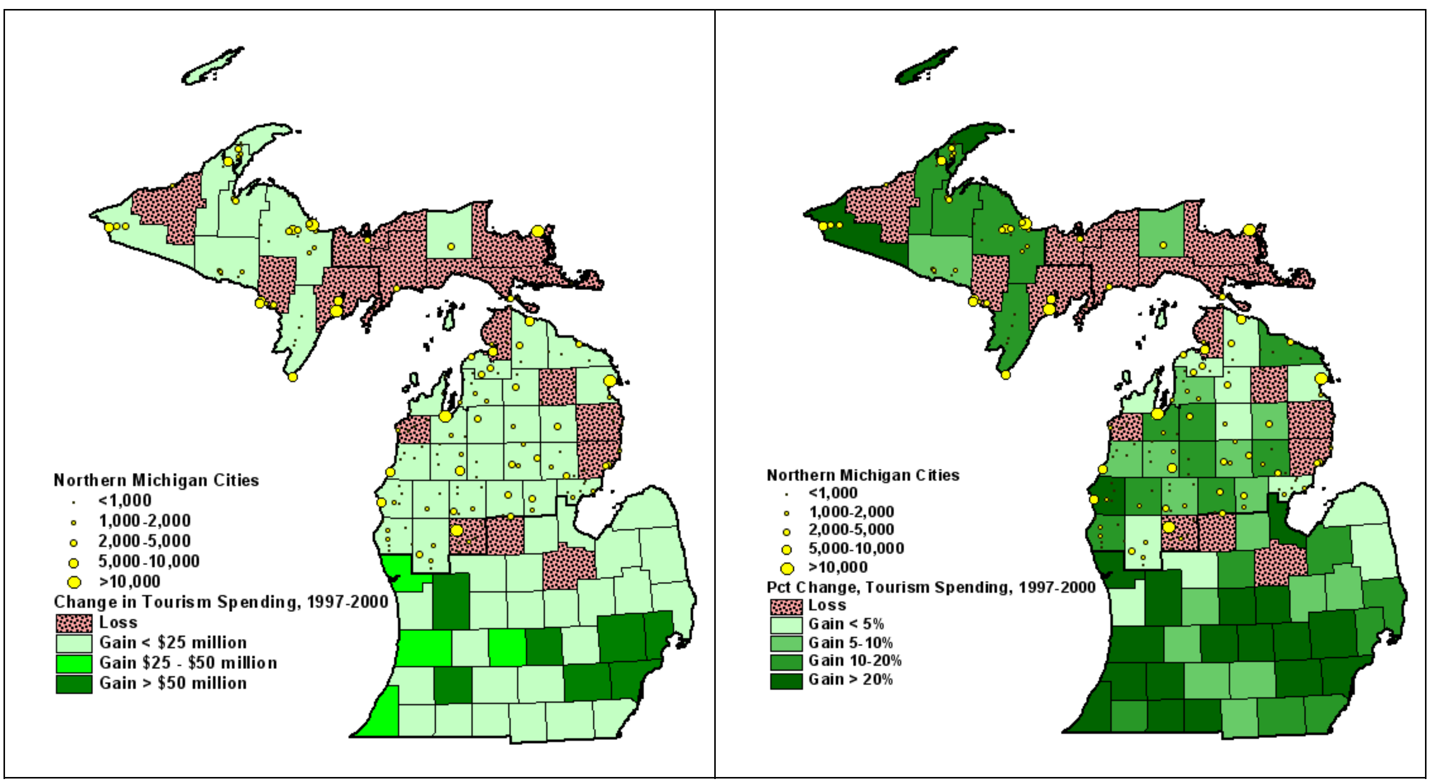

Figure 4.7. Change and percent change in tourism spending, by county, 1997 to 2000.

Minerals, oil and gas

Mining establishments are largely concentrated in the SLP and NLP, but there is a controversial proposal for a large new nickel and copper mine in the UP near Marquette (Table 4.1). There are other mining opportunities in the UP, too. Oil and Gas Extraction are solely in those ecoregions. During the 2000-2005 period, the number of Mining establishments has been fairly constant (Appendix Table A4.4.), but the number of employees has declined considerably (Appendix Table A4.16). Increased weekly wages (Appendix Table A4.12) have offset the decline in employee numbers yielding a steady level of income (total wages) for workers (Appendix Table A4.8). The separation of surface and subsurface rights makes minerals management a complex forest-related natural resource. Surface rights may, for example, be part of the state forest system whereas subsurface rights may be privately held. This leads to access issues in some instances.

Government Activities

Two direct economic activities with which the MiDNR affects economies of northern Michigan are MiDNR employment and payments to counties in lieu of taxes. Employment brings important wages to rural communities and generates additional economic activity through spending by the agency and by its employees. Conceptually, payments in lieu of taxes are simply government's substitution for taxes they would pay on their lands if they were not MiDNR lands. However, they are government payments to local taxing units, and therefore send revenue to local communities that contribute to economic well being.

DNR Employment

The number of MiDNR employees declined over the 1995-2005 period (Figure 4.8, Appendix Table A4.22). Counts are based on payroll processing figures on July 4 for all years. The payroll processing system changed in 2001, so Full Time/Other classifications changed for some employees (Mecosta County data not included.). Though detailed data from 1995-2000 and 2001-2005 are not directly comparable, there are downward trends in the WUP, EUP and NLP for the entire period and for the early and later years. The largest loss of MiDNR employees was in the NLP, especially in Roscommon and Crawford counties. Marquette County had the largest loss of MiDNR employees.

A second trend compounds the economic losses due to reduced overall employment, namely the switch from full-time to part-time or seasonal employees (Figure 4.9, Appendix Table A4.23). As with total employment, comparisons between early and later data must be made with care. But, clearly there has been a significant shift away from reliance on full-time employees as the mainstay of the MiDNR workforce. From a regional perspective, there are fewer wages flowing to northern counties due to reduced employment and to a shift away from full-time employees.

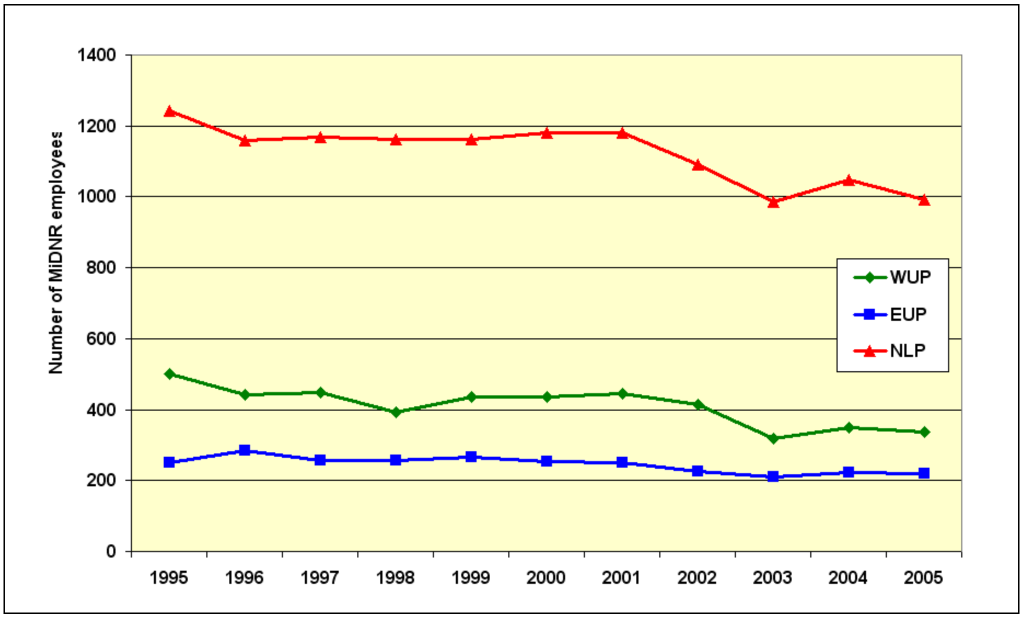

Figure 4.8. Number of MiDNR employees by ecoregion, 1995 – 2005. Note: Mecosta County data not included.

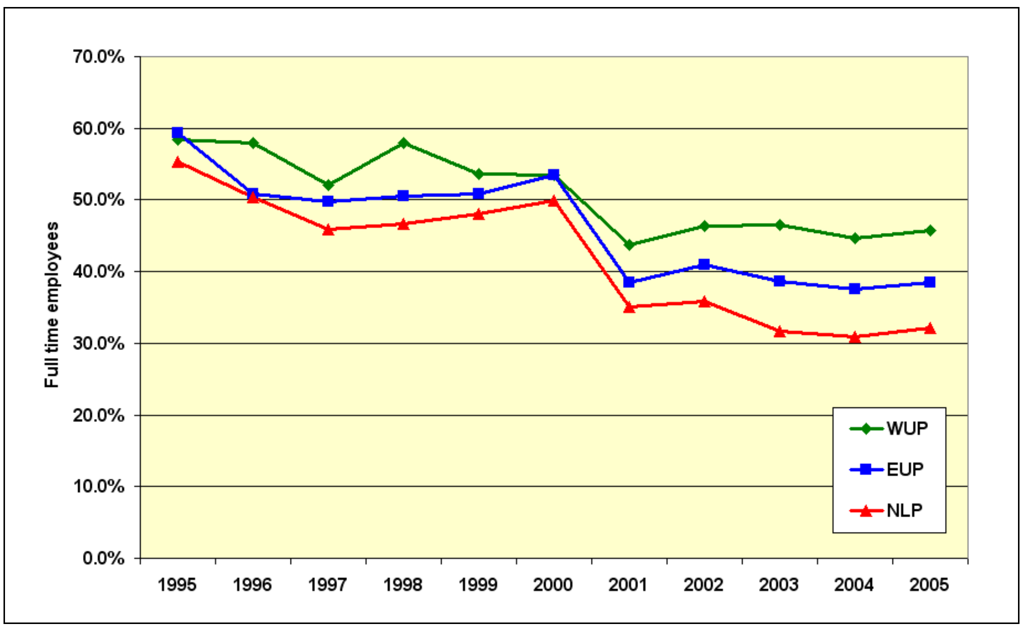

Figure 4.9. Percent of full-time MiDNR employees by ecoregion, 1995 – 2005. Note: Mecosta County data not included.

Payments in Lieu of Taxes (PILT)

The Natural Resources and Environmental protection Act of 1994 (P.A. 451) requires the state of Michigan to assess the value of state lands in each municipality and assessment district annually. This assessment is the basis for paying local units the "payment in lieu of taxes" for the state lands within their boundaries.

The payments have increased in recent years, with the largest payments in the Southern Lower Peninsula where land has a higher assessed value (Table 4.7). Tax-reverted lands (classified as swamp lands) are paid an annual rate of $2/acre rather than being paid at an assessed value (Appendix Table A4.24). PILT payments are based on multiplying the appropriate Taxable Valuation for the year times the appropriate millage rate. Currently, PILT property falls under the category of “agricultural” for tax purposes.

A new policy, Public Act 513 of 2004, modified the PILT payment structure. It amended the Natural Resources Environmental Protection Act by eliminating reimbursements for the State education tax from PILT funds to the school aid fund. Beginning in Fiscal Year 2005-06, the portion of the payments that represent assessments by local school districts, intermediate school districts, or community college districts will be charged against the School Aid Fund rather than the state general fund. Therefore the Tax Year 2005 report is several million dollars less than the Tax Year 2004 figure. The State Tax Commission (STC) issued Bulletin #15 of 2005 related to P.A. 513 of 2004. The bulletin instructs assessors to record PILT property on a separate tax roll to be known as the “Act 513 Roll” and to attach it to their ad valorem roll. All PILT property is to be removed from the ad valorem assessment roll by taking an ‘equalization loss’ and ‘capped value (Headlee) losses’. The separate roll is being established due to constitutional issues and negative values for agricultural properties.

Table 4.7. MI DNR payments to counties in lieu of taxes by ecoregion, 1999-2004.

Year	Western Upper Peninsula	Eastern Upper Peninsula	Northern Lower Peninsula	Michigan
1999	$2,129,949	$2,195,574	$5,942,185	$15,341,511
2000	$2,176,385	$2,225,961	$6,120,201	$15,784,038
2001	$2,207,840	$2,234,230	$6,260,134	$16,205,448
2002	$2,223,197	$2,240,409	$6,402,834	$16,511,842
2003	$2,212,380	$2,213,753	$6,295,149	$16,279,408
2004	$2,363,807	$2,241,728	$6,537,225	$17,028,568
Average Annual Increase	$151,426	$27,975	$242,076	$749,161

Regional economic well-being

Regional economic well-being is defined in the context of households’ income, per capita personal income, income sources, housing characteristics, and land values. These measures provide a broad context for understanding economic dimensions of northern Michigan that affect people at the household or personal level, helping to characterize people who live near state forests.

Household and per capita income

Median household income in 2000 was lowest in the WUP and highest in the SLP (Table 4.8, Figure 4.10). Most of the lowest income counties were located in northern Michigan; Lake County in the NLP had the lowest median household income, $26,622, followed by Gogebic County in the WUP at $27,405 (Appendix Table A4.25). A higher percentage of households with annual incomes of less than $10,000 and less than $25,000 per year were also concentrated in northern Michigan. For household incomes of less than $10,000 per year, the range was from 5.4% in Grand Traverse County to 17.5% for Lake County. The overall pattern shows the WUP with the lowest median household income and largest percentage of households with annual incomes less than $10,000 and $25,000. The WUP is followed by the EUP and finally the NLP. The NLP has the highest percentage of households with annual incomes greater than $100,000. However, this percentage is still less than half of the statewide rate. The study region had fewer households with an annual income of $50,000 or more than the state as a whole. Only 29 to 31 percent of the households in the three ecoregions exceeded this level while 44 percent of the households statewide had incomes above $50,000 in 2004.

Per capita personal income mirrors the household income patterns with lower per capita incomes concentrated in northern Michigan (Figure 4.11). The lowest per capita personal income in northern Michigan was in Luce County, and the highest was in Emmet County (Appendix Table A4.26). There were gains in per capita income between 2000 and 2004, but a portion of this was due to inflation.

Table 4.8. Households and household income by ecoregion, 2000

Ecoregion	Median HH Income	House-holds	HH < $10,000 income		HH < $25,000 income	
WUP	$32,856	98,260	11,464	11.7%	37,144	37.8%
EUP	$33,822	28,462	3,221	11.3%	10,444	36.7%
NLP	$35,507	298,375	28,103	9.4%	100,082	33.5%
Michigan	$44,667	3,788,780	313,905	8.3%	1,002,138	26.5%
			HH > $50,000 income		**HH > $100,000 income**	
WUP	$32,856	98,260	28,860	29.4%	4,629	4.7%
EUP	$33,822	28,462	8,149	28.6%	1,160	4.1%
NLP	$35,507	298,375	93,603	31.4%	17,901	6.0%
Michigan	$44,667	3,788,780	1,691,897	44.7%	480,461	12.7%

Source: US Census 2000.

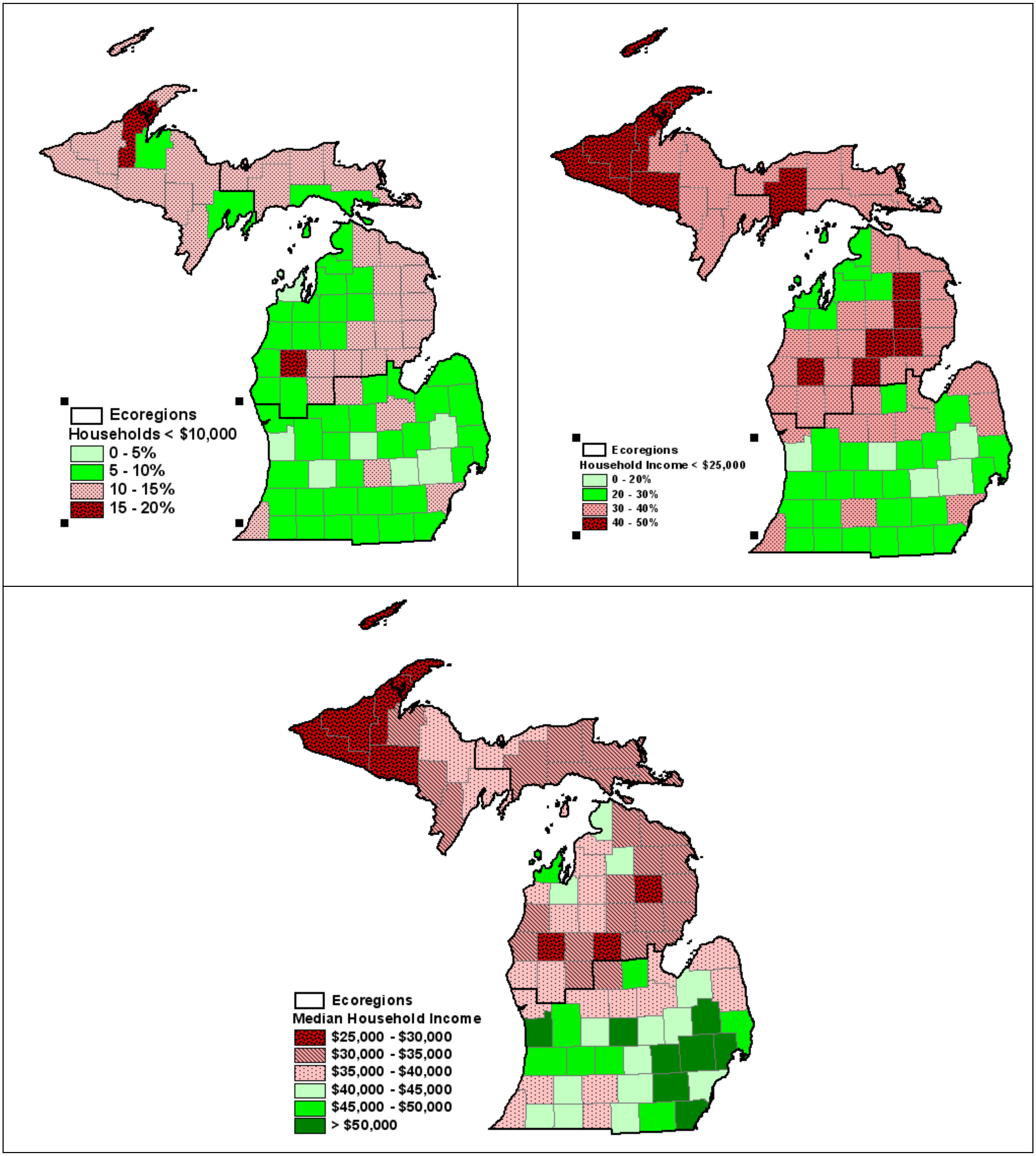

Figure 4.10. Median household income by county and ecoregion, 2000

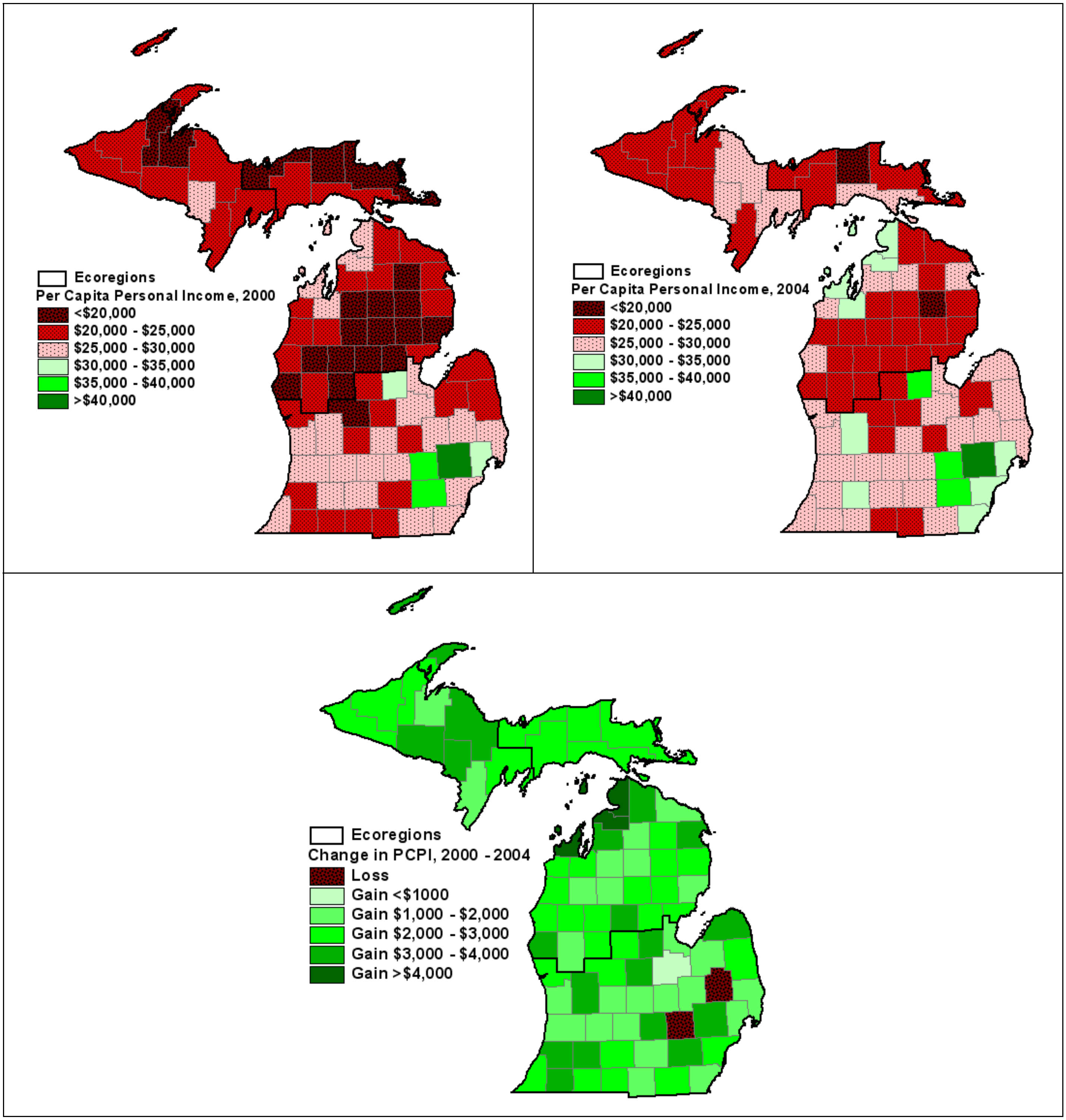

Figure 4.11. Per capita personal income trends by county and ecoregion, 1970-2004

There are multiple sources of income for households, including earnings (wages and salaries), social security, and public assistance. The WUP, EUP and NLP had lower percentages of households with income from earnings than the statewide average (Table 4.9). Alcona County had the lowest percentage of households with earnings income, 57.9%, and Grand Traverse County had the highest, 82.6% (Appendix Table A4.27). Ten counties had over 40% of the households with Social Security as a source of income: Gogebic, Iron, Keweenaw, Alcona, Iosco, Lake, Montmorency, Oscoda, Presque Isle, and Roscommon. Northern Michigan ecoregions had less dependence on public assistance than the SLP. Retirement income was very important to northern ecoregions; all had more reliance on it than the state as a whole. Thirty-seven percent of Alcona County households had income from retirements whereas only 17.8% of Emmet County households had retirement as a source of income.

Table 4.9. Household with earnings and income sources by county and ecoregion, 2000

Ecoregion	1999	2000	With Earnings income	With Social Security Income	With Supplemental Security Income	With Public Assist-ance Income	With Retire-ment Income
	Households		Percent of Households (1999)				
Western Upper Peninsula	98,260	98,291	72.8%	33.6%	3.9%	3.2%	22.7%
Eastern Upper Peninsula	28,462	28,413	73.8%	33.2%	4.3%	3.5%	24.6%
Northern Lower Peninsula	298,375	298,068	73.2%	34.1%	4.7%	3.4%	24.5%
Michigan	3,788,780	3,785,661	80.2%	26.2%	4.2%	3.6%	19.2%

Data Source: Bureau of Census, 2000.

Notes: Social Security Income - Social Security pensions, survivor's benefits and permanent disability insurance payments made by the Social Security Administration prior to deductions for medical insurance and railroad retirement insurance payments from the U.S. Government. Medicare reimbursements are not included. Supplemental Security Income (SSI) is a nationwide U.S. assistance program administered by the Social Security Administration that guarantees a minimum level of income for needy, aged, blind, or disabled individuals. Public Assistance Income - Public assistance income includes general assistance and Temporary Assistance for Needy Families (TANF). Separate payments received for hospital or other medical care (vendor payments) are excluded. This does not include Supplemental Security Income. Retirement or Disability Income - Retirement pensions and survivor benefits from a former employer, labor union or federal, state, county or other governmental agency; disability income from sources such as worker's compensation, companies or unions, federal, state or local government and the U.S. military; periodic receipts from annuities and insurance and regular income from IRA and KEOGH plans.

Housing Characteristics and values

Housing information provides another dimension to a social and economic assessment and gives indications on the structure and wealth of local communities. Housing values are quite variable, as are forest land values.

The number of housing units reflects the population within a given ecoregion. Hence, the largest number of housing units in northern Michigan were in the NLP in 2000 (Table 4.11). Grand Traverse County had the largest number of housing units in the NLP, and Marquette County had the largest number in the UP—both have over 30,000 units (Appendix Table A. 4.28). Seasonal homes and their owners play an important economic and social role in northern Michigan. Six counties have 45% or more of their housing units classified as seasonal: Keweenaw, Alcona, Lake, Montmorency, Oscoda, and Roscommon. Only Grand Traverse County has less than 10% of the housing units classified as seasonal. The WUP has the highest percentage of owner occupied housing units in northern Michigan, and the NLP has the lowest. Only two counties, Dickinson and Grand traverse, exceed the statewide average of 66% of housing that is owner occupied. Marquette is the only county that exceeds the statewide percentage of renter-occupied housing units. Finally, the patterns of median rent and median home value are similar with the WUP lowest and the NLP highest. Gogebic County had the lowest median home value, $39,700, in northern Michigan, and Leelanau County had the highest, $165,400.

Table 4.11. Housing units and median value by county and ecoregion, 2000

Region/ county	Total Housing Units	Seasonal	Owner Occupied	Renter Occupied	Heat with Wood	Median Rent	Median Home Value
WUP Region	129,162	16.6%	58.0%	18.1%	4.8%	$378	$64,700
EUP Region	44,515	30.4%	49.5%	14.3%	5.9%	$413	$77,219
NLP Region	457,546	29.8%	53.2%	11.9%	4.4%	$464	$92,971
Michigan	4,234,279	5.5%	66.0%	23.4%	1.3%	$546	$115,600

Data Source: Census 2000

Land values from selected studies and MI DNR data (acquisition/disposal)

Few data are readily available to assess forest land property values in northern Michigan. One source of data, based on a very limited sample, is the annual survey of Michigan land values and leasing rates conducted by Michigan State University (Table 4.12). Recreational lands are probably the closest category to forest lands, and the northern Michigan per acre value was approximately half as much as the SLP value. Recent MiDNR purchases of forest land in the UP reflect a considerably lower value (Table 4.13). The price differences reflect market conditions and property characteristics. Most of these purchases were aimed at expanding deer habitat on wetter sites in the UP.

Two studies related to effects of state forests (public lands) on forest land values were found. Jones (2001) and White and Leefers (In review) found very little effect of public lands on property values of undeveloped lands. White and Leefers hypothesized that the small effect was due to a lack of scarcity. Public lands are very common in northern Michigan so proximity to them is not very important given an abundance of forests and public lands. Leefers and White examined sales of properties in Wexford County and observed a flattening of price per acre if parcel sizes exceeded 20 acres (Figure 4.12).

Table 4.12. Value of undeveloped, non-agricultural land by region, 2003 - 2005

		Type of Land Use		
Region	Year	Residential	Commercial/ Industrial	Recreational
SLP	2003	10,274	23,558	4,422
SLP	2004	11,499	35,168	4,869
SLP	2005	14,351	41,669	5,021
WUP + EUP + NLP	2003	4,211	64,500	2,406
WUP + EUP + NLP	2004	3,788	10,408	3,305
WUP + EUP + NLP	2005	3,426	29,930	2,594

Data Source: Department of Agricultural Economics, Michigan State University.

Table 4.13. Recent purchases of forestland parcels by the MiDNR

Parcel	Acres	County	Price	Price/acre
Escanaba Paper Co.	600	Chippewa	$240,000	$400
Escanaba Paper Co.	905	Chippewa	$491,000	$543

Forster Estate	75	Chippewa	$42,000	$560
Carolo Trust	40	Dickinson	$73,000	$1,825
Dittrich	624	Chippewa	$550,000	$881
Keweenaw Land Co.	120	Dickinson	$150,000	$1,250
Renner	40	Mackinac	$44,000	$1,100
Al Weecks	635	Dickinson	$350,000	$551
Burt Carly	154	Schoolcraft	$177,000	$1,149
Pat Carly	117	Schoolcraft	$141,000	$1,205
Cedarwood, LLC	5,100	Chippewa	$3,300,000	$647
Total	8,410		$5,558,000	$661

Source: Michigan DNR

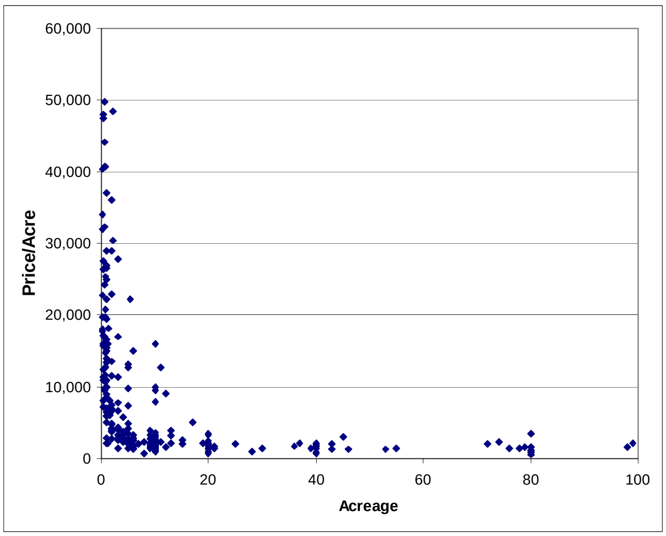

Figure 4.12. Per acre price for undeveloped parcels sold in Wexford County, 2000-01 (Source: Leefers and White 2003).

Natural resource dependency

The dependence of Michigan communities, counties and regions on natural resources is not well studied. Two unpublished sources provide some insights regarding dependence of Michigan counties on natural resources. Many northern Michigan counties are dependent on wildland-based earnings derived from four broad industries—timber, grazing, mining, and recreation and wildlife (Figure 4.13, Appendix Table A4.29). Ontonagon had the highest dependency (50%) followed closely by Alger County (49%). Many northern Michigan counties are fairly dependent on these industries. In a similar type of study on dependency on forest products industries, counties were classified as dependent if 15% or more of their economic sales were associated with selected forest products industry sectors (Table 4.14). Ten counties met this standard for dependency; most were in the Upper Peninsula. Hence, dependence can defined in several ways, but recent studies of dependence related to natural resources are lacking.

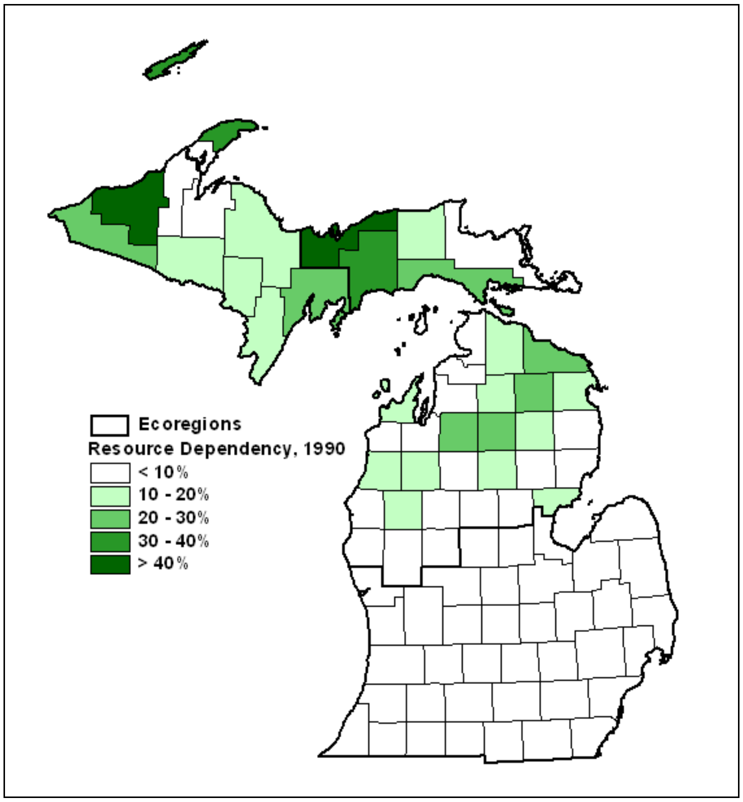

Figure 4.13. Percent of total county earnings (dependency measure) from wildland-based industries, 1990 Source: E. Schuster, USDA-Forest Service, unpublished data, 1993.

Table 4.14. Percent of total county earnings (dependency measure) from forest products industries, 1996

Area Name	Output percent from forest products	Employment percent from forest products
Crawford County	15.0	7.0
Gogebic County	18.8	7.9
Menominee County	22.0	6.8
Dickinson County	26.9	5.7
Ontonagon County	27.1	11.7
Manistee County	28.0	6.1
Schoolcraft County	29.3	10.5
Delta County	29.5	10.1
Luce County	45.5	16.0
Alger County	47.4	21.2

Source: M.Vasievich, USDA-Forest Service, unpublished data, 2000.

References

Jones, D.M. 2001. Effects of proximity to public lands on private property values: an hedonic price analysis. Ph.D. dissertation, Michigan State University. 176 p.

Leefers, L.A. and E.M. White. 2003. Hedonic pricing: analysis of property values and land use. In Web Accessible Natural Resource Information/Decision Support System Final Report (July 2003), Michigan State University, Victor Institute for Responsible Land Use and Development. Section 14, 5 p.

Minnesota Governor's Advisory Task Force. 2003. Governor's advisory task force report on competitiveness of Minnesota's primary forest products industry. Minneapolis, MN: Governor's Office. 34 p.

Rickenbach, M., T.W. Steele, and M. Schira. 2005. Status of the logging sector in Wisconsin and Michigan's Upper Peninsula, 2003. Madison, WI: University of Wisconsin Extension. 40 p.

White, E.M, and L.A. Leefers. In review. Influence of natural amenities on residential property values in a rural setting. Society and Natural Resources.

Social and Economic Assessment for Michigan's State Forests

APPENDIX

Prepared for: Michigan Department of Natural Resources
Forest, Mineral, and Fire Management Division

Lansing, Michigan

September 5, 2006

Prepared by:
Tessa Systems, LLC
East Lansing, MI

Appendix

Table A4.1. Establishments by selected economic sectors, 2000 to 2005, Western Upper Peninsula.

Western Upper Peninsula						
Industry Sector	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
Ag, forestry, fishing and hunting	261	264	261	231	228	228
>>Forestry and logging	203	203	199	176	175	174
>>Fishing, hunting and trapping		3	3			
>>Ag and forestry support activities	17	18	19	13	9	7
Mining	6	7	11	9	10	11
>>Mining, except oil and gas	5	6	10	8	8	7
>>Support activities for mining					4	4
Utilities	17	20	20	22	22	19
Construction	850	881	895	888	897	880
Manufacturing	398	404	386	365	354	363
>>Wood product manufacturing	73	81	72	61	59	64
>>Paper manufacturing		3	3	3	3	3
Wholesale trade	242	244	247	240	225	219
Retail trade	1,197	1,210	1,173	1,125	1,122	1,096
Transportation and warehousing	230	244	247	228	214	213
Information	101	94	94	91	105	105
Finance and insurance	318	327	349	353	344	337
Real estate and rental and leasing	157	165	181	180	189	188
Professional and technical services	412	414	411	398	401	397
Mgmt of companies and enterprises	6	7	9	6	6	6
Administrative and waste services	236	224	223	218	222	227
Educational services	15	20	20	22	24	21
Health care and social assistance	547	553	558	541	550	554
Arts, entertainment, and recreation	117	118	115	112	104	102
Accommodation and food services	775	774	750	720	723	723
>>Accommodation	156	158	154	147	144	137
>>Food services and drinking places	609	614	594	571	577	583
Other services, except public admin.	693	688	694	671	670	672
Total, All Industries	6,647	6,714	6,692	6,473	6,467	6,426
Federal Government						151
State Government						130
Local Government						333

Data Source: Michigan Department of Labor and Economic Growth (http://www.milmi.org/)

Note: Sectors marked with “>>” are subsets of the more aggregate sector above.

Table A4.2. Establishments by selected economic sectors, 2000 to 2005, Eastern Upper Peninsula.

Eastern Upper Peninsula						
Industry Sector	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
Ag, forestry, fishing and hunting	86	84	82	82	81	81
>>Forestry and logging	59	57	55	55	55	55
>>Fishing, hunting and trapping	15	14	15	13	12	12
Mining	9	8	8	6	8	8
>>Mining, except oil and gas	9	8	8	6	8	8
Utilities	6	6	4	5	5	6
Construction	321	339	345	332	329	325
Manufacturing	81	77	72	71	64	59
>> >>Wood product manufacturing	20	16	20	18	14	15
Wholesale trade	64	63	58	56	55	54
Retail trade	428	425	417	412	416	408
Transportation and warehousing	70	71	77	77	77	78
Information	40	38	37	34	31	30
Finance and insurance	97	99	103	97	93	97
Real estate and rental and leasing	50	51	53	50	48	49
Professional and technical services	100	108	104	103	107	106
Administrative and waste services	54	56	57	51	51	47
Educational services	3	4	4	3		3
Health care and social assistance	116	115	120	118	118	126
Arts, entertainment, and recreation	17	40	38	34	36	39
Accommodation and food services	428	423	416	403	394	370
>>Accommodation	175	178	169	154	151	142
>>Food services and drinking places	253	245	248	249	243	228
Other services, except public admin.	169	173	176	166	161	155
Total, All Industries	2,186	2,201	2,193	2,116	2,095	2,059
Federal Government						57
State Government						56
Local Government						137

Data Source: Michigan Department of Labor and Economic Growth (http://www.milmi.org/)

Note: Sectors marked with “>>” are subsets of the more aggregate sector above.

Table A4.3. Establishments by selected economic sectors, 2000 to 2005, Northern Lower Peninsula.

Northern Lower Peninsula						
Industry Sector	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
Ag, forestry, fishing and hunting	437	445	457	435	428	429
>>Forestry and logging	112	113	111	107	91	91
>>Fishing, hunting and trapping	9	9	8	9	7	8
>>Ag and forestry support activities	14	10	11	11	17	14
Mining	139	140	151	129	122	134
>>Oil and gas extraction	28	29	31	24	22	25
>>Mining, except oil and gas	11	10	10	8	6	9
>>Support activities for mining	69	78	81	74	73	72
Utilities	38	40	38	42	43	46
Construction	3,427	3,685	3,815	3,665	3,668	3,624
Manufacturing	1,330	1,338	1,315	1,259	1,217	1,194
>>Wood product manufacturing	154	145	144	128	118	119
>>Paper manufacturing	9	7	5	6	5	5
Wholesale trade	665	672	669	657	650	643
Retail trade	3,703	3,715	3,612	3,483	3,497	3,463
Transportation and warehousing	487	518	521	490	479	474
Information	282	277	297	286	279	277
Finance and insurance	827	858	855	838	839	856
Real estate and rental and leasing	634	665	659	665	684	700
Professional and technical services	1,344	1,409	1,431	1,363	1,341	1,354
Mgmt of companies and enterprises	11	11	13	14	13	10
Administrative and waste services	817	863	884	852	871	899
Educational services	94	90	85	70	83	92
Health care and social assistance	1,558	1,590	1,618	1,605	1,622	1,644
Arts, entertainment, and recreation	436	452	455	454	458	475
Accommodation and food services	2,148	2,138	2,105	2,071	2,092	2,083
>>Accommodation	449	462	461	456	449	439
>>Food services and drinking places	1,666	1,645	1,603	1,586	1,613	1,615
Other services, except public admin.	1,930	1,928	1,915	1,831	1,822	1,843
Unclassified						3
Total, All Industries	20,500	21,021	21,042	20,368	20,361	20,367
Federal Government						334
State Government						268
Local Government						884

Data Source: Michigan Department of Labor and Economic Growth (http://www.milmi.org/)

Note: Sectors marked with “>>” are subsets of the more aggregate sector above.

Table A4.4. Establishments by selected economic sectors, 2000 to 2005, Michigan, State

Industry Sector	2000	2001	2002	2003	2004	2005
Ag, forestry, fishing and hunting	2,263	2,271	2,281	2,196	2,203	2,217
>>Forestry and logging	448	439	432	397	380	378
>>Fishing, hunting and trapping	53	51	50	48	42	41
>>Ag and forestry support activities	262	259	267	256	257	253
Mining	453	463	468	447	436	441
>>Oil and gas extraction	82	78	79	76	76	77
>>Mining, except oil and gas	205	214	212	201	197	198
>>Support activities for mining	167	172	178	171	164	166
Utilities	346	359	379	410	432	406
Construction	28,688	29,565	30,525	29,279	29,306	28,859
Manufacturing	18,039	17,823	17,477	16,534	16,048	15,739
>>Wood product manufacturing	696	677	645	602	569	557
>>Paper manufacturing	285	282	281	268	259	257
Wholesale trade	16,349	16,523	17,140	16,495	16,008	15,622
Retail trade	37,520	36,911	36,460	35,172	35,256	35,001
Transportation and warehousing	5,384	5,554	5,735	5,464	5,478	5,522
Information	3,577	3,682	3,975	3,771	3,688	3,585
Finance and insurance	11,504	11,719	12,011	12,216	12,649	12,729
Real estate and rental and leasing	7,664	7,612	7,813	7,746	7,914	7,961
Professional and technical services	24,810	25,693	26,229	25,122	24,833	24,477
Mgmt of companies and enterprises	788	748	788	765	759	765
Administrative and waste services	12,928	13,094	13,568	13,197	13,203	13,070
Educational services	1,891	1,914	2,000	1,991	2,017	2,113
Health care and social assistance	21,197	21,087	21,335	21,129	21,414	21,666
Arts, entertainment, and recreation	3,741	3,717	3,772	3,727	3,790	3,784
Accommodation and food services	18,393	18,164	18,416	18,160	18,569	18,651
>>Accommodation	1,961	1,951	1,946	1,876	1,884	1,847
>>Food services and drinking places	16,432	16,213	16,470	16,284	16,685	16,804
Other services, except public admin.	22,864	22,460	22,403	21,508	21,364	21,291
Total, All Industries	238,396	239,355	242,774	235,326	235,366	233,899
Federal Government						1,717
State Government						1,482
Local Government						4,946

Data Source: Michigan Department of Labor and Economic Growth (http://www.milmi.org/)

Note: Sectors marked with “>>” are subsets of the more aggregate sector above.

Table A4.5. Total wages (million $) by selected economic sectors, 2000 to 2005, Western Upper Peninsula.

Western Upper Peninsula						
Industry Sector	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
Ag, forestry, fishing and hunting	22.9	23.7	22.0	22.6	27.7	29.0
>>Forestry and logging	19.1	19.8	18.2	19.1	19.4	21.4
>>Fishing, hunting and trapping		0.2	0.1			
>>Ag and forestry support activities	0.8	0.8	0.8	0.5	0.5	0.3
Mining	102.3	88.7	75.0	82.5	84.8	87.9
>>Mining, except oil and gas	102.1	88.6	74.6	82.3	81.7	87.4
>>Support activities for mining					5.9	0.7
Utilities	11.8	14.5	16.8	18.2	20.1	15.4
Construction	174.2	164.5	171.9	175.9	177.8	177.1
Manufacturing	457.0	439.3	422.9	429.8	447.0	455.5
>>Wood product manufacturing	55.5	61.8	54.5	57.7	57.4	58.8
>>Paper manufacturing		12.1	12.6	13.3	12.7	13.5
Wholesale trade	67.0	56.9	55.4	59.6	62.4	62.5
Retail trade	212.2	210.6	214.3	217.3	226.5	220.4
Transportation and warehousing	49.1	46.2	46.4	46.5	52.5	51.0
Information	26.1	27.8	41.4	42.1	43.2	41.4
Finance and insurance	75.5	75.1	75.1	80.8	82.8	79.1
Real estate and rental and leasing	10.4	10.8	13.1	13.1	14.6	16.4
Professional and technical services	59.0	59.4	62.3	74.8	82.7	81.1
Mgmt of companies and enterprises	1.2	2.9	7.0	1.2	1.3	1.4
Administrative and waste services	38.2	36.9	39.5	40.1	39.9	41.9
Educational services	1.8	2.4	2.4	2.6	3.1	2.9
Health care and social assistance	306.4	324.8	351.9	372.9	396.8	398.3
Arts, entertainment, and recreation	9.5	10.2	10.5	11.6	11.5	12.9
Accommodation and food services	99.6	80.5	84.3	74.7	78.0	79.6
>>Accommodation	22.8	24.2	24.4	16.0	16.2	16.8
>>Food services and drinking places	54.0	56.1	59.7	58.4	61.4	62.2
Other services, exc. public admin.	55.9	59.2	59.4	62.6	62.6	62.9
Total, All Industries	1,829.9	1,781.8	1,815.7	1,878.6	1,966.4	1,972.0
Federal Government						79.1
State Government						229.3
Local Government						459.5

Data Source: Michigan Department of Labor and Economic Growth (http://www.milmi.org/)

Note: Sectors marked with “>>” are subsets of the more aggregate sector above.

Table A4.6. Total wages (million $) by selected economic sectors, 2000 to 2005, Eastern Upper Peninsula.

Eastern Upper Peninsula						
Industry Sector	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
Ag, forestry, fishing and hunting	6.0	5.8	5.5	5.4	6.3	7.1
>>Forestry and logging	4.5	4.2	3.9	3.8	4.5	5.1
>>Fishing, hunting and trapping	0.9	1.0	0.8	0.8	0.9	0.7
Mining	8.3	6.9	10.0	9.5	10.5	9.2
>>Mining, except oil and gas	8.3	6.9	10.0	9.5	10.5	9.2
Utilities	7.0	7.2	6.4	6.8	7.0	6.8
Construction	32.5	33.2	33.9	33.2	33.0	30.7
Manufacturing	70.7	68.9	67.5	78.4	72.2	62.4
>>Wood product manufacturing	7.9	4.3	14.4	14.1	4.0	4.8
Wholesale trade	7.2	7.3	7.5	9.1	10.9	11.4
Retail trade	56.7	59.2	60.7	60.4	61.3	59.4
Transportation and warehousing	16.8	15.8	15.8	15.0	14.2	14.1
Information	7.3	8.1	7.0	6.0	6.5	6.7
Finance and insurance	18.1	20.6	21.3	21.4	24.8	24.5
Real estate and rental and leasing	2.7	3.0	3.0	3.6	2.0	2.1
Professional and technical services	9.4	10.2	7.4	7.4	10.2	11.0
Administrative and waste services	5.2	5.4	15.6	6.4	7.0	6.6
Educational services	1.3	1.3	1.3	1.3		1.9
Health care and social assistance	27.5	28.9	29.8	31.4	32.7	30.1
Arts, entertainment, and recreation	11.8	5.9	5.7	5.2	4.8	5.0
Accommodation and food services	50.0	49.2	41.6	49.4	49.2	50.8
>>Accommodation	27.2	27.7	17.9	25.8	25.8	26.6
>>Food services and drinking places	22.8	21.4	23.7	23.6	23.4	24.2
Other services, exc. public admin.	8.3	8.5	8.9	8.9	9.0	8.2
Total, All Industries	383.6	359.0	366.4	377.0	384.2	365.2
Federal Government						30.3
State Government						122.2
Local Government						232.7

Data Source: Michigan Department of Labor and Economic Growth (http://www.milmi.org/)

Note: Sectors marked with “>>” are subsets of the more aggregate sector above.

Table A4.7. Total wages (million $) by selected economic sectors, 2000 to 2005, Northern Lower Peninsula.

Northern Lower Peninsula						
Industry Sector	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
Ag, forestry, fishing and hunting	66.9	66.7	64.2	71.3	73.4	73.3
>>Forestry and logging	17.6	15.2	14.5	15.0	15.3	15.9
>>Fishing, hunting and trapping	0.4	0.3	0.3	0.4	0.2	0.2
>>Ag and forestry support activities	7.5	2.0	2.1	2.1	4.1	3.3
Mining	82.4	68.6	69.9	60.7	64.5	69.9
>>Oil and gas extraction	10.4	10.5	12.3	11.1	12.5	11.5
>>Mining, except oil and gas	12.9	6.9	5.7	5.2	4.9	5.1
>>Support activities for mining	34.5	37.1	32.9	27.7	29.8	35.4
Utilities	47.9	50.4	50.7	50.1	49.6	51.4
Construction	507.3	489.8	502.1	481.8	507.9	489.3
Manufacturing	1,497.0	1,378.9	1,353.7	1,374.5	1,418.1	1,403.1
>>Wood product manufacturing	70.1	66.3	67.1	66.3	63.3	73.0
>>Paper manufacturing	23.6	23.8	19.5	20.5	20.5	21.2
Wholesale trade	160.0	164.9	164.8	165.5	174.4	174.3
Retail trade	710.7	730.3	749.2	759.4	808.3	782.5
Transportation and warehousing	146.7	135.4	131.4	129.1	134.5	144.7
Information	103.9	102.2	108.1	116.0	125.2	111.2
Finance and insurance	191.9	202.4	224.9	250.7	266.1	262.8
Real estate and rental and leasing	45.3	46.0	47.5	51.5	55.3	54.3
Professional and technical services	215.5	219.6	226.4	242.3	247.1	225.9
Mgmt of companies and enterprises	5.4	6.9	6.6	6.6	6.4	4.9
Administrative and waste services	132.0	124.5	129.8	148.2	165.8	177.8
Educational services	25.9	28.1	31.9	28.2	33.2	39.5
Health care and social assistance	721.3	791.6	859.9	905.2	965.2	950.3
Arts, entertainment, and recreation	49.2	51.3	55.3	55.9	56.6	71.6
Accommodation and food services	325.7	324.2	334.8	337.9	345.1	349.5
>>Accommodation	97.6	98.4	96.2	101.1	103.2	105.6
>>Food services and drinking places	213.0	212.8	220.4	223.9	225.9	226.7
Other services, exc. public admin.	141.2	143.0	151.1	151.5	155.9	157.5
Unclassified						0.2
Total, All Industries	5,298.3	5,233.8	5,348.5	5,479.3	5,749.1	5,680.9
Federal Government						116.7
State Government						235.5
Local Government						1,263.7

Data Source: Michigan Department of Labor and Economic Growth (http://www.milmi.org/)

Note: Sectors marked with “>>” are subsets of the more aggregate sector above.

Table A4.8. Total wages (million $) by selected economic sectors, 2000 to 2005, Michigan.

State						
Industry Sector	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
Ag, forestry, fishing and hunting	433.7	459.5	459.4	483.0	515.9	521.2
>>Forestry and logging	51.0	49.7	47.6	47.8	50.3	51.9
>>Fishing, hunting and trapping	4.8	4.7	4.5	3.2	3.1	2.9
>>Ag and forestry support activities	44.5	48.2	39.6	43.7	51.3	50.0
Mining	346.3	334.6	303.6	307.2	328.8	346.7
>>Oil and gas extraction	30.6	26.3	22.3	25.8	31.2	33.2
>>Mining, except oil and gas	251.4	241.2	218.4	220.2	221.9	238.4
>>Support activities for mining	64.3	67.1	62.9	61.2	75.7	75.1
Utilities	1,392.8	1,408.5	1,422.0	1,518.3	1,494.5	1,562.1
Construction	8,816.9	8,740.0	8,559.0	8,159.2	8,298.1	8,102.5
Manufacturing	44,312.7	40,759.2	39,592.9	39,820.8	39,015.9	37,956.6
>>Wood product manufacturing	417.4	393.3	373.0	380.6	385.7	378.7
>>Paper manufacturing	921.2	804.3	759.7	758.8	744.4	753.2
Wholesale trade	9,442.5	9,171.2	9,015.5	9,215.9	9,470.0	9,451.3
Retail trade	11,635.8	11,826.1	11,921.9	11,889.9	12,082.3	11,757.0
Transportation and warehousing	4,198.2	4,167.3	4,228.9	4,287.7	4,461.7	4,424.7
Information	3,473.0	3,547.1	3,467.8	3,459.9	3,496.5	3,515.4
Finance and insurance	6,764.3	7,298.7	7,653.5	8,107.3	8,237.1	8,470.2
Real estate and rental and leasing	1,539.4	1,582.1	1,635.0	1,641.4	1,682.9	1,680.5
Professional and technical services	16,865.8	16,260.3	15,603.7	15,683.6	15,875.8	15,867.8
Mgmt of companies and enterprises	5,985.8	5,645.4	5,347.9	5,601.8	6,245.6	6,203.3
Administrative and waste services	7,205.4	7,061.3	7,491.6	7,647.0	8,054.1	8,344.2
Educational services	1,150.7	1,229.8	1,333.7	1,438.9	1,562.5	1,696.6
Health care and social assistance	14,434.9	15,212.3	16,240.0	16,972.4	17,853.5	18,166.4
Arts, entertainment, and recreation	1,467.6	1,456.0	1,450.0	1,462.9	1,498.7	1,507.8
Accommodation and food services	3,827.5	3,810.8	3,941.5	3,991.4	4,148.0	4,192.7
>>Accommodation	572.8	536.3	530.0	526.8	563.5	572.6
>>Food services and drinking places	3,254.7	3,274.5	3,411.5	3,464.6	3,584.5	3,620.1
Other services, exc. public admin.	3,172.0	3,325.1	3,277.6	3,235.5	3,296.6	3,256.6
Total, All Industries	146,465.4	143,295.4	142,945.7	144,924.2	147,618.6	147,023.7
Federal Government						2,979.7
State Government						6,465.9
Local Government						16,143.0

Data Source: Michigan Department of Labor and Economic Growth (http://www.milmi.org/)

Note: Sectors marked with ">>" are subsets of the more aggregate sector above.

Table A4.9. Average weekly wages, by selected economic sectors, 2000 to 2005, Western Upper Peninsula.

Western Upper Peninsula						
Industry Sector	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
Ag, forestry, fishing and hunting	$448	$466	$471	$482	$524	$541
>>Forestry and logging	$501	$525	$521	$537	$562	$605
>>Fishing, hunting and trapping		$447	$308			
>>Ag and forestry support activities	$416	$424	$441	$499	$844	$458
Mining	$1,003	$911	$851	$1,001	$1,092	$1,088
>>Mining, except oil and gas	$1,004	$911	$850	$1,002	$1,073	$1,087
>>Support activities for mining					$2,172	$1,308
Utilities	$992	$1,053	$1,103	$1,178	$1,357	$1,251
Construction	$625	$632	$654	$669	$671	$689
Manufacturing	$692	$702	$719	$760	$793	$786
>>Wood product manufacturing	$500	$538	$529	$566	$597	$606
>>Paper manufacturing		$942	$977	$1,063	$1,052	$1,140
Wholesale trade	$669	$642	$610	$640	$650	$665
Retail trade	$294	$309	$321	$328	$337	$333
Transportation and warehousing	$539	$543	$564	$583	$622	$609
Information	$482	$517	$518	$518	$523	$527
Finance and insurance	$547	$558	$564	$596	$617	$598
Real estate and rental and leasing	$342	$316	$316	$334	$349	$380
Professional and technical services	$625	$647	$631	$630	$671	$649
Mgmt of companies and enterprises	$852	$661	$542	$705	$738	$851
Administrative and waste services	$397	$408	$424	$452	$461	$469
Educational services	$317	$333	$321	$320	$298	$271
Health care and social assistance	$530	$552	$569	$591	$606	$598
Arts, entertainment, and recreation	$188	$200	$201	$206	$223	$239
Accommodation and food services	$184	$164	$166	$158	$164	$165
>>Accommodation	$205	$209	$219	$193	$193	$197
>>Food services and drinking places	$148	$150	$151	$151	$157	$158
Other services, exc. public admin.	$305	$320	$322	$339	$343	$338
Total, All Industries	$474	$482	$488	$510	$527	$525
Federal Government						$855
State Government						$921
Local Government						$563

Data Source: Michigan Department of Labor and Economic Growth (http://www.milmi.org/)

Note: Sectors marked with “>>” are subsets of the more aggregate sector above.

Table A4.10. Average weekly wages, by selected economic sectors, 2000 to 2005, Eastern Upper Peninsula.

Eastern Upper Peninsula						
Industry Sector	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
Ag, forestry, fishing and hunting	$408	$421	$422	$447	$466	$500
>>Forestry and logging	$433	$447	$446	$463	$491	$509
>>Fishing, hunting and trapping	$348	$358	$391	$458	$455	$518
Mining	$1,000	$1,071	$1,200	$1,397	$1,182	$1,170
>>Mining, except oil and gas	$1,000	$1,071	$1,200	$1,397	$1,182	$1,170
Utilities	$1,018	$1,024	$1,084	$1,152	$1,192	$1,119
Construction	$506	$505	$552	$550	$547	$552
Manufacturing	$652	$674	$681	$709	$754	$731
>>Wood product manufacturing	$541	$530	$531	$553	$428	$434
Wholesale trade	$524	$549	$552	$551	$595	$616
Retail trade	$313	$329	$341	$353	$367	$361
Transportation and warehousing	$467	$473	$484	$502	$507	$467
Information	$453	$482	$449	$414	$442	$469
Finance and insurance	$490	$522	$532	$578	$662	$651
Real estate and rental and leasing	$439	$467	$467	$558	$347	$361
Professional and technical services	$524	$559	$508	$542	$616	$627
Administrative and waste services	$383	$419	$559	$404	$404	$418
Educational services	$551	$497	$542	$525		$489
Health care and social assistance	$464	$486	$512	$516	$540	$485
Arts, entertainment, and recreation	$365	$381	$389	$400	$386	$370
Accommodation and food services	$246	$248	$219	$250	$260	$262
>>Accommodation	$334	$343	$265	$343	$368	$364
>>Food services and drinking places	$188	$182	$194	$193	$196	$200
Other services, exc. public admin.	$289	$289	$296	$290	$292	$274
Total, All Industries	$412	$429	$440	$458	$475	$459
Federal Government						$955
State Government						$895
Local Government						$566

Data Source: Michigan Department of Labor and Economic Growth (http://www.milmi.org/)

Note: Sectors marked with “>>” are subsets of the more aggregate sector above.

Table A4.11. Average weekly wages, by selected economic sectors, 2000 to 2005, Northern Lower Peninsula.

Northern Lower Peninsula						
Industry Sector	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
Ag, forestry, fishing and hunting	$355	$350	$345	$362	$373	$380
>>Forestry and logging	$480	$467	$487	$517	$543	$561
>>Fishing, hunting and trapping	$564	$557	$599	$611	$573	$708
>>Ag and forestry support activities	$366	$221	$249	$239	$313	$358
Mining	$852	$875	$859	$920	$970	$942
>>Oil and gas extraction	$937	$873	$919	$938	$1,073	$1,010
>>Mining, except oil and gas	$759	$757	$908	$857	$930	$914
>>Support activities for mining	$821	$896	$839	$897	$966	$944
Utilities	$1,119	$1,142	$1,204	$1,255	$1,258	$1,262
Construction	$581	$586	$596	$599	$619	$614
Manufacturing	$643	$657	$690	$724	$742	$738
>>Wood product manufacturing	$582	$620	$639	$645	$650	$654
>>Paper manufacturing	$753	$783	$859	$882	$968	$1,033
Wholesale trade	$618	$640	$637	$666	$685	$675
Retail trade	$344	$356	$366	$380	$392	$389
Transportation and warehousing	$603	$621	$626	$639	$645	$654
Information	$606	$630	$632	$644	$701	$680
Finance and insurance	$621	$624	$646	$697	$723	$714
Real estate and rental and leasing	$384	$384	$387	$408	$424	$406
Professional and technical services	$628	$656	$670	$702	$718	$686
Mgmt of companies and enterprises	$1,040	$1,399	$1,389	$1,164	$1,173	$1,257
Administrative and waste services	$411	$436	$438	$466	$470	$459
Educational services	$402	$396	$401	$405	$424	$435
Health care and social assistance	$534	$562	$588	$587	$626	$610
Arts, entertainment, and recreation	$268	$275	$284	$278	$284	$305
Accommodation and food services	$206	$212	$217	$220	$224	$227
>>Accommodation	$266	$272	$281	$280	$285	$289
>>Food services and drinking places	$184	$189	$193	$197	$199	$202
Other services, exc. public admin.	$351	$361	$376	$385	$391	$389
Unclassified						$1,718
Total, All Industries	$475	$487	$500	$514	$532	$526
Federal Government						$818
State Government						$904
Local Government						$604

Data Source: Michigan Department of Labor and Economic Growth (http://www.milmi.org/)

Note: Sectors marked with “>>” are subsets of the more aggregate sector above.

Table A4.12. Average weekly wages, by selected economic sectors, 2000 to 2005, Michigan.

State						
Industry Sector	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
Ag, forestry, fishing and hunting	$360	$366	$378	$391	$408	$402
>>Forestry and logging	$485	$490	$496	$515	$541	$572
>>Fishing, hunting and trapping	$415	$439	$463	$423	$427	$398
>>Ag and forestry support activities	$398	$374	$393	$421	$433	$419
Mining	$880	$858	$855	$914	$975	$986
>>Oil and gas extraction	$1,007	$928	$889	$930	$1,058	$1,150
>>Mining, except oil and gas	$898	$863	$869	$941	$981	$1,008
>>Support activities for mining	$776	$815	$801	$824	$926	$873
Utilities	$1,262	$1,295	$1,334	$1,424	$1,406	$1,445
Construction	$811	$823	$827	$830	$841	$837
Manufacturing	$961	$955	$1,000	$1,057	$1,078	$1,076
>>Wood product manufacturing	$601	$619	$624	$631	$655	$639
>>Paper manufacturing	$881	$895	$895	$929	$966	$980
Wholesale trade	$983	$982	$992	$1,030	$1,073	$1,074
Retail trade	$403	$417	$432	$442	$453	$452
Transportation and warehousing	$758	$768	$790	$824	$857	$837
Information	$888	$910	$904	$946	$989	$1,010
Finance and insurance	$881	$938	$956	$989	$1,013	$1,036
Real estate and rental and leasing	$532	$552	$567	$565	$577	$574
Professional and technical services	$1,183	$1,171	$1,161	$1,208	$1,247	$1,236
Mgmt of companies and enterprises	$1,657	$1,625	$1,493	$1,583	$1,767	$1,839
Administrative and waste services	$482	$509	$539	$548	$570	$582
Educational services	$527	$538	$533	$533	$539	$549
Health care and social assistance	$623	$648	$669	$682	$715	$710
Arts, entertainment, and recreation	$420	$432	$455	$456	$471	$462
Accommodation and food services	$219	$222	$226	$230	$235	$236
>>Accommodation	$289	$291	$299	$304	$318	$321
>>Food services and drinking places	$210	$213	$218	$221	$226	$226
Other services, exc. public admin.	$445	$471	$461	$471	$478	$471
Total, All Industries	$716	$723	$734	$757	$777	$776
Federal Government						$1,051
State Government						$901
Local Government						$685

Data Source: Michigan Department of Labor and Economic Growth (http://www.milmi.org/)

Note: Sectors marked with “>>” are subsets of the more aggregate sector above.

Table A4.13. Employment, by selected economic sectors, 2000 to 2005, Western Upper Peninsula.

Western Upper Peninsula						
Industry Sector	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
Ag, forestry, fishing and hunting	983	978	897	903	1,017	1,032
>>Forestry and logging	732	725	670	683	663	679
>>Fishing, hunting and trapping		7	5			
>>Ag and forestry support activities	38	37	36	21	12	13
Mining	1,960	1,873	1,695	1,586	1,493	1,554
>>Mining, except oil and gas	1,956	1,869	1,689	1,579	1,464	1,546
>>Support activities for mining					53	10
Utilities	229	265	293	298	285	236
Construction	5,365	5,008	5,057	5,057	5,096	4,945
Manufacturing	12,697	12,037	11,312	10,877	10,845	11,146
>>Wood product manufacturing	2,134	2,207	1,979	1,961	1,849	1,864
>>Paper manufacturing		248	248	241	232	227
Wholesale trade	1,928	1,706	1,748	1,792	1,846	1,806
Retail trade	13,871	13,108	12,837	12,732	12,917	12,733
Transportation and warehousing	1,752	1,636	1,582	1,533	1,623	1,608
Information	1,043	1,034	1,538	1,566	1,591	1,511
Finance and insurance	2,653	2,588	2,560	2,606	2,583	2,544
Real estate and rental and leasing	587	660	797	755	806	833
Professional and technical services	1,814	1,767	1,899	2,282	2,372	2,402
Mgmt of companies and enterprises	27	86	250	34	35	31
Administrative and waste services	1,853	1,742	1,791	1,706	1,664	1,714
Educational services	108	136	143	156	202	205
Health care and social assistance	11,108	11,312	11,897	12,135	12,585	12,802
Arts, entertainment, and recreation	971	978	1,001	1,083	996	1,039
Accommodation and food services	10,438	9,443	9,750	9,089	9,164	9,288
>>Accommodation	2,139	2,229	2,143	1,594	1,617	1,642
>>Food services and drinking places	7,033	7,189	7,587	7,461	7,511	7,576
Other services, except public admin.	3,524	3,555	3,551	3,549	3,512	3,581
Total, All Industries	74,201	71,030	71,586	70,815	71,774	72,270
Federal Government						1,779
State Government						4,788
Local Government						15,690

Data Source: Michigan Department of Labor and Economic Growth (http://www.milmi.org/)

Note: Sectors marked with “>>” are subsets of the more aggregate sector above.

Table A4.14. Employment, by selected economic sectors, 2000 to 2005, Eastern Upper Peninsula.

Eastern Upper Peninsula						
Industry Sector	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
Ag, forestry, fishing and hunting	285	265	249	232	259	271
>>Forestry and logging	202	182	169	159	176	192
>>Fishing, hunting and trapping	51	52	37	35	38	27
Mining	159	125	160	131	171	152
>>Mining, except oil and gas	159	125	160	131	171	152
Utilities	133	134	113	113	113	117
Construction	1,234	1,264	1,181	1,161	1,161	1,071
Manufacturing	2,085	1,966	1,906	2,129	1,843	1,643
>>Wood product manufacturing	281	157	522	490	179	212
Wholesale trade	266	257	260	318	351	355
Retail trade	3,479	3,462	3,430	3,292	3,213	3,167
Transportation and warehousing	690	640	627	575	540	581
Information	309	325	299	279	284	275
Finance and insurance	709	760	769	713	720	724
Real estate and rental and leasing	120	124	123	126	110	110
Professional and technical services	345	351	280	263	319	336
Administrative and waste services	261	246	536	306	333	306
Educational services	46	51	48	49		73
Health care and social assistance	1,140	1,143	1,119	1,173	1,165	1,193
Arts, entertainment, and recreation	622	297	281	252	239	262
Accommodation and food services	3,905	3,814	3,649	3,797	3,646	3,728
>>Accommodation	1,564	1,554	1,296	1,446	1,349	1,406
>>Food services and drinking places	2,341	2,260	2,352	2,351	2,297	2,322
Other services, except public admin.	556	563	579	593	596	574
Total, All Industries	17,903	16,098	16,015	15,841	15,542	15,307
Federal Government						611
State Government						2,624
Local Government						7,910

Data Source: Michigan Department of Labor and Economic Growth (http://www.milmi.org/)

Note: Sectors marked with “>>” are subsets of the more aggregate sector above.

Table A4.15. Employment, by selected economic sectors, 2000 to 2005, Northern Lower Peninsula.

Northern Lower Peninsula						
Industry Sector	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
Ag, forestry, fishing and hunting	3,623	3,663	3,580	3,783	3,785	3,703
>>Forestry and logging	703	626	571	557	542	545
>>Fishing, hunting and trapping	13	9	11	12	7	6
>>Ag and forestry support activities	394	173	164	168	255	175
Mining	1,860	1,509	1,564	1,270	1,279	1,427
>>Oil and gas extraction	214	231	257	227	223	219
>>Mining, except oil and gas	326	175	121	118	101	107
>>Support activities for mining	808	796	755	594	593	722
Utilities	823	849	810	768	758	783
Construction	16,796	16,070	16,194	15,460	15,770	15,321
Manufacturing	44,797	40,387	37,732	36,522	36,745	36,547
>>Wood product manufacturing	2,317	2,057	2,020	1,976	1,872	2,148
>>Paper manufacturing	603	583	436	446	407	395
Wholesale trade	4,981	4,953	4,976	4,779	4,892	4,964
Retail trade	39,732	39,415	39,398	38,465	39,623	38,635
Transportation and warehousing	4,679	4,193	4,035	3,883	4,012	4,254
Information	3,297	3,116	3,291	3,464	3,433	3,146
Finance and insurance	5,946	6,241	6,692	6,913	7,077	7,073
Real estate and rental and leasing	2,270	2,304	2,360	2,429	2,509	2,571
Professional and technical services	6,603	6,442	6,495	6,640	6,622	6,334
Mgmt of companies and enterprises	100	94	92	108	105	75
Administrative and waste services	6,171	5,497	5,696	6,111	6,782	7,444
Educational services	1,239	1,365	1,530	1,340	1,507	1,747
Health care and social assistance	25,995	27,100	28,141	29,635	29,671	29,970
Arts, entertainment, and recreation	3,532	3,579	3,747	3,863	3,832	4,519
Accommodation and food services	30,357	29,402	29,628	29,493	29,592	29,596
>>Accommodation	7,058	6,947	6,587	6,936	6,969	7,026
>>Food services and drinking places	22,272	21,615	21,983	21,807	21,782	21,593
Other services, except public admin.	7,740	7,611	7,720	7,572	7,677	7,777
Unclassified						2
Total, All Industries	214,292	206,710	205,812	204,950	207,926	207,787
Federal Government						2,745
State Government						5,011
Local Government						40,241

Data Source: Michigan Department of Labor and Economic Growth (http://www.milmi.org/)

Note: Sectors marked with ">>" are subsets of the more aggregate sector above.

Table A4.16. Employment, by selected economic sectors, 2000 to 2005, Michigan.

State						
Industry Sector	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
Ag, forestry, fishing and hunting	23,172	24,137	23,397	23,746	24,340	24,955
>>Forestry and logging	2,022	1,952	1,844	1,785	1,788	1,743
>>Fishing, hunting and trapping	222	207	188	147	138	140
>>Ag and forestry support activities	2,151	2,474	1,941	1,998	2,280	2,293
Mining	7,565	7,502	6,827	6,461	6,488	6,759
>>Oil and gas extraction	585	545	483	534	568	555
>>Mining, except oil and gas	5,386	5,374	4,834	4,500	4,349	4,550
>>Support activities for mining	1,594	1,584	1,510	1,427	1,572	1,654
Utilities	21,226	20,912	20,494	20,505	20,437	20,787
Construction	209,001	204,236	199,059	189,107	189,690	186,221
Manufacturing	886,659	820,785	761,045	724,535	695,885	678,346
>>Wood product manufacturing	13,357	12,211	11,487	11,597	11,326	11,397
>>Paper manufacturing	20,104	17,274	16,315	15,716	14,813	14,779
Wholesale trade	184,805	179,623	174,832	171,988	169,736	169,189
Retail trade	554,658	545,404	530,167	516,868	512,474	500,621
Transportation and warehousing	106,572	104,404	102,937	100,089	100,137	101,624
Information	75,193	75,001	73,803	70,308	67,973	66,924
Finance and insurance	147,688	149,573	153,966	157,721	156,375	157,190
Real estate and rental and leasing	55,636	55,134	55,486	55,877	56,095	56,324
Professional and technical services	274,254	267,080	258,354	249,750	244,858	246,864
Mgmt of companies and enterprises	69,460	66,820	68,878	68,066	67,989	64,881
Administrative and waste services	287,383	266,646	267,153	268,294	271,673	275,821
Educational services	41,958	43,961	48,154	51,885	55,774	59,387
Health care and social assistance	445,910	451,496	466,515	478,726	480,330	491,726
Arts, entertainment, and recreation	67,160	64,845	61,313	61,667	61,137	62,716
Accommodation and food services	336,566	330,519	335,194	334,271	339,052	341,713
>>Accommodation	38,174	35,460	34,112	33,296	34,028	34,282
>>Food services and drinking places	298,392	295,059	301,081	300,975	305,025	307,431
Other services, except public admin.	137,020	135,798	136,585	132,227	132,494	132,972
Total, All Industries	3,931,883	3,813,873	3,744,158	3,682,088	3,652,935	3,645,020
Federal Government						54,529
State Government						138,063
Local Government						452,939

Data Source: Michigan Department of Labor and Economic Growth (http://www.milmi.org/)

Note: Sectors marked with “>>” are subsets of the more aggregate sector above.

Table A4.17. Labor force and unemployment data by eco-region, 1990 to 2005.

Year	Civilian Labor Force	Employment	Unemployment	Unemployment Rate
Western Upper Peninsula				
1990	108,647	99,926	8,721	8.0%
1991	108,821	98,778	10,043	9.2%
1992	111,974	100,386	11,588	10.3%
1993	114,406	104,185	10,221	8.9%
1994	117,277	107,386	9,891	8.4%
1995	116,171	106,592	9,579	8.2%
1996	115,375	107,199	8,176	7.1%
1997	116,797	109,319	7,478	6.4%
1998	116,439	110,084	6,355	5.5%
1999	117,832	111,657	6,175	5.2%
2000	120,574	114,770	5,804	4.8%
2001	121,448	114,300	7,148	5.9%
2002	119,375	111,149	8,226	6.9%
2003	121,306	112,594	8,712	7.2%
2004	123,111	114,729	8,382	6.8%
2005	125,078	117,239	7,839	6.3%
Eastern Upper Peninsula				
Year	**Civilian Labor Force**	**Employment**	**Unemployment**	**Unemployment Rate**
1990	30,944	27,194	3,750	12.1%
1991	31,082	27,151	3,931	12.6%
1992	32,259	27,727	4,532	14.0%
1993	33,531	29,523	4,008	12.0%
1994	35,131	30,996	4,135	11.8%
1995	35,656	31,907	3,749	10.5%
1996	35,878	32,781	3,097	8.6%
1997	36,490	33,447	3,043	8.3%
1998	36,021	33,220	2,801	7.8%
1999	36,418	33,817	2,601	7.1%
2000	35,401	33,068	2,333	6.6%
2001	35,519	32,836	2,683	7.6%
2002	34,777	31,914	2,863	8.2%
2003	35,235	32,093	3,142	8.9%
2004	35,505	32,303	3,202	9.0%
2005	35,732	32,646	3,086	8.6%
Northern Lower Peninsula				
Year	**Civilian Labor Force**	**Employment**	**Unemployment**	**Unemployment Rate**
1990	292,282	264,851	27,431	9.4%
1991	293,482	261,071	32,411	11.0%
1992	305,550	268,793	36,757	12.0%
1993	316,439	283,609	32,830	10.4%

1994	329,575	296,865	32,710	9.9%
1995	329,590	299,569	30,021	9.1%
1996	331,143	305,925	25,218	7.6%
1997	341,243	318,463	22,780	6.7%
1998	343,410	322,693	20,717	6.0%
1999	350,666	330,823	19,843	5.7%
2000	366,935	348,725	18,210	5.0%
2001	367,901	343,436	24,465	6.6%
2002	363,900	336,092	27,808	7.6%
2003	369,552	338,547	31,005	8.4%
2004	375,816	345,202	30,614	8.1%
2005	380,386	351,954	28,432	7.5%
Michigan				
Year	**Civilian Labor Force**	**Employment**	**Unemployment**	**Unemployment Rate**
1990	4,619,988	4,262,409	357,579	7.7%
1991	4,588,881	4,162,074	426,807	9.3%
1992	4,661,696	4,234,783	426,913	9.2%
1993	4,711,598	4,364,545	347,053	7.4%
1994	4,804,463	4,508,900	295,563	6.2%
1995	4,834,939	4,576,521	258,418	5.3%
1996	4,888,192	4,647,116	241,076	4.9%
1997	4,963,077	4,748,691	214,386	4.3%
1998	5,007,953	4,809,503	198,450	4.0%
1999	5,089,421	4,897,144	192,277	3.8%
2000	5,143,916	4,953,421	190,495	3.7%
2001	5,143,869	4,876,338	267,531	5.2%
2002	5,049,238	4,733,812	315,426	6.2%
2003	5,054,902	4,696,338	358,564	7.1%
2004	5,073,174	4,717,152	356,022	7.0%
2005	5,097,457	4,753,822	343,635	6.7%

Data Source: Bureau of Labor Statistics

Table A4.18. Labor force and unemployment data by ecoregion and county, 1990 to 2005.

County	Year	Civilian Labor Force	Employment	Unemploy-ment	Unemploy-ment Rate
Western Upper Peninsula					
Baraga, MI	1990	3,350	2,998	352	10.5%
	1991	3,229	2,784	445	13.8%
	1992	3,238	2,740	498	15.4%
	1993	3,520	3,106	414	11.8%
	1994	3,828	3,431	397	10.4%
	1995	3,981	3,581	400	10.0%
	1996	4,012	3,655	357	8.9%
	1997	4,186	3,888	298	7.1%
	1998	4,290	4,010	280	6.5%
	1999	4,360	4,088	272	6.2%
	2000	4,119	3,854	265	6.4%
	2001	4,012	3,661	351	8.7%
	2002	3,841	3,474	367	9.6%
	2003	3,911	3,527	384	9.8%
	2004	4,039	3,580	459	11.4%
	2005	4,168	3,717	451	10.8%
Delta, MI	1990	16,975	15,396	1,579	9.3%
	1991	17,228	15,170	2,058	11.9%
	1992	17,565	15,094	2,471	14.1%
	1993	17,815	15,761	2,054	11.5%
	1994	18,160	16,225	1,935	10.7%
	1995	18,051	16,317	1,734	9.6%
	1996	18,337	16,915	1,422	7.8%
	1997	18,769	17,444	1,325	7.1%
	1998	18,911	17,752	1,159	6.1%
	1999	19,141	18,029	1,112	5.8%
	2000	19,809	18,775	1,034	5.2%
	2001	20,009	18,743	1,266	6.3%
	2002	19,725	18,281	1,444	7.3%
	2003	20,099	18,427	1,672	8.3%
	2004	20,432	18,828	1,604	7.9%
	2005	20,614	19,177	1,437	7.0%
Dickinson, MI	1990	12,495	11,555	940	7.5%
	1991	12,675	11,505	1,170	9.2%
	1992	12,899	11,616	1,283	9.9%
	1993	13,155	12,098	1,057	8.0%
	1994	13,546	12,542	1,004	7.4%
	1995	13,693	12,756	937	6.8%
	1996	13,882	13,128	754	5.4%
	1997	14,049	13,258	791	5.6%
	1998	14,059	13,410	649	4.6%

County	Year	Civilian Labor Force	Employment	Unemploy-ment	Unemploy-ment Rate
	1999	14,196	13,516	680	4.8%
	2000	14,000	13,431	569	4.1%
	2001	14,193	13,503	690	4.9%
	2002	14,106	13,261	845	6.0%
	2003	14,207	13,253	954	6.7%
	2004	14,471	13,556	915	6.3%
	2005	14,593	13,792	801	5.5%
Gogebic, MI	1990	7,278	6,682	596	8.2%
	1991	7,399	6,760	639	8.6%
	1992	7,793	7,008	785	10.1%
	1993	8,150	7,364	786	9.6%
	1994	8,367	7,625	742	8.9%
	1995	8,384	7,549	835	10.0%
	1996	8,244	7,346	898	10.9%
	1997	8,169	7,433	736	9.0%
	1998	7,951	7,373	578	7.3%
	1999	7,964	7,464	500	6.3%
	2000	7,719	7,244	475	6.2%
	2001	7,965	7,419	546	6.9%
	2002	7,835	7,243	592	7.6%
	2003	7,894	7,241	653	8.3%
	2004	7,869	7,260	609	7.7%
	2005	7,879	7,298	581	7.4%
Houghton, MI	1990	14,608	13,520	1,088	7.4%
	1991	14,521	13,287	1,234	8.5%
	1992	15,108	13,597	1,511	10.0%
	1993	15,738	14,378	1,360	8.6%
	1994	16,412	15,104	1,308	8.0%
	1995	16,340	15,084	1,256	7.7%
	1996	16,509	15,459	1,050	6.4%
	1997	16,997	16,067	930	5.5%
	1998	17,243	16,373	870	5.0%
	1999	17,315	16,587	728	4.2%
	2000	17,121	16,294	827	4.8%
	2001	17,056	16,049	1,007	5.9%
	2002	16,892	15,755	1,137	6.7%
	2003	17,124	15,941	1,183	6.9%
	2004	17,334	16,250	1,084	6.3%
	2005	17,662	16,573	1,089	6.2%
Iron, MI	1990	5,298	4,827	471	8.9%
	1991	5,262	4,700	562	10.7%
	1992	5,383	4,751	632	11.7%
	1993	5,532	4,925	607	11.0%
	1994	5,597	4,949	648	11.6%

County	Year	Civilian Labor Force	Employment	Unemploy-ment	Unemploy-ment Rate
	1995	5,510	4,997	513	9.3%
	1996	5,524	5,086	438	7.9%
	1997	5,635	5,247	388	6.9%
	1998	5,538	5,205	333	6.0%
	1999	5,565	5,223	342	6.1%
	2000	5,654	5,335	319	5.6%
	2001	5,735	5,377	358	6.2%
	2002	5,686	5,291	395	6.9%
	2003	5,850	5,427	423	7.2%
	2004	5,956	5,517	439	7.4%
	2005	5,937	5,517	420	7.1%
Keweenaw, MI	1990	606	516	90	14.9%
	1991	617	505	112	18.2%
	1992	638	527	111	17.4%
	1993	689	583	106	15.4%
	1994	729	632	97	13.3%
	1995	746	653	93	12.5%
	1996	786	694	92	11.7%
	1997	815	736	79	9.7%
	1998	849	773	76	9.0%
	1999	870	802	68	7.8%
	2000	1,049	985	64	6.1%
	2001	1,050	967	83	7.9%
	2002	1,012	921	91	9.0%
	2003	1,052	944	108	10.3%
	2004	1,072	948	124	11.6%
	2005	1,079	967	112	10.4%
Marquette, MI	1990	32,124	29,552	2,572	8.0%
	1991	32,007	29,448	2,559	8.0%
	1992	32,884	30,087	2,797	8.5%
	1993	33,181	30,674	2,507	7.6%
	1994	33,695	31,149	2,546	7.6%
	1995	32,509	29,933	2,576	7.9%
	1996	31,503	29,634	1,869	5.9%
	1997	31,925	30,097	1,828	5.7%
	1998	31,775	30,268	1,507	4.7%
	1999	32,518	30,854	1,664	5.1%
	2000	34,183	32,704	1,479	4.3%
	2001	34,497	32,633	1,864	5.4%
	2002	33,675	31,382	2,293	6.8%
	2003	34,270	32,029	2,241	6.5%
	2004	34,889	32,789	2,100	6.0%
	2005	35,892	33,895	1,997	5.6%
Menominee, MI	1990	12,033	11,213	820	6.8%

County	Year	Civilian Labor Force	Employment	Unemploy-ment	Unemploy-ment Rate
	1991	11,984	10,977	1,007	8.4%
	1992	12,466	11,385	1,081	8.7%
	1993	12,714	11,732	982	7.7%
	1994	13,044	12,124	920	7.1%
	1995	13,087	12,232	855	6.5%
	1996	13,026	12,294	732	5.6%
	1997	13,006	12,301	705	5.4%
	1998	12,762	12,106	656	5.1%
	1999	12,894	12,329	565	4.4%
	2000	13,272	12,728	544	4.1%
	2001	13,379	12,655	724	5.4%
	2002	13,105	12,299	806	6.2%
	2003	13,375	12,554	821	6.1%
	2004	13,456	12,679	777	5.8%
	2005	13,616	12,921	695	5.1%
Ontonagon, MI	1990	3,880	3,667	213	5.5%
	1991	3,899	3,642	257	6.6%
	1992	4,000	3,581	419	10.5%
	1993	3,912	3,564	348	8.9%
	1994	3,899	3,605	294	7.5%
	1995	3,870	3,490	380	9.8%
	1996	3,552	2,988	564	15.9%
	1997	3,246	2,848	398	12.3%
	1998	3,061	2,814	247	8.1%
	1999	3,009	2,765	244	8.1%
	2000	3,648	3,420	228	6.3%
	2001	3,552	3,293	259	7.3%
	2002	3,498	3,242	256	7.3%
	2003	3,524	3,251	273	7.7%
	2004	3,593	3,322	271	7.5%
	2005	3,638	3,382	256	7.0%
Eastern Upper Peninsula					
Alger, MI	1990	3,814	3,462	352	9.2%
	1991	3,869	3,458	411	10.6%
	1992	3,940	3,484	456	11.6%
	1993	4,008	3,600	408	10.2%
	1994	4,133	3,750	383	9.3%
	1995	4,242	3,871	371	8.7%
	1996	4,208	3,913	295	7.0%
	1997	4,273	4,003	270	6.3%
	1998	4,298	4,080	218	5.1%
	1999	4,403	4,169	234	5.3%
	2000	4,374	4,142	232	5.3%
	2001	4,425	4,156	269	6.1%

County	Year	Civilian Labor Force	Employment	Unemploy-ment	Unemploy-ment Rate
	2002	4,402	4,092	310	7.0%
	2003	4,449	4,104	345	7.8%
	2004	4,421	4,076	345	7.8%
	2005	4,418	4,095	323	7.3%
Chippewa, MI	1990	14,653	12,990	1,663	11.3%
	1991	14,755	13,025	1,730	11.7%
	1992	15,615	13,593	2,022	12.9%
	1993	16,552	14,697	1,855	11.2%
	1994	17,361	15,417	1,944	11.2%
	1995	17,443	15,759	1,684	9.7%
	1996	17,640	16,215	1,425	8.1%
	1997	17,829	16,437	1,392	7.8%
	1998	17,452	16,117	1,335	7.6%
	1999	17,692	16,531	1,161	6.6%
	2000	17,467	16,359	1,108	6.3%
	2001	17,465	16,174	1,291	7.4%
	2002	17,021	15,670	1,351	7.9%
	2003	17,373	15,847	1,526	8.8%
	2004	17,569	16,016	1,553	8.8%
	2005	17,745	16,271	1,474	8.3%
Luce, MI	1990	2,422	2,200	222	9.2%
	1991	2,422	2,101	321	13.3%
	1992	2,368	1,982	386	16.3%
	1993	2,372	2,003	369	15.6%
	1994	2,462	2,115	347	14.1%
	1995	2,592	2,321	271	10.5%
	1996	2,715	2,514	201	7.4%
	1997	2,815	2,571	244	8.7%
	1998	2,712	2,508	204	7.5%
	1999	2,620	2,424	196	7.5%
	2000	2,754	2,589	165	6.0%
	2001	2,853	2,668	185	6.5%
	2002	2,895	2,684	211	7.3%
	2003	2,905	2,681	224	7.7%
	2004	2,888	2,672	216	7.5%
	2005	2,872	2,658	214	7.5%
Mackinac, MI	1990	6,236	5,343	893	14.3%
	1991	6,304	5,353	951	15.1%
	1992	6,436	5,369	1,067	16.6%
	1993	6,662	5,824	838	12.6%
	1994	7,063	6,184	879	12.4%
	1995	7,274	6,411	863	11.9%
	1996	7,224	6,501	723	10.0%
	1997	7,330	6,623	707	9.6%

County	Year	Civilian Labor Force	Employment	Unemploy-ment	Unemploy-ment Rate
	1998	7,314	6,653	661	9.0%
	1999	7,402	6,758	644	8.7%
	2000	6,881	6,368	513	7.5%
	2001	6,873	6,279	594	8.6%
	2002	6,624	6,012	612	9.2%
	2003	6,582	5,961	621	9.4%
	2004	6,574	5,926	648	9.9%
	2005	6,590	5,938	652	9.9%
Schoolcraft, MI	1990	3,819	3,199	620	16.2%
	1991	3,732	3,214	518	13.9%
	1992	3,900	3,299	601	15.4%
	1993	3,937	3,399	538	13.7%
	1994	4,112	3,530	582	14.2%
	1995	4,105	3,545	560	13.6%
	1996	4,091	3,638	453	11.1%
	1997	4,243	3,813	430	10.1%
	1998	4,245	3,862	383	9.0%
	1999	4,301	3,935	366	8.5%
	2000	3,925	3,610	315	8.0%
	2001	3,903	3,559	344	8.8%
	2002	3,835	3,456	379	9.9%
	2003	3,926	3,500	426	10.9%
	2004	4,053	3,613	440	10.9%
	2005	4,107	3,684	423	10.3%
Northern Lower Peninsula					
Alcona, MI	1990	3,934	3,419	515	13.1%
	1991	3,906	3,343	563	14.4%
	1992	4,123	3,447	676	16.4%
	1993	4,455	3,835	620	13.9%
	1994	4,838	4,231	607	12.5%
	1995	4,866	4,370	496	10.2%
	1996	4,941	4,517	424	8.6%
	1997	5,077	4,671	406	8.0%
	1998	4,992	4,655	337	6.8%
	1999	4,957	4,601	356	7.2%
	2000	4,465	4,167	298	6.7%
	2001	4,315	3,890	425	9.8%
	2002	4,146	3,711	435	10.5%
	2003	4,206	3,711	495	11.8%
	2004	4,211	3,758	453	10.8%
	2005	4,225	3,799	426	10.1%
Alpena, MI	1990	14,329	12,864	1,465	10.2%
	1991	14,332	12,589	1,743	12.2%
	1992	14,789	12,694	2,095	14.2%

County	Year	Civilian Labor Force	Employment	Unemploy-ment	Unemploy-ment Rate
	1993	14,900	12,971	1,929	12.9%
	1994	15,453	13,537	1,916	12.4%
	1995	15,319	13,726	1,593	10.4%
	1996	15,533	14,163	1,370	8.8%
	1997	15,901	14,694	1,207	7.6%
	1998	16,054	14,999	1,055	6.6%
	1999	16,028	15,085	943	5.9%
	2000	15,536	14,687	849	5.5%
	2001	15,687	14,489	1,198	7.6%
	2002	15,204	13,916	1,288	8.5%
	2003	15,279	13,891	1,388	9.1%
	2004	15,356	14,066	1,290	8.4%
	2005	15,144	14,030	1,114	7.4%
Antrim, MI	1990	8,889	7,991	898	10.1%
	1991	8,814	7,714	1,100	12.5%
	1992	8,954	7,779	1,175	13.1%
	1993	9,208	8,239	969	10.5%
	1994	9,357	8,432	925	9.9%
	1995	9,390	8,615	775	8.3%
	1996	9,576	8,939	637	6.7%
	1997	10,060	9,513	547	5.4%
	1998	10,235	9,638	597	5.8%
	1999	10,541	9,944	597	5.7%
	2000	11,603	11,078	525	4.5%
	2001	11,648	10,921	727	6.2%
	2002	11,613	10,800	813	7.0%
	2003	11,714	10,738	976	8.3%
	2004	12,111	11,164	947	7.8%
	2005	12,259	11,368	891	7.3%
Arenac, MI	1990	6,178	5,621	557	9.0%
	1991	6,096	5,474	622	10.2%
	1992	6,190	5,474	716	11.6%
	1993	6,430	5,748	682	10.6%
	1994	6,585	5,817	768	11.7%
	1995	6,651	6,014	637	9.6%
	1996	6,768	6,155	613	9.1%
	1997	6,880	6,317	563	8.2%
	1998	6,885	6,400	485	7.0%
	1999	6,967	6,510	457	6.6%
	2000	7,648	7,211	437	5.7%
	2001	7,673	7,090	583	7.6%
	2002	7,507	6,838	669	8.9%
	2003	7,704	6,959	745	9.7%
	2004	7,933	7,161	772	9.7%

County	Year	Civilian Labor Force	Employment	Unemploy-ment	Unemploy-ment Rate
	2005	8,026	7,312	714	8.9%
Benzie, MI	1990	6,072	5,361	711	11.7%
	1991	6,098	5,276	822	13.5%
	1992	6,294	5,529	765	12.2%
	1993	6,604	5,914	690	10.4%
	1994	6,853	6,242	611	8.9%
	1995	7,067	6,431	636	9.0%
	1996	7,148	6,655	493	6.9%
	1997	7,534	7,068	466	6.2%
	1998	7,656	7,226	430	5.6%
	1999	7,873	7,480	393	5.0%
	2000	8,391	8,017	374	4.5%
	2001	8,420	7,933	487	5.8%
	2002	8,410	7,841	569	6.8%
	2003	8,792	8,108	684	7.8%
	2004	8,988	8,327	661	7.4%
	2005	9,222	8,542	680	7.4%
Charlevoix, MI	1990	11,293	10,349	944	8.4%
	1991	11,573	10,379	1,194	10.3%
	1992	11,970	10,334	1,636	13.7%
	1993	12,350	10,938	1,412	11.4%
	1994	12,587	11,329	1,258	10.0%
	1995	12,728	11,669	1,059	8.3%
	1996	13,180	12,345	835	6.3%
	1997	13,679	12,953	726	5.3%
	1998	13,855	13,190	665	4.8%
	1999	14,269	13,602	667	4.7%
	2000	13,819	13,207	612	4.4%
	2001	13,841	13,032	809	5.8%
	2002	13,712	12,735	977	7.1%
	2003	13,836	12,719	1,117	8.1%
	2004	14,286	13,195	1,091	7.6%
	2005	14,552	13,517	1,035	7.1%
Cheboygan, MI	1990	10,523	9,258	1,265	12.0%
	1991	10,359	8,823	1,536	14.8%
	1992	10,725	9,197	1,528	14.2%
	1993	10,861	9,572	1,289	11.9%
	1994	11,702	10,289	1,413	12.1%
	1995	11,923	10,452	1,471	12.3%
	1996	11,853	10,598	1,255	10.6%
	1997	12,144	10,925	1,219	10.0%
	1998	12,477	11,256	1,221	9.8%
	1999	12,502	11,313	1,189	9.5%
	2000	12,943	11,903	1,040	8.0%

County	Year	Civilian Labor Force	Employment	Unemploy-ment	Unemploy-ment Rate
	2001	12,986	11,775	1,211	9.3%
	2002	12,574	11,288	1,286	10.2%
	2003	12,787	11,515	1,272	9.9%
	2004	12,975	11,763	1,212	9.3%
	2005	13,349	12,190	1,159	8.7%
Clare, MI	1990	9,278	8,285	993	10.7%
	1991	9,399	8,252	1,147	12.2%
	1992	9,817	8,494	1,323	13.5%
	1993	10,105	9,017	1,088	10.8%
	1994	10,467	9,285	1,182	11.3%
	1995	10,330	9,200	1,130	10.9%
	1996	9,884	9,050	834	8.4%
	1997	10,285	9,493	792	7.7%
	1998	10,423	9,656	767	7.4%
	1999	10,812	10,054	758	7.0%
	2000	13,028	12,332	696	5.3%
	2001	12,906	12,000	906	7.0%
	2002	12,763	11,747	1,016	8.0%
	2003	13,043	11,856	1,187	9.1%
	2004	13,514	12,216	1,298	9.6%
	2005	13,629	12,362	1,267	9.3%
Crawford, MI	1990	5,375	5,015	360	6.7%
	1991	5,548	5,071	477	8.6%
	1992	5,585	5,026	559	10.0%
	1993	5,530	4,957	573	10.4%
	1994	5,675	5,096	579	10.2%
	1995	5,561	5,069	492	8.8%
	1996	5,427	5,048	379	7.0%
	1997	5,576	5,210	366	6.6%
	1998	5,521	5,204	317	5.7%
	1999	5,678	5,343	335	5.9%
	2000	6,703	6,398	305	4.6%
	2001	6,747	6,382	365	5.4%
	2002	6,629	6,179	450	6.8%
	2003	6,700	6,195	505	7.5%
	2004	6,869	6,367	502	7.3%
	2005	6,853	6,392	461	6.7%
Emmet, MI	1990	14,156	12,823	1,333	9.4%
	1991	14,500	12,806	1,694	11.7%
	1992	14,986	13,006	1,980	13.2%
	1993	15,230	13,467	1,763	11.6%
	1994	15,790	13,919	1,871	11.8%
	1995	15,949	14,235	1,714	10.7%
	1996	16,202	14,748	1,454	9.0%

County	Year	Civilian Labor Force	Employment	Unemploy-ment	Unemploy-ment Rate
	1997	17,008	15,705	1,303	7.7%
	1998	17,273	16,065	1,208	7.0%
	1999	18,080	16,937	1,143	6.3%
	2000	18,057	17,077	980	5.4%
	2001	18,250	17,147	1,103	6.0%
	2002	18,426	17,127	1,299	7.0%
	2003	19,130	17,681	1,449	7.6%
	2004	19,956	18,376	1,580	7.9%
	2005	20,352	18,809	1,543	7.6%
Gladwin, MI	1990	8,106	7,321	785	9.7%
	1991	8,100	7,101	999	12.3%
	1992	8,195	7,045	1,150	14.0%
	1993	8,405	7,460	945	11.2%
	1994	8,858	7,925	933	10.5%
	1995	8,870	8,074	796	9.0%
	1996	8,974	8,301	673	7.5%
	1997	9,221	8,536	685	7.4%
	1998	9,125	8,446	679	7.4%
	1999	9,037	8,438	599	6.6%
	2000	10,963	10,392	571	5.2%
	2001	11,034	10,286	748	6.8%
	2002	10,974	10,092	882	8.0%
	2003	11,207	10,167	1,040	9.3%
	2004	11,202	10,057	1,145	10.2%
	2005	11,055	9,981	1,074	9.7%
Grand Traverse, MI	1990	36,055	33,601	2,454	6.8%
	1991	36,176	33,296	2,880	8.0%
	1992	38,326	35,130	3,196	8.3%
	1993	39,848	37,326	2,522	6.3%
	1994	41,390	39,031	2,359	5.7%
	1995	41,838	39,472	2,366	5.7%
	1996	42,733	40,802	1,931	4.5%
	1997	44,497	42,769	1,728	3.9%
	1998	44,804	43,274	1,530	3.4%
	1999	45,428	43,941	1,487	3.3%
	2000	45,570	44,028	1,542	3.4%
	2001	45,710	43,599	2,111	4.6%
	2002	45,553	43,031	2,522	5.5%
	2003	46,795	43,944	2,851	6.1%
	2004	47,800	44,759	3,041	6.4%
	2005	48,656	45,913	2,743	5.6%
Iosco, MI	1990	11,172	10,227	945	8.5%
	1991	11,175	10,082	1,093	9.8%
	1992	11,433	10,117	1,316	11.5%

County	Year	Civilian Labor Force	Employment	Unemploy-ment	Unemploy-ment Rate
	1993	10,757	9,361	1,396	13.0%
	1994	10,930	9,694	1,236	11.3%
	1995	11,133	10,105	1,028	9.2%
	1996	11,265	10,373	892	7.9%
	1997	11,601	10,704	897	7.7%
	1998	11,634	10,858	776	6.7%
	1999	11,588	10,736	852	7.4%
	2000	11,603	10,867	736	6.3%
	2001	11,071	10,067	1,004	9.1%
	2002	10,719	9,660	1,059	9.9%
	2003	10,624	9,556	1,068	10.1%
	2004	10,704	9,684	1,020	9.5%
	2005	10,751	9,790	961	8.9%
Kalkaska, MI	1990	6,146	5,541	605	9.8%
	1991	6,300	5,548	752	11.9%
	1992	6,560	5,766	794	12.1%
	1993	6,939	6,132	807	11.6%
	1994	7,119	6,432	687	9.7%
	1995	7,170	6,555	615	8.6%
	1996	7,419	6,863	556	7.5%
	1997	7,609	7,132	477	6.3%
	1998	7,621	7,145	476	6.2%
	1999	7,691	7,263	428	5.6%
	2000	8,551	8,156	395	4.6%
	2001	8,600	7,984	616	7.2%
	2002	8,498	7,850	648	7.6%
	2003	8,689	7,984	705	8.1%
	2004	8,762	8,085	677	7.7%
	2005	8,939	8,294	645	7.2%
Lake, MI	1990	2,733	2,406	327	12.0%
	1991	2,774	2,409	365	13.2%
	1992	3,059	2,624	435	14.2%
	1993	3,245	2,799	446	13.7%
	1994	3,277	2,859	418	12.8%
	1995	3,149	2,741	408	13.0%
	1996	3,093	2,769	324	10.5%
	1997	3,086	2,824	262	8.5%
	1998	3,233	2,988	245	7.6%
	1999	3,442	3,189	253	7.4%
	2000	4,456	4,207	249	5.6%
	2001	4,467	4,139	328	7.3%
	2002	4,457	4,088	369	8.3%
	2003	4,506	4,069	437	9.7%
	2004	4,487	4,025	462	10.3%

County	Year	Civilian Labor Force	Employment	Unemploy-ment	Unemploy-ment Rate
	2005	4,499	4,075	424	9.4%
Leelanau, MI	1990	8,779	8,229	550	6.3%
	1991	8,814	8,136	678	7.7%
	1992	9,408	8,661	747	7.9%
	1993	9,933	9,289	644	6.5%
	1994	10,327	9,744	583	5.6%
	1995	10,282	9,714	568	5.5%
	1996	10,404	9,943	461	4.4%
	1997	10,980	10,557	423	3.9%
	1998	11,018	10,667	351	3.2%
	1999	11,129	10,797	332	3.0%
	2000	11,325	10,983	342	3.0%
	2001	11,145	10,741	404	3.6%
	2002	11,001	10,485	516	4.7%
	2003	11,382	10,757	625	5.5%
	2004	11,574	10,969	605	5.2%
	2005	11,818	11,252	566	4.8%
Manistee, MI	1990	9,399	8,398	1,001	10.7%
	1991	9,318	8,159	1,159	12.4%
	1992	9,716	8,319	1,397	14.4%
	1993	9,899	8,622	1,277	12.9%
	1994	10,206	8,985	1,221	12.0%
	1995	10,211	9,024	1,187	11.6%
	1996	10,059	9,067	992	9.9%
	1997	10,255	9,457	798	7.8%
	1998	10,288	9,629	659	6.4%
	1999	10,911	10,317	594	5.4%
	2000	11,830	11,208	622	5.3%
	2001	12,041	11,285	756	6.3%
	2002	11,913	11,027	886	7.4%
	2003	11,916	10,885	1,031	8.7%
	2004	11,874	10,853	1,021	8.6%
	2005	12,115	11,187	928	7.7%
Mason, MI	1990	12,199	11,185	1,014	8.3%
	1991	12,563	11,267	1,296	10.3%
	1992	13,407	11,720	1,687	12.6%
	1993	13,943	12,436	1,507	10.8%
	1994	14,418	12,910	1,508	10.5%
	1995	14,153	12,760	1,393	9.8%
	1996	13,672	12,526	1,146	8.4%
	1997	14,013	13,027	986	7.0%
	1998	13,918	13,074	844	6.1%
	1999	14,229	13,437	792	5.6%
	2000	14,731	14,028	703	4.8%

County	Year	Civilian Labor Force	Employment	Unemploy-ment	Unemploy-ment Rate
	2001	15,427	14,025	1,402	9.1%
	2002	15,358	13,662	1,696	11.0%
	2003	15,367	13,669	1,698	11.0%
	2004	15,281	13,867	1,414	9.3%
	2005	15,352	14,205	1,147	7.5%
Mecosta, MI	1990	16,469	15,146	1,323	8.0%
	1991	16,344	14,869	1,475	9.0%
	1992	16,255	14,832	1,423	8.8%
	1993	17,111	15,859	1,252	7.3%
	1994	17,328	16,172	1,156	6.7%
	1995	17,143	16,230	913	5.3%
	1996	17,283	16,424	859	5.0%
	1997	17,567	16,789	778	4.4%
	1998	17,769	17,096	673	3.8%
	1999	17,948	17,277	671	3.7%
	2000	18,923	18,119	804	4.2%
	2001	19,103	18,081	1,022	5.3%
	2002	19,083	17,949	1,134	5.9%
	2003	19,865	18,548	1,317	6.6%
	2004	20,051	18,654	1,397	7.0%
	2005	20,181	18,783	1,398	6.9%
Missaukee, MI	1990	5,388	4,820	568	10.5%
	1991	5,354	4,761	593	11.1%
	1992	5,519	4,965	554	10.0%
	1993	5,810	5,297	513	8.8%
	1994	6,247	5,749	498	8.0%
	1995	6,186	5,664	522	8.4%
	1996	6,175	5,773	402	6.5%
	1997	6,242	5,855	387	6.2%
	1998	6,420	6,046	374	5.8%
	1999	6,946	6,584	362	5.2%
	2000	7,000	6,691	309	4.4%
	2001	6,756	6,301	455	6.7%
	2002	6,718	6,235	483	7.2%
	2003	6,657	6,137	520	7.8%
	2004	6,781	6,253	528	7.8%
	2005	6,842	6,358	484	7.1%
Montmorency, MI	1990	3,243	2,753	490	15.1%
	1991	3,162	2,602	560	17.7%
	1992	3,535	2,844	691	19.5%
	1993	3,520	2,949	571	16.2%
	1994	3,564	2,952	612	17.2%
	1995	3,461	2,923	538	15.5%
	1996	3,330	2,926	404	12.1%

County	Year	Civilian Labor Force	Employment	Unemploy-ment	Unemploy-ment Rate
	1997	3,461	3,072	389	11.2%
	1998	3,523	3,135	388	11.0%
	1999	3,544	3,174	370	10.4%
	2000	4,083	3,760	323	7.9%
	2001	4,151	3,742	409	9.9%
	2002	4,233	3,790	443	10.5%
	2003	4,295	3,798	497	11.6%
	2004	4,363	3,843	520	11.9%
	2005	4,319	3,823	496	11.5%
Newaygo, MI	1990	17,293	15,626	1,667	9.6%
	1991	17,730	15,652	2,078	11.7%
	1992	18,462	16,175	2,287	12.4%
	1993	19,573	17,554	2,019	10.3%
	1994	20,303	18,161	2,142	10.6%
	1995	19,958	17,985	1,973	9.9%
	1996	20,064	18,211	1,853	9.2%
	1997	20,216	18,660	1,556	7.7%
	1998	20,510	19,140	1,370	6.7%
	1999	20,645	19,334	1,311	6.4%
	2000	23,002	21,944	1,058	4.6%
	2001	23,302	21,867	1,435	6.2%
	2002	22,861	21,053	1,808	7.9%
	2003	22,844	20,849	1,995	8.7%
	2004	23,178	21,372	1,806	7.8%
	2005	23,677	21,975	1,702	7.2%
Oceana, MI	1990	11,302	10,065	1,237	10.9%
	1991	11,082	9,734	1,348	12.2%
	1992	11,492	9,821	1,671	14.5%
	1993	11,965	10,404	1,561	13.0%
	1994	13,278	11,546	1,732	13.0%
	1995	12,987	11,515	1,472	11.3%
	1996	13,318	11,976	1,342	10.1%
	1997	13,855	12,809	1,046	7.5%
	1998	13,872	12,907	965	7.0%
	1999	14,217	13,272	945	6.6%
	2000	13,217	12,446	771	5.8%
	2001	13,463	12,514	949	7.0%
	2002	13,425	12,283	1,142	8.5%
	2003	13,570	12,301	1,269	9.4%
	2004	13,991	12,821	1,170	8.4%
	2005	14,494	13,360	1,134	7.8%
Ogemaw, MI	1990	7,222	6,509	713	9.9%
	1991	7,147	6,350	797	11.2%
	1992	7,467	6,516	951	12.7%

County	Year	Civilian Labor Force	Employment	Unemploy-ment	Unemploy-ment Rate
	1993	7,823	6,974	849	10.9%
	1994	8,335	7,395	940	11.3%
	1995	8,322	7,471	851	10.2%
	1996	8,397	7,627	770	9.2%
	1997	8,573	7,908	665	7.8%
	1998	8,522	7,943	579	6.8%
	1999	8,815	8,260	555	6.3%
	2000	9,600	9,089	511	5.3%
	2001	9,692	8,991	701	7.2%
	2002	9,665	8,874	791	8.2%
	2003	9,700	8,818	882	9.1%
	2004	9,890	9,051	839	8.5%
	2005	9,979	9,252	727	7.3%
Osceola, MI	1990	8,802	7,805	997	11.3%
	1991	8,884	7,800	1,084	12.2%
	1992	9,437	8,441	996	10.6%
	1993	10,245	9,258	987	9.6%
	1994	10,632	9,715	917	8.6%
	1995	10,593	9,697	896	8.5%
	1996	10,675	9,991	684	6.4%
	1997	10,953	10,263	690	6.3%
	1998	10,797	10,178	619	5.7%
	1999	10,720	10,171	549	5.1%
	2000	11,176	10,674	502	4.5%
	2001	11,155	10,411	744	6.7%
	2002	10,955	10,199	756	6.9%
	2003	10,890	10,018	872	8.0%
	2004	10,544	9,639	905	8.6%
	2005	10,461	9,697	764	7.3%
Oscoda, MI	1990	2,927	2,688	239	8.2%
	1991	2,975	2,678	297	10.0%
	1992	3,153	2,831	322	10.2%
	1993	3,390	3,056	334	9.9%
	1994	3,599	3,224	375	10.4%
	1995	3,636	3,283	353	9.7%
	1996	3,418	3,094	324	9.5%
	1997	3,408	3,128	280	8.2%
	1998	3,411	3,157	254	7.4%
	1999	3,639	3,378	261	7.2%
	2000	3,894	3,660	234	6.0%
	2001	3,871	3,540	331	8.6%
	2002	3,764	3,359	405	10.8%
	2003	3,807	3,377	430	11.3%
	2004	3,892	3,466	426	10.9%

County	Year	Civilian Labor Force	Employment	Unemploy-ment	Unemploy-ment Rate
	2005	3,950	3,545	405	10.3%
Otsego, MI	1990	9,369	8,787	582	6.2%
	1991	9,634	8,773	861	8.9%
	1992	10,231	9,249	982	9.6%
	1993	10,955	10,107	848	7.7%
	1994	11,825	11,012	813	6.9%
	1995	12,130	11,378	752	6.2%
	1996	12,280	11,673	607	4.9%
	1997	12,861	12,303	558	4.3%
	1998	13,073	12,529	544	4.2%
	1999	13,345	12,779	566	4.2%
	2000	12,354	11,846	508	4.1%
	2001	12,356	11,638	718	5.8%
	2002	12,233	11,344	889	7.3%
	2003	12,344	11,341	1,003	8.1%
	2004	12,758	11,800	958	7.5%
	2005	13,135	12,252	883	6.7%
Presque Isle, MI	1990	6,063	5,352	711	11.7%
	1991	6,147	5,238	909	14.8%
	1992	6,253	5,199	1,054	16.9%
	1993	6,365	5,301	1,064	16.7%
	1994	6,479	5,316	1,163	18.0%
	1995	6,273	5,267	1,006	16.0%
	1996	6,167	5,368	799	13.0%
	1997	6,251	5,541	710	11.4%
	1998	6,137	5,496	641	10.4%
	1999	6,223	5,618	605	9.7%
	2000	6,497	5,966	531	8.2%
	2001	6,611	6,002	609	9.2%
	2002	6,458	5,797	661	10.2%
	2003	6,562	5,833	729	11.1%
	2004	6,405	5,686	719	11.2%
	2005	6,305	5,629	676	10.7%
Roscommon, MI	1990	7,156	6,505	651	9.1%
	1991	6,929	6,206	723	10.4%
	1992	7,405	6,524	881	11.9%
	1993	7,779	6,967	812	10.4%
	1994	8,022	7,133	889	11.1%
	1995	8,186	7,342	844	10.3%
	1996	7,973	7,251	722	9.1%
	1997	8,130	7,477	653	8.0%
	1998	7,982	7,416	566	7.1%
	1999	8,141	7,584	557	6.8%
	2000	10,371	9,817	554	5.3%

County	Year	Civilian Labor Force	Employment	Unemploy-ment	Unemploy-ment Rate
	2001	10,439	9,775	664	6.4%
	2002	10,441	9,653	788	7.5%
	2003	10,700	9,805	895	8.4%
	2004	11,310	10,376	934	8.3%
	2005	11,380	10,487	893	7.8%
Wexford, MI	1990	12,432	10,901	1,531	12.3%
	1991	12,249	10,683	1,566	12.8%
	1992	12,804	11,034	1,770	13.8%
	1993	13,261	11,800	1,461	11.0%
	1994	14,131	12,733	1,398	9.9%
	1995	14,125	12,588	1,537	10.9%
	1996	13,932	12,749	1,183	8.5%
	1997	14,320	13,103	1,217	8.5%
	1998	14,382	13,280	1,102	7.7%
	1999	15,321	14,405	916	6.0%
	2000	15,596	14,767	829	5.3%
	2001	15,034	13,789	1,245	8.3%
	2002	14,607	13,479	1,128	7.7%
	2003	14,641	13,318	1,323	9.0%
	2004	14,770	13,549	1,221	8.3%
	2005	14,867	13,775	1,092	7.3%
Michigan					
	1990	4,619,988	4,262,409	357,579	7.7%
	1991	4,588,881	4,162,074	426,807	9.3%
	1992	4,661,696	4,234,783	426,913	9.2%
	1993	4,711,598	4,364,545	347,053	7.4%
	1994	4,804,463	4,508,900	295,563	6.2%
	1995	4,834,939	4,576,521	258,418	5.3%
	1996	4,888,192	4,647,116	241,076	4.9%
	1997	4,963,077	4,748,691	214,386	4.3%
	1998	5,007,953	4,809,503	198,450	4.0%
	1999	5,089,421	4,897,144	192,277	3.8%
	2000	5,143,916	4,953,421	190,495	3.7%
	2001	5,143,869	4,876,338	267,531	5.2%
	2002	5,049,238	4,733,812	315,426	6.2%
	2003	5,054,902	4,696,338	358,564	7.1%
	2004	5,073,174	4,717,152	356,022	7.0%
	2005	5,097,457	4,753,822	343,635	6.7%

Table A4.19. Unemployment rate (percent), by month and ecoregion, 1990 – 2006.

Western Upper Peninsula												
Year	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**
1990	6.4	8.1	9.1	9.2	8.0	8.0	7.7	7.3	7.3	7.7	8.7	8.7
1991	9.5	10.2	10.0	10.4	9.5	9.3	8.8	7.9	8.0	8.4	8.7	10.1
1992	11.4	12.3	12.3	12.3	11.2	11.3	10.4	8.8	8.7	7.5	8.5	9.6
1993	11.0	10.3	10.0	9.9	9.3	9.7	8.7	7.4	7.4	7.0	7.9	8.7
1994	10.6	10.7	10.1	9.9	8.5	8.7	8.0	7.4	7.1	6.4	6.6	7.1
1995	9.1	9.1	9.9	10.4	8.8	8.4	7.1	6.8	6.3	6.8	8.3	7.8
1996	9.1	8.7	8.2	8.6	8.3	7.4	6.5	5.6	5.3	4.8	6.1	6.6
1997	8.3	8.0	8.0	7.6	6.5	7.4	5.8	5.0	4.8	4.4	5.3	5.9
1998	7.1	7.1	7.8	5.9	5.4	5.9	3.8	4.2	4.1	4.1	4.7	5.4
1999	6.5	6.5	6.5	6.1	5.2	5.5	4.2	4.3	4.8	4.6	4.1	4.8
2000	5.7	5.2	6.0	4.6	4.6	5.0	4.8	4.3	3.9	3.5	5.0	5.2
2001	6.6	6.4	6.8	6.2	5.6	6.5	5.1	4.9	4.4	4.4	6.1	7.3
2002	8.8	8.3	8.9	8.0	7.1	7.5	6.6	5.6	5.0	4.7	5.8	6.5
2003	8.3	8.1	8.1	7.4	7.8	8.4	7.1	6.3	6.1	5.4	6.5	6.8
2004	8.1	7.9	8.6	7.2	7.0	6.8	6.8	5.7	5.4	5.0	6.2	7.0
2005	7.9	7.8	7.7	7.0	6.6	6.2	6.0	5.2	4.9	4.3	5.5	6.1
2006	6.7	7.6	8.0	7.6								
Eastern Upper Peninsula												
Year	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**
1990	15.6	18.6	19.0	16.6	10.8	8.8	8.2	7.2	7.3	7.0	12.5	15.5
1991	17.5	18.5	17.9	16.2	10.2	9.8	8.5	7.4	7.7	7.8	14.7	18.0
1992	21.4	21.9	21.0	18.0	12.1	11.1	9.9	8.3	8.9	8.3	13.3	16.8
1993	19.3	18.2	16.9	14.0	10.1	9.8	8.4	7.1	7.4	7.6	11.9	15.1
1994	19.0	18.6	17.7	15.4	10.3	8.9	8.1	7.4	7.4	7.2	10.3	12.9
1995	16.7	15.9	16.2	14.5	9.5	8.2	6.4	6.2	5.9	5.6	10.4	12.2
1996	14.9	13.6	12.2	11.7	7.8	6.6	5.4	4.8	4.7	4.4	8.8	10.6
1997	13.3	12.7	12.4	10.5	6.5	6.6	4.9	5.0	5.3	5.1	8.8	10.5
1998	13.1	12.5	12.4	8.8	6.3	6.2	3.8	4.5	4.5	4.2	8.0	10.2
1999	11.2	11.8	11.0	9.5	6.1	5.8	4.1	3.5	3.6	3.5	7.8	9.2
2000	9.7	9.1	9.7	7.1	5.4	5.6	5.3	4.6	4.3	3.8	7.1	8.3
2001	11.1	10.7	11.1	9.3	6.5	6.0	4.8	4.6	4.4	4.4	8.7	10.5
2002	12.4	12.0	12.5	11.0	7.4	7.3	6.0	5.0	4.7	4.5	7.7	9.5
2003	12.3	12.0	12.3	10.6	8.3	8.0	7.1	6.1	6.1	5.6	9.0	10.8
2004	12.8	12.5	13.5	10.5	8.1	7.4	6.9	5.8	5.7	5.6	9.3	11.4
2005	12.9	12.9	12.6	10.6	8.1	6.9	6.6	5.5	5.5	5.1	8.3	10.0
2006	11.3	12.4	12.6	11.2								
Northern Lower Peninsula												
Year	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**
1990	11.1	12.7	12.2	10.9	8.8	8.3	8.3	7.5	7.3	6.7	8.7	10.4
1991	13.0	14.0	14.0	12.5	10.3	10.1	9.4	8.7	8.8	8.7	10.8	12.6
1992	15.8	16.2	15.8	13.9	11.8	11.9	11.1	9.2	9.3	8.5	10.1	11.4

1993	13.5	13.0	12.5	11.2	10.1	10.1	9.5	7.7	8.4	8.4	9.8	10.7
1994	13.8	13.7	13.3	11.5	9.1	9.4	9.0	7.7	7.7	7.3	8.2	8.9
1995	12.3	12.0	12.2	11.2	8.9	9.0	8.1	6.6	6.4	6.1	8.0	8.7
1996	11.2	10.5	9.7	9.2	7.5	7.0	6.9	5.2	5.4	5.0	6.8	7.5
1997	9.8	9.4	9.1	7.6	5.9	5.8	5.6	4.6	5.0	4.6	6.2	6.9
1998	9.1	8.7	8.7	5.7	5.2	5.5	4.1	4.3	4.4	4.3	5.9	6.7
1999	8.2	8.6	8.1	6.3	5.2	5.3	4.7	3.6	3.7	3.7	5.2	5.8
2000	6.6	6.3	6.5	4.5	4.4	4.6	4.8	3.9	3.8	3.5	5.1	5.8
2001	8.7	8.3	8.6	6.8	5.9	5.9	5.6	5.0	5.0	5.1	7.1	8.1
2002	10.0	9.7	10.4	8.5	7.1	7.3	7.2	5.8	5.5	5.4	7.0	8.1
2003	10.2	10.2	10.4	8.7	8.2	8.4	8.3	6.9	6.8	6.4	7.9	8.6
2004	10.5	10.2	10.9	8.1	7.8	7.6	8.0	6.2	6.2	5.9	7.7	8.8
2005	10.1	10.1	9.9	8.0	7.2	6.6	7.1	5.6	5.6	5.2	6.9	7.7
2006	8.7	9.7	9.9	8.5								
Michigan												
Year	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**
1990	9.3	8.5	8.1	7.4	7.2	7.3	7.8	7.4	7.1	7.1	7.7	8.0
1991	9.6	10.1	10.4	9.5	9.2	9.6	9.5	8.7	8.7	8.5	8.7	9.1
1992	10.6	10.6	10.3	9.2	9.1	9.8	9.9	8.7	8.5	7.7	7.6	7.7
1993	8.7	8.4	7.9	7.2	7.2	7.7	7.9	6.8	6.8	6.7	6.7	6.8
1994	8.3	7.9	7.5	6.4	5.8	6.2	6.7	5.7	5.3	5.0	4.6	4.6
1995	6.2	5.9	6.1	5.6	5.3	5.8	6.1	5.0	4.7	4.4	4.6	4.6
1996	6.0	5.5	5.6	4.8	4.9	5.1	5.6	4.4	4.4	4.1	4.3	4.5
1997	5.7	5.2	5.0	4.2	3.9	4.4	4.7	3.7	3.9	3.6	3.7	3.8
1998	5.0	4.6	4.6	3.2	3.4	4.1	4.8	3.6	3.6	3.5	3.5	3.8
1999	4.8	4.7	4.4	3.7	3.6	4.0	4.2	3.1	3.2	3.1	3.3	3.2
2000	4.1	3.8	4.0	3.1	3.5	3.9	4.7	3.7	3.4	3.1	3.6	3.7
2001	5.5	5.1	5.4	4.5	4.7	5.1	5.5	5.0	4.9	5.1	5.7	5.9
2002	7.3	6.6	7.0	6.0	6.1	6.6	7.0	5.7	5.4	5.3	5.8	6.1
2003	7.6	7.4	7.6	6.8	7.1	7.8	8.1	6.9	6.7	6.4	6.4	6.4
2004	7.7	7.3	7.8	6.3	6.8	7.2	7.9	6.6	6.5	6.4	6.8	6.9
2005	7.8	7.8	7.6	6.6	6.7	6.8	7.3	6.1	6.0	5.6	6.2	6.3
2006	7.1	7.2	7.5	6.8	5.8							

Data Source: Bureau of Labor Statistics

Table A4.20. Employment and firms in the forest products industries by county and ecoregion, 2005.

Region/County	Estimated Employees	Logging/ Trucking Firms	Primary Manufacturing Firms	Secondary Manufacturing Firms
Western Upper Peninsula				
Baraga	198	25	5	1
Delta	4,031	47	13	18
Dickinson	2,090	31	5	5
Gogebic	388	18	5	5
Houghton	549	31	4	7
Iron	483	59	5	9
Keweenaw	39	5		4
Marquette	678	41	6	13
Menominee	1,513	55	17	22
Ontonagon	428	23	1	3
WUP total	10,397	335	61	87
Eastern Upper Peninsula				
Alger	781	17	4	4
Chippewa	334	25	5	5
Luce	339	24	3	2
Mackinac	173	19	5	7
Schoolcraft	349	26	2	3
EUP Total	1,976	111	19	21
Northern Lower Peninsula				
Alcona	204	15	7	4
Alpena	770	21	9	15
Antrim	189	6	4	7
Arenac	86	3	5	3
Benzie	82	9	2	2
Charlevoix	482	4	3	6
Cheboygan	240	11	6	9
Clare	163	4	9	6
Crawford	652	6	6	7
Emmet	467	4	6	8
Gladwin	90	8	7	4
Grand Traverse	347	6	1	21
Iosco	216	7	4	6
Kalkaska	39	6	1	2
Lake	211	10	2	1
Leelanau	68	6	1	7
Manistee	373	9	3	1
Mason	359	5	2	8
Mecosta	122	9	4	4
Missaukee	318	20	5	3
Montmorency	157	16	4	2

Region/County	Estimated Employees	Logging/ Trucking Firms	Primary Manufacturing Firms	Secondary Manufacturing Firms
Newaygo	113	11	5	5
Oceana	118	8	6	5
Ogemaw	151	21	7	6
Osceola	86	6	6	2
Oscoda	160	8	15	9
Otsego	414	9	4	4
Presque Isle	229	16	9	7
Roscommon	31	8		2
Wexford	155	15	4	3
NLP Total	7,092	287	147	169
Michigan	88,774	840	339	1,291

Data Source: Data compiled by Jack Pilon, Michigan DNR, Gaylord, MI.

Notes: Data are generally based on 2005 information. Primary companies use products directly from the woods; secondary companies add value to primary products. Some companies may have primary and secondary operations and do their own logging. In some cases, employment numbers are estimated and based on the employee range reported by firms.

Table A4.21. Tourism-related spending by county and ecoregion, 1995, 1997, and 2000.

Ecoregion/ County	Spending, 1995	Spending, 1997	Spending, 2000	Change, 1997-2000	Change, 1997-2000	State Market Share, 2000
	Million dollars				percent	
Western Upper Peninsula						
Baraga	$11.8	$12.0	$14.1	$2.1	14.9%	0.2%
Delta	$41.7	$51.0	$46.9	-$4.1	-8.7%	0.5%
Dickinson	$22.8	$28.0	$26.6	-$1.4	-5.3%	0.3%
Gogebic	$29.1	$34.0	$45.3	$11.3	24.9%	0.5%
Houghton	$43.4	$50.0	$62.0	$12.0	19.4%	0.7%
Iron	$17.8	$22.0	$24.1	$2.1	8.7%	0.3%
Keweenaw	$10.2	$11.0	$17.8	$6.8	38.2%	0.2%
Marquette	$79.6	$73.0	$82.7	$9.7	11.7%	0.9%
Menominee	$16.1	$19.0	$23.5	$4.5	19.1%	0.3%
Ontonagon	$20.6	$22.0	$15.7	-$6.3	-40.1%	0.2%
WUP Region	$293.1	$322.0	$358.7	$36.7	10.2%	4.0%
Eastern Upper Peninsula						
Alger	$32.6	$36.0	$28.1	-$7.9	-28.1%	0.3%
Chippewa	$86.2	$101.0	$97.9	-$3.1	-3.2%	1.1%
Luce	$15.7	$16.0	$17.7	$1.7	9.6%	0.2%
Mackinac	$130.2	$178.0	$175.2	-$2.8	-1.6%	2.0%
Schoolcraft	$34.8	$31.0	$24.7	-$6.3	-25.5%	0.3%
EUP Region	$299.5	$362.0	$343.6	-$18.4	-5.4%	3.9%
Northern Lower Peninsula						
Alcona	$37.1	$35.0	$34.2	-$0.8	-2.3%	0.4%

Alpena	$33.6	$34.0	$34.3	$0.3	0.9%	0.4%
Antrim	$74.2	$64.0	$67.8	$3.8	5.6%	0.8%
Arenac	$21.5	$22.0	$22.6	$0.6	2.7%	0.3%
Benzie	$44.0	$71.0	$58.8	-$12.2	-20.7%	0.7%
Charlevoix	$69.2	$86.0	$90.1	$4.1	4.6%	1.0%
Cheboygan	$56.7	$59.0	$61.3	$2.3	3.8%	0.7%
Clare	$56.0	$58.0	$66.3	$8.3	12.5%	0.7%
Crawford	$48.2	$44.0	$45.1	$1.1	2.4%	0.5%
Emmet	$120.7	$149.0	$121.9	-$27.1	-22.2%	1.4%
Gladwin	$36.0	$36.0	$38.9	$2.9	7.5%	0.4%
Grand Traverse	$225.1	$209.0	$234.0	$25.0	10.7%	2.6%
Iosco	$64.5	$65.0	$60.4	-$4.6	-7.6%	0.7%
Kalkaska	$23.7	$25.0	$28.6	$3.6	12.6%	0.3%
Lake	$34.5	$39.0	$43.7	$4.7	10.8%	0.5%
Leelanau	$56.2	$62.0	$63.7	$1.7	2.7%	0.7%
Manistee	$35.9	$39.0	$42.1	$3.1	7.4%	0.5%
Mason	$44.3	$48.0	$62.3	$14.3	23.0%	0.7%
Mecosta	$38.5	$49.0	$46.9	-$2.1	-4.5%	0.5%
Missaukee	$18.2	$18.0	$21.8	$3.8	17.4%	0.2%
Montmorency	$31.5	$31.0	$29.7	-$1.3	-4.4%	0.3%
Newaygo	$38.9	$41.0	$41.6	$0.6	1.4%	0.5%
Oceana	$31.6	$38.0	$43.1	$5.1	11.8%	0.5%
Ogemaw	$41.2	$41.0	$46.7	$5.7	12.2%	0.5%
Osceola	$25.2	$26.0	$27.7	$1.7	6.1%	0.3%
Oscoda	$28.2	$28.0	$30.6	$2.6	8.5%	0.3%
Otsego	$54.9	$78.0	$78.9	$0.9	1.1%	0.9%
Presque Isle	$22.6	$22.0	$24.6	$2.6	10.6%	0.3%
Roscommon	$72.4	$71.0	$77.7	$6.7	8.6%	0.9%
Wexford	$44.2	$46.0	$50.1	$4.1	8.2%	0.6%
NLP Region	$1,528.5	$1,634.0	$1,695.5	$61.5	3.6%	19.1%
Michigan						
Michigan	$6,378.0	$7,230.0	$8,891.0	$1,661.0	18.7%	100.0%

Note: Excludes air-related travel expenditures in counties with major airports.

Data Source: Stynes, D. Michigan county-level tourism spending estimates by lodging segments, 1995,http://www.msu.edu/course/prr/840/econimpact/michigan/MItsm95.htm; 1997, http://www.msu.edu/course/prr/840/econimpact/michigan/michtsm97.htm; 2000, http://www.prr.msu.edu/miteim/michtsm00.htm.

Table A4.22. DNR employment trends by county and eco-region, 1995-2005

Region/County	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Baraga	54	54	49	52	80	93	80	61	45	48	41
Delta	50	53	47	58	56	50	45	49	37	40	39
Dickinson	19	17	22	20	18	16	15	16	12	10	10
Gogebic	14	9	10	10	10	13	13	12	8	6	6
Houghton	18	28	23	30	32	26	29	30	27	28	27
Iron	40	36	31	37	34	33	36	35	26	30	26
Keweenaw	10	25	23	26	21	22	24	29	22	21	22
Marquette	243	158	185	110	116	110	104	110	88	102	102
Menominee	26	26	23	29	26	30	55	31	21	21	25
Ontonagon	28	36	35	20	42	44	44	42	32	43	38
WUP Total	502	442	448	392	435	437	445	415	318	349	336
Region/County	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
Alger	14	17	19	17	19	19	14	16	15	14	14
Chippewa	49	62	60	60	62	58	57	65	57	63	66
Luce	56	62	58	59	63	59	62	60	55	60	54
Mackinac	79	86	74	76	77	74	76	45	42	42	44
Schoolcraft	51	56	46	45	45	43	41	41	41	45	40
EUP Total	249	283	257	257	266	253	250	227	210	224	218
Region/County	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
Alcona	18	16	17	20	22	20	21	24	17	20	17
Alpena	14	16	15	19	22	20	20	18	17	15	13
Antrim	3	3	2	3	4	4	2	3	1	2	1
Arenac	4	4	4	4	11	8	11	6	1	1	0
Benzie	24	30	26	19	18	11	15	16	15	14	12
Charlevoix	63	70	71	71	69	69	76	86	84	82	76
Cheboygan	86	88	98	87	90	87	98	68	74	75	73
Clare	33	28	34	28	30	30	26	24	23	23	22
Crawford	137	140	122	133	129	129	124	115	110	134	123
Emmet	61	50	52	46	47	51	48	48	49	53	50
Gladwin	14	19	21	18	18	23	22	19	13	16	16
Grand Traverse	56	68	65	76	68	70	69	67	60	64	62
Iosco	64	49	52	52	47	49	51	48	39	39	43
Kalkaska	11	13	15	13	13	24	11	11	8	8	8
Lake	19	22	19	24	22	24	22	21	14	18	18
Leelanau	6	8	6	7	9	7	10	10	6	9	6
Manistee	16	16	12	16	17	16	16	15	14	16	16
Mason	45	46	42	44	44	42	46	40	39	42	40
Missaukee	1	2	2	1	2	2	3	3	0	0	0
Montmorency	41	45	38	43	38	43	42	39	34	35	30
Newaygo	3	3	6	6	8	7	7	7	5	5	5
Oceana	58	51	52	51	50	56	59	67	68	62	60
Ogemaw	28	34	34	40	24	30	26	26	20	24	24
Osceola	9	9	8	10	11	10	10	10	3	2	2

Region/County	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Oscoda	33	22	20	20	21	19	20	12	10	8	6
Otsego	98	70	66	103	115	109	114	78	73	82	76
Presque Isle	25	22	23	25	24	27	30	27	21	24	25
Roscommon	180	162	188	110	116	117	100	98	90	90	93
Wexford	93	54	59	72	72	76	82	84	78	85	76
NLP Total	**1243**	**1160**	**1169**	**1161**	**1161**	**1180**	**1181**	**1090**	**986**	**1048**	**993**

Data Source: E. Wehrwein, DNR Human Resources Staff, May 2006.

Note: Counts are based on PP 15 (July 4) for all years. The payroll processing system changed in 2001, so Full Time/Other classifications changed for some employees. Mecosta County data not included.

Table A4.23. MiDNR employment by eco-region, by employee type, 1995 to 2005.

Region/Year	Total Employees	Full Time Employees	Other Employees	Full Time Employees
	Number	Number	Number	Percent
Western Upper Peninsula				
1995	502	293	209	58.4%
1996	442	256	186	57.9%
1997	448	233	215	52.0%
1998	392	227	165	57.9%
1999	435	233	202	53.6%
2000	437	234	203	53.5%
2001	445	195	250	43.8%
2002	415	192	223	46.3%
2003	318	148	170	46.5%
2004	349	156	193	44.7%
2005	336	154	182	45.8%
Eastern Upper Peninsula				
1995	249	148	101	59.4%
1996	283	144	139	50.9%
1997	257	128	129	49.8%
1998	257	130	127	50.6%
1999	266	135	131	50.8%
2000	253	135	118	53.4%
2001	250	96	154	38.4%
2002	227	93	134	41.0%
2003	210	81	129	38.6%
2004	224	84	140	37.5%
2005	218	84	134	38.5%
Northern Lower Peninsula				
1995	1,243	687	556	55.3%
1996	1,160	585	575	50.4%
1997	1,169	537	632	45.9%
1998	1,161	542	619	46.7%
1999	1,161	558	603	48.1%
2000	1,180	589	591	49.9%
2001	1,181	414	767	35.1%
2002	1,090	391	699	35.9%
2003	986	313	673	31.7%
2004	1,048	324	724	30.9%
2005	993	319	674	32.1%

Data Source: E. Wehrwein, DNR Human Resources Staff, May 2006.

Note: Counts are based on PP 15 (July 4) for all years. The payroll processing system changed in 2001, so Full Time/Other classifications changed for some employees. Mecosta County data not included.

Table A4.24. MI DNR payments to counties in lieu of taxes by county and eco-region, 2004

Region/County	Total County Acres	DNR Acres	Percent DNR	Percent Swampland	Total DNR Payment	Payment per acre
Western Upper Peninsula						
Baraga	583,806	78,313	13.0%	93.0%	$175,281	$2.24
Delta	748,915	67,867	9.0%	96.0%	$147,344	$2.17
Dickinson	491,925	223,246	45.0%	89.0%	$475,604	$2.13
Gogebic	712,033	11,766	2.0%	29.0%	$65,427	$5.56
Houghton	647,466	45,937	7.0%	91.0%	$101,102	$2.20
Iron	760,143	84,637	11.0%	92.0%	$187,236	$2.21
Keweenaw	348,468	11,196	3.0%	25.0%	$161,653	$14.44
Marquette	1,182,581	261,599	22.0%	74.0%	$572,995	$2.19
Menominee	670,297	97,819	15.0%	92.0%	$203,555	$2.08
Ontonagon	844,754	67,883	8.0%	50.0%	$273,610	$4.03
WUP Totals	6,990,389	950,264	13.6%	82.1%	2,363,807	$2.49
Eastern Upper Peninsula						
Alger	589,949	97,440	17.0%	95.0%	$199,131	$2.04
Chippewa	999,960	217,315	22.0%	66.0%	$451,942	$2.08
Luce	582,654	297,727	51.0%	88.0%	$575,740	$1.93
Mackinac	650,255	214,496	33.0%	94.0%	$468,328	$2.18
Schoolcraft	758,096	288,445	38.0%	86.0%	$546,588	$1.89
EUP Totals	3,580,914	1,115,423	31.1%	85.0%	$2,241,728	$2.01
Northern Lower Peninsula						
Alcona	435,247	8,990	2.0%	79.0%	$67,350	$7.49
Alpena	371,153	49,460	13.0%	77.0%	$163,279	$3.30
Antrim	305,558	44,859	15.0%	73.0%	$160,524	$3.58
Arenac	235,098	31,251	13.0%	84.0%	$92,971	$2.98
Benzie	204,192	62,224	30.0%	92.0%	$172,483	$2.77
Charlevoix	266,225	58,500	22.0%	70.0%	$218,211	$3.73
Cheboygan	462,440	184,914	40.0%	93.0%	$445,819	$2.41
Clare	364,757	53,259	15.0%	78.0%	$136,021	$2.55
Crawford	359,846	178,550	50.0%	91.0%	$466,887	$2.61
Emmet	300,855	76,443	25.0%	86.0%	$339,065	$4.44
Gladwin	330,665	86,704	26.0%	88.0%	$197,579	$2.28
Grand Traverse	299,278	68,265	23.0%	82.0%	$362,053	$5.30
Iosco	354,822	25,052	7.0%	93.0%	$84,851	$3.39
Kalkaska	359,699	158,781	44.0%	81.0%	$490,397	$3.09
Lake	365,394	61,216	17.0%	88.0%	$164,540	$2.69
Leelanau	220,234	8,407	4.0%	59.0%	$140,552	$16.72
Manistee	350,101	24,195	7.0%	69.0%	$83,199	$3.44
Mason	315,527	6,617	2.0%	61.0%	$162,295	$24.53
Mecosta	362,779	14,539	4.0%	25.0%	$77,815	$5.35

Region/County	Total County Acres	DNR Acres	Percent DNR	Percent Swampland	Total DNR Payment	Payment per acre
Missaukee	363,290	104,289	29.0%	66.0%	$294,448	$2.82
Montmorency	355,529	137,520	39.0%	79.0%	$365,231	$2.66
Newaygo	542,741	7,186	1.0%	22.0%	$59,445	$8.27
Oceana	345,416	5,770	2.0%	75.0%	$40,476	$7.01
Ogemaw	366,811	76,512	21.0%	89.0%	$224,941	$2.94
Osceola	367,337	19,345	5.0%	45.0%	$80,812	$4.18
Oscoda	364,769	56,366	15.0%	94.0%	$141,375	$2.51
Otsego	334,273	98,556	29.0%	79.0%	$279,288	$2.83
Presque Isle	428,875	88,686	21.0%	92.0%	$232,200	$2.62
Roscommon	338,315	202,789	60.0%	86.0%	$529,746	$2.61
Wexford	366,676	54,162	15.0%	71.0%	$263,373	$4.86
NLP Totals	10,437,902	2,053,405	19.7%	82.6%	6,537,225	$3.18
Michigan	36,337,095	4,556,233	13.0%	78.0%	$17,028,568	$3.74

Table A4.25. Households and household income by county and eco-region, 2000

Western Upper Peninsula								
Region - County	**Median HH Income**	**House-holds**	**Households, less than $10,000 income number/percent**		**Households, less than $25,000 income**		**Households, greater than $100,000 income**	
Baraga	$33,673	3,371	329	9.8%	1,244	36.9%	127	3.8%
Delta	$35,511	15,820	1,584	10.0%	5,357	33.9%	941	5.9%
Dickinson	$34,825	11,407	1,151	10.1%	4,002	35.1%	655	5.7%
Gogebic	$27,405	7,401	1,088	14.7%	3,384	45.7%	288	3.9%
Houghton	$28,817	13,793	2,163	15.7%	6,022	43.7%	612	4.4%
Iron	$28,560	5,734	718	12.5%	2,524	44.0%	162	2.8%
Keweenaw	$28,140	1,012	139	13.7%	416	41.1%	48	4.7%
Marquette	$35,548	25,738	2,700	10.5%	8,878	34.5%	1320	5.1%
Menominee	$32,888	10,541	1,209	11.5%	3,873	36.7%	349	3.3%
Ontonagon	$29,552	3,443	383	11.1%	1,444	41.9%	127	3.7%
Eastern Upper Peninsula								
Region - County	**Median HH Income**	**House-holds**	**Households, less than $10,000 income number/percent**		**Households, less than $25,000 income**		**Households, greater than $100,000 income**	
Alger	$35,892	3,797	383	10.1%	1,233	32.5%	169	4.5%
Chippewa	$34,464	13,491	1,608	11.9%	4,994	37.0%	529	3.9%
Luce	$32,031	2,486	297	11.9%	946	38.1%	74	3.0%
Mackinac	$33,356	5,072	502	9.9%	1,797	35.4%	227	4.5%
Schoolcraft	$31,140	3,616	431	11.9%	1,474	40.8%	161	4.5%
Northern Lower Peninsula								
Region - County	**Median HH**	**House-holds**	**Households, less than $10,000**		**Households, less than $25,000**		**Households, greater than $100,000**	

	Income		income number/percent		income		income	
Alcona	$31,362	5,114	608	11.9%	1,927	37.7%	210	4.1%
Alpena	$34,177	12,877	1,326	10.3%	4,661	36.2%	530	4.1%
Antrim	$38,107	9,254	687	7.4%	2,745	29.7%	629	6.8%
Arenac	$32,805	6,732	742	11.0%	2,650	39.4%	332	4.9%
Benzie	$37,350	6,498	437	6.7%	1,936	29.8%	361	5.6%
Charlevoix	$39,788	10,373	803	7.7%	2,839	27.4%	818	7.9%
Cheboygan	$33,417	10,841	1,132	10.4%	3,856	35.6%	620	5.7%
Clare	$28,845	12,739	1,750	13.7%	5,393	42.3%	568	4.5%
Crawford	$33,364	5,628	504	9.0%	1,884	33.5%	291	5.2%
Emmet	$40,222	12,542	980	7.8%	3,540	28.2%	1188	9.5%
Gladwin	$32,019	10,565	1,095	10.4%	3,995	37.8%	561	5.3%
Grand Traverse	$43,169	30,486	1,652	5.4%	7,162	23.5%	3182	10.4%
Iosco	$31,321	11,755	1,301	11.1%	4,484	38.1%	498	4.2%
Kalkaska	$36,072	6,397	542	8.5%	1,999	31.2%	273	4.3%
Lake	$26,622	4,682	821	17.5%	2,195	46.9%	167	3.6%
Leelanau	$47,062	8,458	397	4.7%	1,779	21.0%	1004	11.9%
Manistee	$34,208	9,829	968	9.8%	3,441	35.0%	449	4.6%
Mason	$34,704	11,436	1,030	9.0%	4,162	36.4%	677	5.9%
Mecosta	$33,849	14,898	1,860	12.5%	5,489	36.8%	919	6.2%
Missaukee	$35,224	5,467	485	8.9%	1,764	32.3%	235	4.3%
Montmorency	$30,005	4,477	515	11.5%	1,813	40.5%	161	3.6%
Newaygo	$37,130	17,639	1,635	9.3%	5,620	31.9%	837	4.7%
Oceana	$35,307	9,826	947	9.6%	3,286	33.4%	426	4.3%
Ogemaw	$30,474	8,843	1,024	11.6%	3,599	40.7%	334	3.8%
Osceola	$34,102	8,863	898	10.1%	3,062	34.5%	345	3.9%
Oscoda	$28,228	3,934	473	12.0%	1,691	43.0%	129	3.3%
Otsego	$40,876	8,993	540	6.0%	2,334	26.0%	722	8.0%
Presque Isle	$31,656	6,172	643	10.4%	2,321	37.6%	239	3.9%
Roscommon	$30,029	11,264	1,205	10.7%	4,560	40.5%	482	4.3%
Wexford	$35,363	11,793	1,103	9.4%	3,895	33.0%	714	6.1%
Michigan								
Region - County	**Median HH Income**	**House-holds**	**Households, less than $10,000 income number/percent**		**Households, less than $25,000 income**		**Households, greater than $100,000 income**	
Michigan	$44,667	3,788,780	313,905	8.3%	1,002,138	26.5%	480,461	12.7%

Source: US Census 2000.

Table A4.26. Per capita personal income, 1970 to 2004

Western Upper Peninsula						
Ecoregion/county	**1970**	**1980**	**1990**	**2000**	**2004**	**Change, 2000 - 2004**
Menominee	$2,925	$7,708	$14,748	$21,945	$23,592	$1,647
Iron	$2,856	$8,120	$13,643	$20,344	$24,264	$3,920
Dickinson	$3,544	$9,554	$17,464	$25,257	$29,021	$3,764
Keweenaw	$2,573	$6,797	$14,189	$20,900	$24,399	$3,499
Houghton	$2,808	$6,928	$12,864	$19,436	$22,064	$2,628
Baraga	$3,168	$7,233	$12,312	$18,917	$20,702	$1,785
Marquette	$3,272	$8,288	$14,951	$22,315	$25,676	$3,361
Ontonagon	$3,108	$7,560	$13,906	$20,887	$23,860	$2,973
Delta	$3,232	$7,950	$14,554	$23,121	$26,077	$2,956
Gogebic	$3,226	$7,206	$13,036	$20,033	$22,801	$2,768
Eastern Upper Peninsula						
Ecoregion/county	**1970**	**1980**	**1990**	**2000**	**2004**	**Change, 2000 - 2004**
Luce	$2,715	$8,334	$15,328	$17,184	$19,605	$2,421
Chippewa	$3,019	$6,970	$11,774	$18,620	$20,776	$2,156
Schoolcraft	$2,929	$7,431	$13,707	$20,337	$22,878	$2,541
Alger	$2,622	$6,189	$12,278	$18,683	$20,919	$2,236
Mackinac	$2,873	$7,343	$14,958	$24,558	$27,182	$2,624
Northern Lower Peninsula						
Ecoregion/county	**1970**	**1980**	**1990**	**2000**	**2004**	**Change, 2000 - 2004**
Roscommon	$3,271	$7,528	$13,981	$19,765	$22,476	$2,711
Presque Isle	$2,739	$7,751	$13,422	$20,105	$22,004	$1,899
Arenac	$3,250	$7,817	$13,876	$20,513	$23,102	$2,589
Alpena	$3,267	$8,283	$15,162	$23,334	$26,461	$3,127
Montmorency	$2,653	$6,966	$11,776	$18,142	$20,904	$2,762
Oceana	$3,285	$7,748	$13,662	$19,234	$22,696	$3,462
Antrim	$3,159	$8,320	$14,735	$24,431	$27,703	$3,272
Benzie	$3,383	$7,722	$14,483	$23,648	$25,963	$2,315
Otsego	$3,334	$8,181	$15,688	$24,365	$25,410	$1,045
Oscoda	$2,509	$6,577	$10,474	$15,552	$18,238	$2,686
Osceola	$2,967	$6,552	$12,203	$19,446	$21,775	$2,329
Mason	$3,324	$7,845	$14,647	$22,678	$25,078	$2,400
Wexford	$3,003	$7,140	$13,825	$22,168	$23,920	$1,752
Mecosta	$2,520	$6,314	$11,674	$18,548	$20,920	$2,372
Ogemaw	$2,808	$6,470	$11,636	$18,035	$20,709	$2,674
Crawford	$3,255	$6,484	$11,965	$19,683	$21,650	$1,967
Emmet	$3,696	$9,063	$18,898	$27,459	$32,709	$5,250
Newaygo	$3,289	$7,561	$13,518	$21,123	$22,697	$1,574

Lake	$2,909	$6,081	$11,279	$18,596	$21,013	$2,417
Cheboygan	$2,990	$7,597	$13,696	$21,468	$24,580	$3,112
Iosco	$3,459	$7,698	$15,123	$19,900	$21,555	$1,655
Clare	$2,865	$6,857	$12,485	$19,083	$22,179	$3,096
Manistee	$3,227	$8,009	$14,378	$21,881	$24,165	$2,284
Missaukee	$2,725	$6,532	$12,527	$19,296	$20,710	$1,414
Kalkaska	$3,342	$6,712	$12,456	$18,350	$20,131	$1,781
Charlevoix	$3,142	$8,256	$15,967	$26,070	$30,453	$4,383
Gladwin	$3,104	$7,118	$12,748	$19,933	$21,965	$2,032
Leelanau	$3,688	$8,982	$17,813	$27,981	$34,429	$6,448
Grand Traverse	$3,886	$9,158	$18,115	$28,912	$31,600	$2,688
Alcona	$2,907	$7,140	$13,614	$20,195	$22,236	$2,041
Michigan						
Ecoregion/county	**1970**	**1980**	**1990**	**2000**	**2004**	**Change, 2000 - 2004**
Michigan	$4,198	$10,314	$18,922	$29,552	$32,079	$2,527

Table A4.27. Household sources of income

Western Upper Peninsula							
	1999	2000	With Earnings income	With Social Security Income	With Supplemental Security Income	With Public Assist-ance Income	With Retire-ment Income
Ecoregion	Households		Percent of Households (1999)				
Baraga	3,371	3,353	72.9%	35.3%	4.4%	4.1%	23.4%
Delta	15,820	15,836	73.0%	34.0%	4.4%	2.5%	21.7%
Dickinson	11,407	11,386	72.3%	34.5%	4.0%	2.9%	22.7%
Gogebic	7,401	7,425	65.1%	41.6%	4.9%	4.1%	26.0%
Houghton	13,793	13,793	72.6%	33.1%	3.3%	3.7%	20.6%
Iron	5,734	5,748	64.1%	44.4%	4.4%	4.0%	28.6%
Keweenaw	1,012	998	66.9%	40.6%	2.9%	3.7%	28.2%
Marquette	25,738	25,767	77.2%	27.8%	3.4%	2.8%	23.0%
Menominee	10,541	10,529	74.7%	32.2%	3.6%	3.3%	18.1%
Ontonagon	3,443	3,456	66.9%	39.6%	4.3%	3.6%	29.4%
WUP Ecoregion	98,260	98,291	72.8%	33.6%	3.9%	3.2%	22.7%
Eastern Upper Peninsula							
	1999	2000	With Earnings income	With Social Security Income	With Supplemental Security Income	With Public Assist-ance Income	With Retire-ment Income
Ecoregion	Households		Percent of Households (1999)				
Alger	3,797	3,785	72.3%	35.6%	4.2%	2.2%	27.9%
Chippewa	13,491	13,474	76.3%	29.7%	4.3%	3.9%	22.5%
Luce	2,486	2,481	69.9%	36.2%	5.6%	4.0%	28.5%
Mackinac	5,072	5,067	73.2%	35.5%	4.2%	2.8%	25.0%
Schoolcraft	3,616	3,606	69.2%	38.3%	4.2%	3.7%	26.1%
EUP Ecoregion	28,462	28,413	73.8%	33.2%	4.3%	3.5%	24.6%
Northern Lower Peninsula							
	1999	2000	With Earnings income	With Social Security Income	With Supplemental Security Income	With Public Assist-ance Income	With Retire-ment Income
Ecoregion	Households		Percent of Households (1999)				
Alcona	5,114	5,132	57.9%	46.7%	4.2%	3.4%	37.0%
Alpena	12,877	12,818	72.7%	34.9%	5.5%	3.8%	24.2%
Antrim	9,254	9,222	74.8%	35.1%	3.6%	2.5%	26.4%
Arenac	6,732	6,710	68.7%	36.3%	5.7%	4.3%	26.5%
Benzie	6,498	6,500	74.6%	34.6%	3.7%	2.0%	25.7%
Charlevoix	10,373	10,400	79.2%	30.6%	3.5%	2.0%	21.3%
Cheboygan	10,841	10,835	72.5%	36.4%	4.9%	3.1%	25.6%
Clare	12,739	12,686	67.3%	38.2%	6.7%	5.0%	27.3%

Crawford	5,628	5,625	72.7%	35.6%	5.8%	4.0%	28.5%
Emmet	12,542	12,577	80.9%	28.2%	3.1%	1.9%	17.8%
Gladwin	10,565	10,561	65.5%	38.9%	5.5%	3.5%	32.7%
Grand Traverse	30,486	30,396	82.6%	25.3%	2.5%	2.0%	18.7%
Iosco	11,755	11,727	64.1%	41.7%	4.9%	4.1%	33.0%
Kalkaska	6,397	6,428	77.3%	30.4%	5.1%	3.4%	24.0%
Lake	4,682	4,704	63.5%	41.3%	8.4%	6.3%	26.0%
Leelanau	8,458	8,436	78.3%	32.8%	2.3%	1.5%	23.4%
Manistee	9,829	9,860	71.9%	36.8%	5.1%	3.5%	23.0%
Mason	11,436	11,406	74.6%	33.2%	4.6%	3.6%	20.0%
Mecosta	14,898	14,915	75.2%	30.4%	5.1%	3.6%	22.1%
Missaukee	5,467	5,450	74.7%	32.6%	4.7%	4.3%	20.8%
Montmorency	4,477	4,455	60.2%	45.3%	5.5%	3.6%	35.2%
Newaygo	17,639	17,599	77.2%	30.5%	4.8%	3.8%	19.8%
Oceana	9,826	9,778	76.9%	32.7%	5.4%	4.9%	21.0%
Ogemaw	8,843	8,842	66.3%	38.3%	6.2%	4.0%	27.0%
Osceola	8,863	8,861	74.8%	32.2%	5.7%	3.8%	21.4%
Oscoda	3,934	3,921	62.7%	42.1%	6.0%	4.6%	31.4%
Otsego	8,993	8,995	78.9%	30.1%	3.1%	3.4%	22.8%
Presque Isle	6,172	6,155	64.0%	41.1%	5.1%	3.0%	28.7%
Roscommon	11,264	11,250	60.3%	44.4%	5.6%	3.4%	35.8%
Wexford	11,793	11,824	76.7%	30.6%	5.2%	4.2%	21.2%
NLP Ecoregion	298,375	298,068	73.2%	34.1%	4.7%	3.4%	24.5%
State							
	1999	**2000**	**With Earnings income**	**With Social Security Income**	**With Supplemental Security Income**	**With Public Assist-ance Income**	**With Retire-ment Income**
Ecoregion	Households		Percent of Households (1999)				
Michigan	3,788,780	3,785,661	80.2%	26.2%	4.2%	3.6%	19.2%

Table A4.28. Housing units and median value by county and eco-region, 2000

Western Upper Peninsula							
Region/ county	**Total Housing Units**	**Seasonal**	**Owner Occupied**	**Renter Occupied**	**Heat with Wood**	**Median Rent**	**Median Home Value**
Baraga	4,631	21.9%	56.3%	16.2%	9.3%	$339	$67,100
Delta	19,223	12.1%	65.6%	16.8%	4.7%	$383	$80,000
Dickinson	13,702	11.5%	66.6%	16.5%	2.8%	$417	$64,600
Gogebic	10,839	20.8%	54.0%	14.5%	4.3%	$340	$39,700
Houghton	17,748	14.9%	55.5%	22.2%	5.6%	$368	$54,800
Iron	8,772	27.1%	54.0%	11.5%	5.6%	$346	$47,500
Keweenaw	2,327	50.5%	38.1%	4.8%	5.6%	$263	$44,100
Marquette	32,877	12.9%	54.7%	23.7%	2.9%	$398	$77,200
Menominee	13,639	17.4%	61.4%	15.8%	6.4%	$353	$63,400
Ontonagon	5,404	27.5%	54.4%	9.6%	9.3%	$321	$41,400
WUP Region	129,162	16.6%	58.0%	18.1%	4.8%	$378	$64,700
Eastern Upper Peninsula							
Region/ county	**Total Housing Units**	**Seasonal**	**Owner Occupied**	**Renter Occupied**	**Heat with Wood**	**Median Rent**	**Median Home Value**
Alger	5,964	30.9%	52.3%	11.1%	8.4%	$376	$75,900
Chippewa	19,430	24.6%	51.3%	18.1%	4.2%	$426	$77,300
Luce	4,008	31.3%	49.7%	12.2%	8.0%	$430	$67,800
Mackinac	9,413	41.9%	42.6%	11.2%	6.4%	$429	$91,800
Schoolcraft	5,700	30.2%	51.9%	11.4%	6.7%	$345	$64,900
EUP Region	44,515	30.4%	49.5%	14.3%	5.9%	$413	$77,219
Northern Lower Peninsula							
Region/ county	**Total Housing Units**	**Seasonal**	**Owner Occupied**	**Renter Occupied**	**Heat with Wood**	**Median Rent**	**Median Home Value**
Alcona	10,584	47.9%	43.6%	4.9%	6.0%	$411	$83,700
Alpena	15,289	10.8%	66.4%	17.5%	5.0%	$370	$78,100
Antrim	15,090	34.1%	51.9%	9.3%	4.6%	$460	$110,000
Arenac	9,563	23.8%	59.4%	10.8%	5.0%	$399	$77,700
Benzie	10,312	30.8%	54.0%	9.0%	4.7%	$486	$107,400
Charlevoix	15,370	28.6%	54.9%	12.8%	4.5%	$470	$112,700
Cheboygan	16,583	28.8%	54.1%	11.3%	3.8%	$440	$94,500
Clare	22,229	38.6%	47.0%	10.1%	3.6%	$397	$70,500
Crawford	10,042	40.9%	46.4%	9.7%	4.0%	$453	$79,500
Emmet	18,554	27.2%	51.2%	16.6%	4.7%	$513	$131,500
Gladwin	16,828	33.2%	53.8%	9.0%	3.9%	$395	$86,800
Grand Traverse	34,842	8.7%	67.5%	19.7%	1.9%	$614	$130,400
Iosco	20,432	33.0%	47.1%	10.3%	3.0%	$416	$77,100
Kalkaska	10,822	35.4%	50.5%	8.9%	6.0%	$468	$85,100
Lake	13,498	61.0%	28.9%	5.9%	5.0%	$387	$61,300

Leelanau	13,297	30.9%	53.7%	9.8%	4.6%	$565	$165,400
Manistee	14,272	24.4%	56.1%	12.9%	5.1%	$424	$77,400
Mason	16,063	23.5%	55.7%	15.3%	4.4%	$425	$81,500
Mecosta	19,593	18.4%	56.1%	20.1%	4.4%	$470	$90,100
Missaukee	8,621	32.9%	52.9%	10.3%	6.2%	$460	$78,700
Montmorency	9,238	47.5%	41.5%	6.7%	4.3%	$431	$76,900
Newaygo	23,202	18.9%	64.0%	11.8%	6.1%	$447	$88,700
Oceana	15,009	27.7%	53.9%	11.3%	4.7%	$427	$82,500
Ogemaw	15,404	37.8%	48.6%	8.8%	5.9%	$432	$72,900
Osceola	12,853	26.2%	56.2%	12.8%	6.0%	$409	$70,000
Oscoda	8,690	48.0%	38.7%	6.4%	7.1%	$393	$67,300
Otsego	13,375	28.4%	55.0%	12.3%	3.3%	$540	$102,500
Presque Isle	9,910	33.1%	53.1%	9.0%	6.3%	$345	$77,800
Roscommon	23,109	48.0%	41.8%	6.8%	1.8%	$420	$78,900
Wexford	14,872	14.8%	63.0%	16.5%	5.2%	$451	$79,900
NLP Region	457,546	29.8%	53.2%	11.9%	4.4%	$464	$92,971
Michigan							
Region/ county	**Total Housing Units**	**Seasonal**	**Owner Occupied**	**Renter Occupied**	**Heat with Wood**	**Median Rent**	**Median Home Value**
Michigan	4,234,279	5.5%	66.0%	23.4%	1.3%	$546	$115,600

Data Source: Census 2000

Table A4.29. Percent of total county earnings from wildland based industries, direct and indirect effects with and without related government.

AreaName	Wildland w/ Government		Wildland w/o Government	
	Percent Direct	Percent Direct plus Indirect	Percent Direct	Percent Direct plus Indirect
Western Upper Peninsula				
Baraga, MI	7.0	14.6	6.7	14.3
Delta, MI	24.0	57.9	23.6	56.2
Dickinson, MI	11.0	26.6	11.3	26.6
Gogebic, MI	23.0	48.4	19.8	41.1
Houghton, MI	7.0	14.8	6.3	12.8
Iron, MI	16.0	30.3	15.0	29.0
Keweenaw, MI	35.0	65.6	23.6	43.0
Marquette, MI	13.0	26.0	12.5	25.5
Menominee, MI	14.0	31.8	13.8	31.8
Ontonagon, MI	50.0	106.0	48.7	104.3
Eastern Upper Peninsula				
Alger, MI	49.0	114.6	46.8	110.6
Chippewa, MI	10.0	19.8	7.7	14.2
Luce, MI	18.0	38.7	17.9	38.7
Mackinac, MI	24.0	44.0	23.1	42.1
Schoolcraft, MI	31.0	67.2	29.1	64.0
Northern Lower Peninsula				
Alcona, MI	9.0	15.8	7.8	13.4
Alpena, MI	11.0	24.2	10.7	24.1
Antrim, MI	9.0	16.8	9.0	16.1
Arenac, MI	12.0	21.1	12.1	20.6
Benzie, MI	9.0	15.7	8.7	15.7
Charlevoix, MI	5.0	9.2	5.0	9.2
Cheboygan, MI	16.0	33.1	15.9	32.9
Clare, MI	10.0	16.8	10.2	16.8
Crawford, MI	25.0	53.5	24.7	52.6
Emmet, MI	7.0	12.7	6.7	12.6
Gladwin, MI	7.0	13.6	7.4	13.5
Grand Traverse, MI	6.0	10.8	5.8	10.7
Iosco, MI	5.0	8.5	4.3	8.0
Kalkaska, MI	27.0	50.3	26.6	50.3
Lake, MI	15.0	28.3	13.7	25.4
Leelanau, MI	18.0	33.0	16.3	29.5
Manistee, MI	15.0	32.8	14.4	32.3
Mason, MI	4.0	7.3	3.4	6.7
Mecosta, MI	2.0	4.2	2.2	4.0
Missaukee, MI	10.0	21.4	10.2	21.0
Montmorency, MI	30.0	55.2	29.8	55.1
Newaygo, MI	2.0	4.3	2.1	3.8

Oceana, MI	8.0	15.4	7.5	15.3
Ogemaw, MI	9.0	16.4	8.7	16.1
Osceola, MI	5.0	10.8	5.3	10.7
Oscoda, MI	14.0	26.0	12.5	22.9
Otsego, MI	13.0	25.6	12.6	24.9
Presque Isle, MI	30.0	60.0	29.3	59.4
Roscommon, MI	16.0	27.7	15.7	27.7
Wexford, MI	11.0	23.6	10.4	21.8

Source: E. Schuster, USDA Forest Service, unpublished data, 1993.

Chapter 6. Outdoor Recreation Uses and Values

There are no appendix items for Chapter 6.

Chapter 7. Other forest uses and values

There are no appendix items for Chapter 7.

Chapter 8. Assessment Summary

There are no appendix items for Chapter 8.

Descriptions of Selected NAICS Sectors

11: Sector 11--Agriculture, Forestry, Fishing and Hunting	The Agriculture, Forestry, Fishing and Hunting sector comprises establishments primarily engaged in growing crops, raising animals, harvesting timber, and harvesting fish and other animals from a farm, ranch, or their natural habitats. The establishments in this sector are often described as farms, ranches, dairies, greenhouses, nurseries, orchards, or hatcheries. A farm may consist of a single tract of land or a number of separate tracts which may be held under different tenures. For example, one tract may be owned by the farm operator and another rented. It may be operated by the operator alone or with the assistance of members of the household or hired employees, or it may be operated by a partnership, corporation, or other type of organization. When a landowner has one or more tenants, renters, croppers, or managers, the land operated by each is considered a farm. The sector distinguishes two basic activities: agricultural production and agricultural support activities. Agricultural production includes establishments performing the complete farm or ranch operation, such as farm owner-operators, tenant farm operators, and sharecroppers. Agricultural support activities include establishments that perform one or more activities associated with farm operation, such as soil preparation, planting, harvesting, and management, on a contract or fee basis. Excluded from the Agriculture, Forestry, Hunting and Fishing sector are establishments primarily engaged in agricultural research and establishments primarily engaged in administering programs for regulating and conserving land, mineral, wildlife, and forest use. These establishments are classified in Industry 54171, Research and Development in the Physical, Engineering, and Life Sciences; and Industry 92412, Administration of Conservation Programs, respectively.
113: Forestry and Logging	Industries in the Forestry and Logging subsector grow and harvest timber on a long production cycle (i.e., of 10 years or more). Long production cycles use different production processes than short production cycles, which require more horticultural interventions prior to harvest, resulting in processes more similar to those found in the Crop Production subsector. Consequently, Christmas tree production and other production involving production cycles of less than 10 years, are classified in the Crop Production subsector. Industries in this subsector specialize in different stages of the production cycle. Reforestation requires production of seedlings in specialized nurseries. Timber production requires natural forest or suitable areas of land that are available for a long duration. The maturation time for timber depends upon the species of tree, the climatic conditions of the region, and the intended purpose of the timber. The harvesting of timber (except when

	done on an extremely small scale) requires specialized machinery unique to the industry. Establishments gathering forest products, such as gums, barks, balsam needles, rhizomes, fibers, Spanish moss, and ginseng and truffles, are also included in this subsector.
114: Fishing, Hunting and Trapping	Industries in the Fishing, Hunting, and Trapping subsector harvest fish and other wild animals from their natural habitats and are dependent upon a continued supply of the natural resource. The harvesting of fish is the predominant economic activity of this subsector and it usually requires specialized vessels that, by the nature of their size, configuration and equipment, are not suitable for any other type of production, such as transportation. Hunting and trapping activities utilize a wide variety of production processes and are classified in the same subsector as fishing because the availability of resources and the constraints imposed, such as conservation requirements and proper habitat maintenance, are similar.
115: Support Activities for Agriculture and Forestry	Industries in the Support Activities for Agriculture and Forestry subsector provide support services that are an essential part of agricultural and forestry production. These support activities may be performed by the agriculture or forestry producing establishment or conducted independently as an alternative source of inputs required for the production process for a given crop, animal, or forestry industry. Establishments that primarily perform these activities independent of the agriculture or forestry producing establishment are in this subsector.
21: Sector 21--Mining	The Mining sector comprises establishments that extract naturally occurring mineral solids, such as coal and ores; liquid minerals, such as crude petroleum; and gases, such as natural gas. The term mining is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and flotation), and other preparation customarily performed at the mine site, or as a part of mining activity. The Mining sector distinguishes two basic activities: mine operation and mining support activities. Mine operation includes establishments operating mines, quarries, or oil and gas wells on their own account or for others on a contract or fee basis. Mining support activities include establishments that perform exploration (except geophysical surveying) and/or other mining services on a contract or fee basis (except mine site preparation and construction of oil/gas pipelines). Establishments in the Mining sector are grouped and classified according to the natural resource mined or to be mined. Industries include establishments that develop the mine site, extract the natural resources, and/or those that beneficiate (i.e., prepare) the mineral mined. Beneficiation is the process whereby the extracted material is reduced to particles that can be separated into mineral and waste, the former suitable for further processing or direct use. The operations that take place in beneficiation are primarily mechanical, such as grinding, washing, magnetic separation, and centrifugal separation. In contrast, manufacturing operations primarily use chemical and electrochemical processes, such as electrolysis and distillation. However, some treatments, such as heat treatments, take place in both the beneficiation and the manufacturing (i.e., smelting/refining) stages. The range of preparation activities varies by mineral and the purity of any given ore deposit. While some minerals, such as petroleum and natural gas, require little or no preparation, others are washed and screened, while yet others, such as gold and silver, can be transformed into bullion before leaving the mine site. Mining, beneficiating, and manufacturing activities often occur in a single location. Separate receipts will be collected for these activities whenever possible. When receipts cannot be broken out between mining and manufacturing, establishments that mine or quarry nonmetallic minerals, beneficiate the nonmetallic minerals into more finished manufactured products are classified based on the primary activity of the establishment. A mine that manufactures a small amount of finished products will be classified in Sector 21, Mining. An establishment that mines whose primary output is a more finished manufactured product

	will be classified in Sector 31-33, Manufacturing.
211: Oil and Gas Extraction	Industries in the Oil and Gas Extraction subsector operate and/or develop oil and gas field properties. Such activities may include exploration for crude petroleum and natural gas; drilling, completing, and equipping wells; operating separators, emulsion breakers, desilting equipment, and field gathering lines for crude petroleum and natural gas; and all other activities in the preparation of oil and gas up to the point of shipment from the producing property. This subsector includes the production of crude petroleum, the mining and extraction of oil from oil shale and oil sands, and the production of natural gas, sulfur recovery from natural gas, and recovery of hydrocarbon liquids. Establishments in this subsector include those that operate oil and gas wells on their own account or for others on a contract or fee basis. Establishments primarily engaged in providing support services, on a fee or contract basis, required for the drilling or operation of oil and gas wells (except geophysical surveying and mapping, mine site preparation, and construction of oil/gas pipelines) are classified in Subsector 213, Support Activities for Mining.
212: Mining (except Oil and Gas)	Industries in the Mining (except Oil and Gas) subsector primarily engage in mining, mine site development, and beneficiating (i.e., preparing) metallic minerals and nonmetallic minerals, including coal. The term "mining" is used in the broad sense to include ore extraction, quarrying, and beneficiating (e.g., crushing, screening, washing, sizing, concentrating, and flotation), customarily done at the mine site. Beneficiation is the process whereby the extracted material is reduced to particles which can be separated into mineral and waste, the former suitable for further processing or direct use. The operations that take place in beneficiation are primarily mechanical, such as grinding, washing, magnetic separation, centrifugal separation, and so on. In contrast, manufacturing operations primarily use chemical and electrochemical processes, such as electrolysis, distillation, and so on. However some treatments, such as heat treatments, take place in both stages: the beneficiation and the manufacturing (i.e., smelting/refining) stages. The range of preparation activities varies by mineral and the purity of any given ore deposit. While some minerals, such as petroleum and natural gas, require little or no preparation, others are washed and screened, while yet others, such as gold and silver, can be transformed into bullion before leaving the mine site. Establishments in the Mining (except Oil and Gas) subsector include those that have complete responsibility for operating mines and quarries (except oil and gas wells) and those that operate mines and quarries (except oil and gas wells) for others on a contract or fee basis. Establishments primarily engaged in providing support services, on a contract or fee basis, required for the mining and quarrying of minerals are classified in Subsector 213, Support Activities for Mining.
213: Support Activities for Mining	Industries in the Support Activities for Mining subsector group establishments primarily providing support services, on a contract or fee basis, required for the mining and quarrying of minerals and for the extraction of oil and gas. Establishments performing exploration (except geophysical surveying and mapping) for minerals, on a contract or fee basis, are included in this subsector. Exploration includes traditional prospecting methods, such as taking core samples and making geological observations at prospective sites. The activities performed on a contract or fee basis by establishments in the Support Activities for Mining subsector are also often performed in-house by mining operators. These activities include: taking core samples, making geological observations at prospective sites, excavating slush pits and cellars, and such oil and gas operations as spudding in, drilling in, redrilling, directional drilling, well surveying; running, cutting, and pulling casings, tubes and rods; cementing wells, shooting wells; perforating well casings; acidizing and chemically treating wells; and cleaning out, bailing, and swabbing wells.

22: Sector 22--Utilities	The Utilities sector comprises establishments engaged in the provision of the following utility services: electric power, natural gas, steam supply, water supply, and sewage removal. Within this sector, the specific activities associated with the utility services provided vary by utility: electric power includes generation, transmission, and distribution; natural gas includes distribution; steam supply includes provision and/or distribution; water supply includes treatment and distribution; and sewage removal includes collection, treatment, and disposal of waste through sewer systems and sewage treatment facilities. Excluded from this sector are establishments primarily engaged in waste management services classified in Subsector 562, Waste Management and Remediation Services. These establishments also collect, treat, and dispose of waste materials; however, they do not use sewer systems or sewage treatment facilities.
23: Sector 23--Construction	The construction sector comprises establishments primarily engaged in the construction of buildings or engineering projects (e.g., highways and utility systems). Establishments primarily engaged in the preparation of sites for new construction and establishments primarily engaged in subdividing land for sale as building sites also are included in this sector. Construction work done may include new work, additions, alterations, or maintenance and repairs. Activities of these establishments generally are managed at a fixed place of business, but they usually perform construction activities at multiple project sites. Production responsibilities for establishments in this sector are usually specified in (1) contracts with the owners of construction projects (prime contracts) or (2) contracts with other construction establishments (subcontracts). Establishments primarily engaged in contracts that include responsibility for all aspects of individual construction projects are commonly known as general contractors, but also may be known as design-builders, construction managers, turnkey contractors, or (in cases where two or more establishments jointly secure a general contract) joint-venture contractors. Construction managers that provide oversight and scheduling only (i.e., agency) as well as construction managers that are responsible for the entire project (i.e., at risk) are included as general contractor type establishments. Establishments of the ôgeneral contractor typeö frequently arrange construction of separate parts of their projects through subcontracts with other construction establishments. Establishments primarily engaged in activities to produce a specific component (e.g., masonry, painting, and electrical work) of a construction project are commonly known as specialty trade contractors. Activities of specialty trade contractors are usually subcontracted from other construction establishments but, especially in remodeling and repair construction, the work may be done directly for the owner of the property. Establishments primarily engaged in activities to construct buildings to be sold on sites that they own are known as operative builders, but also may be known as speculative builders or merchant builders. Operative builders produce buildings in a manner similar to general contractors, but their production processes also include site acquisition and securing of financial backing. Operative builders are most often associated with the construction of residential buildings. Like general contractors, they may subcontract all or part of the actual construction work on their buildings. There are substantial differences in the types of equipment, work force skills, and other inputs required by establishments in this sector. To highlight these differences and variations in the underlying production functions, this sector is divided into three subsectors. Subsector 236, Construction of Buildings, comprises establishments of the general contractor type and operative builders involved in the construction of buildings. Subsector 237, Heavy and Civil Engineering Construction, comprises establishments involved in the construction of engineering projects. Subsector 238, Specialty Trade Contractors, comprises establishments engaged in specialty trade activities generally needed in the construction of all types of buildings. Force account construction is construction work performed by an enterprise primarily

	engaged in some business other than construction for its own account and use, using employees of the enterprise. This activity is not included in the construction sector unless the construction work performed is the primary activity of a separate establishment of the enterprise. The installation and the ongoing repair and maintenance of telecommunications and utility networks is excluded from construction when the establishments performing the work are not independent contractors. Although a growing proportion of this work is subcontracted to independent contractors in the Construction Sector, the operating units of telecommunications and utility companies performing this work are included with the telecommunications or utility activities.
31: Sector 31-33--Manufacturing	The Manufacturing sector comprises establishments engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products. The assembling of component parts of manufactured products is considered manufacturing, except in cases where the activity is appropriately classified in Sector 23, Construction. Establishments in the Manufacturing sector are often described as plants, factories, or mills and characteristically use power-driven machines and materials-handling equipment. However, establishments that transform materials or substances into new products by hand or in the worker's home and those engaged in selling to the general public products made on the same premises from which they are sold, such as bakeries, candy stores, and custom tailors, may also be included in this sector. Manufacturing establishments may process materials or may contract with other establishments to process their materials for them. Both types of establishments are included in manufacturing. The materials, substances, or components transformed by manufacturing establishments are raw materials that are products of agriculture, forestry, fishing, mining, or quarrying as well as products of other manufacturing establishments. The materials used may be purchased directly from producers, obtained through customary trade channels, or secured without recourse to the market by transferring the product from one establishment to another, under the same ownership. The new product of a manufacturing establishment may be finished in the sense that it is ready for utilization or consumption, or it may be semifinished to become an input for an establishment engaged in further manufacturing. For example, the product of the alumina refinery is the input used in the primary production of aluminum; primary aluminum is the input to an aluminum wire drawing plant; and aluminum wire is the input for a fabricated wire product manufacturing establishment. The subsectors in the Manufacturing sector generally reflect distinct production processes related to material inputs, production equipment, and employee skills. In the machinery area, where assembling is a key activity, parts and accessories for manufactured products are classified in the industry of the finished manufactured item when they are made for separate sale. For example, a replacement refrigerator door would be classified with refrigerators and an attachment for a piece of metal working machinery would be classified with metal working machinery. However, components, input from other manufacturing establishments, are classified based on the production function of the component manufacturer. For example, electronic components are classified in Subsector 334, Computer and Electronic Product Manufacturing and stampings are classified in Subsector 332, Fabricated Metal Product Manufacturing. Manufacturing establishments often perform one or more activities that are classified outside the Manufacturing sector of NAICS. For instance, almost all manufacturing has some captive research and development or administrative operations, such as accounting, payroll, or management. These captive services are treated the same as captive manufacturing activities. When the services are provided by separate establishments, they are classified to the NAICS sector where such services are primary, not in manufacturing. The boundaries of manufacturing and the other sectors of the classification system can be somewhat blurry. The establishments in the manufacturing sector are engaged in the transformation of materials into new products. Their output is a new product. However, the definition of what constitutes a new product can be somewhat subjective. As clarification,

	the following activities are considered manufacturing in NAICS: Milk bottling and pasteurizing; Grinding of lenses to prescription; Water bottling and processing; Wood preserving; Fresh fish packaging (oyster shucking, Electroplating, plating, metal heat fish filleting); treating, and polishing for the trade; Apparel jobbing (assigning of materials Lapidary work for the trade; to contract factories or shops for Fabricating signs and advertising displays; fabrication or other contract operations) Rebuilding or remanufacturing as well as contracting on materials owned by others; machinery (i.e., automotive parts) Printing and related activities; Ship repair and renovation; Ready-mixed concrete production; Machine shops; and Leather converting; Tire retreading. Conversely, there are activities that are sometimes considered manufacturing, but which for NAICS are classified in another sector (i.e., not classified as manufacturing). They include: 1. Logging, classified in Sector 11, Agriculture, Forestry, Fishing and Hunting is considered a harvesting operation; 2. The beneficiating of ores and other minerals, classified in Sector 21, Mining, is considered part of the activity of mining; 3. The construction of structures and fabricating operations performed at the site of construction by contractors, is classified in Sector 23, Construction; 4. Establishments engaged in breaking of bulk and redistribution in smaller lots, including packaging, repackaging, or bottling products, such as liquors or chemicals; the customized assembly of computers; sorting of scrap; mixing paints to customer order; and cutting metals to customer order, classified in Sector 42, Wholesale Trade or Sector 44-45, Retail Trade, produce a modified version of the same product, not a new product; and 5. Publishing and the combined activity of publishing and printing, classified in Sector 51, Information, perform the transformation of information into a product where as the value of the product to the consumer lies in the information content, not in the format in which it is distributed (i.e., the book or software diskette).
321: Wood Product Manufacturing	Industries in the Wood Product Manufacturing subsector manufacture wood products, such as lumber, plywood, veneers, wood containers, wood flooring, wood trusses, manufactured homes (i.e., mobile home), and prefabricated wood buildings. The production processes of the Wood Product Manufacturing subsector include sawing, planing, shaping, laminating, and assembling of wood products starting from logs that are cut into bolts, or lumber that then may be further cut, or shaped by lathes or other shaping tools. The lumber or other transformed wood shapes may also be subsequently planed or smoothed, and assembled into finished products, such as wood containers. The Wood Product Manufacturing subsector includes establishments that make wood products from logs and bolts that are sawed and shaped, and establishments that purchase sawed lumber and make wood products. With the exception of sawmills and wood preservation establishments, the establishments are grouped into industries mainly based on the specific products manufactured.
322: Paper Manufacturing	Industries in the Paper Manufacturing subsector make pulp, paper, or converted paper products. The manufacturing of these products is grouped together because they constitute a series of vertically connected processes. More than one is often carried out in a single establishment. There are essentially three activities. The manufacturing of pulp involves separating the cellulose fibers from other impurities in wood or used paper. The manufacturing of paper involves matting these fibers into a sheet. Converted paper products are made from paper and other materials by various cutting and shaping techniques and includes coating and laminating activities. The Paper Manufacturing subsector is subdivided into two industry groups, the first for the manufacturing of pulp and paper and the second for the manufacturing of converted paper

	products. Paper making is treated as the core activity of the subsector. Therefore, any establishment that makes paper (including paperboard), either alone or in combination with pulp manufacturing or paper converting, is classified as a paper or paperboard mill. Establishments that make pulp without making paper are classified as pulp mills. Pulp mills, paper mills and paperboard mills comprise the first industry group. Establishments that make products from purchased paper and other materials make up the second industry group, Converted Paper Product Manufacturing. This general activity is then subdivided based, for the most part, on process distinctions. Paperboard container manufacturing uses corrugating, cutting, and shaping machinery to form paperboard into containers. Paper bag and coated and treated paper manufacturing establishments cut and coat paper and foil. Stationery product manufacturing establishments make a variety of paper products used for writing, filing, and similar applications. Other converted paper product manufacturing includes, in particular, the conversion of sanitary paper stock into such things as tissue paper and disposable diapers. An important process used in the Paper Bag and Coated and Treated Paper Manufacturing industry is lamination, often combined with coating. Lamination and coating makes a composite material with improved properties of strength, impermeability, and so on. The laminated materials may be paper, metal foil, or plastics film. While paper is often one of the components, it is not always. Lamination of plastics film to plastics film is classified in the NAICS Subsector 326, Plastics and Rubber Products Manufacturing, because establishments that do this often first make the film. The same situation holds with respect to bags. The manufacturing of bags from plastics only, whether or not laminated, is classified in Subsector 326, Plastics and Rubber Products Manufacturing, but all other bag manufacturing is classified in this subsector. Excluded from this subsector are photosensitive papers. These papers are chemically treated and are classified in Industry 32599, All Other Chemical Product and Preparation Manufacturing.
42: Sector 42--Wholesale Trade	The Wholesale Trade sector comprises establishments engaged in wholesaling merchandise, generally without transformation, and rendering services incidental to the sale of merchandise. The merchandise described in this sector includes the outputs of agriculture, mining, manufacturing, and certain information industries, such as publishing. The wholesaling process is an intermediate step in the distribution of merchandise. Wholesalers are organized to sell or arrange the purchase or sale of (a) goods for resale (i.e., goods sold to other wholesalers or retailers), (b) capital or durable nonconsumer goods, and (c) raw and intermediate materials and supplies used in production. Wholesalers sell merchandise to other businesses and normally operate from a warehouse or office. These warehouses and offices are characterized by having little or no display of merchandise. In addition, neither the design nor the location of the premises is intended to solicit walk-in traffic. Wholesalers do not normally use advertising directed to the general public. Customers are generally reached initially via telephone, in-person marketing, or by specialized advertising that may include Internet and other electronic means. Follow-up orders are either vendor-initiated or client-initiated, generally based on previous sales, and typically exhibit strong ties between sellers and buyers. In fact, transactions are often conducted between wholesalers and clients that have long-standing business relationships. This sector comprises two main types of wholesalers: merchant wholesalers that sell goods on their own account and business to business electronic markets, agents, and brokers that arrange sales and purchases for others generally for a commission or fee. (1) Establishments that sell goods on their own account are known as wholesale merchants, distributors, jobbers, drop shippers, and import/export merchants. Also included as wholesale merchants are sales offices and sales branches (but not retail stores) maintained by manufacturing, refining, or mining enterprises apart from their plants or mines for the purpose of marketing their products. Merchant wholesale establishments typically maintain their own warehouse, where they receive and handle goods for their customers. Goods are generally sold without transformation, but may include integral

	functions, such as sorting, packaging, labeling, and other marketing services. (2) Establishments arranging for the purchase or sale of goods owned by others or purchasing goods, generally on a commission basis are known as business to business electronic markets, agents and brokers, commission merchants, import/export agents and brokers, auction companies, and manufacturers' representatives. These establishments operate from offices and generally do not own or handle the goods they sell. Some wholesale establishments may be connected with a single manufacturer and promote and sell the particular manufacturers' products to a wide range of other wholesalers or retailers. Other wholesalers may be connected to a retail chain, or limited number of retail chains, and only provide a variety of products needed by that particular retail operation(s). These wholesalers may obtain the products from a wide range of manufacturers. Still other wholesalers may not take title to the goods, but act as agents and brokers for a commission. Although, in general, wholesaling normally denotes sales in large volumes, durable nonconsumer goods may be sold in single units. Sales of capital or durable nonconsumer goods used in the production of goods and services, such as farm machinery, medium and heavy duty trucks, and industrial machinery, are always included in wholesale trade.
44: Sector 44-45--Retail Trade	The Retail Trade sector comprises establishments engaged in retailing merchandise, generally without transformation, and rendering services incidental to the sale of merchandise. The retailing process is the final step in the distribution of merchandise; retailers are, therefore, organized to sell merchandise in small quantities to the general public. This sector comprises two main types of retailers: store and nonstore retailers. 1. Store retailers operate fixed point-of-sale locations, located and designed to attract a high volume of walk-in customers. In general, retail stores have extensive displays of merchandise and use mass-media advertising to attract customers. They typically sell merchandise to the general public for personal or household consumption, but some also serve business and institutional clients. These include establishments, such as office supply stores, computer and software stores, building materials dealers, plumbing supply stores, and electrical supply stores. Catalog showrooms, gasoline services stations, automotive dealers, and mobile home dealers are treated as store retailers. In addition to retailing merchandise, some types of store retailers are also engaged in the provision of after-sales services, such as repair and installation. For example, new automobile dealers, electronic and appliance stores, and musical instrument and supply stores often provide repair services. As a general rule, establishments engaged in retailing merchandise and providing after-sales services are classified in this sector. The first eleven subsectors of retail trade are store retailers. The establishments are grouped into industries and industry groups typically based on one or more of the following criteria: (a) The merchandise line or lines carried by the store; for example, specialty stores are distinguished from general-line stores. (b) The usual trade designation of the establishments. This criterion applies in cases where a store type is well recognized by the industry and the public, but difficult to define strictly in terms of commodity lines carried; for example, pharmacies, hardware stores, and department stores. (c) Capital requirements in terms of display equipment; for example, food stores have equipment requirements not found in other retail industries. (d) Human resource requirements in terms of expertise; for example, the staff of an automobile dealer requires knowledge in financing, registering, and licensing issues that are not necessary in other retail industries. 2. Nonstore retailers, like store retailers, are organized to serve the general public, but their retailing methods differ. The establishments of this subsector reach customers and market merchandise with methods, such as the broadcasting of "infomercials," the broadcasting

	and publishing of direct-response advertising, the publishing of paper and electronic catalogs, door-to-door solicitation, in-home demonstration, selling from portable stalls (street vendors, except food), and distribution through vending machines. Establishments engaged in the direct sale (nonstore) of products, such as home heating oil dealers and home delivery newspaper routes are included here. The buying of goods for resale is a characteristic of retail trade establishments that particularly distinguishes them from establishments in the agriculture, manufacturing, and construction industries. For example, farms that sell their products at or from the point of production are not classified in retail, but rather in agriculture. Similarly, establishments that both manufacture and sell their products to the general public are not classified in retail, but rather in manufacturing. However, establishments that engage in processing activities incidental to retailing are classified in retail. This includes establishments, such as optical goods stores that do in-store grinding of lenses, and meat and seafood markets. Wholesalers also engage in the buying of goods for resale, but they are not usually organized to serve the general public. They typically operate from a warehouse or office and neither the design nor the location of these premises is intended to solicit a high volume of walk-in traffic. Wholesalers supply institutional, industrial, wholesale, and retail clients; their operations are, therefore, generally organized to purchase, sell, and deliver merchandise in larger quantities. However, dealers of durable nonconsumer goods, such as farm machinery and heavy duty trucks, are included in wholesale trade even if they often sell these products in single units.
48: Sector 48-49--Transportation and Warehousing	The Transportation and Warehousing sector includes industries providing transportation of passengers and cargo, warehousing and storage for goods, scenic and sightseeing transportation, and support activities related to modes of transportation. Establishments in these industries use transportation equipment or transportation related facilities as a productive asset. The type of equipment depends on the mode of transportation. The modes of transportation are air, rail, water, road, and pipeline. The Transportation and Warehousing sector distinguishes three basic types of activities: subsectors for each mode of transportation, a subsector for warehousing and storage, and a subsector for establishments providing support activities for transportation. In addition, there are subsectors for establishments that provide passenger transportation for scenic and sightseeing purposes, postal services, and courier services. A separate subsector for support activities is established in the sector because, first, support activities for transportation are inherently multimodal, such as freight transportation arrangement, or have multimodal aspects. Secondly, there are production process similarities among the support activity industries. One of the support activities identified in the support activity subsector is the routine repair and maintenance of transportation equipment (e.g., aircraft at an airport, railroad rolling stock at a railroad terminal, or ships at a harbor or port facility). Such establishments do not perform complete overhauling or rebuilding of transportation equipment (i.e., periodic restoration of transportation equipment to original design specifications) or transportation equipment conversion (i.e., major modification to systems). An establishment that primarily performs factory (or shipyard) overhauls, rebuilding, or conversions of aircraft, railroad rolling stock, or a ship is classified in Subsector 336, Transportation Equipment Manufacturing according to the type of equipment. Many of the establishments in this sector often operate on networks, with physical facilities, labor forces, and equipment spread over an extensive geographic area. Warehousing establishments in this sector are distinguished from merchant wholesaling in that the warehouse establishments do not sell the goods. Excluded from this sector are establishments primarily engaged in providing travel agent services that support transportation and other establishments, such as hotels, businesses, and government agencies. These establishments are classified in Sector 56, Administrative and Support and Waste Management and Remediation Services. Also, establishments primarily engaged in providing rental and leasing of transportation equipment without

	operator are classified in Subsector 532, Rental and Leasing Services.
51: Sector 51--Information	The Information sector comprises establishments engaged in the following processes: (a) producing and distributing information and cultural products, (b) providing the means to transmit or distribute these products as well as data or communications, and (c) processing data. The main components of this sector are the publishing industries, including software publishing, and both traditional publishing and publishing exclusively on the Internet; the motion picture and sound recording industries; the broadcasting industries, including traditional broadcasting and those broadcasting exclusively over the Internet; the telecommunications industries; the industries known as Internet service providers and web search portals, data processing industries, and the information services industries. The expressions "information age" and "global information economy" are used with considerable frequency today. The general idea of an "information economy" includes both the notion of industries primarily producing, processing, and distributing information, as well as the idea that every industry is using available information and information technology to reorganize and make themselves more productive. For the purpose of developing NAICS, it is the transformation of information into a commodity that is produced and distributed by a number of growing industries that is at issue. The Information sector groups three types of establishments: (1) those engaged in producing and distributing information and cultural products; (2) those that provide the means to transmit or distribute these products as well as data or communications; and (3) those that process data. Cultural products are those that directly express attitudes, opinions, ideas, values, and artistic creativity; provide entertainment; or offer information and analysis concerning the past and present. Included in this definition are popular, mass-produced, products as well as cultural products that normally have a more limited audience, such as poetry books, literary magazines, or classical records. The unique characteristics of information and cultural products, and of the processes involved in their production and distribution, distinguish the Information sector from the goods-producing and service-producing sectors. Some of these characteristics are: 1. Unlike traditional goods, an "information or cultural product," such as a newspaper on-line or television program, does not necessarily have tangible qualities, nor is it necessarily associated with a particular form. A movie can be shown at a movie theater, on a television broadcast, through video-on-demand or rented at a local video store. A sound recording can be aired on radio, embedded in multimedia products, or sold at a record store. 2. Unlike traditional services, the delivery of these products does not require direct contact between the supplier and the consumer. 3. The value of these products to the consumer lies in their informational, educational, cultural, or entertainment content, not in the format in which they are distributed. Most of these products are protected from unlawful reproduction by copyright laws. 4. The intangible property aspect of information and cultural products makes the processes involved in their production and distribution very different from goods and services. Only those possessing the rights to these works are authorized to reproduce, alter, improve, and distribute them. Acquiring and using these rights often involves significant costs. In addition, technology is revolutionizing the distribution of these products. It is possible to distribute them in a physical form, via broadcast, or on-line. 5. Distributors of information and cultural products can easily add value to the products they distribute. For instance, broadcasters add advertising not contained in the original product. This capacity means that unlike traditional distributors, they derive revenue not from sale of the distributed product to the final consumer, but from those who pay for the privilege of adding information to the original product. Similarly, a directory and mailing list publisher can acquire the rights to thousands of previously published newspaper and periodical articles and add new value by providing search and software and organizing the information in a way that facilitates research and retrieval. These products often command a much higher price than the original information.

	The distribution modes for information commodities may either eliminate the necessity for traditional manufacture, or reverse the conventional order of manufacture-distribute: A newspaper distributed on-line, for example, can be printed locally or by the final consumer. Similarly, it is anticipated that packaged software, which today is mainly bought through the traditional retail channels, will soon be available mainly on-line. The NAICS Information sector is designed to make such economic changes transparent as they occur, or to facilitate designing surveys that will monitor the new phenomena and provide data to analyze the changes. Many of the industries in the NAICS Information sector are engaged in producing products protected by copyright law, or in distributing them (other than distribution by traditional wholesale and retail methods). Examples are traditional publishing industries, software and directory and mailing list publishing industries, and film and sound industries. Broadcasting and telecommunications industries and information providers and processors are also included in the Information sector, because their technologies are so closely linked to other industries in the Information sector.
52: Sector 52--Finance and Insurance	The Finance and Insurance sector comprises establishments primarily engaged in financial transactions (transactions involving the creation, liquidation, or change in ownership of financial assets) and/or in facilitating financial transactions. Three principal types of activities are identified: 1. Raising funds by taking deposits and/or issuing securities and, in the process, incurring liabilities. Establishments engaged in this activity use raised funds to acquire financial assets by making loans and/or purchasing securities. Putting themselves at risk, they channel funds from lenders to borrowers and transform or repackage the funds with respect to maturity, scale, and risk. This activity is known as financial intermediation. 2. Pooling of risk by underwriting insurance and annuities. Establishments engaged in this activity collect fees, insurance premiums, or annuity considerations; build up reserves; invest those reserves; and make contractual payments. Fees are based on the expected incidence of the insured risk and the expected return on investment. 3. Providing specialized services facilitating or supporting financial intermediation, insurance, and employee benefit programs. In addition, monetary authorities charged with monetary control are included in this sector. The subsectors, industry groups, and industries within the NAICS Finance and Insurance sector are defined on the basis of their unique production processes. As with all industries, the production processes are distinguished by their use of specialized human resources and specialized physical capital. In addition, the way in which these establishments acquire and allocate financial capital, their source of funds, and the use of those funds provides a third basis for distinguishing characteristics of the production process. For instance, the production process in raising funds through deposit-taking is different from the process of raising funds in bond or money markets. The process of making loans to individuals also requires different production processes than does the creation of investment pools or the underwriting of securities. Most of the Finance and Insurance subsectors contain one or more industry groups of (1) intermediaries with similar patterns of raising and using funds and (2) establishments engaged in activities that facilitate, or are otherwise related to, that type of financial or insurance intermediation. Industries within this sector are defined in terms of activities for which a production process can be specified, and many of these activities are not exclusive to a particular type of financial institution. To deal with the varied activities taking place within existing financial institutions, the approach is to split these institutions into components performing specialized services. This requires defining the units engaged in providing those services and developing procedures that allow for their delineation. These units are the equivalents for finance and insurance of the establishments defined for other industries. The output of many financial services, as well as the inputs and the processes by which they are combined, cannot be observed at a single location and can only be defined at a

	higher level of the organizational structure of the enterprise. Additionally, a number of independent activities that represent separate and distinct production processes may take place at a single location belonging to a multilocation financial firm. Activities are more likely to be homogeneous with respect to production characteristics than are locations, at least in financial services. The classification defines activities broadly enough that it can be used both by those classifying by location and by those employing a more top-down approach to the delineation of the establishment. Establishments engaged in activities that facilitate, or are otherwise related to, the various types of intermediation have been included in individual subsectors, rather than in a separate subsector dedicated to services alone because these services are performed by intermediaries, as well as by specialist establishments, the extent to which the activity of the intermediaries can be separately identified is not clear. The Finance and Insurance sector has been defined to encompass establishments primarily engaged in financial transactions; that is, transactions involving the creation, liquidation, change in ownership of financial assets; or in facilitating financial transactions. Financial industries are extensive users of electronic means for facilitating the verification of financial balances, authorizing transactions, transferring funds to and from transactors' accounts, notifying banks (or credit card issuers) of the individual transactions, and providing daily summaries. Since these transaction processing activities are integral to the production of finance and insurance services, establishments that principally provide a financial transaction processing service are classified to this sector, rather than to the data processing industry in the Information sector. Legal entities that hold portfolios of assets on behalf of others are significant and data on them are required for a variety of purposes. Thus for NAICS, these funds, trusts, and other financial vehicles are the fifth subsector of the Finance and Insurance sector. These entities earn interest, dividends, and other property income, but have little or no employment and no revenue from the sale of services. Separate establishments and employees devoted to the management of funds are classified in Industry Group 5239, Other Financial Investment Activities.
53: Sector 53--Real Estate and Rental and Leasing	The Real Estate and Rental and Leasing sector comprises establishments primarily engaged in renting, leasing, or otherwise allowing the use of tangible or intangible assets, and establishments providing related services. The major portion of this sector comprises establishments that rent, lease, or otherwise allow the use of their own assets by others. The assets may be tangible, as is the case of real estate and equipment, or intangible, as is the case with patents and trademarks. This sector also includes establishments primarily engaged in managing real estate for others, selling, renting and/or buying real estate for others, and appraising real estate. These activities are closely related to this sector's main activity, and it was felt that from a production basis they would best be included here. In addition, a substantial proportion of property management is self-performed by lessors. The main components of this sector are the real estate lessors industries; equipment lessors industries (including motor vehicles, computers, and consumer goods); and lessors of nonfinancial intangible assets (except copyrighted works). Excluded from this sector are real estate investment trusts (REITS) and establishments primarily engaged in renting or leasing equipment with operators. REITS are classified in Subsector 525, Funds, Trusts, and Other Financial Vehicles, because they are considered investment vehicles. Establishments renting or leasing equipment with operators are classified in various subsectors of NAICS depending on the nature of the services provided (e.g., transportation, construction, agriculture). These activities are excluded from this sector because the client is paying for the expertise and knowledge of the equipment operator, in addition to the rental of the equipment. In many cases, such as the rental of heavy construction equipment, the operator is essential to operate the equipment.
54: Sector 54--	The Professional, Scientific, and Technical Services sector comprises establishments that

Professional, Scientific, and Technical Services	specialize in performing professional, scientific, and technical activities for others. These activities require a high degree of expertise and training. The establishments in this sector specialize according to expertise and provide these services to clients in a variety of industries and, in some cases, to households. Activities performed include: legal advice and representation; accounting, bookkeeping, and payroll services; architectural, engineering, and specialized design services; computer services; consulting services; research services; advertising services; photographic services; translation and interpretation services; veterinary services; and other professional, scientific, and technical services. This sector excludes establishments primarily engaged in providing a range of day-to-day office administrative services, such as financial planning, billing and recordkeeping, personnel, and physical distribution and logistics. These establishments are classified in Sector 56, Administrative and Support and Waste Management and Remediation Services.
55: Sector 55--Management of Companies and Enterprises	The Management of Companies and Enterprises sector comprises (1) establishments that hold the securities of (or other equity interests in) companies and enterprises for the purpose of owning a controlling interest or influencing management decisions or (2) establishments (except government establishments) that administer, oversee, and manage establishments of the company or enterprise and that normally undertake the strategic or organizational planning and decisionmaking role of the company or enterprise. Establishments that administer, oversee, and manage may hold the securities of the company or enterprise. Establishments in this sector perform essential activities that are often undertaken, in-house, by establishments in many sectors of the economy. By consolidating the performance of these activities of the enterprise at one establishment, economies of scale are achieved. Government establishments primarily engaged in administering, overseeing, and managing governmental programs are classified in Sector 92, Public Administration. Establishments primarily engaged in providing a range of day-to-day office administrative services, such as financial planning, billing and recordkeeping, personnel, and physical distribution and logistics are classified in Industry 56111, Office Administrative Services.
56: Sector 56--Administrative and Support and Waste Management and Remediation Services	The Administrative and Support and Waste Management and Remediation Services sector comprises establishments performing routine support activities for the day-to-day operations of other organizations. These essential activities are often undertaken in-house by establishments in many sectors of the economy. The establishments in this sector specialize in one or more of these support activities and provide these services to clients in a variety of industries and, in some cases, to households. Activities performed include: office administration, hiring and placing of personnel, document preparation and similar clerical services, solicitation, collection, security and surveillance services, cleaning, and waste disposal services. The administrative and management activities performed by establishments in this sector are typically on a contract or fee basis. These activities may also be performed by establishments that are part of the company or enterprise. However, establishments involved in administering, overseeing, and managing other establishments of the company or enterprise, are classified in Sector 55, Management of Companies and Enterprises. These establishments normally undertake the strategic and organizational planning and decision making role of the company or enterprise. Government establishments engaged in administering, overseeing, and managing governmental programs are classified in Sector 92, Public Administration.
61: Sector 61--Educational Services	The Educational Services sector comprises establishments that provide instruction and training in a wide variety of subjects. This instruction and training is provided by specialized establishments, such as schools, colleges, universities, and training centers. These establishments may be privately owned and operated for profit or not for profit, or they may

	be publicly owned and operated. They may also offer food and accommodation services to their students. Educational services are usually delivered by teachers or instructors that explain, tell, demonstrate, supervise, and direct learning. Instruction is imparted in diverse settings, such as educational institutions, the workplace, or the home through correspondence, television, or other means. It can be adapted to the particular needs of the students, for example sign language can replace verbal language for teaching students with hearing impairments. All industries in the sector share this commonality of process, namely, labor inputs of instructors with the requisite subject matter expertise and teaching ability.
62: Sector 62--Health Care and Social Assistance	The Health Care and Social Assistance sector comprises establishments providing health care and social assistance for individuals. The sector includes both health care and social assistance because it is sometimes difficult to distinguish between the boundaries of these two activities. The industries in this sector are arranged on a continuum starting with those establishments providing medical care exclusively, continuing with those providing health care and social assistance, and finally finishing with those providing only social assistance. The services provided by establishments in this sector are delivered by trained professionals. All industries in the sector share this commonality of process, namely, labor inputs of health practitioners or social workers with the requisite expertise. Many of the industries in the sector are defined based on the educational degree held by the practitioners included in the industry. Excluded from this sector are aerobic classes in Subsector 713, Amusement, Gambling and Recreation Industries and nonmedical diet and weight reducing centers in Subsector 812, Personal and Laundry Services. Although these can be viewed as health services, these services are not typically delivered by health practitioners.
71: Sector 71--Arts, Entertainment, and Recreation	The Arts, Entertainment, and Recreation sector includes a wide range of establishments that operate facilities or provide services to meet varied cultural, entertainment, and recreational interests of their patrons. This sector comprises (1) establishments that are involved in producing, promoting, or participating in live performances, events, or exhibits intended for public viewing; (2) establishments that preserve and exhibit objects and sites of historical, cultural, or educational interest; and (3) establishments that operate facilities or provide services that enable patrons to participate in recreational activities or pursue amusement, hobby, and leisure-time interests. Some establishments that provide cultural, entertainment, or recreational facilities and services are classified in other sectors. Excluded from this sector are: (1) establishments that provide both accommodations and recreational facilities, such as hunting and fishing camps and resort and casino hotels are classified in Subsector 721, Accommodation; (2) restaurants and night clubs that provide live entertainment in addition to the sale of food and beverages are classified in Subsector 722, Food Services and Drinking Places; (3) motion picture theaters, libraries and archives, and publishers of newspapers, magazines, books, periodicals, and computer software are classified in Sector 51, Information; and (4) establishments using transportation equipment to provide recreational and entertainment services, such as those operating sightseeing buses, dinner cruises, or helicopter rides are classified in Subsector 487, Scenic and Sightseeing Transportation.
72: Sector 72--Accommodation and Food Services	The Accommodation and Food Services sector comprises establishments providing customers with lodging and/or preparing meals, snacks, and beverages for immediate consumption. The sector includes both accommodation and food services establishments because the two activities are often combined at the same establishment. Excluded from this sector are civic and social organizations; amusement and recreation parks; theaters; and other recreation or entertainment facilities providing food and beverage services.

721: Accommodation	Industries in the Accommodation subsector provide lodging or short-term accommodations for travelers, vacationers, and others. There is a wide range of establishments in these industries. Some provide lodging only; while others provide meals, laundry services, and recreational facilities, as well as lodging. Lodging establishments are classified in this subsector even if the provision of complementary services generates more revenue. The types of complementary services provided vary from establishment to establishment. The subsector is organized into three industry groups: (1) traveler accommodation, (2) recreational accommodation, and (3) rooming and boarding houses. The Traveler Accommodation industry group includes establishments that primarily provide traditional types of lodging services. This group includes hotels, motels, and bed and breakfast inns. In addition to lodging, these establishments may provide a range of other services to their guests. The RV (Recreational Vehicle) Parks and Recreational Camps industry group includes establishments that operate lodging facilities primarily designed to accommodate outdoor enthusiasts. Included are travel trailer campsites, recreational vehicle parks, and outdoor adventure retreats. The Rooming and Boarding Houses industry group includes establishments providing temporary or longer-term accommodations, which for the period of occupancy, may serve as a principal residence. Board (i.e., meals) may be provided but is not essential. Establishments that manage short-stay accommodation establishments (e.g., hotels and motels) on a contractual basis are classified in this subsector if they both manage the operation and provide the operating staff. Such establishments are classified based on the type of facility managed and operated.
722: Food Services and Drinking Places	Industries in the Food Services and Drinking Places subsector prepare meals, snacks, and beverages to customer order for immediate on-premises and off-premises consumption. There is a wide range of establishments in these industries. Some provide food and drink only; while others provide various combinations of seating space, waiter/waitress services and incidental amenities, such as limited entertainment. The industries in the subsector are grouped based on the type and level of services provided. The industry groups are full-service restaurants; limited-service eating places; special food services, such as food service contractors, caterers, and mobile food services; and drinking places. Food services and drink activities at hotels and motels; amusement parks, theaters, casinos, country clubs, and similar recreational facilities; and civic and social organizations are included in this subsector only if these services are provided by a separate establishment primarily engaged in providing food and beverage services. Excluded from this subsector are establishments operating dinner cruises. These establishments are classified in Subsector 487, Scenic and Sightseeing Transportation because those establishments utilize transportation equipment to provide scenic recreational entertainment.
81: Sector 81--Other Services (except Public Administration)	The Other Services (except Public Administration) sector comprises establishments engaged in providing services not specifically provided for elsewhere in the classification system. Establishments in this sector are primarily engaged in activities, such as equipment and machinery repairing, promoting or administering religious activities, grantmaking, advocacy, and providing drycleaning and laundry services, personal care services, death care services, pet care services, photofinishing services, temporary parking services, and dating services. Private households that engage in employing workers on or about the premises in activities primarily concerned with the operation of the household are included in this sector. Excluded from this sector are establishments primarily engaged in retailing new equipment and also performing repairs and general maintenance on equipment. These establishments are classified in Sector 44-45, Retail Trade.
92: Sector 92--	The Public Administration sector consists of establishments of federal, state, and local

Public Administration	government agencies that administer, oversee, and manage public programs and have executive, legislative, or judicial authority over other institutions within a given area. These agencies also set policy, create laws, adjudicate civil and criminal legal cases, provide for public safety and for national defense. In general, government establishments in the Public Administration sector oversee governmental programs and activities that are not performed by private establishments. Establishments in this sector typically are engaged in the organization and financing of the production of public goods and services, most of which are provided for free or at prices that are not economically significant. Government establishments also engage in a wide range of productive activities covering not only public goods and services but also individual goods and services similar to those produced in sectors typically identified with private-sector establishments. In general, ownership is not a criterion for classification in NAICS. Therefore, government establishments engaged in the production of private-sector-like goods and services should be classified in the same industry as private-sector establishments engaged in similar activities. As a practical matter, it is difficult to identify separate establishment detail for many government agencies. To the extent that separate establishment records are available, the administration of governmental programs is classified in Sector 92, Public Administration, while the operation of that same governmental program is classified elsewhere in NAICS based on the activities performed. For example, the governmental administrative authority for an airport is classified in Industry 92612, Regulation and Administration of Transportation Programs, while operating the airport is classified in Industry 48811, Airport Operations. When separate records are not available to distinguish between the administration of a governmental program and the operation of it, the establishment is classified in Sector 92, Public Administration. Examples of government-provided goods and services that are classified in sectors other than Public Administration include: schools, classified in Sector 61, Educational Services; hospitals, classified in Subsector 622, Hospitals; establishments operating transportation facilities, classified in Sector 48-49, Transportation and Warehousing; the operation of utilities, classified in Sector 22, Utilities; and the Government Printing Office, classified in Subsector 323, Printing and Related Support Activities.