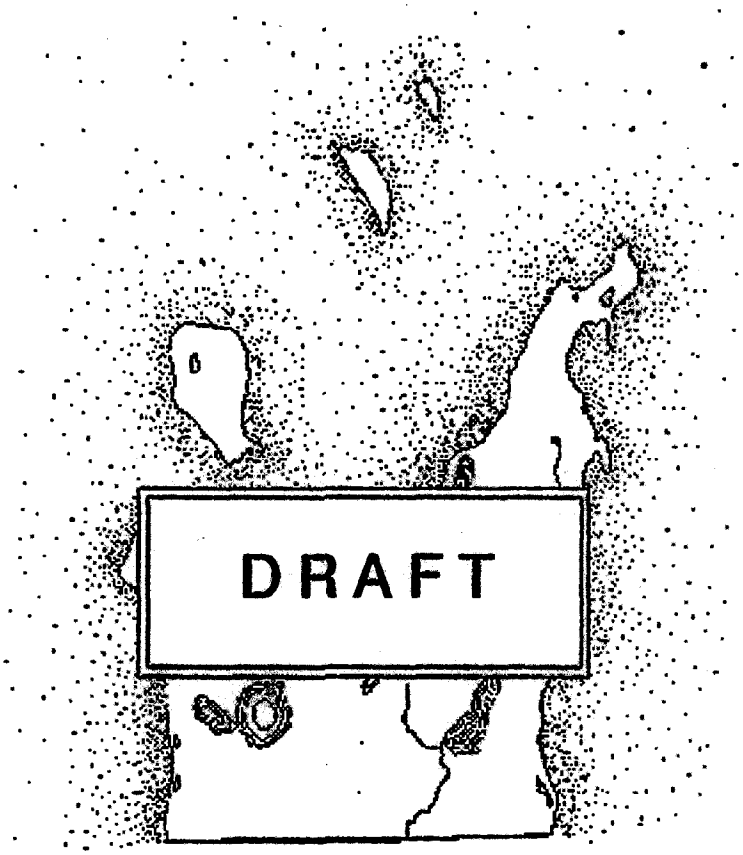
LEELANAU PENINSULA CURRENT TREND FUTURE: IMPLICATIONS OF "BUSINESS AS USUAL"



THE LEELANAU GENERAL PLAN

Policy Guidelines for Managing Growth on the Leelanau Peninsula

Working Paper Number 5

September 5, 1991

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LEELANAU GENERAL PLAN
PROJECT STAFF

Timothy J. Dolehanty
County Planning Director

Duane C. Beard
County Coordinator

Trudy J. Galla
Assistant Planner

Pat Stratton
County Board Secretary

Joyce Pleva
Planning Department Secretary

LEELANAU GENERAL PLAN
TECHNICAL ASSISTANCE STAFF

Planning And Zoning Center, Inc.
302 S. Waverly Road
Lansing, MI 48917
(517)886-0555
(517)886-0564 FAX

Mark A. Wyckoff, AICP, President
Brenda M. Moore, Community Planner
Coy Vaughn, Jr., Graphic Artist

Mark A. Eidelson, AICP, Sr. Planner
Jennifer L. Morris, Planning Aide

PREFACE

This working paper is the first in a series providing background information for the preparation of the **Leelanau General Plan: Policy Guidelines for Managing Growth on the Leelanau Peninsula.** It is numbered as the fifth working paper because the first four working papers were generated to document the activities of the Citizens Advisory Committee (CAC). This committee studied the need for a new County plan and various approaches that could be taken in the preparation of such a plan. They concluded that while a new plan was needed, it should not be simply another *"County Comprehensive Plan"* prepared by the County Planning Commission. Instead, what is needed is a growth management plan for the Peninsula that involves the direct input and participation of all the local units of government in the County. This led to the initiation of the **Leelanau General Plan**.

This working paper documents current trends facing the County in eight different categories:

- Population
- Economy
- Land
- Public Finance
- Transportation
- Community Services
- Infrastructure
- Environment.

In each case there is an effort to identify the current or emerging pattern or trend and then to describe the future if the trend continues. If no citizen or local government or groups of citizens or governmental organizations were to make an effort to change anything (i.e. no new plans, regulations, taxes, subsidies, incentives, etc. were initiated), and current trends were to continue, what would the future be like? This report attempts to project the implications of the future if it is *"business as usual."*

This working paper is intended to serve as a *discussion document* to stimulate thought and motivate participation in the preparation of the **Leelanau General Plan**. If you have suggestions for additions, deletions or refinements, please direct them to the Leelanau County Planning Department.

Working paper #6 presents draft goals and objectives for the **General Plan**. A series of working papers beginning with #7 will address a wide range of technical issues in more detail. The introduction and postscript explains the process in more detail.

EXECUTIVE SUMMARY

Listed below are the emerging trends and projections for each of the eight categories of information addressed in this report.

Population

Trends

- Total permanent population is increasing at about 2.5 - 3% per year.
- In-migration continues to be the primary source of population growth.
- Seasonal population continues to grow at a faster rate than permanent population.
- While the County population is aging, it is not the number over age 65 who are increasing the median age as much as it is the *"baby boomers"* reaching middle age.
- Average household size continues to fall as new households are created faster than population grows.
- Multi-unit residential facilities are increasing in response to the growth of single person and childless households and the relative decline of married couple families.
- New seasonal housing units are built about twice the rate of permanent residences.
- Persons of low income are proportionally fewer, but the disparity between the wealthy and the poor is growing. The need for more affordable housing is becoming more acute.
- The number of school-aged children is increasing at a slower rate than the general population.

Projections

- The year-round population will continue to increase between 2.5 - 3.0% per year.
- Population increases due to in-migration will account for the majority of additional population increases
- Peak seasonal populations will continue to outnumber resident populations by at least 7 to 1.
- Median age will continue to rise, staying higher than the state's average. Older residents will be more economically well-to-do and politically active. They will demand a higher quality of life and expect a higher level of services.
- The Native American population will continue to grow but will still comprise a relatively small percentage of the total population unless in-migration increases.
- Increases in the number of households will continue to outstrip increases in population by at least 50%, and as a result, average household sizes will remain relatively small. On a per-unit basis, more land will be used to accommodate fewer people.
- There will continue to be an increase in demand and production of multi-unit residential facilities. The impacts of such development (both perceived and real) will affect the rural character and public facilities in specific areas. Single person and childless households will become a larger percentage of total

households. Many of these households will want non-traditional housing arrangements that fit their lifestyles (e.g., condominiums, and apartments vs. large lot single family homes). The percentage increase in number of seasonal housing units will be more than twice as high as the increase in year-round units.

- The margin between the wealthy and the poor will widen. Those with fewer economic resources will find it more and more difficult to survive as cost of living and cost of public services rise.
- Smaller families, senior, childless and single-person households will continue to increase at a faster rate than nuclear families. As a result, the number of school-aged children will not increase at the same rate as the general population. Education levels of the County's population will rise with the influx of affluent people.

Economy

Trends

- The County's labor force is growing at a slower pace than it's more urbanized neighbor, Grand Traverse County.
- Except in times of severe recession, unemployment rates are lower in Leelanau County compared to Benzie and Grand Traverse Counties.
- The County is becoming more dependent on the tourist trade.
- Service and retail establishments and employment are increasing faster than other trade sectors.
- Agriculturally based businesses are declining in economic significance relative to other sectors.
- Small businesses provide the majority of jobs in the County.
- Transfer payments in the form of pensions and social security represent a significant flow of money to the local economy.

Projections

- The County's labor force will grow at a slower pace than the population (approximately 8% in the next several years).
- Unemployment rates in the County are projected to be between 6.8 and 7.4% in the next several years.
- Relatively low paying retail and service jobs and construction jobs, will provide the bulk of new employment opportunities.
- Agricultural profit margins will decrease as taxes and cost of production rise and revenues fluctuate. More agricultural land will be taken out of production in anticipation of higher profits from potential development.
- Small businesses will continue to grow in number to try to capture tourist opportunities and because of the lack of other job alternatives.
- Tourism will continue to increase its economic significance while agriculture and the little industrial activity will decline.
- Imported retirement funds (pensions and social security) will become a larger part of the local economy.

Land

Trends

- Urbanization in the form of sprawl is occurring on the Leelanau Peninsula and is expanding at an increasing rate.
- Land division practices are continuing to fragment renewable resource lands.
- The commercial viability of agriculture and its economic importance to the Peninsula are increasingly threatened as sprawl continues.
- Sprawl is continuing largely unabated because current local and county planning and zoning programs encourage it.

Projections

- Urbanization of the Leelanau Peninsula will continue and will become the fundamental force in the loss of the Peninsula's rural character and important open spaces.
- Land fragmentation will fuel continued sprawl, an early demise of agriculture in some areas, and result in significantly higher taxes due to both increased land values and the higher costs of providing public services.
- The Leelanau Peninsula will witness a decline in agricultural acreage as farmland is converted to residential and other urban land uses.
- Community unrest and political pressures will heighten as local and county governmental entities grapple with diverse community attitudes in their independent efforts to better manage growth.

Public Finance

Trends

- The tax base is growing with new development.
- While there are significant differences in millage rates among local units of government in the County, all are generally increasing.
- On a per capita basis, the County receives lower than state average allocations from most state departments.

Projections

- New revenues from development will eventually fail to pay for associated costs of community services because development is too spread out.
- Millage rates will become more disparate as more developed, wealthier communities increase millages at a higher rate than communities of modest or low incomes in order to meet growing service burdens.
- While public service needs will increase, state and federal aid will not proportionately increase.

Transportation

Trends

- The automobile will remain the dominant mode of transportation and is increasing faster than the population.
- Traffic levels are increasing Peninsula-wide, although the rates are higher along traditionally lower volume roadways.

- The increases in travel time, congestion, and traffic hazards spurred by growth and development are exacerbated by the circuitous roadway network in the County.
- The need for major roadway improvements is increasing while available funds are decreasing.
- Road ends are increasingly serving as public access sites to the area water resources.
- Congestion is most apparent in urban and activity centers where seasonal residents compete with permanent residents for parking.

Projections

- The number of single occupancy passenger vehicles will continue to grow at a faster rate than the population.
- Significant decreases in the level of service of both primary and secondary roadway corridors will be experienced as traffic volumes continue to increase.
- Travel time will lengthen and traffic safety will become increasingly threatened at rates proportionally higher than area population growth.
- Future transportation funding will not be sufficient to resolve the inadequacies of the Peninsula's roadway network.
- Parking and congestion problems will increase in the urban centers and key activity centers as tourism grows.
- Increased conflicts will evolve between visitors and waterfront property owners along road ends.

Community Services

Trends

- Community leaders and the citizenry are recognizing potential needs for additional community services (e.g., education, health, recreation).
- An older population is becoming established in the County that is accustomed to urbanized levels of service.
- Demand on fire and police services is rising.
- Youth services are limited in the County and needs for them appear to be increasing.

Projections

- While the need for additional community services is recognized, the financial support to provide them is not there.
- An older population will place more demands on community service systems, in particular, health care and emergency services.
- Needs of those with low incomes will increase as cost of living rises in the County.
- Child care and child service needs for households in poverty will increase.
- Fire, emergency response, police calls and public annoyance crimes (trespassing, disorderly conduct and vandalism) will increase with additional seasonal population increases.

Infrastructure

Trends

- The current sprawl pattern of land development minimizes the pressure for new or expanded public infrastructure systems.
- New public infrastructure systems to serve existing developed areas are relatively costly due to the small population centers and limited cost sharing opportunities.

Projections

- Infrastructure will play a limited, but increasing role in the Peninsula as urbanization continues.
- The provision of new infrastructure in existing villages will be more costly, and hence less likely, than the provision of new facilities as a part of new large scale development.

Environment

Trends

- Air quality continues to decline due largely to land use activities hundreds of miles away within the Lake Michigan Basin.
- Sprawl-like development is the leading threat to the quality of land and water resources.
- Surface waters are vulnerable to contamination due to the lack of a coordinated stormwater management program.
- New sites of groundwater contamination are being discovered.
- Significant losses of sensitive environments (wetlands, sand dunes, floodplains, high risk erosion areas, shorelines) are continuing from many small incremental encroachments.
- Solid waste disposal is not the huge problem it is in most counties for the foreseeable future, but is likely to be later unless a stronger multi-county solid waste disposal alliance is created.

Projections

- Air quality levels will remain high throughout the Peninsula, though pollution from hundreds of miles away will continue to lower air quality.
- The existing high surface water quality of inland lakes and streams may be reduced as new development occurs in the absence of a coordinated stormwater management program.
- The identification of new sites of groundwater contamination will result in new efforts to clean up existing sites of contamination and to prevent future ones.
- Decreases in the quality and quantity of sensitive environments, including wetlands, woodlands, shoreline and dune areas, will likely occur with future growth.
- The Peninsula's solid waste disposal needs for the foreseeable future will be adequately addressed by implementation of the County's current solid waste management plan. However, long term needs will require a stronger multi-county alliance.

INTRODUCTION

Purpose of Working Paper

The purpose of this working paper is to stimulate thought and discussion about the future. Rather than rely on sophisticated projections of many variables which in turn must be founded on a set of assumptions, which may or may not be viewed as reasonable (or perhaps even likely) by most people, this working paper examines the future based on a very simple premise. *What will the future be like if it merely reflects a continuation of existing trends?*

After examining the current trend future, several questions will likely come to mind. For example:

- If the future turns out to be a continuation of recent trends, is that what the citizens of the Peninsula want? Is it a desirable future?
- Does it represent a quality of life at least equal to that presently enjoyed?
- Does it represent a sustainable future?
- Will it leave the next generation with reasonable options or will exploitation of natural resources and current opportunities leave future generations with more problems than possibilities?
- Is the public prepared for the loss of agricultural land and open spaces that would occur?
- Are citizens prepared for the growth that is likely to occur even if there were no changes in local or County policies or both?
- Are County and local governments prepared for the new demands for services inherent in the increases in both year round and seasonal populations?
- Are citizens prepared for the higher taxes necessary to pay for new services?

Following a presentation on September 5 based on material in this report, the Leelanau General Plan Steering Committee was asked as a group the following questions:

Is the trend future different from what you expected?
Is it what you want?
If not, why not? If so, why?

The Steering Committee responded *"Yes"* to the first question and *"No"* to the second. Reasons expressed in opposition to the trend future ranged from a loss of open space, to higher taxes, to a lack of good paying employment opportunities for youth in the County who may want to stay and make a living here. No one expressed support for the current trend future.

Your Opinions are Important—Please Share Them

The Leelanau County Planning Department, Leelanau County Planning Commission, Leelanau General Plan Steering Committee, County Board of Commissioners and the elected officials in your local government want to know your thoughts about this report. Do you want the

current trends to continue? If yes, why? If not, how do you want the County to grow and change? Please let people know what you think and why.

Data Qualifiers

This report relies largely on statistical indicators of change. In many instances the specific information most desirable to document a trend was not readily available. As a result, surrogates had to be used. None of the data presented was originally collected. It has all been assembled by other agencies and most of it has been reported elsewhere. It is possible that there are errors, although efforts have been made to prevent any new errors by reporting it here. An effort has also been made to present available information simply. There may be other ways to interpret the same data. Feel free to contact the County Planning Department about any errors, questions or comments you may have on the data presented herein.

All of the data has been presented exclusively for the Peninsula. No effort has been made to identify, collect and display information related to any of the islands that are a part of Leelanau County. In large part this is because of the lack of such available information.

Presentation Format

The presentation style, format and structure of this report is modeled after a similar report prepared by the Southeast Michigan Council of Governments in 1990 entitled **The "Business as Usual" Trend Future: The Data Base.** That pioneering report has spawned a number of similar efforts because of the simplicity and clarity with which important trend information can be conveyed. The authors of this working paper both acknowledge and thank the authors of the SEMCOG report for their foresight and creativity.

"Big Picture" Considerations

This working paper documents current trends facing the County in eight different categories:

- Population
- Economy
- Land
- Public Finance
- Transportation
- Community Services
- Environment.

Together these trends present the prospect of significant change in the Peninsula over the next two decades. Most formidable are changes to the people and to the land. If the current trends continue, within 20 years Leelanau County will:

Have a resident **population**

- at least 50% greater than the present
- older than the present

- that is one-seventh to one-tenth of the seasonal population
- with greater disparity between the wealthy and the poor.

Have an **economy** more dependent on tourism

- with more commercial and tourist oriented establishments
- with more low paying commercial and service sector jobs
- with fewer agricultural establishments and jobs.

Have **land** that

- is characterized more by sprawl and an early stage of urbanization than distinct rural and urban areas
- has a noticeable loss in its rural character
- has considerably less agriculture
- has many more houses in rural areas
- has considerably less open space
- has fewer views of public resources
- with more open space in *"yards"* and less in fields, orchards and woods
- continues to be fragmented and developed in rural areas in part because of local planning and zoning programs that encourage it.

Have **public finance** that is characterized by a

- growing tax base
- but also higher taxes
- great differences in millage rates within the County with the wealthier communities having much higher rates than the poorer ones
- greater reliance on local revenues over state or federal ones.

Have **roads** with

- considerably more traffic
- longer travel times
- less safety due to more driveways and higher volumes
- more congestion and serious parking problems in the villages.

Have **community services** which

- are inadequate to meet those in need
- are inadequate to meet the level of service desired by the elderly
- are significantly greater in terms of police and fire service in order to meet growing needs
- are inadequate to meet some of the special needs of youth.

Have **infrastructure** which

- is still largely limited to the villages but needed elsewhere
- is very costly to install because of the low density sprawl development pattern.

Have an **environment** which

- has a reduced level of air quality due to activities hundreds of miles away has a surface water quality that is somewhat reduced in quality due to the lack of stormwater management
- has more instances of contaminated groundwater
- has had additional losses of wetlands, sand dunes and other sensitive environments through incremental encroachments
- needs to find other alternatives for solid waste disposal.

These changes are presented as trends and projections in the body of this report. Additional background information is also presented.

Chapter 1

POPULATION

INTRODUCTION

Characteristics of the permanent residents of Leelanau County have changed steadily over the past forty years. Four different populations appear to be emerging. The first are lifelong residents, the second are native Americans, the third are immigrants, and the last is the seasonal population. The latter two are more affluent than the first two groups and tend to have higher educations. This is resulting in the creation of *"haves"* and *"have nots"* and some jealousies and tensions between the various groups. The likelihood of conflicts between values held by each population may grow if the disparities between them become more acute.

However, the precise characteristics of the existing population, as represented by the 1990 census, won't be known until final count data is released in the spring or summer of 1992. Sophisticated projections also won't be available until then. However, some preliminary data is available for comparative analysis with past census data and with simple straight line projections. In general, this data confirms the continuation of trends that began several decades ago and indicates the following emerging patterns:

- Total permanent population is increasing at about 2.5 - 3% per year.
- In-migration continues to be the primary source of population growth.
- Seasonal population continues to grow at a faster rate than permanent population.
- While the County population is aging, it is not the number over age 65 who are increasing the median age as much as it is the *"baby boomers"* reaching middle age.
- Average household size continues to fall as new households are created faster than population grows.
- Multi-unit residential facilities are increasing in response to the growth of single person and childless households and the relative decline of married couple families.
- New seasonal housing units are built about twice the rate of permanent residences.
- Persons of low income are proportionally fewer, but the disparity between the wealthy and the poor is growing. The need for more affordable housing is becoming more acute.
- The number of school-aged children is increasing at a slower rate than the general population.

Chapter 1

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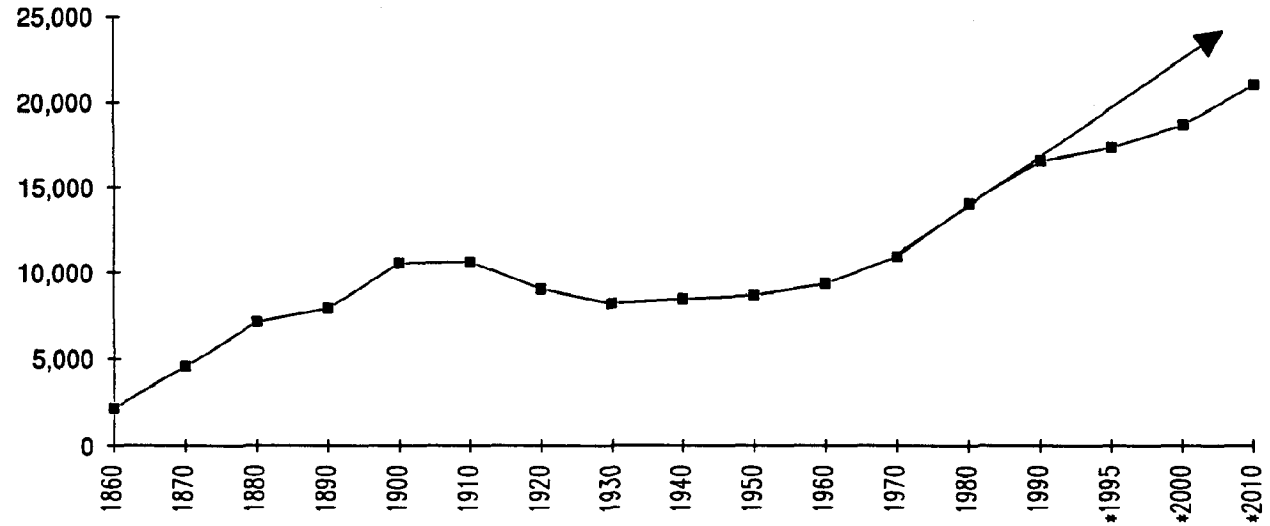
Figure 1-1

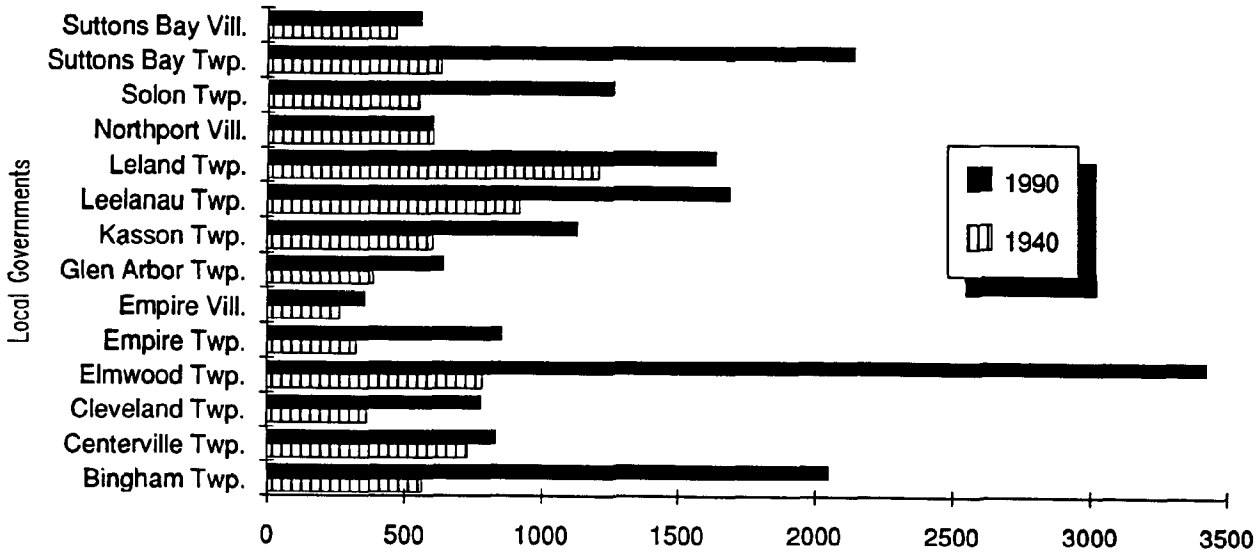
Leelanau County Population: 1860 - 2010*
(* projections made in 1985)



Source: Decennial Census 1960-1990; Projections, Michigan Dept. of Management Budget

Figure 1-2

Population Change From 1940 to 1990



Source: Derived from Decennial Census 1940-1990

The year-round population will continue to increase between 2.5 - 3.0% per year.

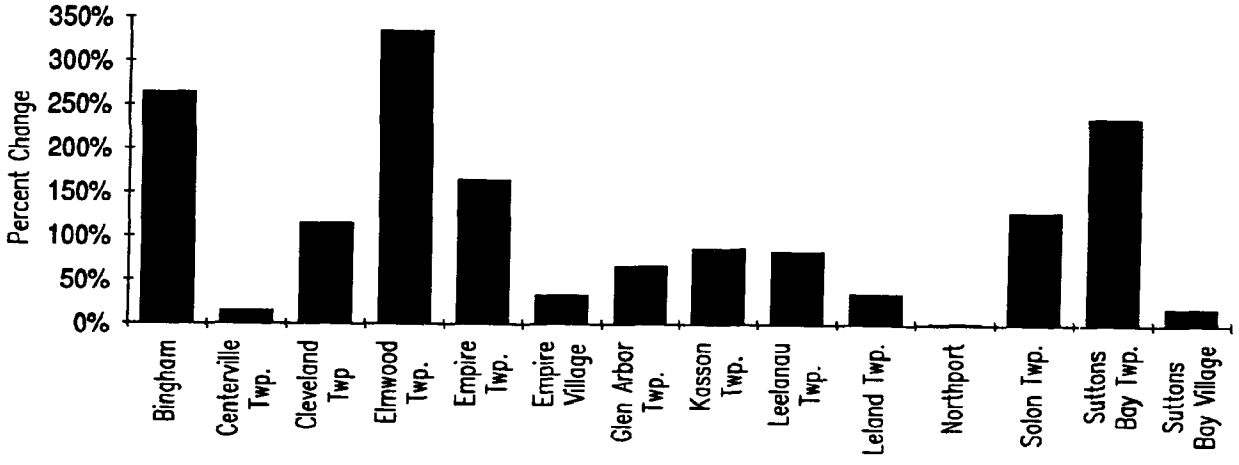
Leelanau County's lumbering era population reached its peak in 1910 at 10,608. Between 1910 and 1930 the population dropped 29%, to 8,206. Since that time, the population has continually increased, with the most dramatic changes coming since 1960. In the last four decades the County has experienced a 91% increase in population (see Table 1-1). In 1985, the Michigan Department of Management & Budget projected by the year 2010, the County population will increase by another 27%, reaching 20,980. Projections presented in the County's 1989 Solid Waste Plan show the population reaching 20,300 by the year 2007. Straight line projection based on the 1970, 1980 and 1990 census figures reveal a population in 2010 of approximately 23,000 (see Figure 1-1).

Table 1-1

Percentage Increase in County Population	
Year	Percentage Increase
1950 - 1960	+7.8%
1960 - 1970	+16.6%
1970 - 1980	+28.8%
1980 - 1990	+18%
1990 - 2010	+27%

Population increases in the County have not been consistent across all jurisdictions (see Figure 1-2). For instance, the percentage of change in population between 1940 and 1990 among local units of government range from a high of +335% in Elmwood Township to a low of +2% in the Village of Northport (see Figure 1-3). This pattern will likely continue without additional infrastructure in the villages (see Chapter 7).

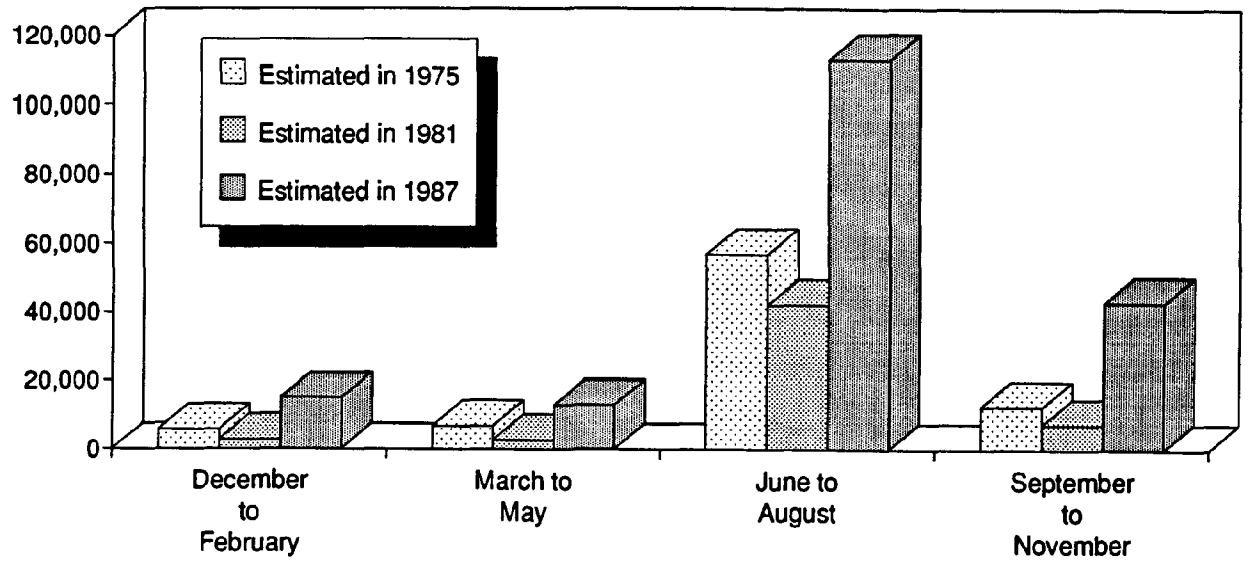
Figure 1-3
Percent Change in Population by Local Units of Government in Leelanau County Between 1940 and 1990



Source: Derived from Decennial Census Data

Figure 1-4

Seasonal Population for Leelanau County



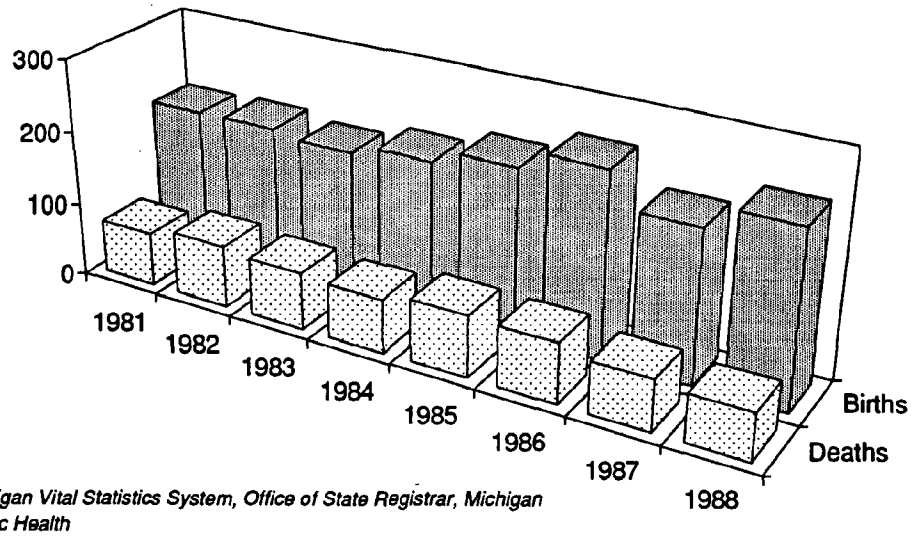
Source: Leelanau County 1989 Solid Waste Plan, 1975 & 1981 figure NWMCOG, 1987 Est. by Gosling & Czubak

Population increases due to in-migration will account for the majority of additional population increases.

Over the last eight years, on an annual basis, there were three times more births than deaths in the County (see Figure 1-4). Between 1981 and 1988 the average number of births per year was 215 and the average number of deaths was 76. The higher birth rate, however, does not account for the entire population gain experienced by the County. In fact, in-migration, between 1980 and 1990 amounted to 1,703 persons and accounted for 68% of the County's population gain in that time period. Net in-migration between 1970 and 1979 amounted to 2,738 persons and accounted for 87% of the population increase during that period.

Figure 1-5

Births and Deaths Recorded in Leelanau County Between 1981-1988



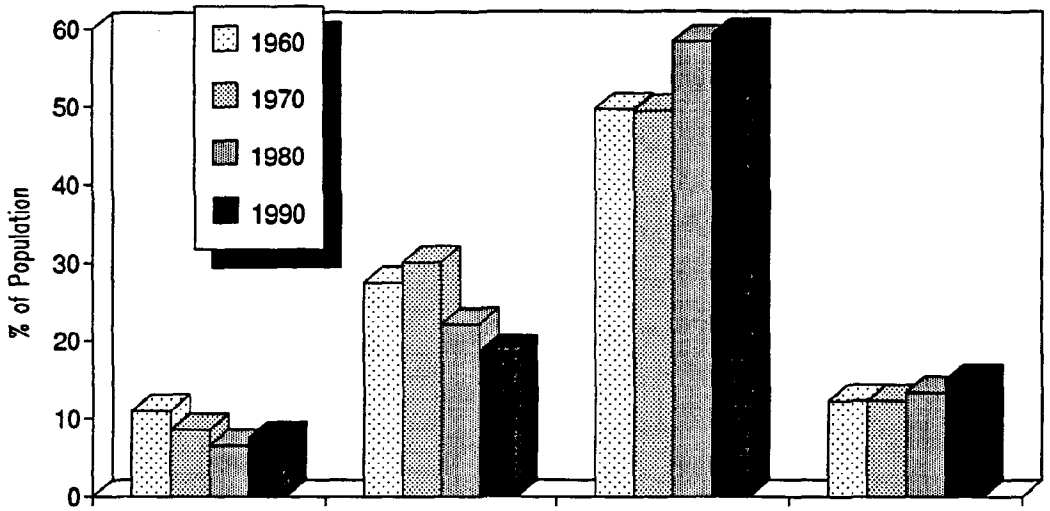
Source: Michigan Vital Statistics System, Office of State Registrar, Michigan Dept. of Public Health

Peak seasonal population will continue to outnumber resident population by at least 7 to 1.

While there's limited data available on the County's seasonal population, it appears to be increasing as evidenced by sales tax collected by tourism related business, increases in jobs related to tourism and visitation to Sleeping Bear Dunes National Lakeshore (see Figures 2-7, 2-8, 2-9, 2-10 and 2-11 in Chapter 2). The most recent available estimates (1987) suggest that during the peak season (June-August) the seasonal population outnumbers the year-round population by nearly 7 to 1. This number is up considerably from 1975 estimates that suggested peak seasonal population outnumbered year round residents by 4 to 1 (see Figure 1-5). It should be noted that 1981 figures are down from 1975 figures due to the recession.

Figure 1-6

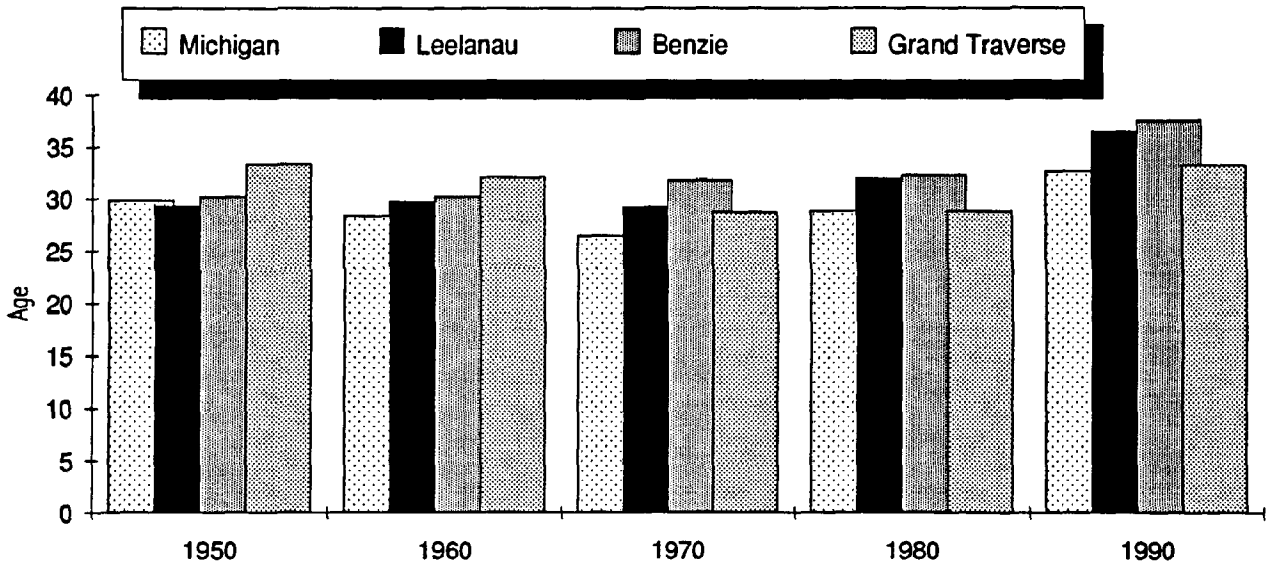
Percentage of the Population by Age Group



Source: Decennial Census

Figure 1-7

Median Age for 1950 to 1990



Source: Decennial Census

Median age will continue to rise, staying higher than the state's average. Older residents will be more economically well-to-do and politically active. They will demand a higher quality of life and expect a higher level of services.

The percentage of the population over 65 in 1960 was approximately 12%. It had risen slightly to approximately 15% by 1990 (see Figure 1-6). By the year 2010, the Michigan Department of Management and Budget projects that approximately 13% of the population will remain over 65.

While state trends show an aging population (i.e., an increase in median age) Leelanau County consistently shows greater increases than the state (see Figure 1-7). In 1970 the County's median age was 29.3 years of age (the state median was 26.5 years), by 1990 the median age increased to 36.5 years (vs. 32.6 for the state). When comparing median age to neighboring counties, Leelanau is higher than Benzie (1990 median age 33.2) but lower than Grand Traverse County (1990 median age 37.5). The increase in median age can primarily be attributed to retirees relocating in the County and the relatively large number of baby boomers reaching middle age.

Illustrations of age/sex shifts over time can be seen in Figures 1-8 through 1-10. In 1960 those under 19 made up a much larger segment of the population than that same group did in 1980. By 1980, the shifts in the population in older age groups can be seen. According to projections for the year 2000 by the Michigan Department of Management and Budget, the top age groups will have the heavier gains, again, as the baby boomer generation ages. What should also be considered are the wave of baby boomer children coming of age to bear children.

Figure 1-8

1960 Age-Sex Pyramid for Leelanau County

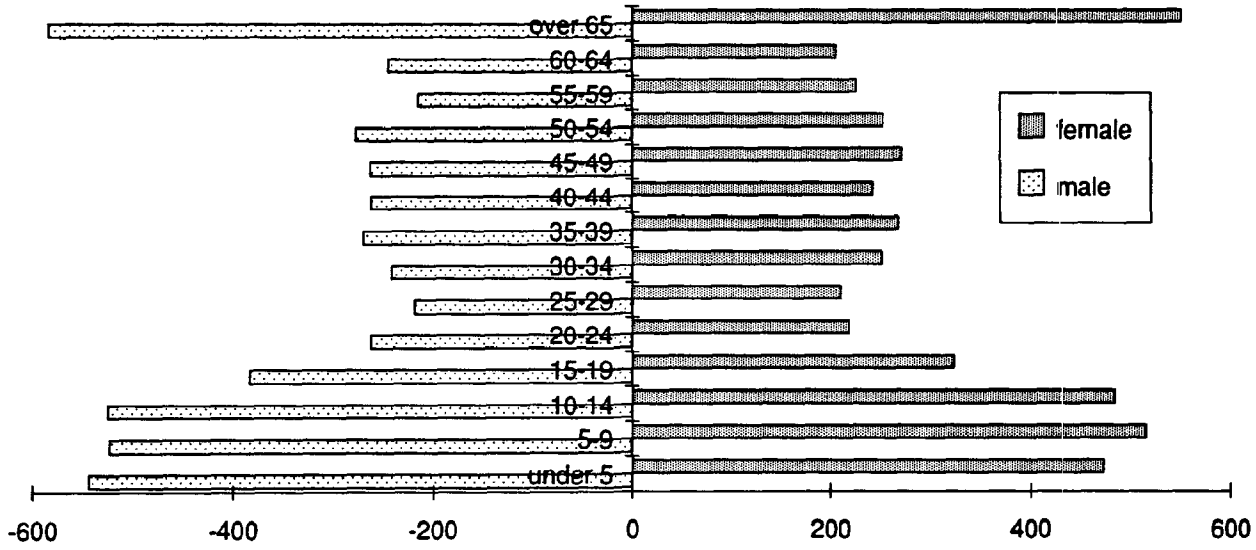


Figure 1-9

1980 Age-Sex Pyramid for Leelanau County

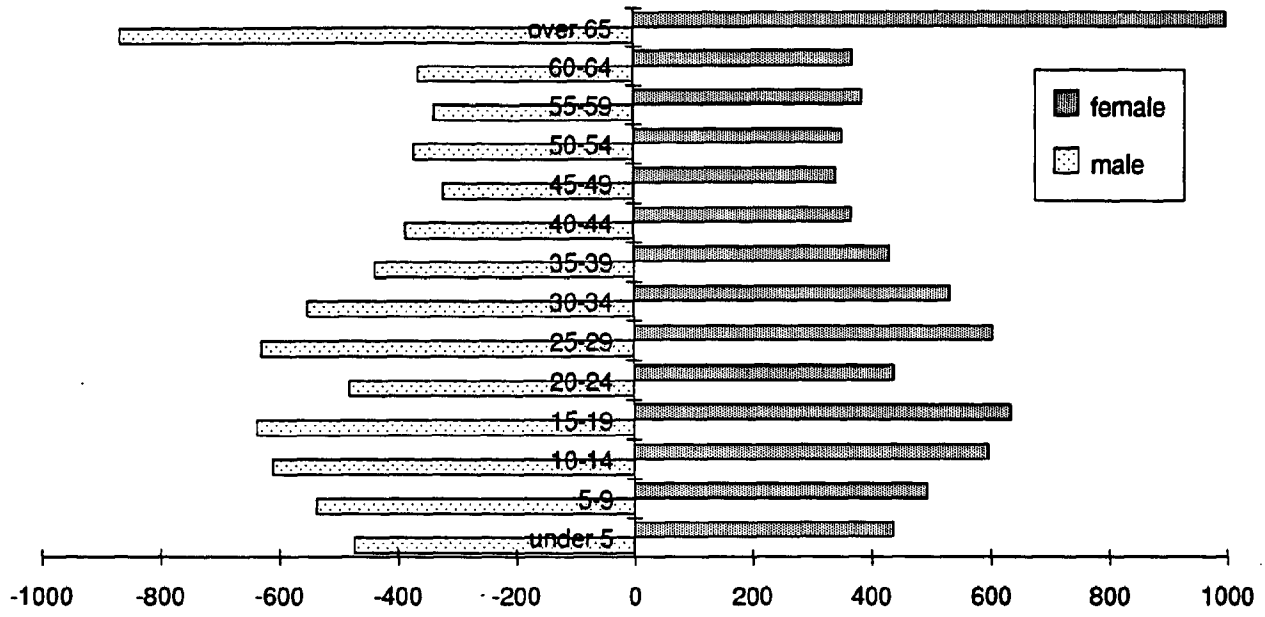
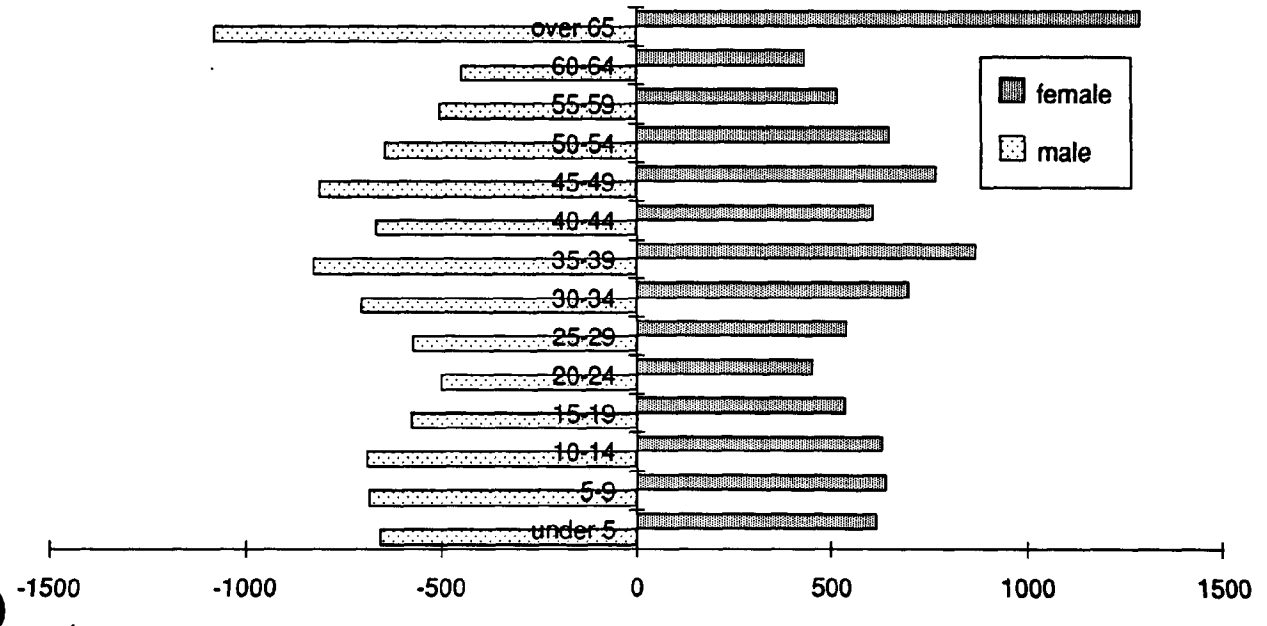


Figure 1-10

2000 Age-Sex Pyramid for Leelanau County



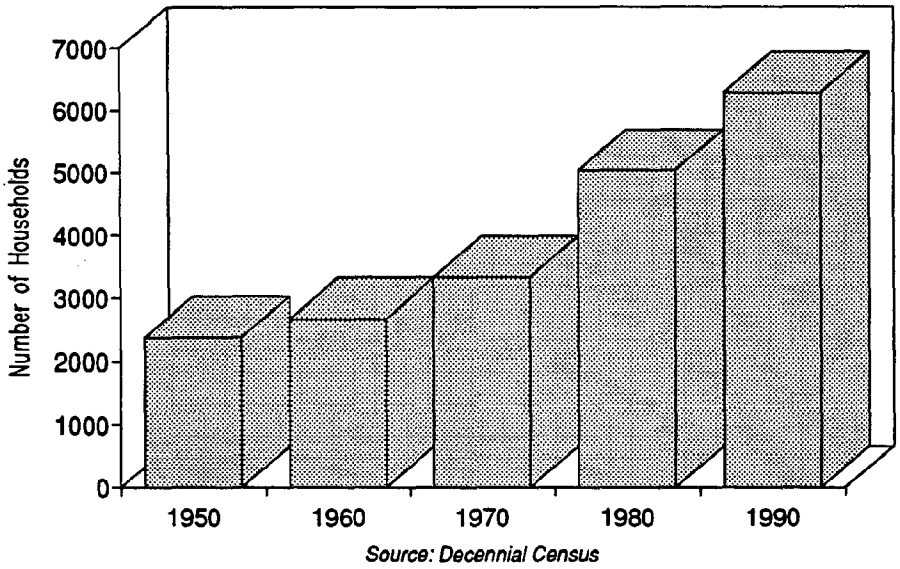
The Native American population will continue to grow but will still comprise a relatively small percentage of the total population unless in-migration increases.

The vast majority of the County's population is white. The highest number of minorities in the County are Native Americans, who comprise almost 3% of the population (451 persons). By comparison, in 1970 and 1980 they represented slightly over 1% of the population with 131 and 178 persons, respectively. The increase may be due to increased in-migration of Native Americans and identification by more persons of their Native American ancestry.

The success of the recently expanded gambling casino is providing job and economic opportunities for Tribe members. Given increasing tourism in the County, this facility is likely to take on a more significant role for the Native American population. Affordable housing is also a strong attractor.

Figure 1-11

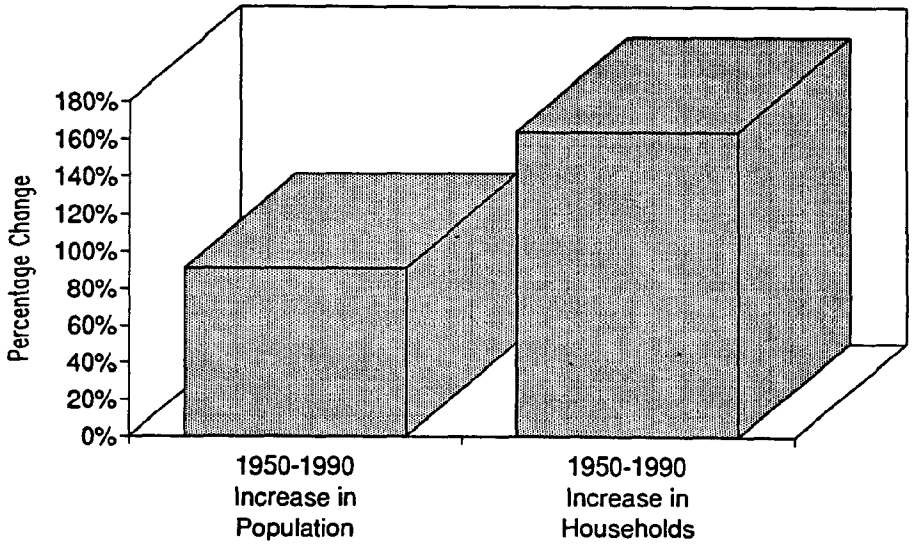
Number of Households in Leelanau County From 1950-1990



Source: Decennial Census

Figure 1-12

Leelanau County Percentage Change in Population and Households 1950-1990



Increases in the number of households will continue to outstrip increases in population by at least 50%, and as a result, average household sizes will remain relatively small. On a per-unit basis, more land will be used to accommodate fewer people.

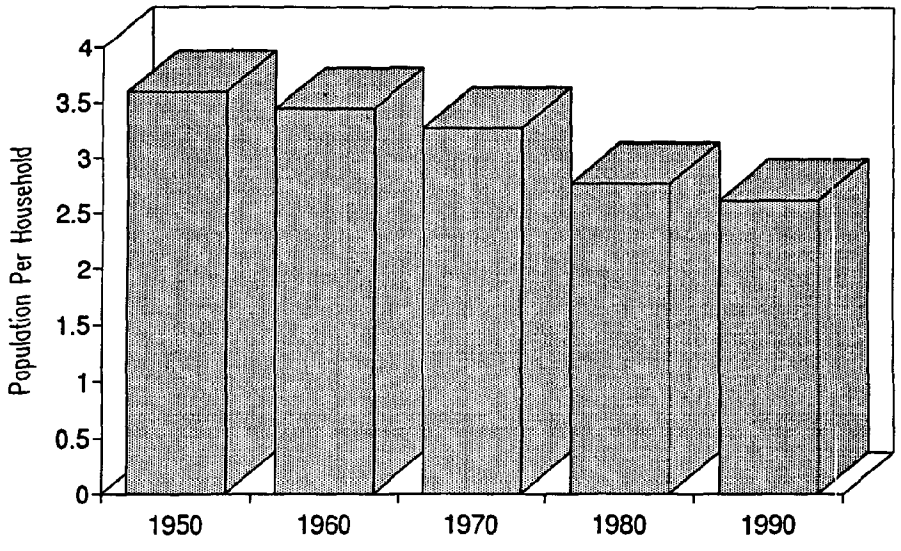
The number of households in Leelanau County have increased along with its population (see Figure 1-11). However, the *percentage* of increase in households has been significantly greater than that of the population (see Figure 1-12). This is because of an increase in seasonal housing, the number of single person households and the fact that people are now less likely to share housing (e.g., extended family households). In fact, the number of households increased 164% between 1940 and 1990 compared to a 91% increase in population.

Average household size in the County decreased from 3.6 persons per household in 1950 to 2.62 in 1990 [a decline of one person per unit, a 37% decrease (see Figure 1-13)]. Ranges in persons per household among local units of government in 1990 varied from a high of 2.90 in Kasson Township to a low of 2.13 persons per household in Glen Arbor Township.

Married couple families are becoming a slightly smaller percentage of households in Leelanau County. In 1980 they represented about 69% of all households, by 1990 the percentage decreased to 66%. From an historical viewpoint, nearly 81% of all households in 1950 were married couple families.

Figure 1-13

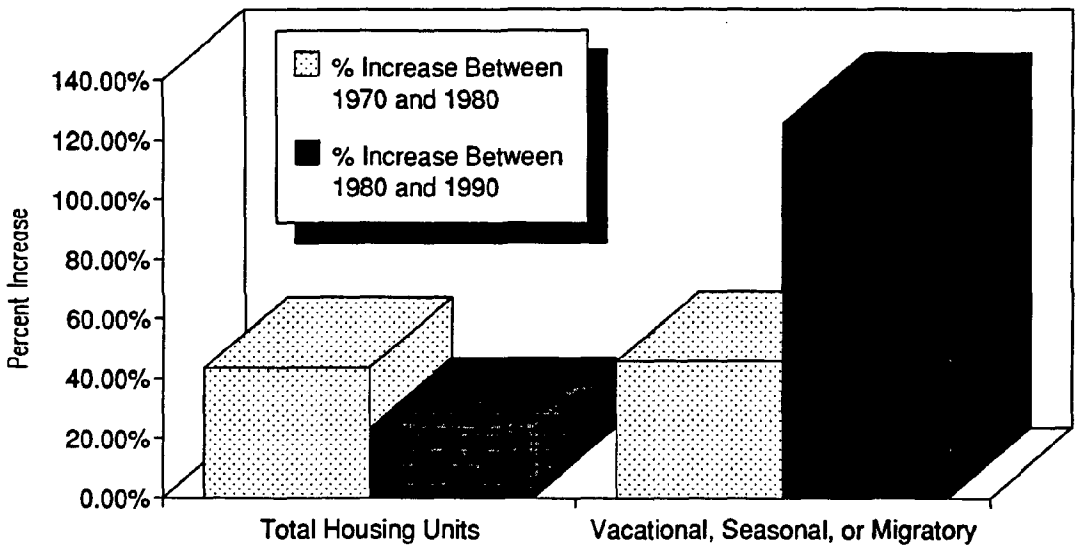
Leelanau County Population Per Household From 1950 to 1990



Source: Decennial Census

Figure 1-14

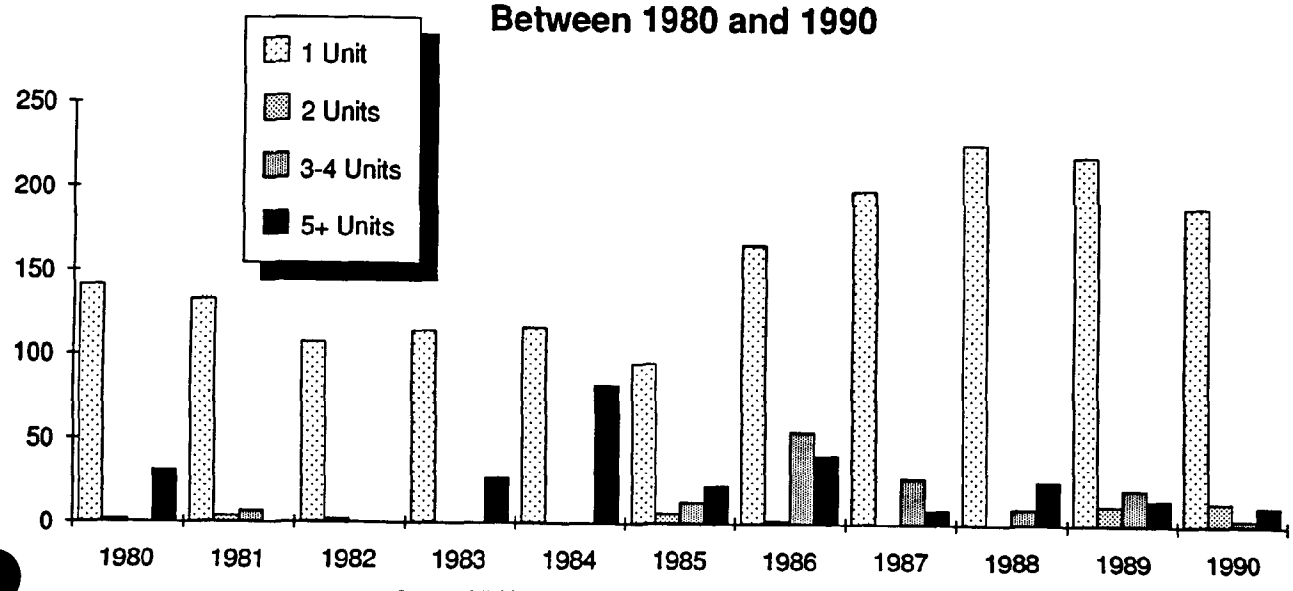
Percent Change in Housing Units Between 1970 and 1990



Source: Decennial Census

Figure 1-15

Residential Building Activity in Leelanau County Between 1980 and 1990



Source: Michigan State Housing Authority and Bureau of Census

There will continue to be an increase in demand and production of multi-unit residential facilities. The impacts of such development (both perceived and real) will affect the rural character and public facilities in specific areas. Single person and childless households will become a larger percentage of total households. Many of these households will want non-traditional housing arrangements that fit their lifestyles (e.g., condominiums, and apartments vs. large lot single family homes). The percentage increase in number of seasonal housing units will be more than twice as high as the increase in year-round units.

In the last decade the number of total housing units in the County increased just over 23%. The number of seasonal or migratory units increased over 125% in that same time period (see Figure 1-14). The majority of new housing units still tend to be single family detached, but in recent years multifamily units have also increased in number (see Figure 1-15). Of the 2,200 units permitted between 1980 and May of 1991, 79% were single family units. The remainder were multifamily; 15% were in structures with 5 or more units; and 6% were in structures with 2-4 units (see Figure 1-16). Between 1980 and 1990 there were 74 demolitions in the County (see Figure 1-17). In some cases, prime properties are being purchased, older homes demolished and newer, more elaborate homes are replacing them. This is most true around inland lakes. In other cases, old farm houses are being demolished and new homes built nearby.

The nature of the County's housing units is still dominated by single family detached homes. The most notable change in types of structures between 1980 and 1990 is the increase in mobile homes, which have more than doubled in the 10 year period. This may be a direct market response to the need for affordable housing.

The majority of the County's housing is fairly new with over 50% of the housing stock being built since 1970.

Figure 1-16

Residential Building Activity Between 1980 and 1990

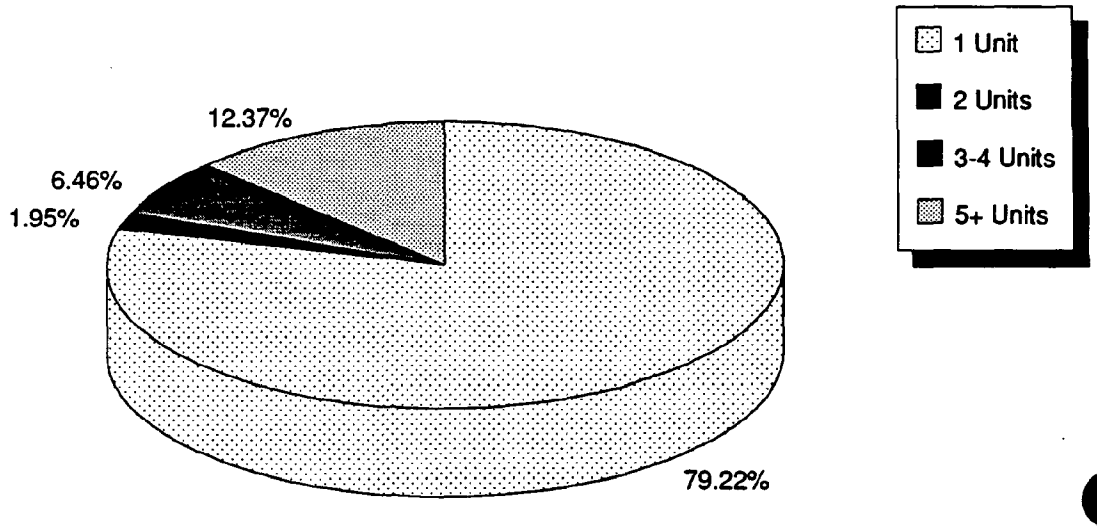
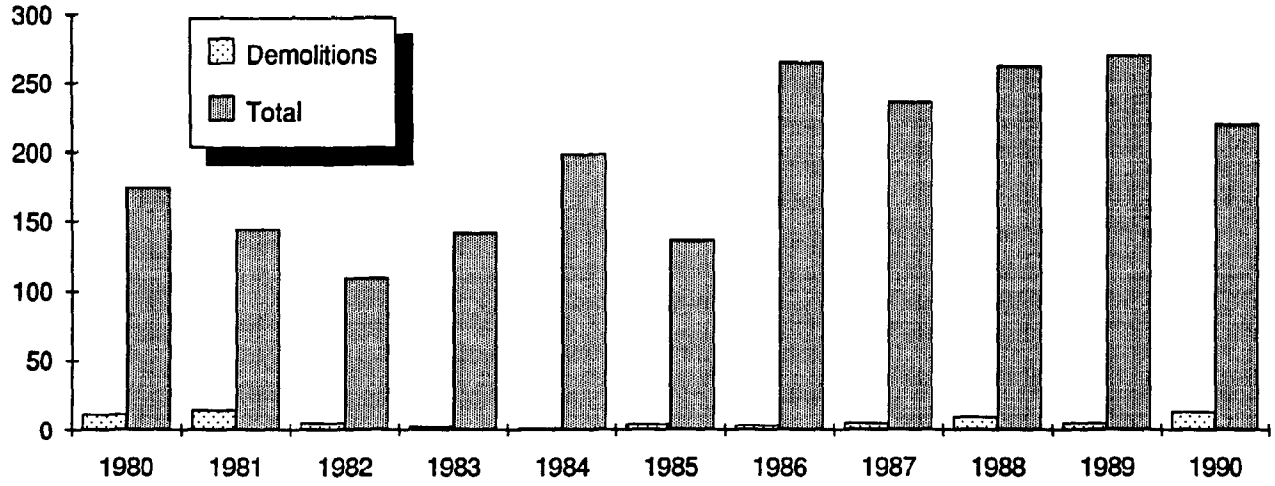


Figure 1-17

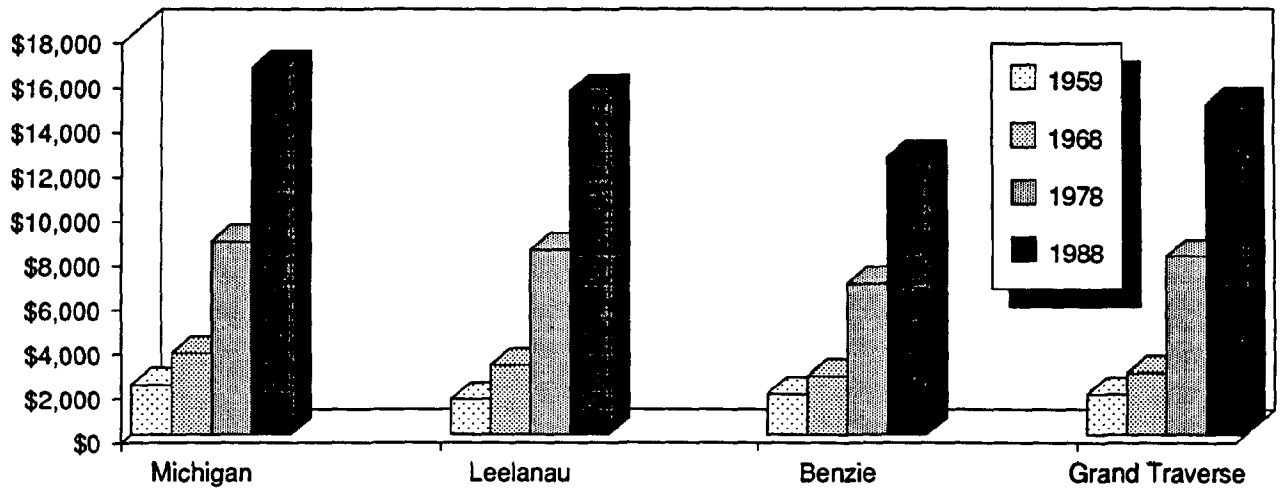
Residential Building Activity in Leelanau County Between 1980 and 1990



Source: Michigan State Housing Authority and Bureau of Census

Figure 1-18

Per Capita Personal Income



Source: U.S. Dept. of Commerce, Bureau of Economic Analysis

The margin between the wealthy and the poor will widen. Those with fewer economic resources will find it more and more difficult to survive as cost of living and cost of public services rise.

Poverty rates declined between 1970 and 1980 (1990 figures unavailable). In 1970 nearly 13% of the County's population was below the poverty level. By 1980 8.3% of the population was below the poverty level.

While per capita income of Leelanau County is lower than the state's average, the County (since 1968) has had a consistently higher per capita income than neighboring Grand Traverse and Benzie Counties. Between 1959 and 1988 the State's per capita incomes increased by 630% while Leelanau County's increased 865%. Grand Traverse and Benzie County's per capita incomes increased 710% and 580%, respectively, in that same time period (see Figure 1-18).

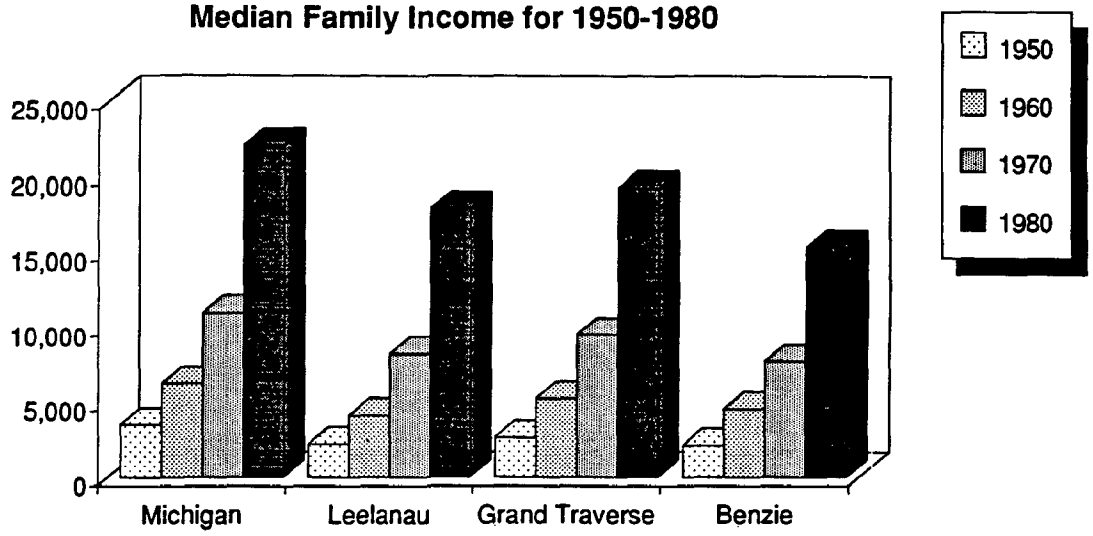
Median family income in Leelanau County has also increased at a greater pace than the state and its neighboring counties. Between 1950 and 1980 (note alternative time frame from per capita figures) Leelanau County family incomes increased almost 710%. The state figure increased by 528%; Grand Traverse, 630%; and Benzie, 623% (see Figure 1-19).

Despite the *percentage* decrease in poverty level and increases in income, a slightly higher number of individuals receive assistance from the Department of Social Services. From 1982 to 1990 between 812 (1986) and 924 (1990) people received public assistance per month in the County (see Figure 1-20).

The percentage of recipients in the County ranged from a high of 8% in 1982 to a low of 5.8% in 1988. Leelanau County has a low percentage of its population receiving public assistance compared to other counties in the state. Transfer payments coming into the County in 1990 to public assistance recipients amounted to 1.4 million dollars (see Figure 1-21).

Figure 1-19

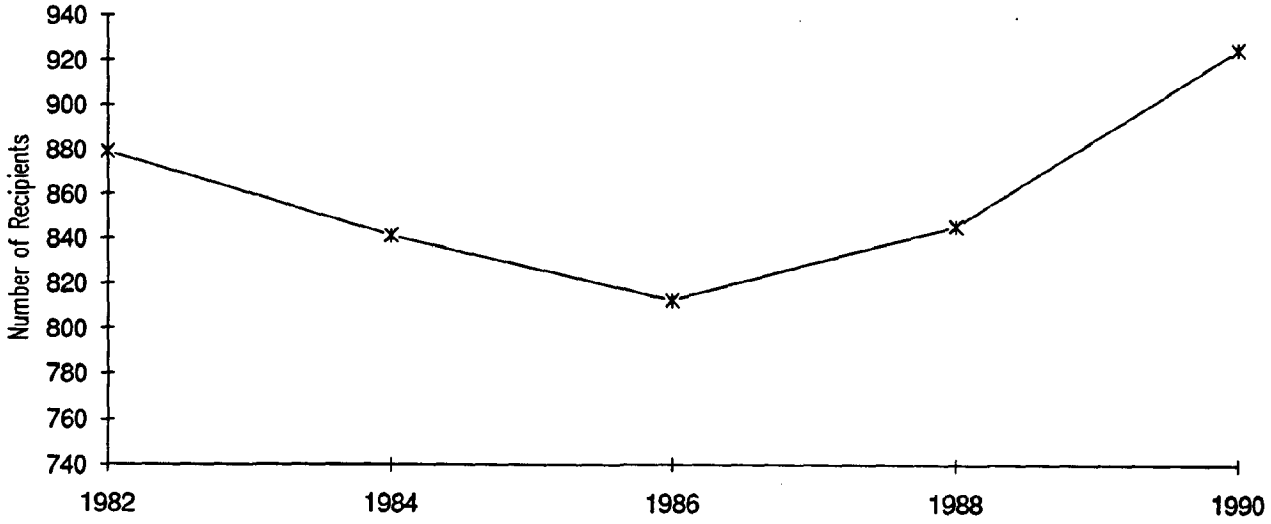
Median Family Income for 1950-1980



Source: Decennial Census

Figure 1-20

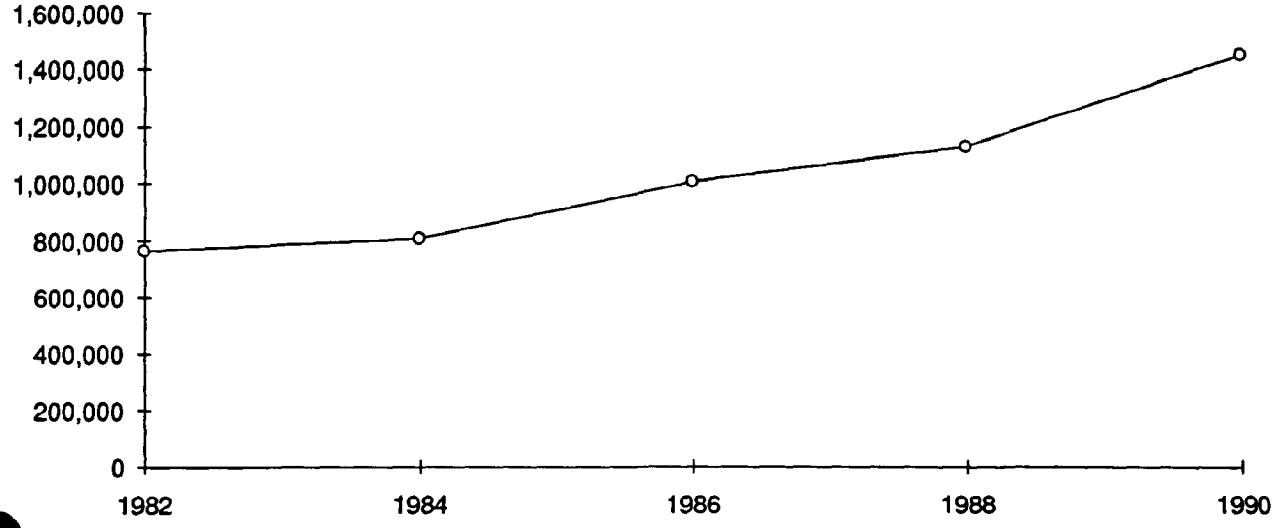
Monthly Average Number of Public Assistance Recipients in Leelanau County



Source: Michigan Department of Social Services

Figure 1-21

Total Annual Public Assistance Payments to Recipients in Leelanau County



Source: Michigan Department of Social Services

Smaller families, senior, childless and single-person households will continue to increase at a faster rate than nuclear families. As a result, the number of school-aged children will not increase at the same rate as the general population. Education levels of the County's population will rise with the influx of affluent people.

Between 1980 and 1990 the number of school-aged children aged 5-17 decreased from 22% to 18.5%. While the number of children 5 years and under increased from 6.5% to 7.5%. More significantly, while the total population increased 18% in the last decade, the percentage of the population that are children did not increase.

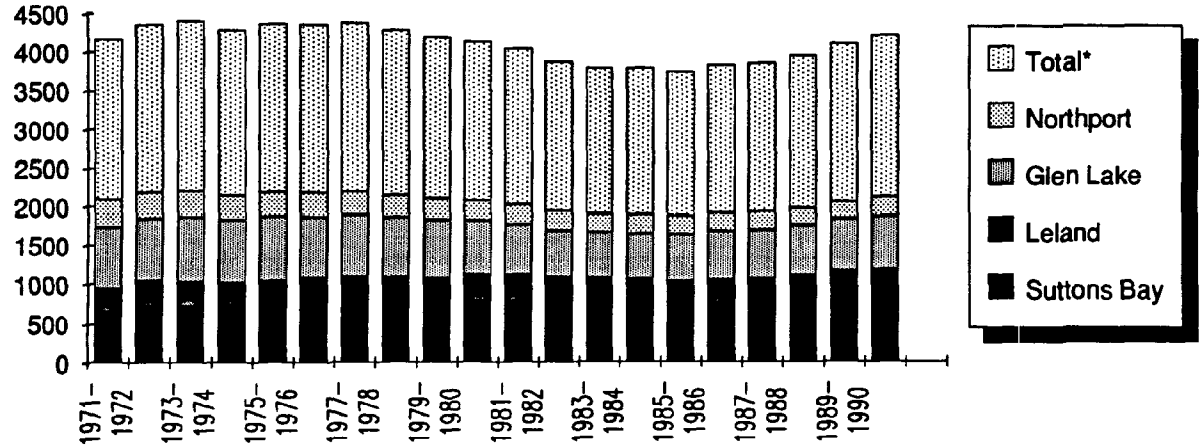
School enrollments have remained relatively flat in the last couple of decades in Leelanau County (see Figure 1-22).

General educational levels have risen in Leelanau County and are expected to continue to rise. In 1970 only 57% of the population had a high school diploma. By 1980 the figure had risen to 77%. When 1990 figures are released, it is anticipated that a still higher average percentage will have completed high school and that levels of college attainment will be relatively high.

Figure 1-22

Figure 1-22

School Enrollment From 1970 to 1991



Source: Respective School Districts
**Traverse City not available*

Chapter 2

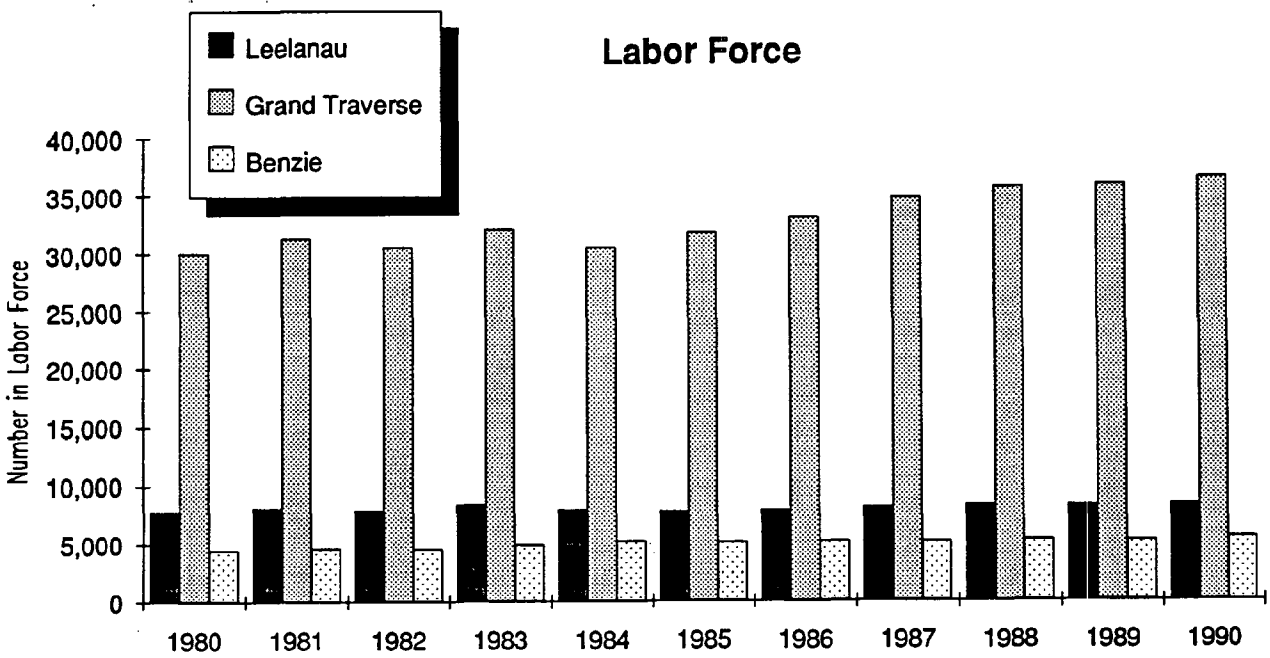
ECONOMY

INTRODUCTION

Leelanau County's economy has experience significant shifts over the last several decades. In the 1940's agriculture was the prime employer in the county. By 1988 retail and service sectors provided the majority of employment. Manufacturing has remained relatively stable in terms of the number of jobs provided, but it continues to be a minor employer overall. Other key emerging patterns in the local economy are outlined below.

- The County's labor force is growing at a slower pace than it's more urbanized neighbor, Grand Traverse County.
- Except in times of severe recession, unemployment rates are lower in Leelanau County compared to Benzie and Grand Traverse Counties.
- The County is becoming more dependent on the tourist trade.
- Service and retail establishments and employment are increasing faster than other trade sectors.
- Agriculturally based businesses are declining in economic significance relative to other sectors.
- Small businesses provide the majority of jobs in the County.
- Transfer payments in the form of pensions and social security represent a significant flow of money to the local economy.

Figure 2-1



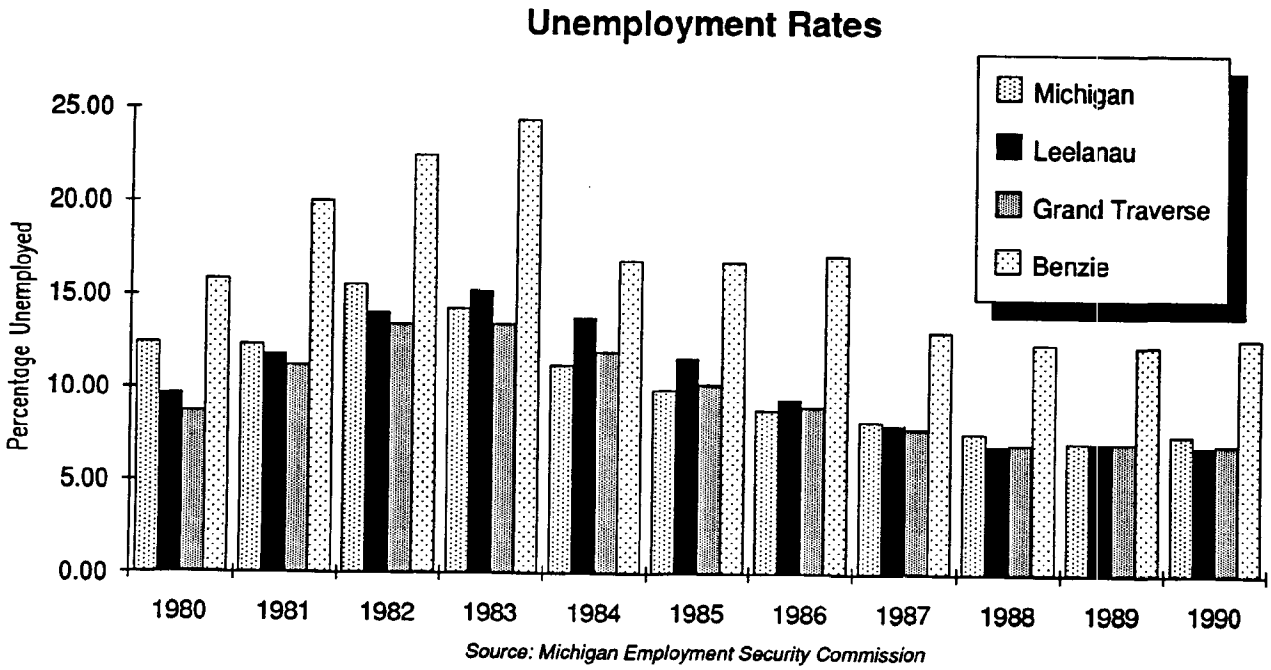
Source: Michigan Employment Security Commission

The County's labor force will grow at a slower pace than the population.

In the last ten years Leelanau County's average annual labor force has ranged between a high of 8,350 (in 1983) to a low of 7,650 (in 1985). As of December 1990, the labor force was estimated at 8,300 (see Figure 2-1).

Overall, since 1985, the County has experienced approximately an 8.5% increase in its labor force. The Michigan Employment Security Commission projects that the labor force will increase 8% to approximately 9,000 by 1992. For comparative purposes, Grand Traverse County had a 1990 labor force of 36,350; up nearly 15% since 1985, and is also expected to experience an 8% increase in its labor force over the next several years. In contrast, population growth will be about 2.5-3.0% per year.

Figure 2-2



Source: Michigan Employment Security Commission

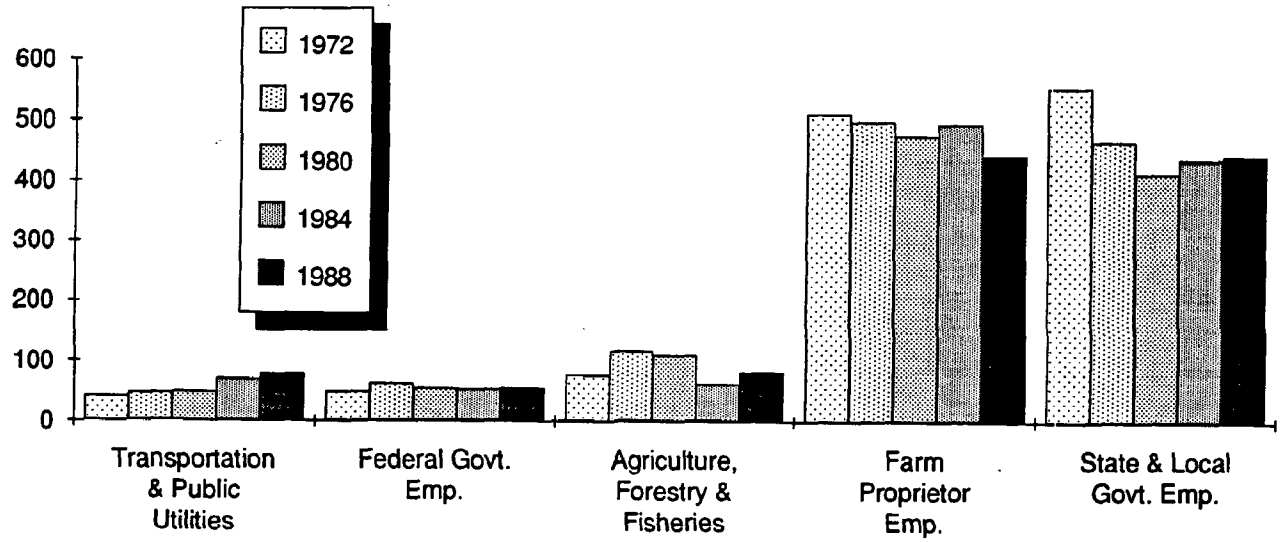
Unemployment rates in the County are projected to be between 6.8 and 7.4% in the next several years.

During the recession of the early 1980's, Leelanau County's unemployment rates were higher than state averages. However, Benzie County tended to have much higher rates than the state, and Grand Traverse County tended to have slightly higher unemployment rates than the state, fairing better than Leelanau County in that time. Since 1987, Leelanau County has had unemployment rates lower than or equal to those of the state. This has also been true of Grand Traverse, but not Benzie County (see Figure 2-2).

Within the County unemployment rates vary widely. In 1990, the highest rate was in Centerville Township, with a labor force of 400 and an unemployment rate of 14.9%. The low was in Bingham Township with a labor force of 900 and an unemployment rate of 3.4%. The highest number in the labor force is in Elmwood Township with 1,950 persons. Differences in unemployment rates and labor force participation between local governmental units are expected to continue. This range is so great that it represents a major disparity in wealth within the County.

Figure 2-3

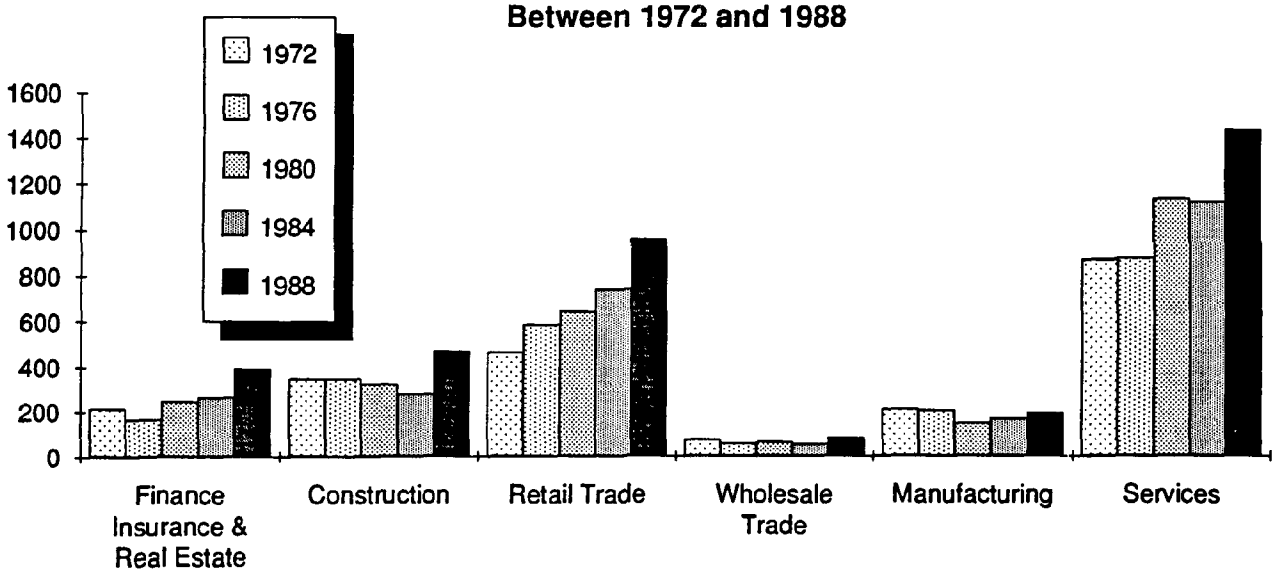
Employment by Sector for Leelanau County Between 1972 and 1988



Source: Michigan State University: Center for the Revitalization of Industrial States (CRIS), U.S. Dept of Commerce, Bureau of Economic Analysis

Figure 2-4

Employment by Sector for Leelanau County Between 1972 and 1988



Source: Michigan State University: Center for the Revitalization to Industrial States (CRIS), U. S. Dept of Commerce, Bureau of Economic Analysis

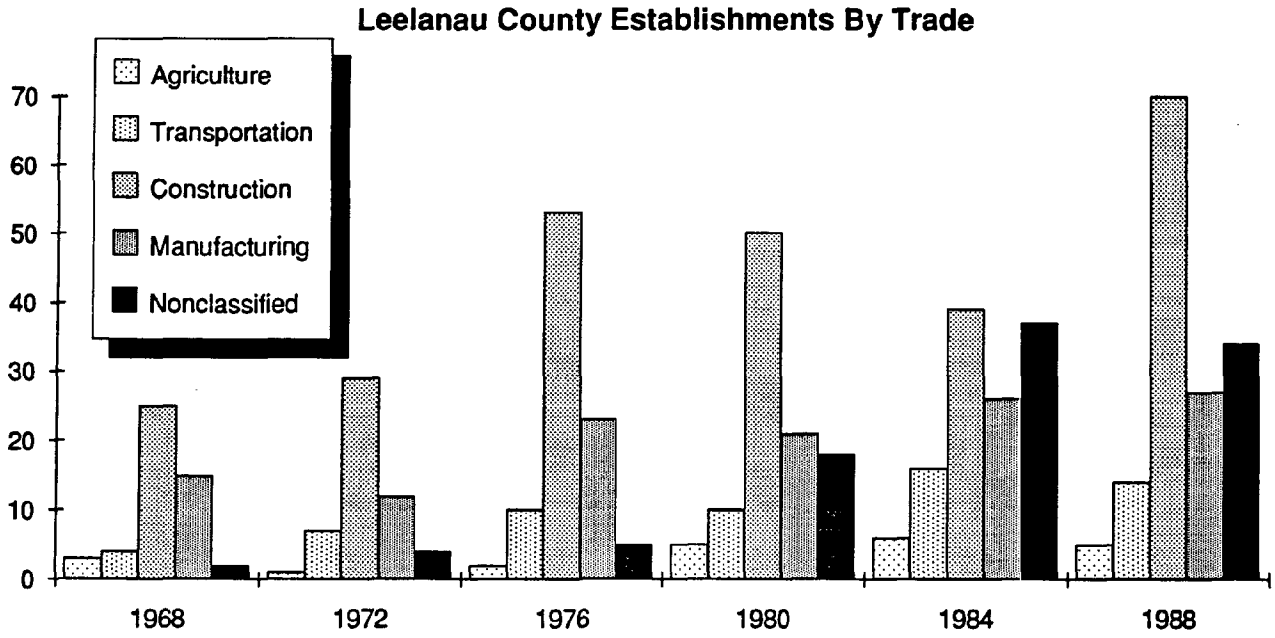
Relatively low paying retail and service jobs, and construction jobs, will provide the bulk of new employment opportunities.

Since 1972, the greatest increases in employment have come in the service and retail sectors. The number of jobs in the service sector increased from 871 in 1972 to 1,433 in 1988 (up 64.5%). The number of jobs in retail trade have gone from 464 to 957, an increase of 106%. Jobs in construction and finance, insurance and real estate have also increased 82% and 36% respectively. Jobs attributed to transportation and public utilities increased from 41 to 79 (up 93%). Employment in state and local government, farm proprietor, agriculture, forestry and fisheries has decreased since 1972. State and local government jobs decreased by 113 jobs (20%); farm proprietors, 67 jobs (13%) and agriculture, forestry and fisheries by 36 jobs (30%). Federal government, wholesale trade and manufacturing employment have stayed relatively flat (see Figures 2-3 and 2-4). These trends are expected to continue as they are largely fueled by increases in tourism, in-migration and construction of seasonal housing. Unfortunately, many of the service sector and retail jobs are low paying, are seasonal, and are not very stable. They are not very recession proof. Rather than broaden the economic base of the County, they are narrowing it with associated declines in agriculture.

Agricultural profit margins will decrease as taxes and cost of production rise and revenues fluctuate. More agricultural land will be taken out of production in anticipation of higher profits from potential development.

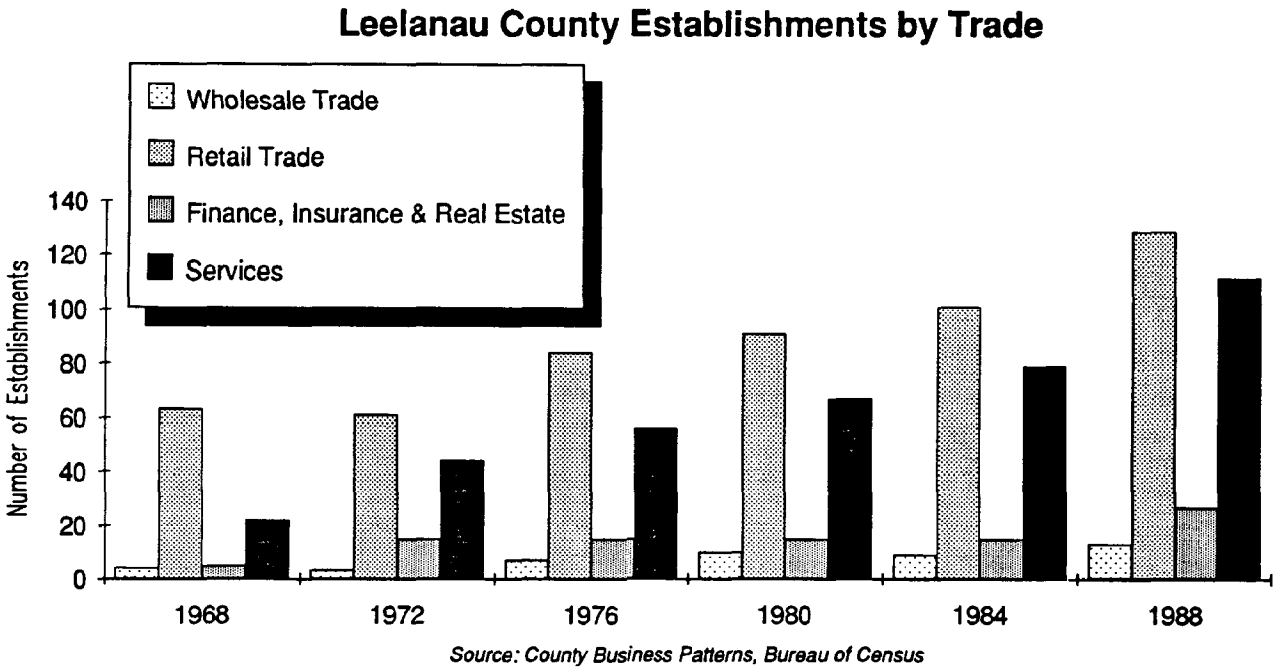
In 1940, 56% of the County's labor force was employed in agriculture. By 1960, 18% of the labor force was employed in agriculture. The percentage of reported jobs related to agriculture in the 1988 ***County Business Patterns*** shows this figure has fallen to approximately 10%. Part of this decline is due to improved mechanization and productivity. Another reason is the large increase in other jobs during the same period. However, the rising in-migration and associated demand for rural lots has stimulated farmland sales. As more nonfarm related homes are erected, values of adjoining farmland increase. Associated higher taxes, in addition to rising costs of machinery, seed, fertilizers, pesticides, etc. have increased the cost of production making additional land sales attractive (if not necessary) to the farmer in years with low market prices for fruits and grains. New nonfarm residents also often complain about typical farm practices making life for farmers even more difficult. The end result is greater incentive to sell farmland for its development value.

Figure 2-5



Source: County Business Patterns, Bureau of Census

Figure 2-6



Source: County Business Patterns, Bureau of Census

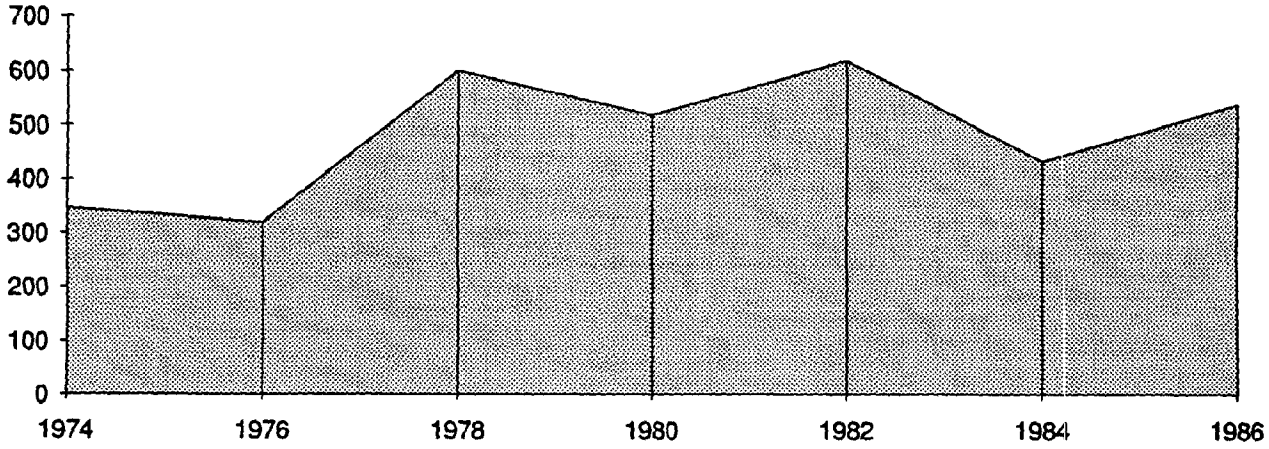
Small businesses will continue to grow in number to try to capture tourist opportunities and because of the lack of other job alternatives.

The highest increase in numbers of establishments by trade in the County since 1960 has been in retail trade and services. Retail trade establishments have gone up 105% and service sector 409% since 1968. The number of construction establishments have nearly tripled between 1968 and 1988 (see Figures 2-5 and 2-6).

The majority of jobs in the County are provided by small business. The average number of employees per reported service establishment in 1988 was 13. For retail trade establishments the average number of employees was 7. In contrast, the larger private employers of the County include: Grand Traverse Band Ottawa Chippewa Indians (casino), Homestead Resort, Sugar Loaf Resort, and Prutsman Mirror. As a destination location with abundant natural amenities, the best opportunities for budding entrepreneurs are tourist oriented. The easiest (and potentially most destructive) have an origin in the exploitation of natural resources.

Figure 2-7

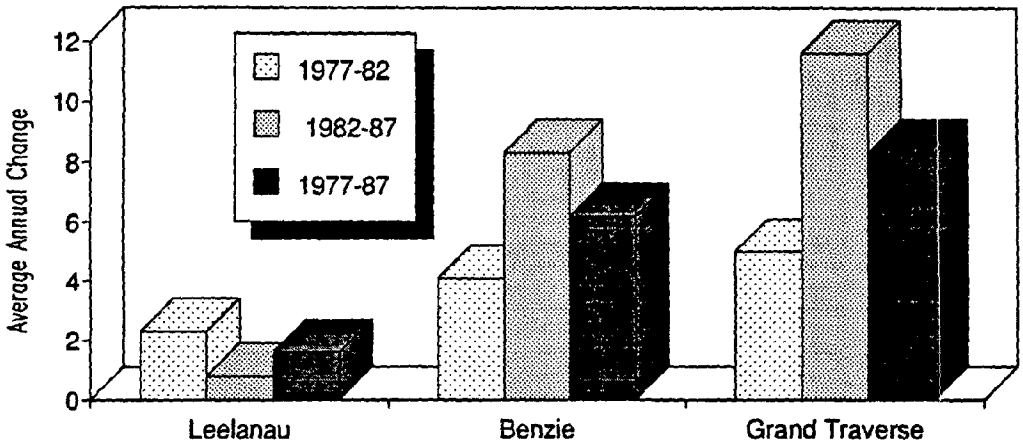
Average Annual Number of Jobs in Tourism-Related Businesses in Leelanau County



Source: Travel & Tourism in Michigan, A Statistical Profile, 1986 & 1991 (MSU, Travel, Tourism & Recreation Resource Center)

Figure 2-8

Annual Percentage Change in Tourism-Related Business Jobs (1977-1987)



Source: Travel & Tourism in Michigan, A Statistical Profile, 1986 & 1991 ed. (MSU, Travel, Tourism & Recreation Resource Center)

Tourism will continue to increase its economic significance while agriculture and industrial activity will decline.

The annual average number of jobs that can be attributed to tourism have generally increased since 1974 (see Figure 2-7). The average increases since 1977 have been lower in Leelanau County than in neighboring Benzie and Grand Traverse Counties (see Figure 2-8). The number of tourism related jobs peak during summer months and taper off during the off-season.

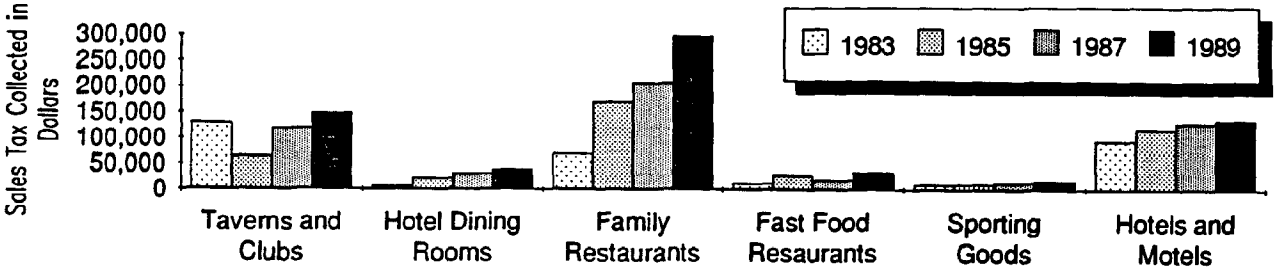
Another indicator of tourism activity is sales tax collected by tourism-related businesses (see Figure 2-9). Sales tax collections associated with family restaurants has experienced the greatest increase since 1983. Sales tax attributed to taverns and clubs and hotels and motels have also increased overall.

Water related activities are a critical component of Leelanau County's amenities. While there is no direct data on the total number of watercraft using Peninsula waters, the number of watercraft registered in the County has increased dramatically over time (See Figure 2-10). While Michigan experienced a decline in watercraft registrations between 1978 and 1985, Leelanau's registrations continued to climb. Overall, between 1978 and 1991 the County had a 42% increase in registered watercraft. In that same time period, the state experienced an approximate 22% increase. This data not only demonstrates the relative popularity of boating in Leelanau, but also demonstrates that more people are calling the County their home port, as they have registered their watercraft here.

Sleeping Bear Dunes National Lakeshore is a major attraction in Leelanau County. Visitation to the lakeshore has generally increased over time (see Figure 2-11). Well over a million people visit the Dunes on an annual basis. Note that visitation counts are down in recent years because the National Park Service has closed a campground for upgrading. When this facility is completed, it is anticipated that visitation will once again climb.

Figure 2-9

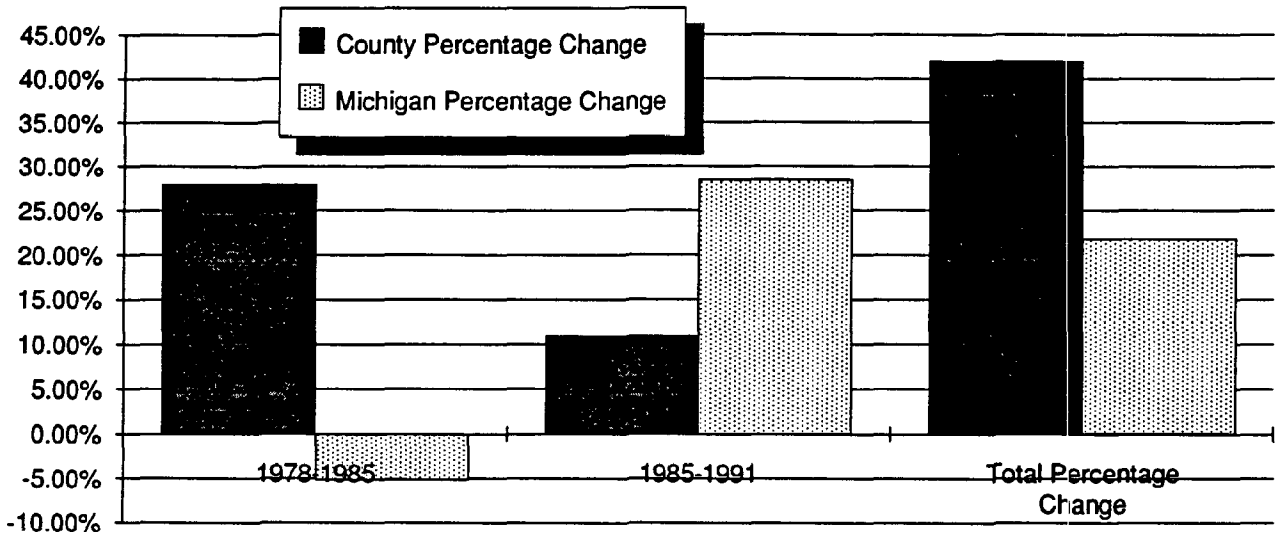
Leelanau County Sales Tax Collections
(1983, 1985, 1987, 1989)



Source: Travel and Tourism in Michigan; a Statistical Profile, 1986 & 1991. MSU Travel and Tourism Research Center.

Figure 2-10

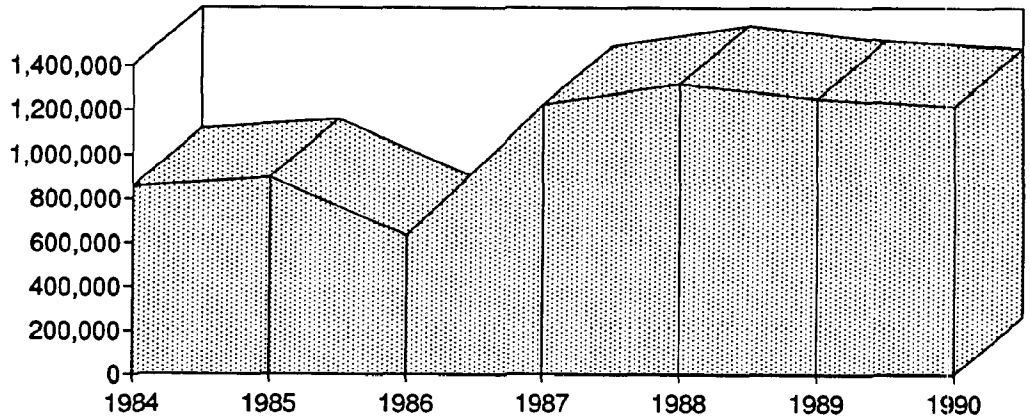
Registered Watercraft



Source: Department of State

Figure 2-11

Sleeping Bear Dunes National Lakeshore
Annual Public Use



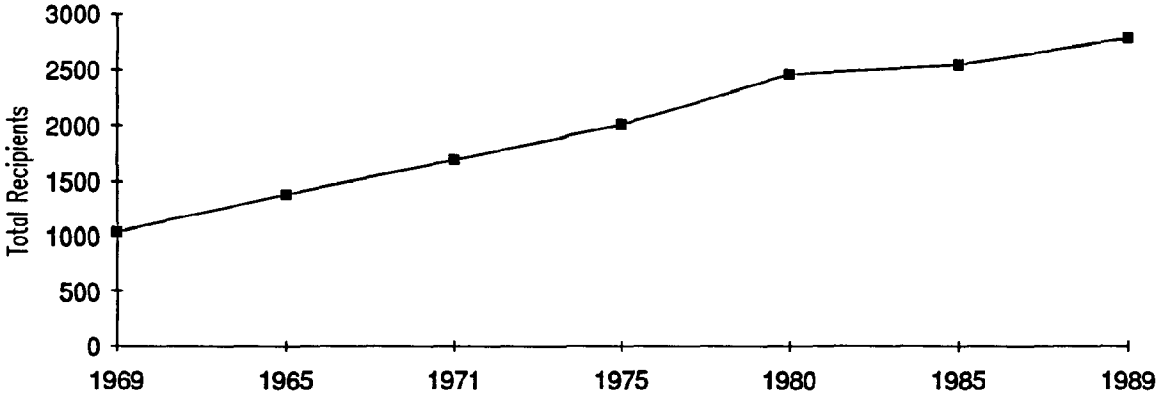
*Source: Leelanau County Sheriff's Dept. (*note: In 1987 method for determining visitation changed. More accurate traffic centers installed. Camp site closed in 1990 for repairs which accounts for loss in visits)*

Imported retirement funds (pensions and social security) will become a larger part of the local economy.

Between 1969 and 1989, the number of persons receiving social security benefits in Leelanau County increased 168%, going from 1,036 to 2,780 average monthly recipients. The amount of benefits imported into the County increased over 24 times. In 1969, total monthly social security payments amounted to 60,233. Comparatively, in 1989, total average monthly payments amounted to nearly 1.5 million dollars (see Figures 2-12 and 2-13). There is no available data on employer pensions provided to retirees in the County, but it can be surmised that social security payments actually represent a relatively low percentage of retiree income entering the County. As the retiree population grows, so will future revenues from social security and pensions. This is a stable source of income not as subject to the vagaries of recession, but more prone to reduction in value due to inflation.

Figure 2-12

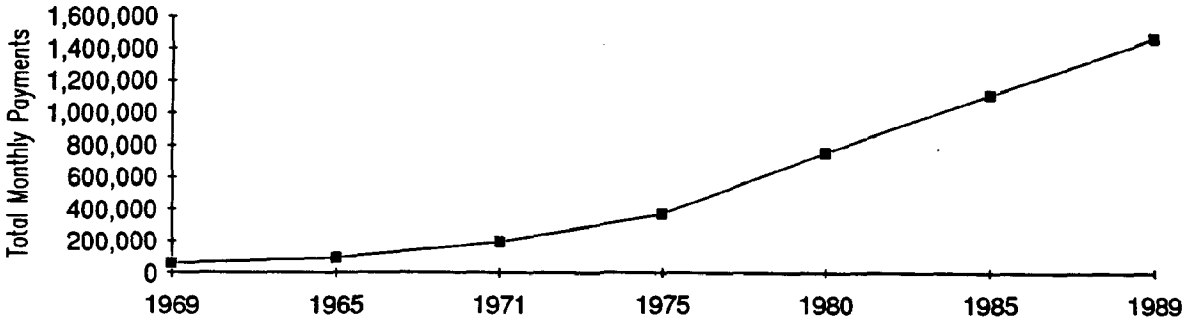
Total Individuals Receiving Social Security



Source: Social Security Administration

Figure 2-13

Leelanau County - Total Monthly Payments to Social Security Recipients



Source: Social Security Administration

Chapter 3

LAND

INTRODUCTION

Changes on the surface of the land are the most visible changes taking place on the Peninsula. When a forest is harvested, a new orchard planted, a hillside home erected or a new commercial structure built, the evidence is visible for all to see. However, the most important changes to the land taking place on the Peninsula are usually invisible for years. These are the land divisions which fragment land into parcel sizes too small for resource management and too large for efficient provision of public services. In most cases this is done for low density residential development purposes.

While it is visible changes to the land which have heightened citizen awareness of the need for a Peninsula-wide approach to managing growth, it will be the degree to which the invisible changes are brought under control in the near future which will establish the options for the future.

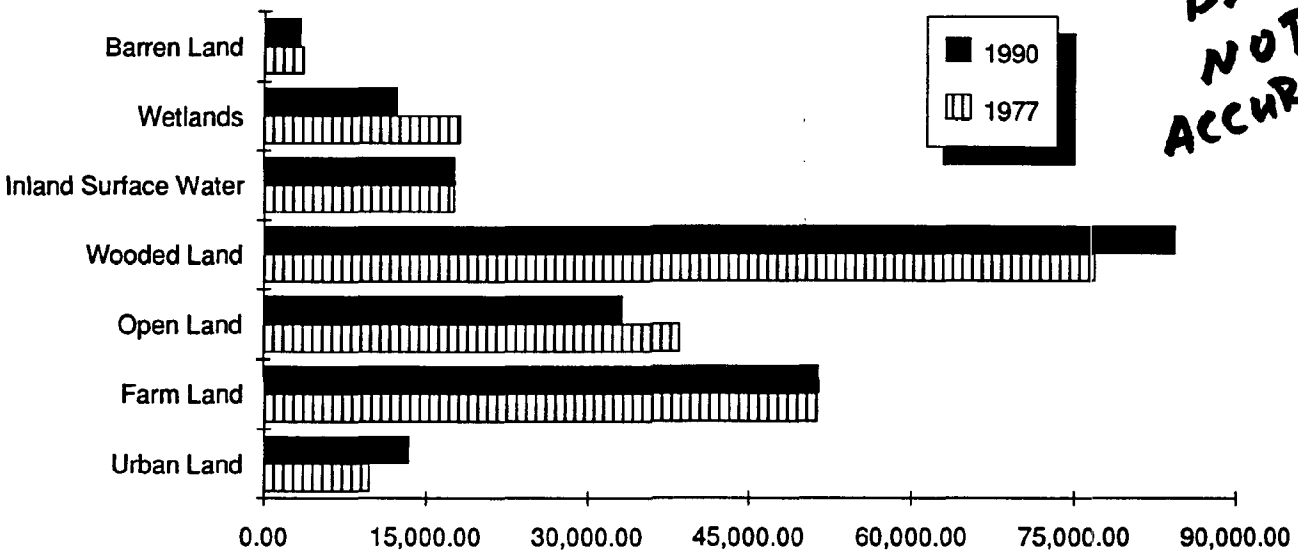
Specific patterns which are emerging and discussed in this chapter include:

- Urbanization in the form of sprawl is occurring on the Leelanau Peninsula and is expanding at an increasing rate.
- Land division practices are continuing to fragment renewable resource lands.
- The commercial viability of agriculture and its economic importance to the Peninsula are increasingly threatened as sprawl continues.
- Sprawl is continuing largely unabated because current local and county planning and zoning programs encourage it.

Figure 3-1

Leelanau County Land Use/Cover Analysis

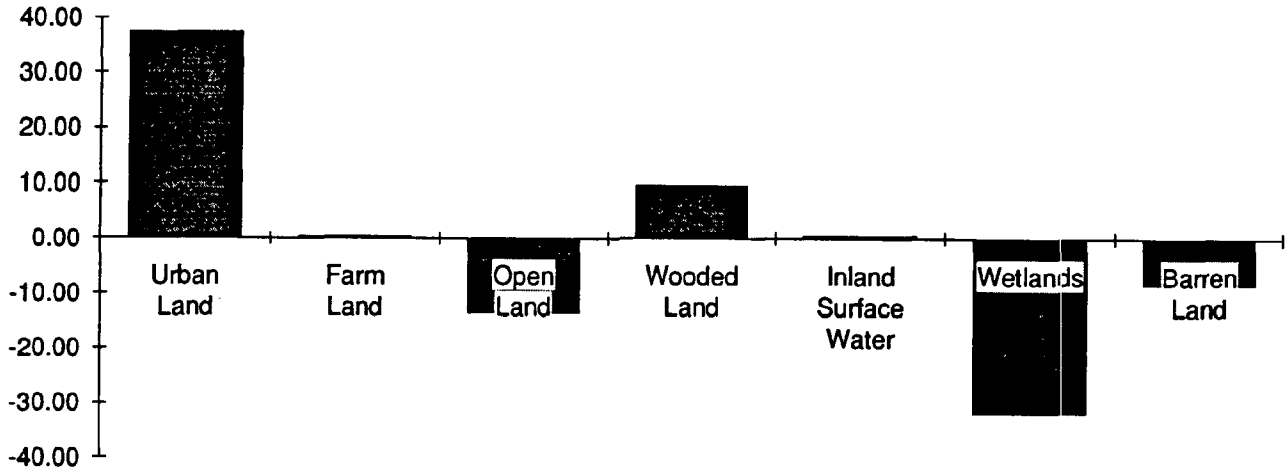
THIS DATA NOT ACCURATE



Source: DNR, Michigan Resource Inventory System and Leelanau County Planning Dept.

Figure 3-2

Leelanau County Land Use/Cover Percent Change Between 1977 - 1990



Source: DNR and Michigan State University

Urbanization of the Leelanau Peninsula will continue and will become the fundamental force in the loss of the Peninsula's rural character and important open spaces.

The urbanization of the Leelanau Peninsula has taken a dramatic shift in the past twenty-five years. Prior to that time, most families either resided in one of the villages, on a farm, or on property used for another resource based activity (such as forest products, fishing, etc.) or were retired around one of the numerous lakes in the County. However, since the mid-60's, non-resource based residential development has begun to threaten, and in many cases replace, resource based uses of land. This trend is an early form of low density urbanization known as *"sprawl."* Sprawl is best characterized by the lack of a clear functional relationship between one use of land (e.g., residential) and the use of lands around it (e.g., agricultural). Sprawl occurs in part, in response to a market demand for low density living options in rural settings, and also because it is both permitted and encouraged by local zoning.

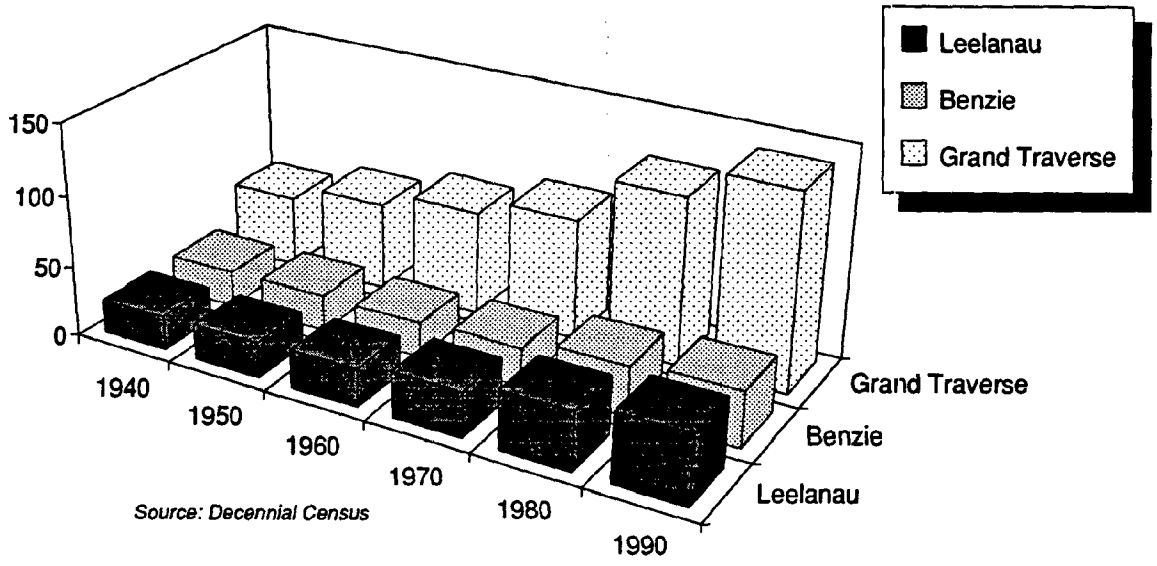
However, while sprawl initially is a very low cost development pattern (from the standpoint of public services), once the low rural level of service threshold of public services has been breached (especially for roads, police, fire, schools and emergency services) it is the most expensive development pattern, and the only one to also result in the systematic destruction of the resource value of renewable lands (such as farms and forests). This is because farms and nonfarm residences are not compatible neighbors. Farming for grains and orchards are essentially industrial operations involving the use of large (and often noisy) equipment, the generation of dust, smoke, fumes, odors, the use of pesticides, fertilizers, herbicides and other chemicals, the disposal of animal wastes and long hours of operation. These activities often conflict with the quiet use and enjoyment of residential property. In addition, residential use drives up the value of agricultural land resulting in higher taxes for the farmer and a reduced capacity to continue farming.

The continuation of sprawl on the Peninsula threatens not only resource based industries, but also the open spaces sought by new residents and thousands of tourists each year. It threatens to permanently change the character of the entire Peninsula.

The words *"rural"* and *"pastoral"* aptly describe the past and current character of the vast majority of the Peninsula. Of the approximately 216,000 acres which comprise the Leelanau Peninsula, almost 94% are of an open space character including extensive woodlands (approximately 7,430 acres) and agricultural lands (approximately 51,563 acres) as well as significant areas of wetlands, fields, rolling topography, and water resources (see Figure 3-1). Urban lands accounted for 6.23% of the County area in 1990. That is an increase of nearly 38% since 1977. Nearly 80% of the urban lands in 1990 were residential with almost all of that single family (see Figure 3-2).

Figure 3-3

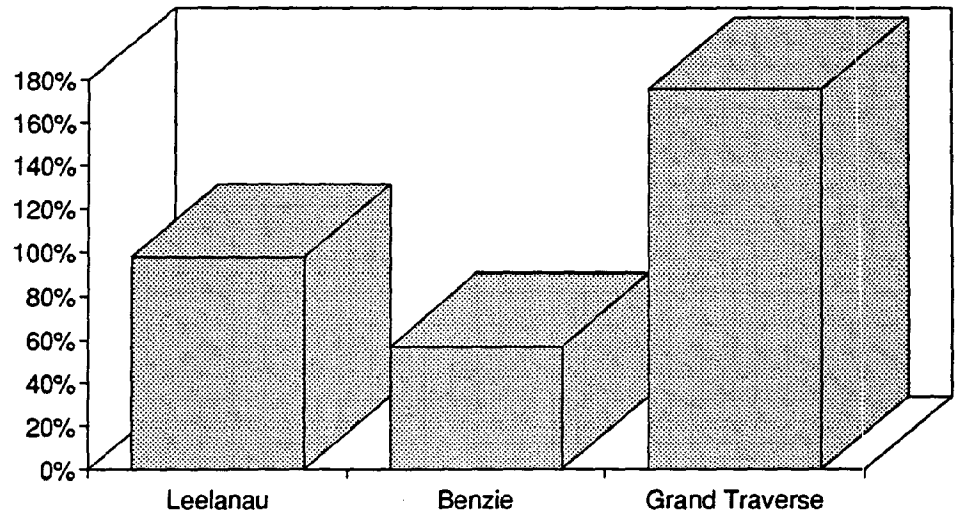
Population Per Square Mile From 1940 to 1990



Source: Decennial Census

Figure 3-4

Percent Increase in Density Between 1940 and 1990



Source: Derived from Decennial Census Data

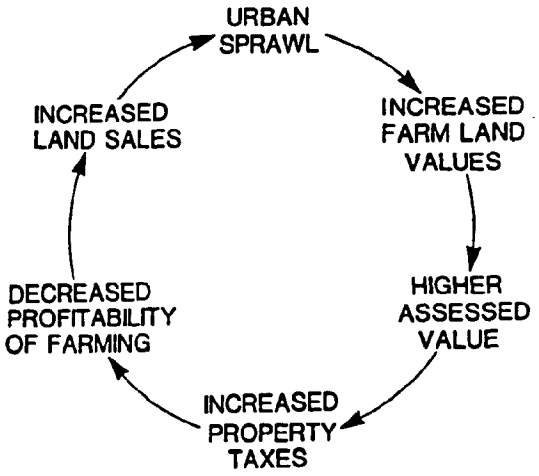
Of the approximately 3,820 acres in the Peninsula rezoned between 1980 and 1989, nearly 37% were converted to a residential designation and nearly 46% were converted to a commercial designation. Total annual land acreage rezoned has risen sharply since 1986 and has averaged over 550 acres per year between 1986 and 1990. At current rates, an additional 7,000 acres of land will be consumed for urban use by the year 2010 resulting in an urbanized area approaching 10% of the total County area.

Population density in the Peninsula has increased 50% since 1970 (Figure 3-3) and 100% since 1940 (see Figure 3-4). The population density in Leelanau County in 1990 (48 persons per square mile) is nearly what Grand Traverse County's was in 1940 (50.4 persons per square mile). The population density in Grand Traverse County in 1990 was 139 persons per square mile. Significant increases in urbanization have occurred in nearly all areas of the Peninsula and have resulted in significant character changes in localized areas.

While a portion of the increased urbanization is anticipated to occur adjacent to and near the greater Traverse City urban area (and will greatly influence visitors' initial perceptions of the Peninsula), the entire Peninsula is expected to experience more sprawl.

This sprawl will ultimately and significantly transform the current character of the Peninsula because of increases in vehicular traffic and congestion, decreases in the levels of public services (but with higher taxes), degradation of the Peninsula's unique character and scenic quality, and loss of special environments.

Diagram of the Urban Sprawl Cycle



Source: Dunford, R. W., 1979., Farmland Tax Relief Alternatives: Use Value Assessment vs. Circuit-Breaker Rebates, Circ. 617, College of Agriculture Research Center, Washington State University, Pullman, WA. (Sept.)

Fig. 3-5 - 3-6

Figure 3-5

1 SECTION, FIRST DIVISION INTO TEN ACRE PARCELS

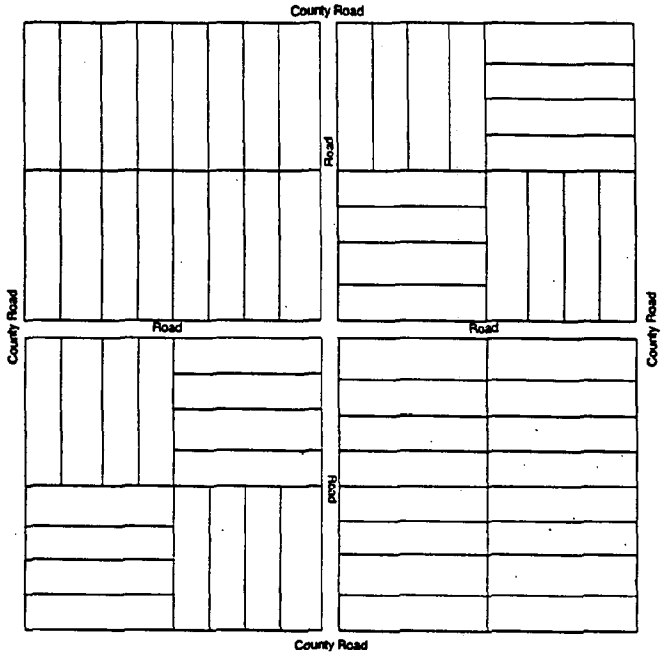
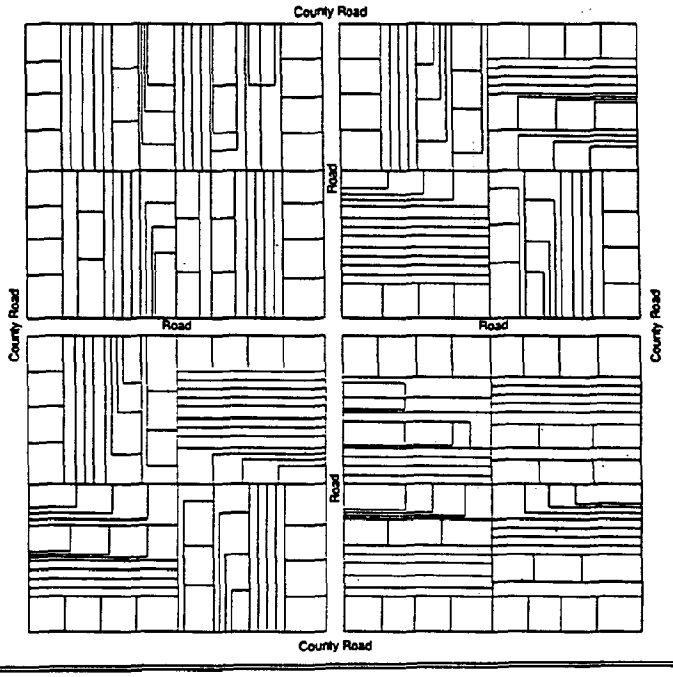


Figure 3-6

1 SECTION, SECOND DIVISION, 4 PARCELS FROM EACH TEN ACRE PARCEL



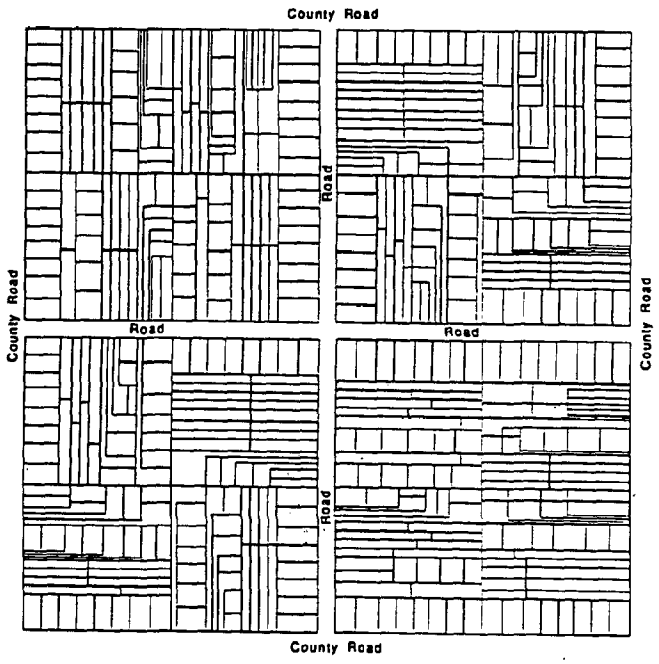
Land fragmentation will fuel continued sprawl, an early demise of agriculture in some areas, and result in significantly higher taxes due to both increased land values and the higher costs of providing public services.

The division of lands in large acreages into smaller parcels is a standard feature of the early stages of urbanization. Initially farmers split 160 acre parcels off 320's or 80's off 160's for their children to continue a way of life. As the cost of farming increases, along with the market demand for rural living sites, smaller parcels are created and sold. Unfortunately, PA 288 of 1967, the Subdivision Control Act, has established a simple, but highly destructive way to do that. PA 288 permits the creation of an unlimited number of 10 acre parcels without going through the formal review and approval requirements of the Subdivision Control Act. It also allows up to four divisions of under 10 acres in size from a parent parcel to be created each 10 years without platting.

The result, over time, is the creation of a rural subdivision without any public review, and the attendant loss of large amounts of farmland, forestland and open space. Figures 3-5, 3-6 and 3-7 show how it happens.

Figure 3-7

1 SECTION, THIRD DIVISION, EACH PARCEL DIVIDED ONE MORE TIME. PARCEL SIZE LESS THAN 2 ACRES



It usually begins with landowner, often a farmer, who in order to meet a cash need, or to capitalize on rising land values, decides to sell some land. If he wants to stay in farming he will choose to sell marginal land (as long as it *"perks"*) with good access (along a County Road). He will also make it as small as possible to preserve the largest amount of farmland. The realtor, representing potential buyers, wants the land in a marketable size. This means it can't be too big because it would cost too much and can't be too small because the farmer won't earn enough from the sale. As long as the parcel size is greater then the minimum required by the local zoning ordinance, and there is no local lot split ordinance or private road ordinance (rarities in Leelanau County), the parcel size will be governed pursuant to PA 288. Often a farmer will take a forty acre parcel and first divide it into 4 ten acre parcels and then divide one of the 10's into 4 smaller lots (the size will depend on parcel characteristics (e.g., slope, access, whether it *"perks"*, etc.). The realtor will market the sale of the 10's as containing future lots once the 10 year *"no-redivision period"* is up. This enhances the purchase for some because it represents a way to recoup part of the investment if they stay 10 years, or to enhance its marketability to others if they don't stay that long.

Unfortunately, this kind of land division practice, when carried out on a wide scale, results in rural subdivisions with multiple driveways (and attendant traffic safety concerns), high public service costs (it is not compact), a near total loss of open space (all the open space is in front and back yards), and the establishment of a significant number of uses (usually residences) that are incompatible with the use of adjoining farms. The situation is exacerbated over time as taxes on the farm go up due to the new (obvious) development potential for nonfarm residences.

This pattern is nearly invisible at first. It takes place over a 20-40 year time frame and is set once the land division occurs (often decades earlier). Many ten acre and smaller parcels are split and sold under land contract (often unrecorded until paid off) and paid over a 9-11 year period. It may be several more years before a house is built. While the impact on loss of open space may not occur right away, the impact on loss of farmland is often immediate (unless the farmer leases back the land).

This pattern is rampant in Leelanau County. One way to get a visual image of it, is to compare *"plat maps"* (such as those produced by Rockford Map Publishers in Rockford, IL) over a period of time. A sample analysis of average parcel sizes in 1930, 1960 and 1990 was performed on Suttons Bay, Centerville, Elmwood and Kasson Townships. The analysis revealed that while the very large acreages that were common in 1930 had been divided many times by 1960, the average parcel size had only fallen 4% from about 71 acres to about 68 acres. In contrast, the average parcel size in these four townships fell nearly 68% from 1960 to 1990 down to 41 acres. The range of decline varied from 59.1% to 64.6% for all but Kasson Township where it fell 81.6%. The percent of total parcels 10 acres or less in size rose from approximately 2% in 1930 to about 44% over the same period. There is no reason to believe the same results would not hold true if the analysis were performed for all other townships in the County.

Another indicator of recent land division activity is the growth in the number of residential parcels on the tax rolls over the past 10 years (see Figure 3-8). In 1980 there were 11,151 residentially classed properties compared to 14,297 in 1991, an increase of 28%. In contrast, agriculturally classed parcels fell by 583 for a 36.9% decline. Commercial properties increased by only 7%, while the number of industrial parcels didn't change. Timber/cutover lands declined dramatically from 900 in 1980 to only 289 in 1991, a two-thirds reduction.

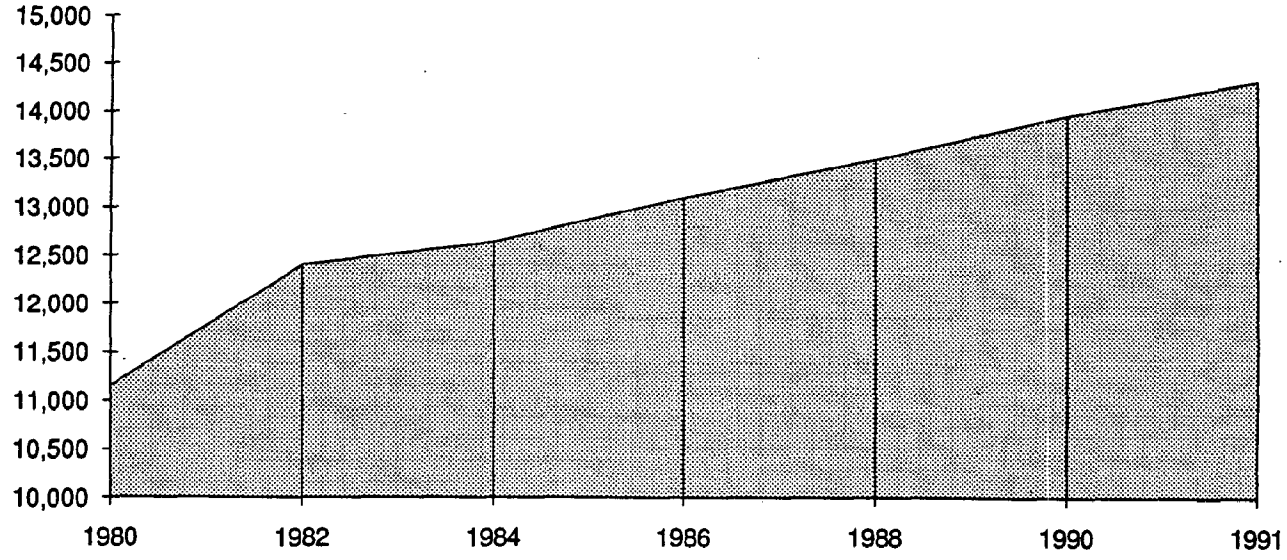
Existing platted but unbuilt lots are also numerous throughout the County. These lots represent a ready supply of land for new homes in subdivisions. Because of marketing and good location, these lots are likely to develop more quickly than many larger parcels scattered throughout the County. The average lot size is usually 1/2-1 acre in size. While concentrated in a smaller area, they represent a reduced loss of agrucultural land and open space compared to the more scattered 10 acre residential pattern (see Figure 3-9).

The state equalized value of residential and commercial land in the Peninsula has increased 178% and 139% respectively between 1980 and 1990 as compared to the 30% increase in agricultural value for the same time period.

Ten acre and smaller parcels, when used for residential purposes only, contribute to the inefficient use of land as agricultural acreage is needlessly taken out of production, important open spaces and environmental systems are fragmented, and significant acreage beyond the immediate needs of the residence are left vacant and excluded from more productive uses. Further, residential development at such low densities can result in escalating public service costs, including police and fire protection services, as the service areas must be extended for a proportionally limited number of residences. This circumstance may ultimately force residents to accept lower levels of service (longer emergency response times, as an example) or pay additional taxes or fees to finance costly yet inefficient public service extensions.

Figure 3-8

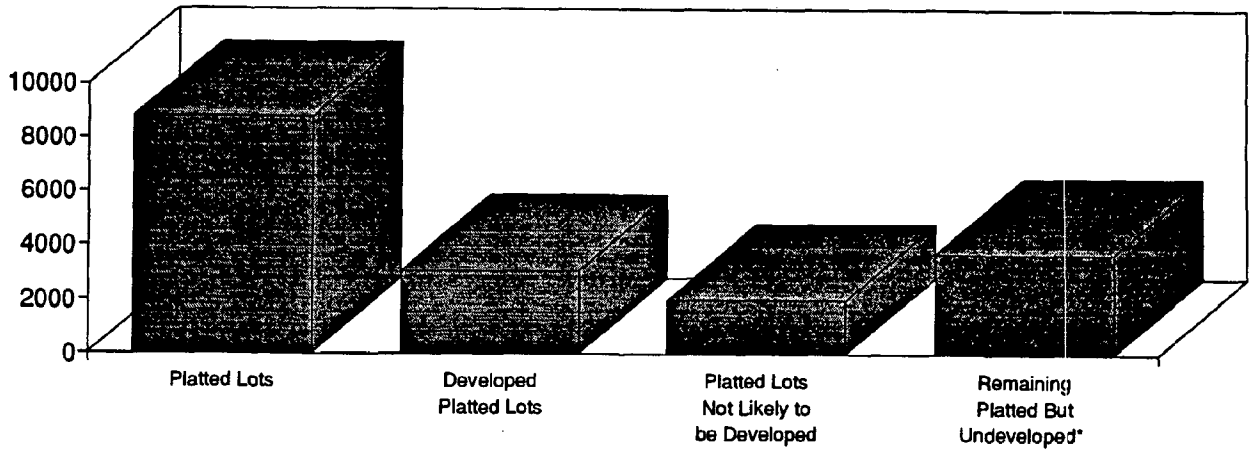
Total Residential Lots in Leelanau County From 1980 to 1991



Source: Leelanau County Department of Equalization

Figure 3-9

Developed & Undeveloped Platted Lots 1991

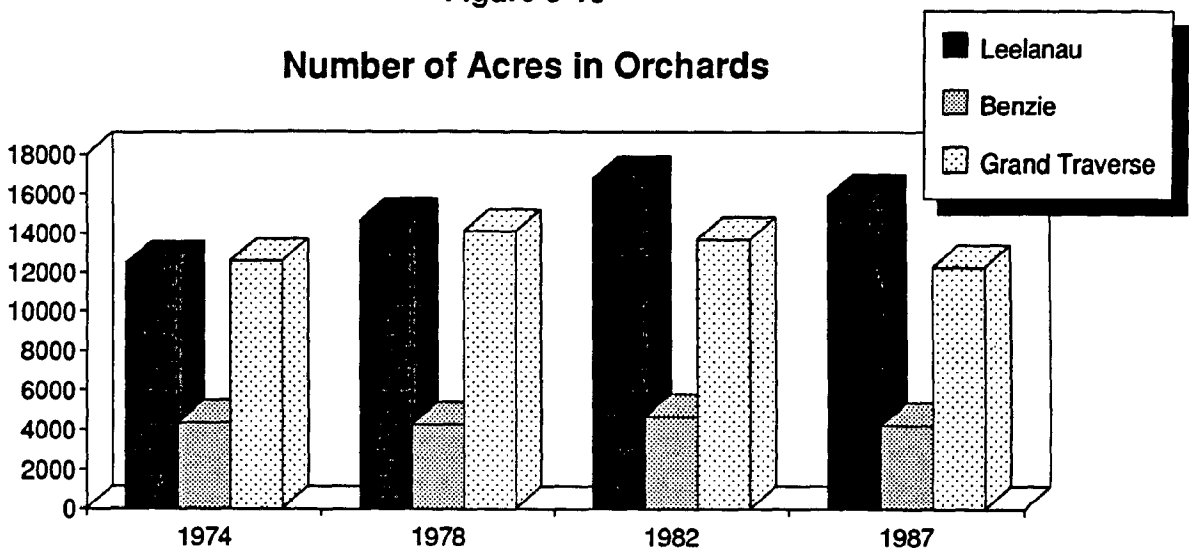


**Represents about 9,667 people*
Source: Leelanau County Planning Department

The Leelanau Peninsula will witness a decline in agricultural acreage as farmland is converted to residential and other urban land uses.

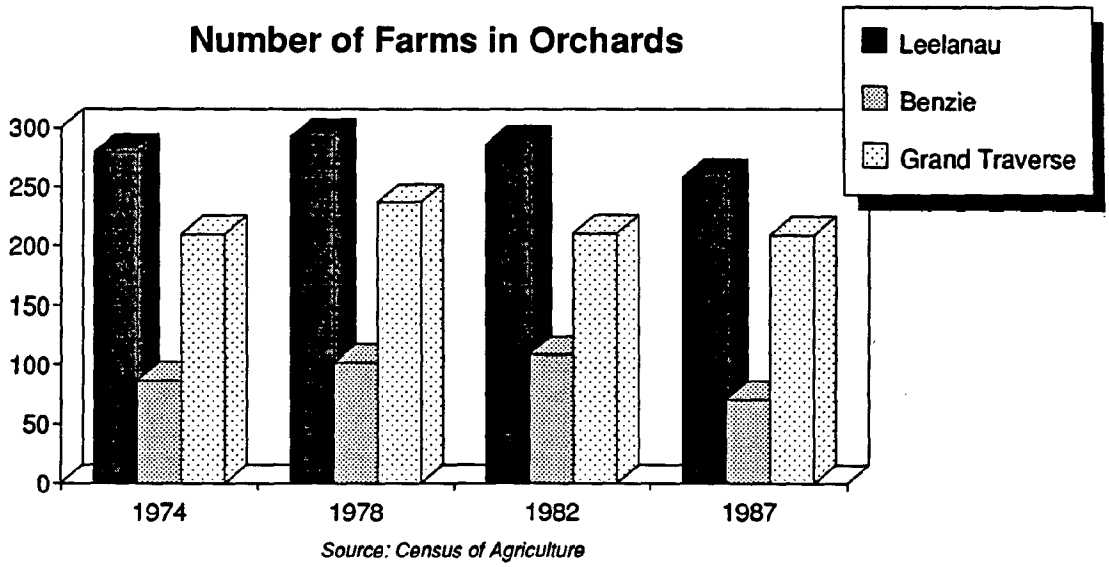
Agriculture in Leelanau County comprises approximately 84% of all active land use acreage. The Peninsula is unique in that it includes a vast orchard industry which accounts for nearly a third of the total Peninsula farm acreage and leads the regional area in orchard acreage and orchard farms (see Figures 3-10 and 3-11).

Figure 3-10



Source: Census of Agriculture, 1988

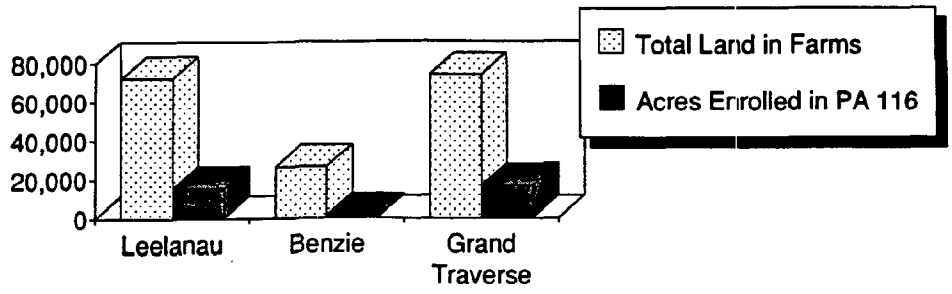
Figure 3-11



Source: Census of Agriculture

Figure 3-12

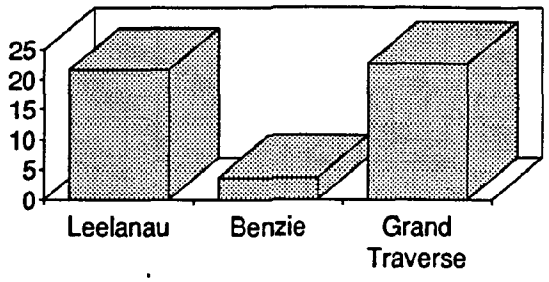
Total Land in Farms & Acres Enrolled in PA 116



Source: Dept. of Agricultured Economics, MSU, 1991

Figure 3-13

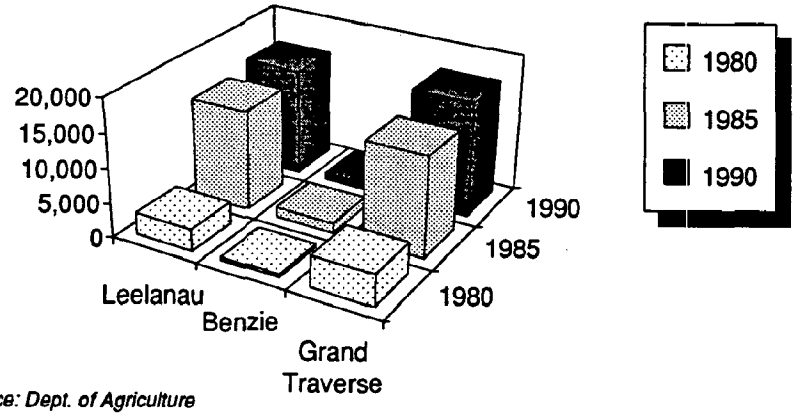
Percentage of Land in Farms Enrolled in PA 116



Source: Dept. of Agricultured Economics, MSU, 1991

Figure 3-14

Acres Enrolled in PA 116

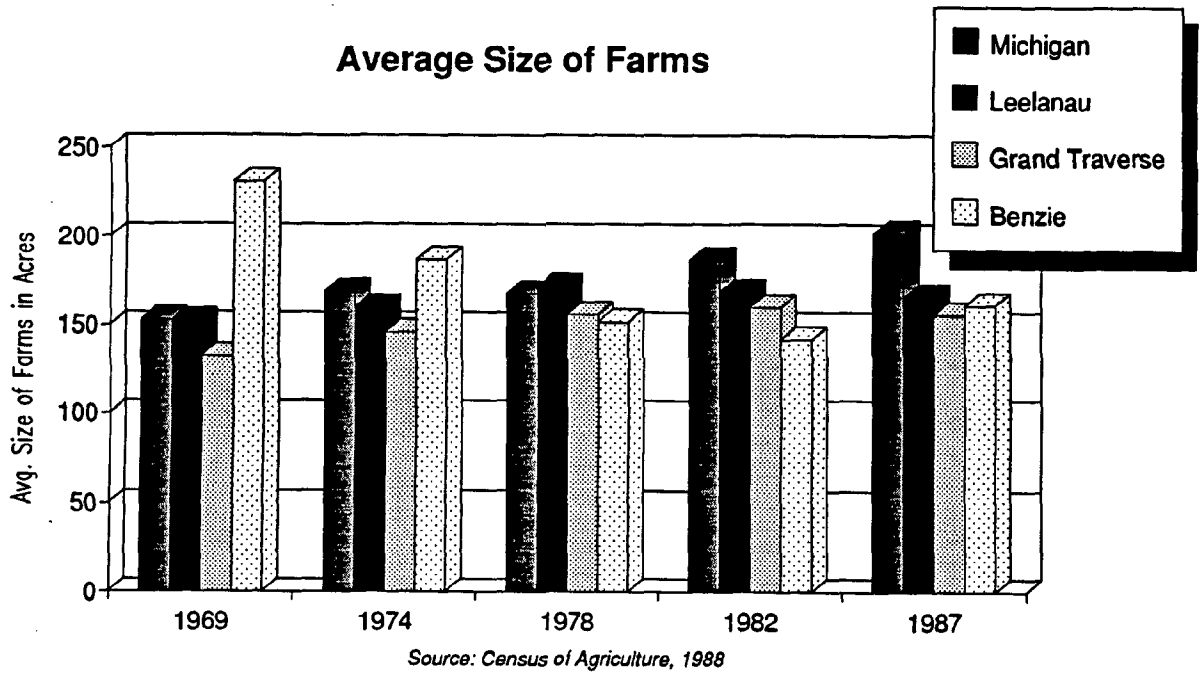


Source: Dept. of Agriculture Economics, MSU,1991

The Peninsula's farmland and agriculturally related activities are the foundation for much of its unique charm and character. Economically, agriculture is a cornerstone of the Peninsula and rivaled only by the tourism industry. The market value of agricultural products sold in the County in 1987 was approximately $15 million. Still, the role of agriculture has, and can be expected to increasingly decline in importance as witnessed by a nearly 33% drop in the market value of farm products sold between 1978 and 1987. As the population growth of the region continues, land development pressure will heighten.

Though the Farmland and Open Space Preservation Act, PA 116 of 1974 established a program providing for strong agricultural preservation, and the County rates high within the region in its involvement in this program, only 21.5% of the local farmland is actually enrolled in the program with an average of 114 acres per contract. Trends suggest the rate of enrollment may be leveling off (see Figures 3-12, 3-13 and 3-14). Though the average farm size in the Peninsula has remained fairly constant during the past twenty years (see Figure 3-15), the Peninsula has already witnessed a 48.5% drop in the total number of farms between 1954 and 1982 from 833 to 429.

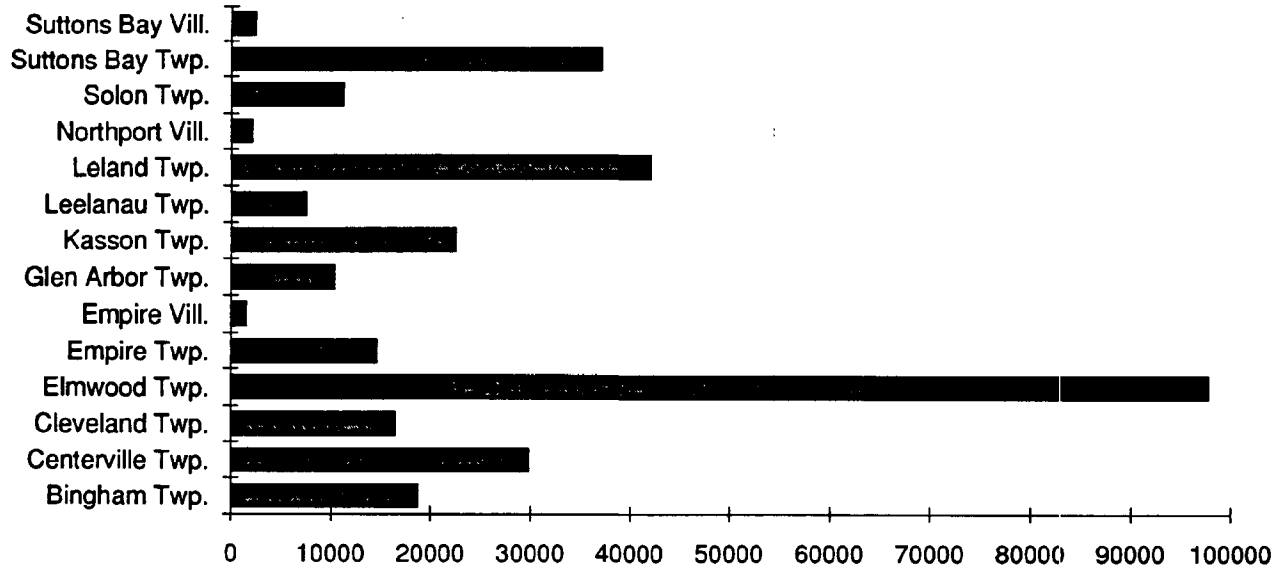
Figure 3-15



Source: Census of Agriculture, 1988

Figure 3-16

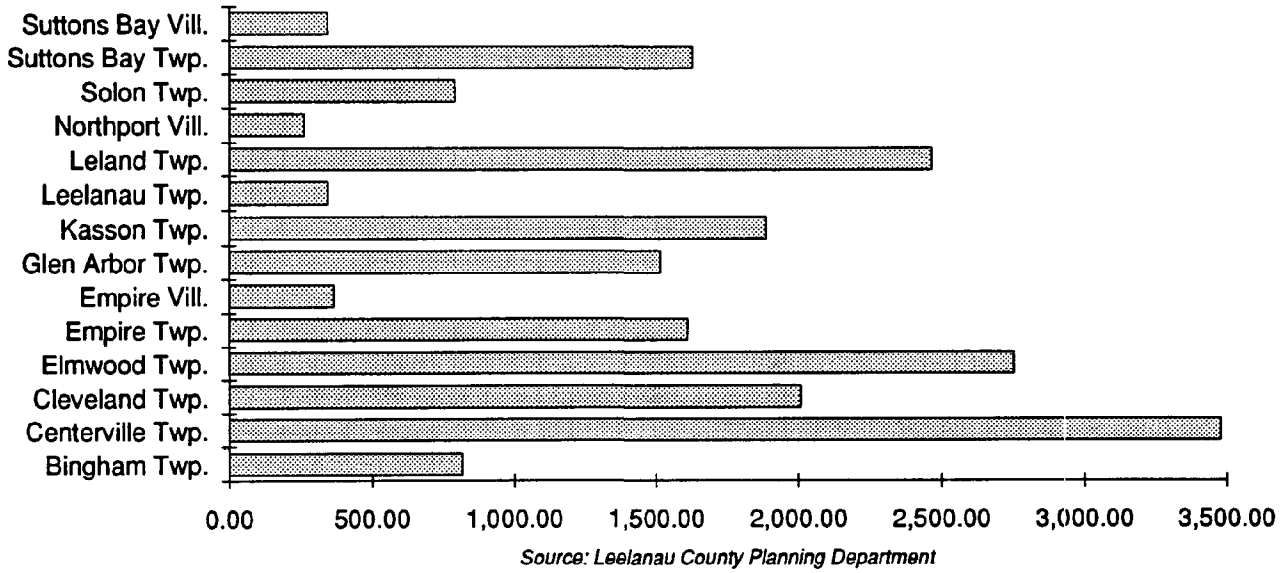
Total Buildout Population for Leelanau County



Source: Leelanau County Planning Department

Figure 3-17

Leelanau County Percent Population Change Between 1990 and Total Possible Buildout



Source: Leelanau County Planning Department

Community unrest and political pressures will heighten as local and county governmental entities grapple with diverse community attitudes in their independent efforts to better manage growth.

The market forces behind sprawl, once started, are considerable. Unfortunately, they are fueled in Leelanau County by local plans and zoning ordinances that encourage them. This may seem unlikely since most land is zoned for low density single family use, either as the primary use (as in a residential district) or as a permitted use (as in an agricultural zone). However, if all land is developed at the maximum permitted density, as tends to occur over time (provided there is an adequate market for the land) then even a low density development pattern results in a large population.

Last year, the Leelanau County Planning Department conducted a buildout analysis of all zoning then in place in the County. A buildout analysis calculates the total number of households and total population of a jurisdiction if all undeveloped, but buildable land, is developed at the maximum density permitted *"by right"* under the zoning ordinance. The results are presented in Figures 3-16 and 3-17.

Despite strong statements supporting preservation of farmland and open space in most of the zoning ordinances in the County, none have regulations which effectively protect these resources. If the current population per household is maintained, at buildout, the County's population would be about 315,000 people. This is 18 times the current population and would, if it were the population today, rank Leelanau as the fifth largest county in the State. It would result in an average population density of 914 persons per square mile (compared to 48 persons per square mile today).

Now there are many legitimate reasons why a population this large is not likely at buildout, but even if it is one-quarter of that or 78,750, it would still be nearly 5 times the present population and would represent an enormous impact on farmland, water resources, public services, sensitive lands and open space. In fact, unless the new development were very compact, taxes would have to rise dramatically to pay for the same level of service offered today (but especially with regard to traffic, it would not be possible to maintain the existing service levels especially during the summer tourist season).

With sixteen separate, uncoordinated zoning ordinances in the County, no agreement on how to handle issues of greater then local significance, and no common concensus on a growth management plan for the Peninsula, it is unlikely that the forces of sprawl will be managed. While each community has its own zoning ordinance, and some have a current comprehensive plan, each plans its future with a focus that does not extend beyond its jurisdictional boundaries. Yet the character and daily living patterns of each individual community are greatly shaped by Peninsula-wide trends and forces.

As sprawl continues, the Peninsula can be expected to witness increases in community unrest and frustration both within and between local jurisdictions as conflicting development policies evolve. Solutions will be difficult to achieve as the necessary mechanisms for conflict resolution will be limited and those that may exist will not focus on the *"big picture"* but rather on the provision of *"bandaid"* answers. A marked decrease in the quality of life as perceived by both Peninsula residents and tourists will evolve. As a result, local elected and appointed officials will spend more and more time reacting to growth pressures and addressing constituent concerns but with fewer and fewer options available.

Chapter 4

PUBLIC FINANCE

INTRODUCTION

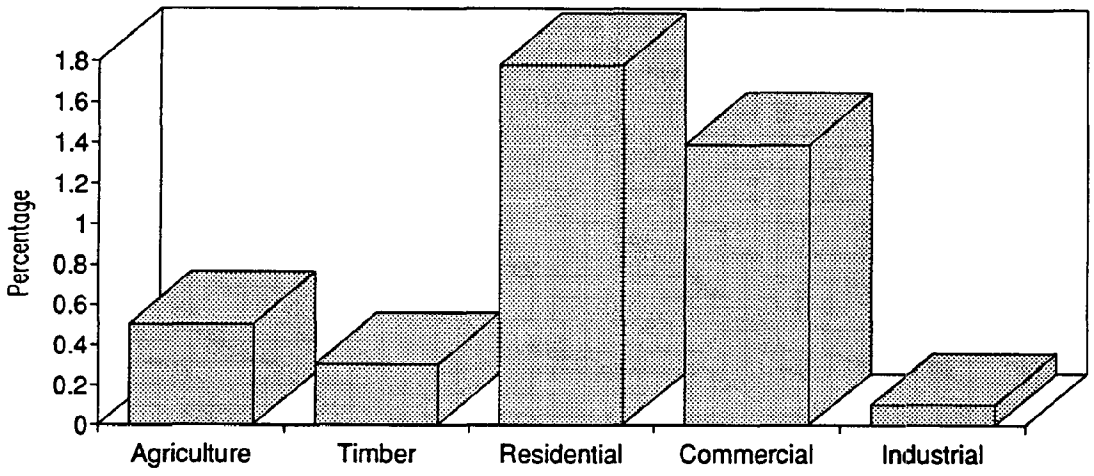
The ability of Leelanau County and the local jurisdictions which comprise the Peninsula to provide adequate services and address day-to-day community needs is directly tied to public finances. Public financing includes the collection of revenues and allocation of funds for community and administrative needs. As state and federal assistance has declined for a wide range of community development and improvement projects, communities have had to shoulder additional financial burdens in an attempt to merely maintain current levels of services. Growth and development in the Peninsula has placed both additional strains on and benefits to local revenues. However, the continuation of current trends (especially of sprawl) suggests the long term outlook for the Peninsula will be a losing struggle to meet the day-to-day service needs of residents and tourists and maintain the current quality of life unless taxes are dramatically increased.

Emerging patterns regarding public finance on the Leelanau Peninsula include the following:

- The tax base is growing with new development.
- While there are significant differences in millage rates among local units of government in the County, all are generally increasing.
- On a per capita basis, the County receives lower than state average allocations from most state departments.

Figure 4-1

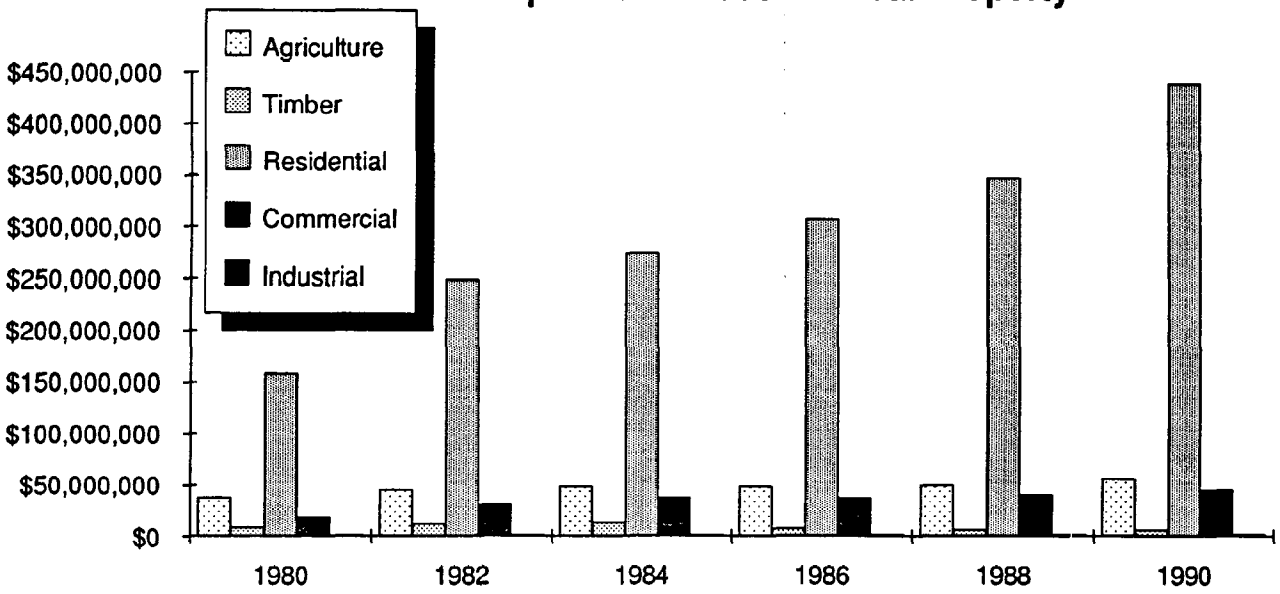
State Equalized Valuation Percentage Change By Class Between 1980 and 1990



Source: Michigan Dept. of Treasury

Figure 4-2

State Equalized Valuation: Real Property



Source: Michigan Dept. of Treasury

New revenues from development will eventually fail to pay for associated costs of community services because development is too spread out.

Land values and taxes associated therewith have been steadily increasing within the Peninsula. Between 1980 and 1990, all classes of lands experienced an increase in state equalized value (SEV) ranging from approximately 10% for industrial lands to 178% for residential land (see Figure 4-1). Increases in SEV among the five land classes resulted in a total SEV increase for the entire Peninsula between 1980 and 1990 of nearly 150%, from approximately $225 million to $550 million. Similarly, sales tax collections have witnessed a dramatic increase as well although the principal area of increase was in family restaurants.

Although these increases in SEV have led to increases in tax revenues, their impact upon the Peninsula's ability to provide services to property is limited. First, most property taxes support schools. The amount to support roads, sewer, water, police, fire, emergency, parks, recreation and other general government services is very low. Second, inflationary forces have had severe impacts upon the cost of community services, especially in the areas of education, transportation, and health services. Also, the aging infrastructure of many communities is increasing maintenance and improvement costs and absorbing a growing proportion of available service delivery funds.

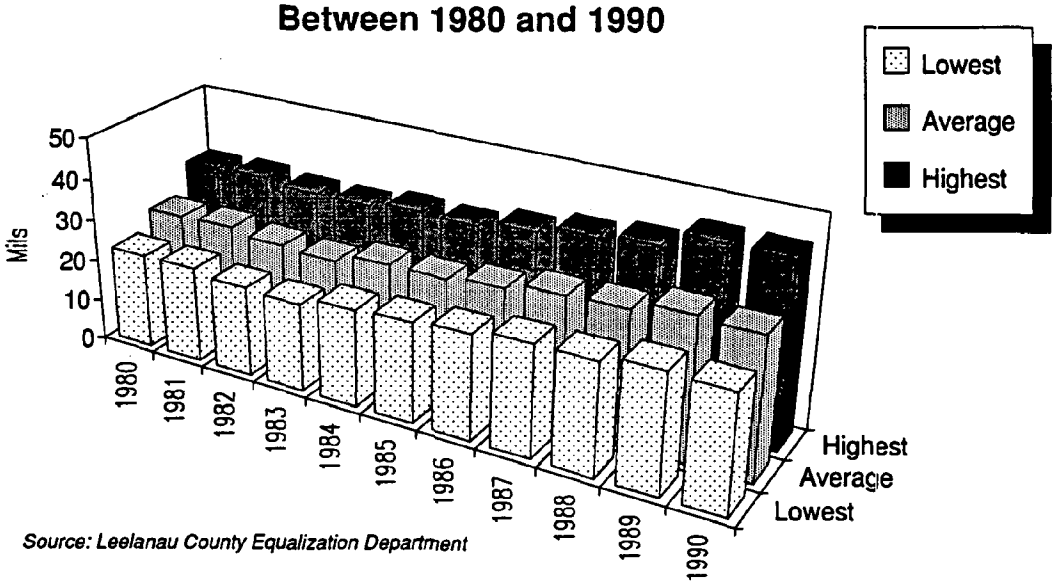
In the Leelanau Peninsula, however, the land development pattern has and will have as dramatic an effect upon service costs as inflation and increasing maintenance costs. Because the pattern of development is of such a low density sprawled character, the relative cost of service delivery is that much higher. Services must be provided to large geographical areas though limited populations exist within these areas. This is extremely costly. It is questionable whether the revenues collected from the rural areas of the Peninsula equal or approach the actual cost for the delivery of services to these areas.

Generally, residential land uses produce the greatest strain upon public finance because of the abundance of services associated with this land use including education, police and fire, social, health, and emergency services. The extreme increases in SEV values for residential property compared to other land classes over the past ten years (see Figure 4-2) illustrates the Peninsula's growing dependence upon residential land uses for revenues. However, it is this same land use that is most costly to service even when developed in a compact fashion.

The continuing low density, sprawled development pattern throughout the Peninsula will slowly choke the finances of local jurisdictions and the Peninsula as a whole, especially if new roads, public sewer, and water services are needed. The level of public services will decline and certain services will have to be terminated unless taxes were to be raised dramatically.

Figure 4-3

Millage Rates of Local Governments in Leelanau County Between 1980 and 1990



Source: Leelanau County Equalization Department

Millage rates will become more disparate as more developed, wealthier communities increase millages at a higher rate than communities of modest or low incomes in order to meet growing service burdens.

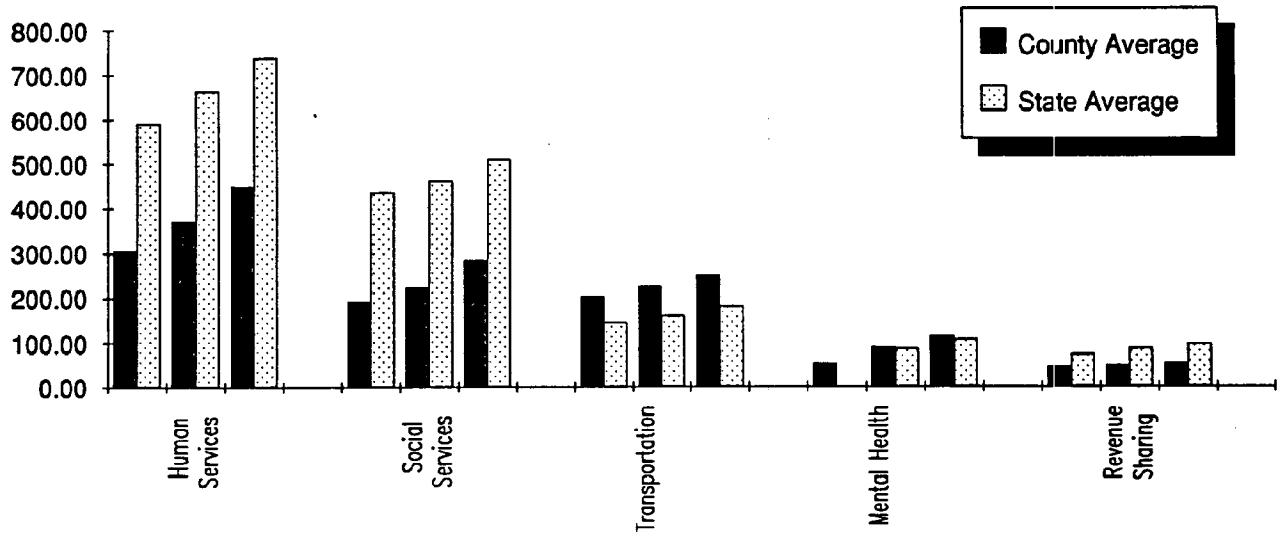
The future will bring increased shortages of revenues as service delivery costs rise and communities struggle to maintain existing levels of service to existing populations as well as accommodate the needs of new development and seasonal populations. This continuing and increasingly difficult struggle will lead to greater pressure for increases in tax millages among the local jurisdictions.

Already there is considerable variation in the tax millages being levied throughout the Peninsula (see Figure 4-3). The past ten years has witnessed a disproportionately large gap between the average millage rate among all jurisdictions and the highest millage rates. The highest millage rate in 1990, 43.7965, was almost 42% higher than the lowest rate during the same year. This trend will continue and the gap will widen as the residents of the wealthier communities accommodate tax increases to assure the continuation of services they have come to expect. As this scenario evolves, the Peninsula will become increasingly divided along community economic lines and the income levels of the households in various jurisdictions.

This condition will serve to alienate communities from one another and greatly impact the ability of the Peninsula to move into the 21st century as a unified and proactive force. The tourism industry will undoubtedly respond to these conditions by frequenting the more established communities and thereby making the wealthier more wealthy and the poorer more poor.

Figure 4-4

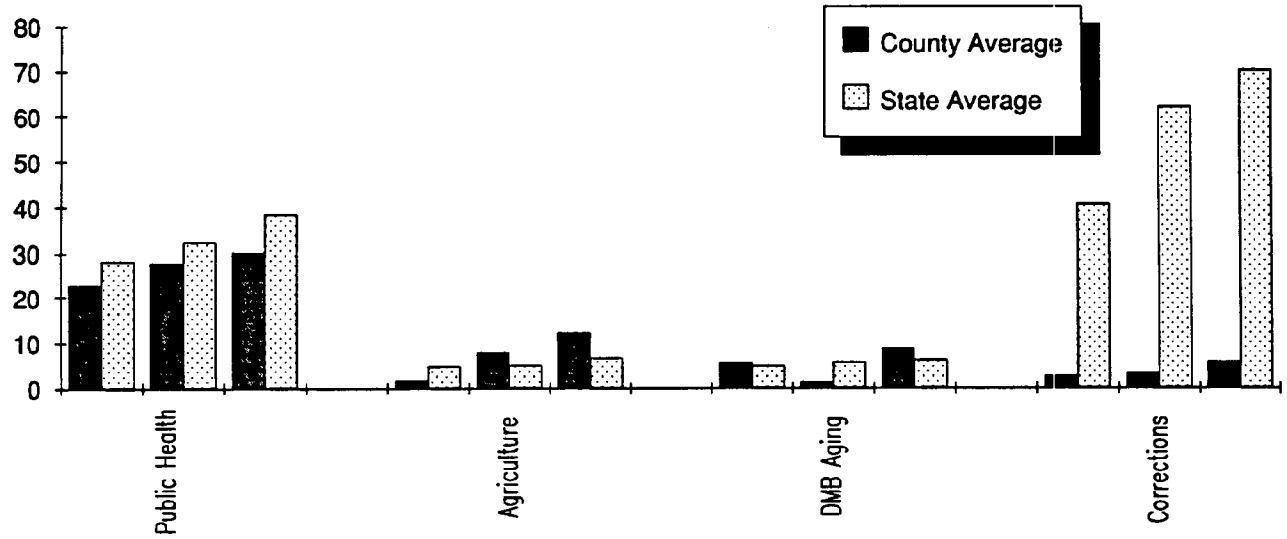
Per Capita Allocations by State Departments to Leelanau County for 1985, 1987 & 1989



Source: Center for the Revitalization of Industrialized States (CRIS), Michigan State University, 1991

Figure 4-5

Per Capita Allocations by State Department to Leelanau County for 1985, 1987 & 1989



Source: Center for the Revitalization of Industrialized States (CRIS), Michigan State University, 1991

While public service needs will increase, state and federal aid will not proportionately increase.

Funding to Leelanau County has increased for several state programs over the past few years. However, on a per capita basis, Leelanau County receives less than the state average per capita for revenue sharing, Department of Management and Budget-Aging Program, human service, social service, public health, and corrections (see Figures 4-4 and 4-5). On a per capita basis, transportation and agriculture payments are generally higher than state averages. While increases have been realized, the increases are not keeping pace with the rise in costs of providing such services (see Chapter 6). Additionally, given the state's current fiscal constraints and federal shifts in local assistance, the County can anticipate relatively less revenue from state and federal programs in the future. Assistance dollars will be spread thinner and thinner and, ultimately, those needing the services the most will suffer the most.

Chapter 5

TRANSPORTATION

INTRODUCTION

The ability to travel by vehicle from one community to another is essential to life as we know it. The automobile dominates our daily activities and households must be able to access a number of communities to meet their employment, schooling, shopping, and associated needs. Along with urban development and rural sprawl, congestion and additional maintenance needs have grown. This is as true for the nations superhighways as it is for local primary and secondary roads. Traffic on the Peninsula is growing with the rise of the permanent and seasonal populations. The quality of life on the Peninsula will be negatively impacted if the transportation facilities are not upgraded to meet new demands. However, improved facilities may facilitate even more sprawl.

Emerging patterns regarding transportation in the Peninsula include:

- The automobile will remain the dominant mode of transportation and is increasing faster than the population.
- Traffic levels are increasing Peninsula-wide, although the rates are higher along traditionally lower volume roadways.
- The increases in travel time, congestion, and traffic hazards spurred by growth and development are exacerbated by the circuitous roadway network in the County.
- The need for major roadway improvements is increasing while available funds are decreasing.
- Road ends are increasingly serving as public access sites to the area water resources.
- Congestion is most apparent in urban and activity centers where seasonal residents compete with permanent residents for parking.

Figure 5-1

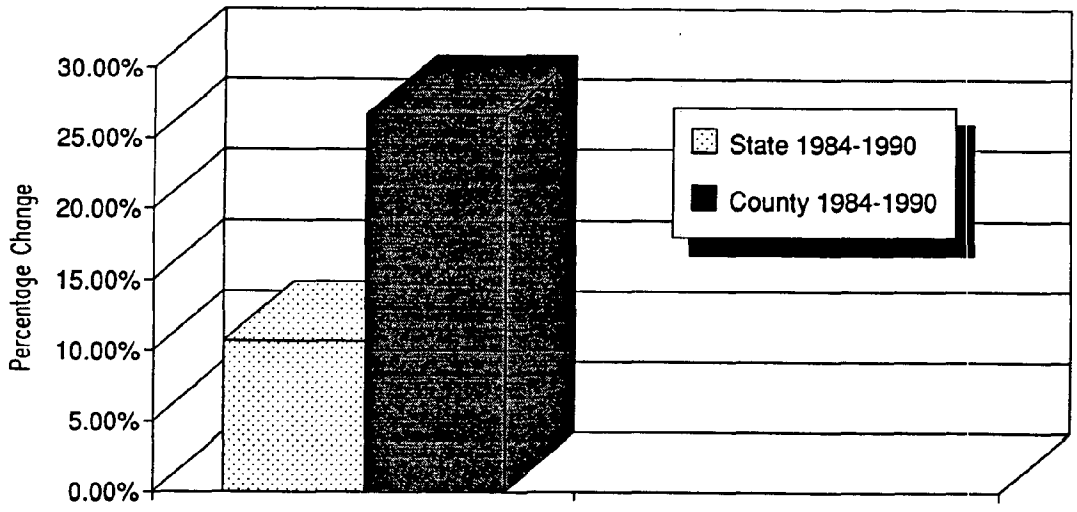
Leelanau County Vehicle Registration 1984 - 1990

Year	Motorcycle	Vehicle Type		Other	TOTAL
		Commercial	Passenger		
1984	372	2603	7661	2067	**12703**
1985	356	2752	8150	2274	**13532**
1986	351	2873	8565	2412	**14201**
1987	332	3043	8842	2604	**14821**
1988	311	3251	9225	2708	**15495**
1989	288	3356	9381	2698	**15723**
1990	286	3459	9602	2745	**16092**

Source: Michigan Secretary of State. Data issued October 1 of each year.

Figure 5-2

Total Valid Vehicle Registrations: 1984 - 1990



Source: Department of State

The number of single occupancy passenger vehicles will continue to grow at a faster rate than the population.

16,092 vehicles were registered on the Leelanau Peninsula in 1990 (see Figure 5-1), an increase of 27% since 1984. In contrast, the same time period witnessed an approximately 10% increase in population growth and only an 11% increase in state-wide vehicle registrations (see Figure 5-2). Approximately 60% of all registered vehicles in 1990 were passenger vehicles.

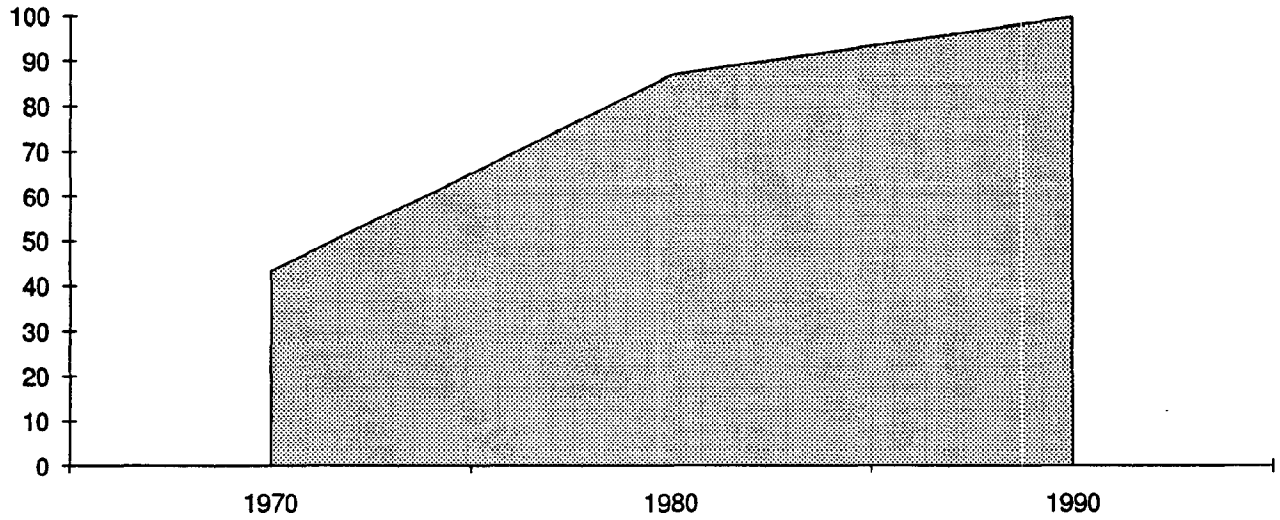
The factor most supportive of a vehicle-dependent Leelanau Peninsula is the low density sprawl development which has and will continue to dominate. The low density development pattern, characterized by persons living on rural land but working elsewhere, limits practical opportunities for ride-sharing or comprehensive public transit services. The success of these modes of transportation are dependent upon large numbers of persons in close proximity and with common daily transportation needs. The relatively limited total population of the Peninsula, the limited populations of the villages scattered throughout the Peninsula, and the current employment patterns, do not support the feasibility of extensive ride-sharing and public transit.

In addition, the automobile offers tremendous opportunities for flexibility and privacy in fulfilling one's transportation needs. This convenience, in addition to the relatively low cost of operation, has positioned the automobile as the foundation of contemporary transportation in this country and has dramatically shaped transportation attitudes.

Forces both nation-wide and those specific to Leelanau Peninsula will fuel the automobile's continuation as the dominant mode of transportation throughout the Peninsula and well into the next century.

Figure 5-3

Annual Vehicle Miles on State Trunkline in Leelanau County (in millions of miles)



Source: Michigan Dept. of Transportation, HPMS Program

Significant decreases in the level of service of both primary and secondary roadway corridors will be experienced as traffic volumes continue to increase.

As growth and development continues, increased demands will be placed upon the Peninsulá's roadway network. Annual vehicle miles traveled on state trunklines in the Peninsula have steadily risen since 1970 (see Figure 5-3) and increased by 15% between 1980 and 1990. This trend can be expected to continue.

Of the approximately 125 average daily traffic counts recorded along the Peninsula's roadway network between 1988 and 1990, just over half were recorded at levels of 1,000 vehicles per day or less. These levels are relatively low. These low volume paved roadway segments will most likely be able to accommodate additional increases in traffic without significant losses in levels of service. However, gravel roads cannot tolerate this level of daily use without frequent road grading.

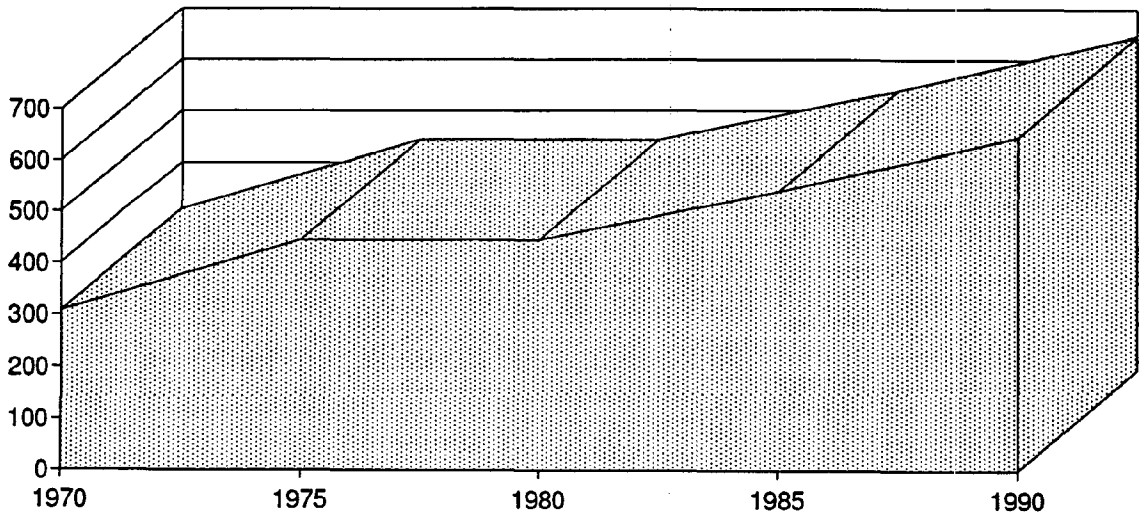
On the other hand, key roadway segments on state highways are at or approaching levels of service which seriously undermine the efficiency of the corridors as well as public health and safety. M-22 clearly illustrates this circumstance. Average daily traffic counts approached nearly 22,000 in the proximity of Traverse City in 1989. Considering the lack of passing lanes along M-22, its curvilinear nature and limited sight distances in selected areas, this level of traffic requires an urban level of service. The installation of the first traffic light in the County in Greilickville this summer is indicative of this need. Traffic counts of 4,000 to 6,000 vehicles daily along stretches of M-22 further northward greatly impact the corridor's level of service and threaten the character of that scenic area.

Though M-22 commands the greatest levels of traffic in the Peninsula, it is not experiencing the greatest percent increases in traffic volumes and herein lies a critical dilemma. Many of the roadways which are experiencing some of the greatest rates of increase in traffic volumes are not designed and constructed to accommodate these increase. For example, the traffic volumes along Lee Point Road, a local road in Bingham Township have increased by more than 300% since 1987. Numerous primary roadways are experiencing similar increases yet are not designed to accommodate the approaching volumes.

Roadways in the Peninsula which have traditionally experienced low traffic volumes will begin to witness increased flows. Roadways currently experiencing high traffic volumes will become more and more congested and the level of service will decline.

Figure 5-4

Leelanau County Traffic Accidents



Source: Michigan State Police

Travel time will lengthen and traffic safety will become increasingly threatened at rates proportionally higher than area population growth.

Though the Peninsula's population increased by approximately 18% between 1980 and 1990, traffic accidents within the Peninsula increased by nearly 46% over the same time period (see Figure 5-4). This disproportionate increase in accidents will continue as traffic volumes and congestion continue to heighten. The increased volumes of traffic on the roads will contribute to higher rates of accidents as maneuvering within the traffic flows becomes more difficult, driver stress levels rise, and stop-and-go movement patterns increase.

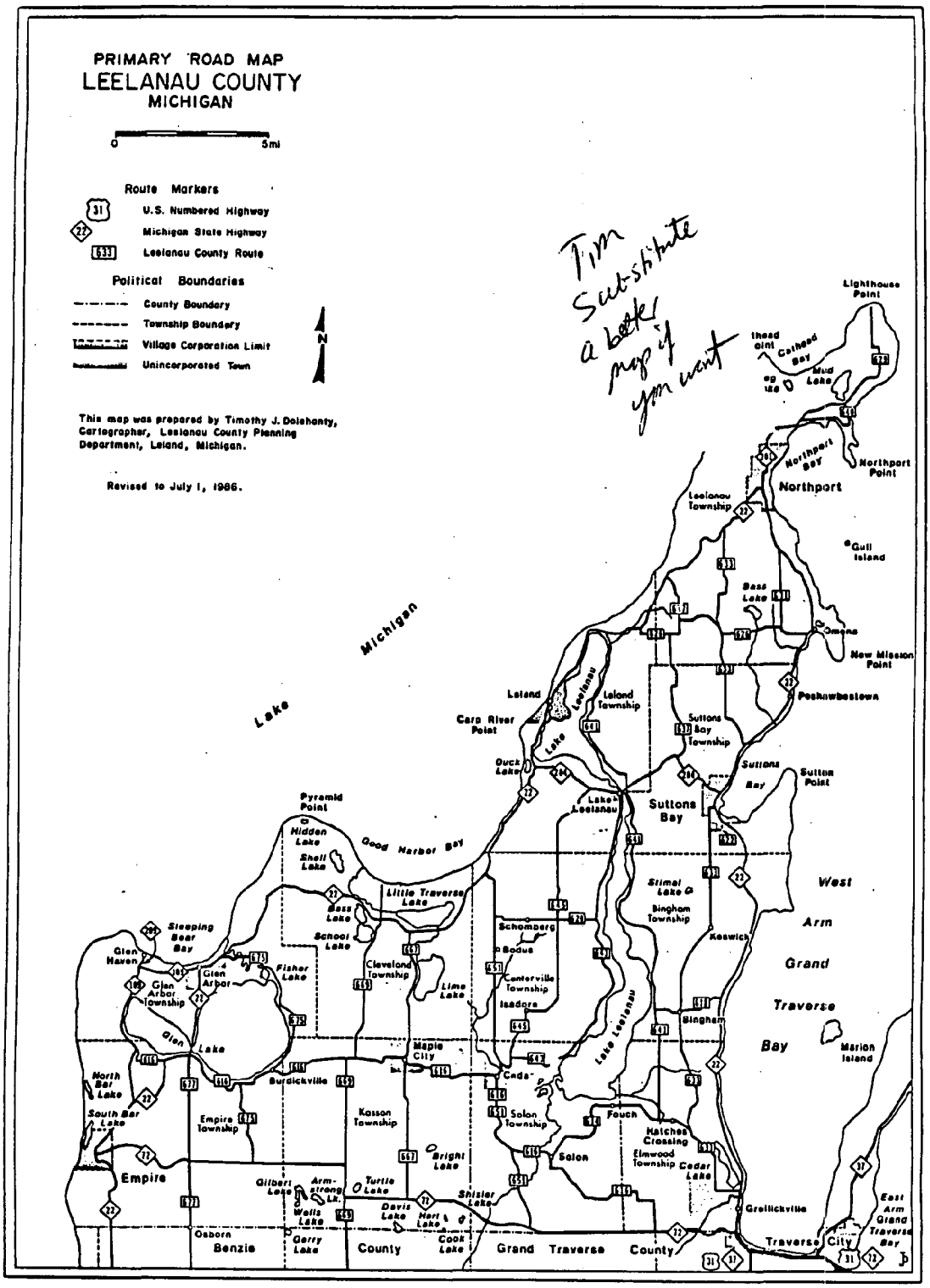
However, increases in traffic volumes will not be the sole reason for increased rates of accidents in the Peninsula. The hilly terrain, curvilinear road alignments, limited sight distances and narrow roadway shoulder widths on many of the road segments in the Peninsula will exacerbate increased traffic volumes and safety hazards.

Also, increased land development will further impact roadway safety beyond the resulting increases in traffic volumes. Additional roadway intersections serving future subdivisions will further interfere with the efficient movement of traffic on primary roads. Additional driveways providing ingress and egress to strip residential and commercial development will further threaten declining safety levels.

Safety hazards will not be restricted to vehicle passengers. Bicycling is growing in popularity in the Peninsula. The limited width of many of the Peninsula's roads and shoulders already creates safety hazards for bicyclers, joggers, and walkers. Increased traffic volumes will further intensify these hazards.

Travel time will noticeably lengthen even with marginal traffic increases in some areas, since many roads are very hilly and full of curves with slow speed limits and few options for passing slow moving vehicles. While this does not pose a serious problem for tourists, it does for commuters and commerce.

Figure 5-5


PRIMARY ROAD MAP
LEELANAU COUNTY
MICHIGAN
0
5mi
Route Markers
U.S. Numbered Highway
Michigan State Highway
Leelanau County Route
Political Boundaries
County Boundary
Township Boundary
Village Corporation Limit
Unincorporated Town
N
This map was prepared by Timothy J. Dolehanty, Cartographer, Leelanau County Planning Department, Leland, Michigan.
Revised to July 1, 1986.
Tim Substitute a better map if you want
Michigan
Lake
Lighthouse Point
Northport
Northport Point
Leelanau Township
Gull Island
Bass Lake
Omena
New Mission Point
Peshawbestown
Leland
Leland Township
Cedar River Point
Suttons Bay Township
Suttons Bay
Sutton Point
Duck Lake
Lake Leelanau
Pyramid Point
Hidden Lake
Shell Lake
Good Harbor Bay
Little Traverse Lake
Bass Lake
School Lake
Sleeping Bear Bay
Glen Haven
Glen Arbor
Glen Arbor Township
Fisher Lake
Glen Lake
Cleveland Township
Lime Lake
Schomberg
Bodus
Centerville Township
Isadore
Maple City
Cedar
Burdickville
North Bar Lake
South Bar Lake
Empire Township
Empire
Kasson Township
Bright Lake
Gilbert Lake
Armstrong Lk.
Turtle Lake
Wells Lake
Davis Lake
Hart Lake
Shisler Lake
Cook Lake
Solon Township
Solon
Fouch
Elmwood Township
Hatches Crossing
Cedar Lake
Stimal Lake
Bingham Township
Keswick
Bingham
West Arm Grand Traverse Bay
Marion Island
Grattickville
Traverse City
East Arm Grand Traverse Bay
Osborn
Benzie
County
Grand Traverse
County

Future transportation funding will not be sufficient to resolve the inadequacies of the Peninsula's roadway network.

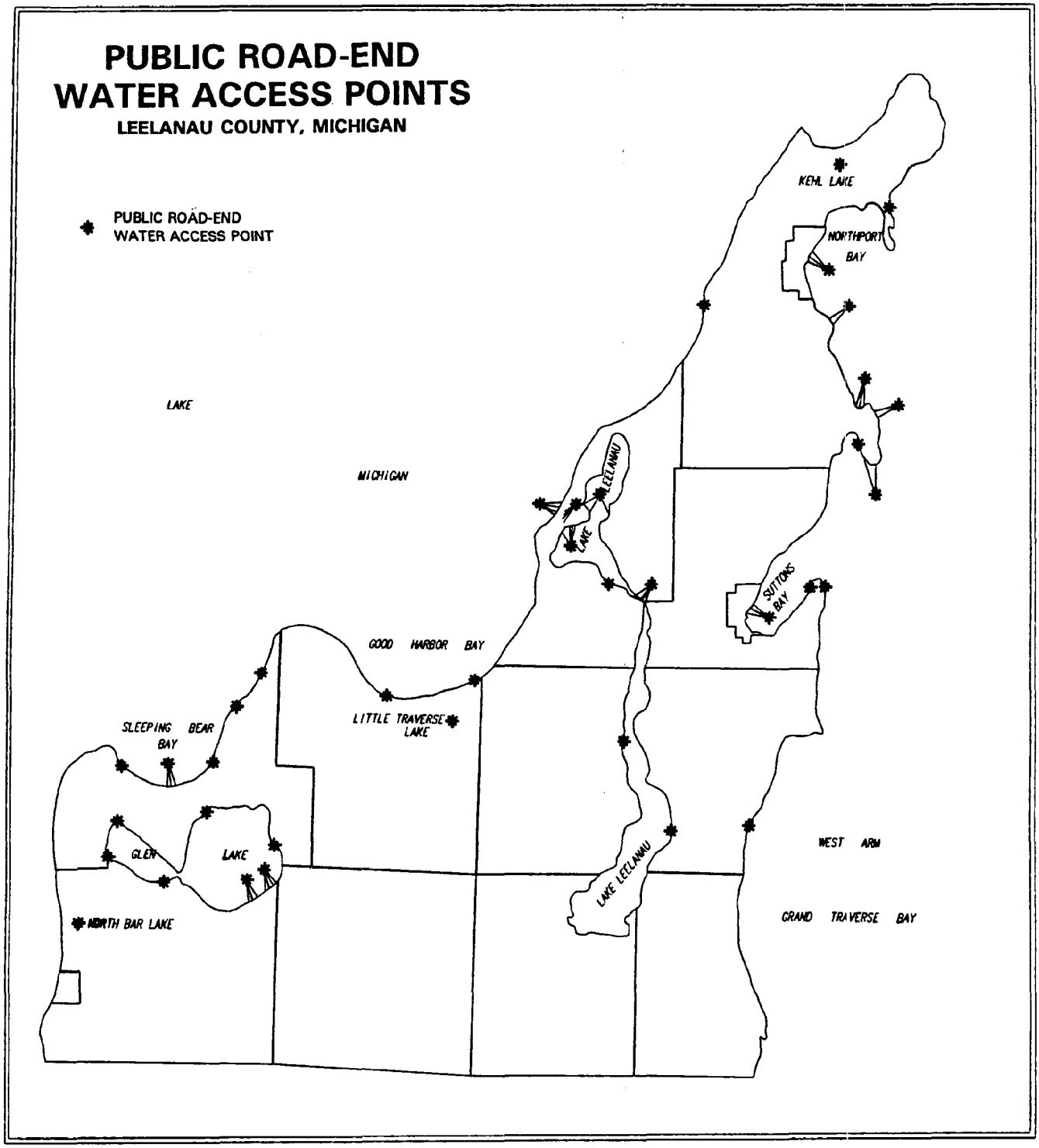
Though detailed solutions to the problems facing the roadway network are far from being identified, it is clear that the solutions must be comprehensive in nature and include both maintenance initiatives as well as major new improvements.

At present, the Peninsula's primary roadway network is based upon the peripheral corridors of M-22 and M-72, providing access into the Peninsula to the north and west respectively (see Figure 5-5). The network of interior roads is inconsistent and does not permit efficient and timely east-west or north-south passage. Traveling across the interior of the Peninsula requires following an awkward, circuitous, and stop-and-go route. The tremendous costs associated with making improvements to address future needs will make their likelihood very small.

Other major road improvements necessary to resolve critical transportation needs include realignment of key intersections (especially on M-72), provision of adequate shoulders for vehicular and bike use, and general maintenance of pavement surfaces.

The County is currently experiencing financial problems in its attempt to maintain the current roadway network. Increased road improvements, particularly those that are most needed, will require massive amounts of money for engineering studies, land acquisition, and construction. While the allocation of transportation dollars to the Township has been steadily increasing, it is not sufficient to offset the tremendous financial costs associated with such projects. Without increases in local taxes in conjunction with entering into long term debt service, the County may not be able to effectively address the Peninsula's transportation needs in the time frame necessary. Without a significant increase in the state gasoline tax very soon, the likelihood of such resources is very limited.

Figure 5-6


PUBLIC ROAD-END
WATER ACCESS POINTS
LEELANAU COUNTY, MICHIGAN
PUBLIC ROAD-END
WATER ACCESS POINT
KEHL LAKE
NORTHPORT
BAY
LAKE
MICHIGAN
LEELANAU
LAKE
SUTTONS
BAY
GOOD HARBOR BAY
LITTLE TRAVERSE
LAKE
SLEEPING BEAR
BAY
GLEN
LAKE
NORTH BAR LAKE
LAKE LEELANAU
WEST ARM
GRAND TRAVERSE BAY

Parking and congestion problems will increase in the urban centers and key activity centers as tourism grows.

The existing urban centers (mostly villages) throughout the Peninsula are comparatively small. Parking is generally limited to the streets with few parking lots situated in or near the retail areas. At present, parking within these downtown areas can be difficult during the warmer months of the year and particularly during special events. This situation not only adds to the congestion in these communities but often results in illegal parking practices, hazardous conditions to the public health, safety, and welfare, and increases in traffic volumes and noise along neighboring residential streets.

As tourism grows and year round development continues, these conditions will worsen.

Increased conflicts will evolve between visitors and waterfront property owners along road ends.

The Leelanau Peninsula abounds with inland lakes. Though there are numerous public access points to most of the lakes throughout the Peninsula, public access is afforded to many residents and visitors by road ends (see Figure 5-6). Allowing for public access via these road ends is a policy strongly upheld by the Leelanau County Road Commission. Along with the merits of such a policy come negative impacts to those residing along the waterfront adjacent to the road ends.

For many such property owners, these road ends contribute to increased noise levels, invasion and/or destruction of property, and the loss of privacy. As the Peninsula's population and tourism industry grow, this conflict will only heighten. Yet it is clearly in the public interest to maintain these public access sites.

K:\leelanau\chapter5\new

Chapter 6

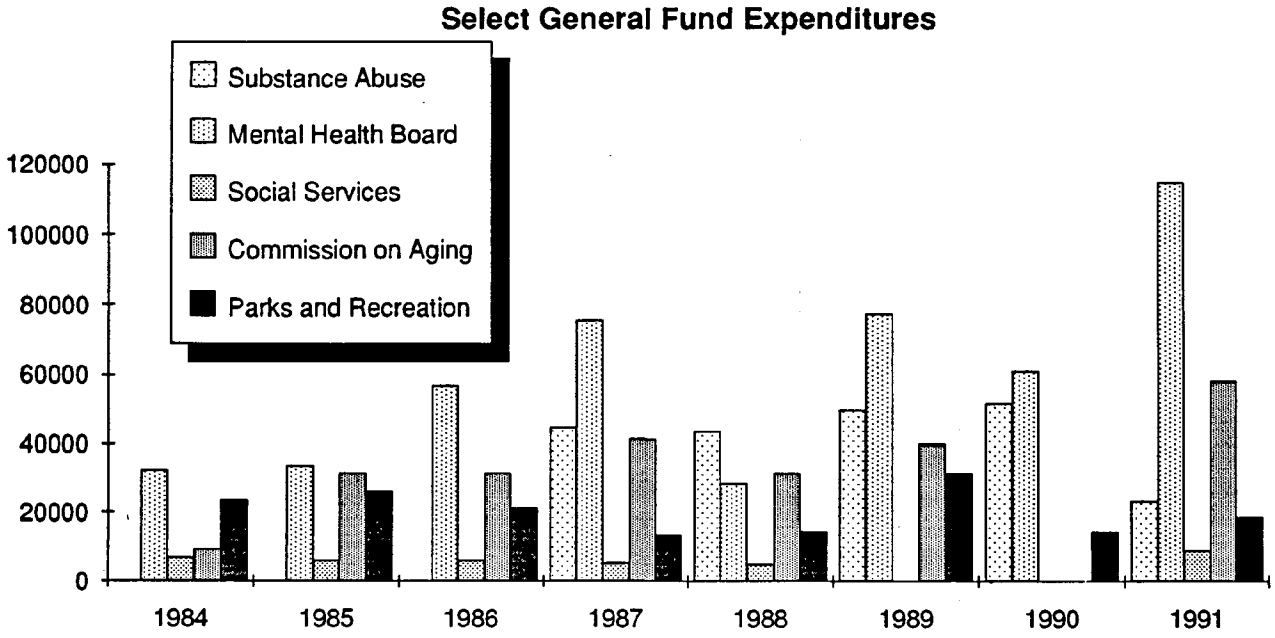
COMMUNITY SERVICES

INTRODUCTION

Community services in Leelanau County are currently limited. Given the growth and change in structure of the County's population, need and demand for services will increase. Service needs may range from additional public safety to a wider variety of human services. An issue in future service provision includes accessibility; linking those with service needs to the service providers. Emerging patterns in community service provision include:

- Community leaders and the citizenry are recognizing potential needs for additional community services (e.g., education, health, recreation).
- An older population is becoming established in the County that is accustomed to urbanized levels of service.
- Demand on fire and police services is rising.
- Youth services are limited in the County and needs for them appear to be increasing.

Figure 6-1



Source: Leelanau County Planning Department

While the need for additional community services is recognized, the financial support to provide them is not there.

Results of the Leelanau County citizen survey, leadership survey, the Leelanau Children's Report, and growth management forums all recognize the potential need for more community and human services in the County. Additionally, it is recognized that fiscal and technical resources are limited to provide such services, given budget constraints at the state, county and local level.

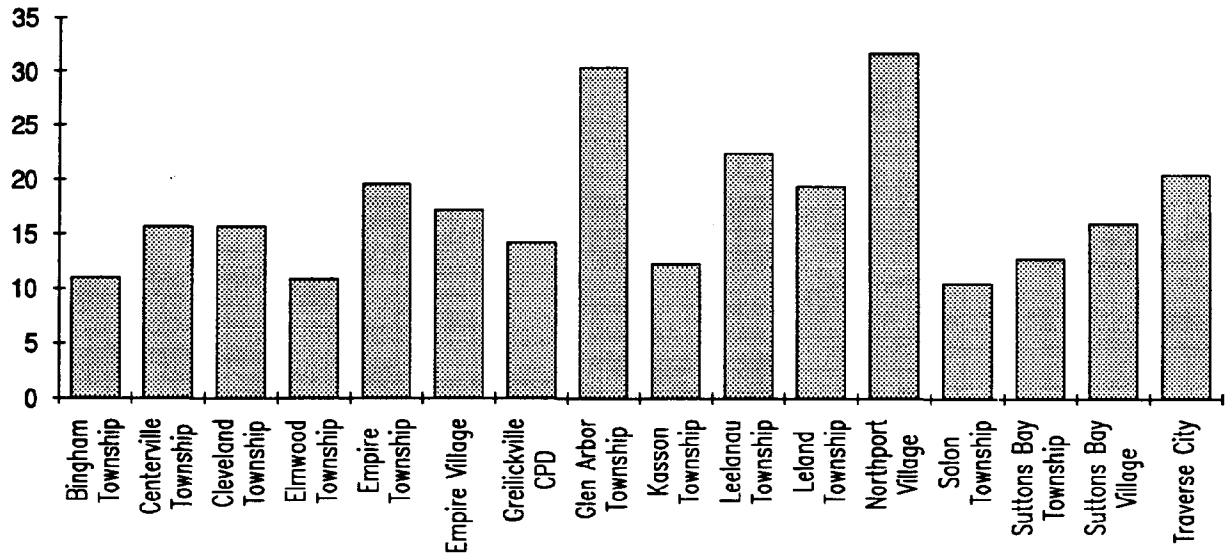
Some of the recurring issues found in these reports and discussions with human service providers include:

- Economic disparity in the County—the widening margin between the more affluent in-migrants and less affluent resident population.
- Need for more public recreational and cultural opportunities.
- Lack of good job opportunities for those graduating from high school.
- Family breakdown (e.g., single parent households) and parental substance abuse.
- Cultural and social barriers to accepting assistance (i.e., failure to link those in need with available help because of negative perceptions associated with taking advantage of assistance programs).
- Need for affordable accessible health and emergency care services.
- An increased number of individuals *"falling through the cracks"* of human service programs (e.g., health care, public assistance) because of reductions in state and federal support.
- Transportation problems of the needy and the inability for them to reach service centers.
- Lack of affordable housing and a need to rehabilitate older housing stock, particularly rental housing.
- Need for more activities for teens.
- Perceived lack of law enforcement. Increasing crime rates, but not crackdowns.

With the increase and change in profile of the County's population, sophisticated service needs and demand will likely outstrip the professional and fiscal capabilities of local units of government. Even now, several regionally-based human service agencies and churches are relied upon to provide for human service needs in the County. It is likely that intergovernmental cooperation will play a critical role in future community service provision.

Figure 6-2

Percent of Population over the Age of 65 for 1990



Source: Decennial Census

An older population will place more demands on community service systems, in particular, health care and emergency services.

Because of its small size, rural nature and limited budget, Leelanau County and its local units of government have not provided a high level of services to residents. Demand for more sophisticated services will likely result because of the magnitude and character of population changes in the county. The majority of the County's population increase can be attributed to in-migration. Many new residents are retirees relocating from urban areas that provide a relatively high level of services (police, fire, health care, recreation, etc.) and they will likely expect to receive such services, since similar results have occurred in many other northern counties.

An aspect that should also be considered when dealing with an older population is that of school support. Oftentimes school districts have trouble garnering political support for school taxes from households who do not have children in the school system.

Figure 6-3

Human Service Agencies in Leelanau County

American Red Cross
County Road 616, Route 1, Box 12
Glen Arbor, MI 49636
(616)334-4261

Child and Adult Protective Services
102 S. Madison
Suttons Bay, MI 49682
(616)271-3442

Grand Traverse Band of Ottawa/Chippewa Indians
Route 1, Box 135
Suttons Bay, MI 49682
(616)271-3538

Holy Rosary Church
3919 Gatzke Road
Cedar, MI 49621
(616)228-5429

Lake Leelanau Mealsite
Lake Leelanau Fire Hall, Old 204
Lake Leelanau, MI 49653
(616)256-9611

Leelanau County 86th District Court
P.O. Box 578, Courthouse
Leland, MI 49654
(616)256-9931

Leelanau County Commission on Aging
209 St. Mary's, P.O. Box 192
Lake Leelanau, MI 49653
(616)256-7590

Leelanau County Department of Social Services
P.O. Box 427
Suttons Bay, MI 49682
(616)271-3442

Leelanau County Probate Court
Courthouse
Leland, MI 49654
(616)256-9803

Leelanau County Youth and Substance Abuse and Leelanau County Probate Court
Courthouse
Leland, MI 49654
(616)256-7783

Leelanau Memorial Hospital
213 S. High Street
Northport, MI 49670
(616)386-5101

Leland United Methodist Church
106 N. Fourth Street
Leland, MI 49654
(616)256-9088

Maple City Senior Mealsite
Lion's Club
County Road 616
Maple City, MI 49664

Maple Valley Nursing Home of Maple City, Inc.
Route 2, Box 7
Maple City, MI 49664
(616)228-5895

MSU-Cooperative Extension Service
116 Phillips
Lake Leelanau, MI 49653
(616)256-9888

Northport Evangelical Covenant Church
409 Shabwasung, P.O. Box 367
Northport, MI 49670
(616)386-7362

Northport Senior Mealsite
Trinity Church, 105 Warren
Northport, MI 49670
(616)946-2720

Peshawbestown Senior Mealsite
Immaculate Conception Church
M-22 Peshawbestown
Suttons Bay, MI 49682
(616)271-3018

St. Rita's Church
8707 Hill Street
Maple City, MI 49664
(616)228-5823

Suttons Bay Area Schools
P.O. Box 367
Suttons Bay, MI 49682
(616)271-3846

Suttons Bay Congregational Church
Madison & Lincoln, P.O. Box 70
Suttons Bay, MI 49682
(616)271-6036

Suttons Bay Senior Mealsite
Suttons Bay-Bingham Fire Hall
St. Mary's
Suttons Bay, MI 49682
(616)271-3520

United Methodist Church
106 North Fourth Street
Leland, MI 49654
(616)256-9088

USDA-Agri. Stabilization & Conservation Service
Old 204
Lake Leelanau, MI 49653
(616)256-9791

Needs of those with low incomes will increase as cost of living rises in the County.

As indicated previously, the percentage of the County's population receiving public assistance is generally low, approximately 6% (see Figure 1-21 in Chapter 1). The number of recipients have fluctuated between 1982 and 1990 from a low of 812 in 1986 to a high of 924 in 1990. While the percentage of total population below poverty level has decreased, consistent numbers of individuals on public assistance suggest that this percentage is lower only because additional persons of affluence have migrated into the County.

Northwest Michigan Human Service Agency, Inc. (NWMHSA) acts as an umbrella agency for Leelanau County human service needs. The agency serves nine other counties as both a service provider and regional liaison for a variety of human service groups. NWMHSA's primary programs are Head Start, meals on wheels, home weatherization and food distribution. In general, needs and demand for these services run high. For example, the Head Start program has a continual waiting list. This year they will increase the class size from 20 to 30 and run two classes a day, rather than one. In addition to the waiting list, many children are simply not recruited or served because of transportation problems.

Accessibility and transportation problems are recurring issues in Leelanau County human service provision. As with many rural communities, identifying and reaching those in need is more difficult because of cultural barriers and the dispersed nature of rural populations. Many of the service agencies in the region are actually based in Traverse City, or other counties, where they may have limited utility to Leelanau County residents because of accessibility problems. Of the 238 service agencies listed for the 10-county region, 24 are located in Leelanau. Many of these are churches (see Figure 6-3).

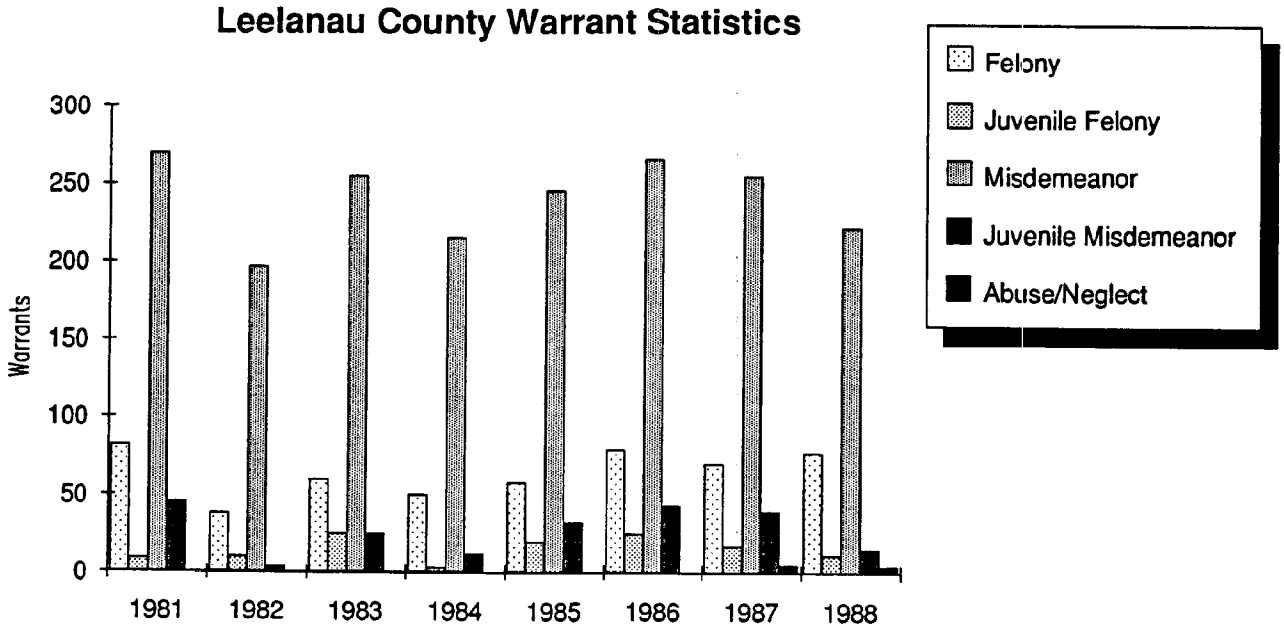
Department of Public Health, Community Mental Health, Commission on Aging and United Way are operated on a multi-county level. The County Department of Social Services (DSS) often turns to multi-unit service agencies based in Traverse City for client assistance. Red Cross and Salvation Army have local contacts in the County and often coordinate with DSS and other service providers to stretch limited resources. Several churches also provide vital assistance through food banks.

Child care and child service needs for households in poverty will increase.

According to the 1991 Leelanau Children's report, there is a need to increase services to youth in the county. Changing family structure (i.e., increases in single parent households) and increasing economic and domestic pressures of those with low incomes puts increased stress on youth. Human service providers are concerned with the number of female-headed households with no husband present. This generally indicates the number of single-parent households and/or widows who may be in need of assistance. In 1980, nearly one-fifth of all families (19%) were comprised of a female-headed householder with no husband present. Data for 1990 is not yet available.

Investment in the County's youth is seen as a critical need to head off some of the more critical social problems of the chronically underprivileged.

Figure 6-4



Source: Leelanau County Sheriff's Dept.

Fire, emergency response, police calls and public annoyance crimes (trespassing, disorderly conduct and vandalism) will increase with additional seasonal population increases.

As can be seen by Figure 6-4, crime statistics in the County have fluctuated considerably since 1981. There is no real trend pointing toward increases in *reported* crimes. However, community surveys and growth management forums reflect a perceived increase in crime and an associated lack of enforcement in the County. As seasonal populations increase, however, crimes such as vandalism, trespassing and disorderly conduct will increase.

Currently, jail capacity is 19 persons. The jail has had days over capacity every year since 1982. In 1990, there were a total of 158 days that the jail was at or over capacity (43% of the time). While this is the most serious overcrowding recorded, there have been 75, 87 and 47 days over capacity in 1985, 1986 and 1987 respectively. This condition has now been persistent enough, for long enough that additional jail facilities will likely need to be constructed soon.

Chapter 7

INFRASTRUCTURE

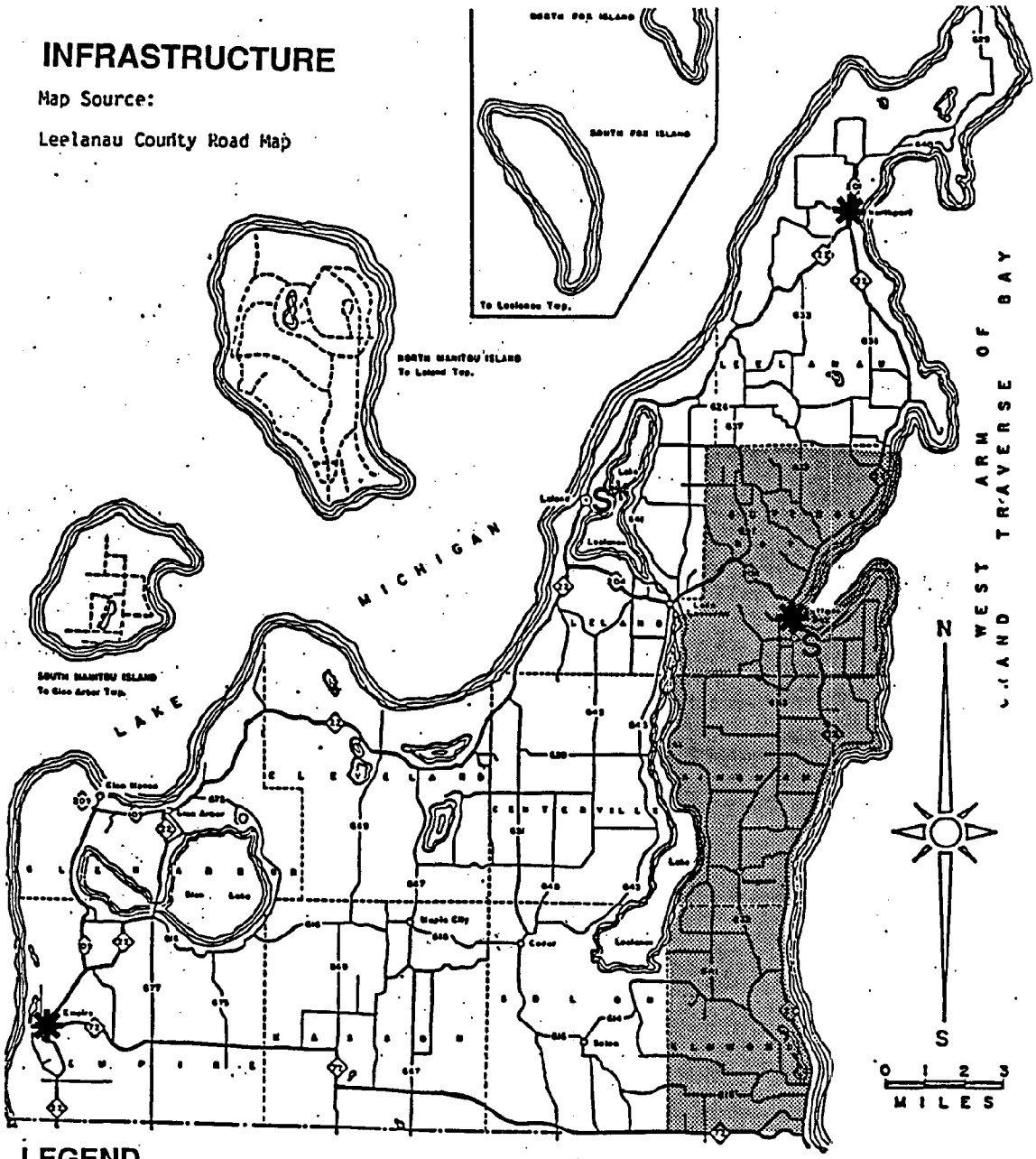
INTRODUCTION

The extent to which infrastructure exists within a geographic region can have a dramatic impact upon the current and future character of the area. Community infrastructure may include nothing more than basic private services such as electricity, gas, and phone service. On the other hand, and where funds are sufficient to meet the cost, public sanitary sewer, water and storm sewer infrastructure may be introduced. Such infrastructure can resolve or prevent public health problems and foster economic development. The unplanned expansion of infrastructure can also dramatically and negatively change the character of a community and region. At present, with the exception of roads (see Chapter 6) the infrastructure on the Leelanau Peninsula is quite limited though the future is in question.

Emerging trends include the following:

- The current sprawl pattern of land development minimizes the pressure for new or expanded public infrastructure systems.
- New public infrastructure systems to serve existing developed areas are relatively costly due to the small population centers and limited cost sharing opportunities.

Figure 7-1


INFRASTRUCTURE
Map Source:
Leelanau County Road Map
MICHIGAN
LAKE
WEST ARM OF GRAND TRAVERSE BAY
N
S
0 1 2 3
MILES
LEGEND
LEELANAU COUNTY
AREAS WITH NATURAL GAS SERVICE
from Michigan Consolidated Gas Co.
CITIES WITH PUBLIC WATER
S EXISTING SEWER SYSTEM
S* NEW SEWER SYSTEM
WHOLE COUNTY IS SERVED BY
ELECTRIC: Cherry Land Rural Electric Corp. or Consumers Power
TELEPHONE: Century or Michigan Bell

Infrastructure will play a limited, but increasing role in the Peninsula as urbanization continues.

The Peninsula is only partially served with basic infrastructure. Only electrical and phone service are available throughout all areas of the Peninsula. Gas service is available in the eastern one-third of the County. Municipal water systems serve Empire, Northport and Sutton's Bay. Public sewer system is available in Suttons Bay, and Leelanau Township expects to begin construction of a public lagoon system in the fall of 1991 to primarily serve Leland (see Figure 7-1).

As urbanization increases, pressures to introduce or expand existing infrastructure usually also increase. For example, with urbanization comes significant increases in concentrated water runoff flows. Stormwater infrastructure is necessary to control flooding and protect water resources from runoff laiden with sedimentation and other impurities. Higher densities of development may preclude the use of on-site facilities for sewage disposal or potable water. Public sewer, water, and stormwater infrastructure are often both the prerequisite for increased levels of urbanization and solutions to evolving public health risks.

The Leelanau Peninsula presents circumstances which will strongly limit the introduction of public infrastructure in the near future. The reasons include:

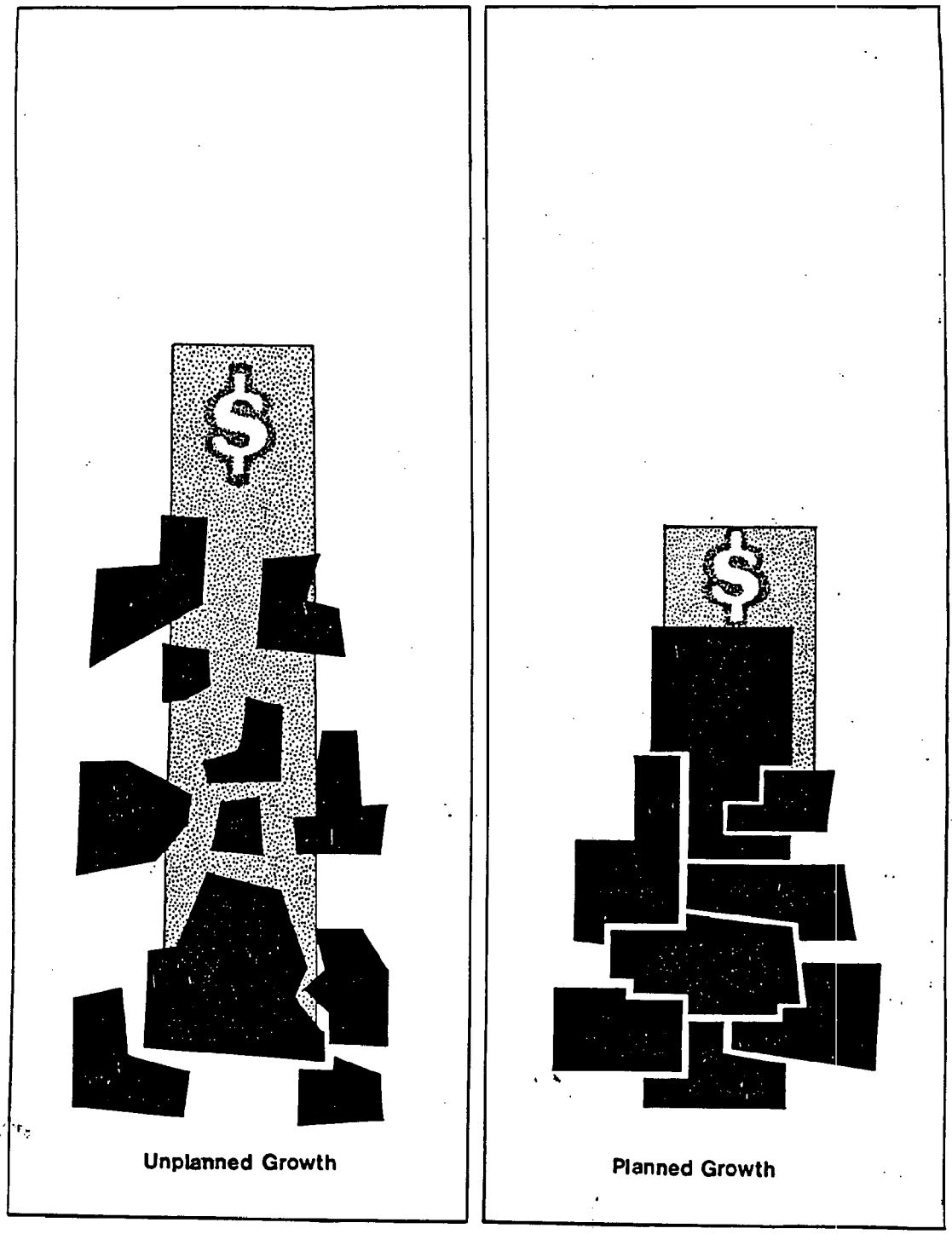
- Though urbanization is increasing throughout the Peninsula, the predominant low density sprawl development pattern minimizes the current need for public infrastructure (except roads).

- The cost of providing infrastructure to a low density development pattern is very high while public financial resources are quite limited.

- Current local land use planning and zoning programs do not systematically link new development with the planned expansion (or introduction) of public infrastructure.

- The seasonal variation in population throughout the Peninsula, and the resulting abbreviated period when infrastructure improvements may be perceived as most beneficial, and who should pay for those benefits, may delay decisions to commit to a public infrastructure system.

Figure 7-2



The provision of new infrastructure in existing villages will be more costly, and hence less likely, than the provision of new facilities as a part of new large scale development.

The irony of the above projection may not be apparent. Digging up existing streets to install sewer lines or storm drains is often more costly than sinking them on virgin land as part of a new development. Yet incremental expansion of existing villages generally has far less negative impacts on the environment, roads, and other public services (such as police and fire) and usually results in a smaller loss of valued open space. New large scale development, when located apart from existing developed areas on the other hand, generally can be serviced by on-site *"package"* private sewer and water systems, in a cost effective manner, but secondary impacts on roads, the environment and the introduction of a major new activity center in a low density area become public costs not typically borne by the developer. The allure of the new tax base to the local government often outweighs the identified costs, because they are born by other governmental agencies who have little or no say in the decision.

However, at some unknown point, the density of development in various areas will either warrant or require public infrastructure, but the number of users served will still be so low that the cost will be very high per user. This will occur first with roads (see Chapter 6), next with sewers around inland lakes and in existing villages. Though new facilities may not be built, the issue of infrastructure expansion will evolve as a significant planning consideration and, at least indirectly, have an increasing impact on local planning decisions and programs.

Chapter 8

ENVIRONMENT

INTRODUCTION

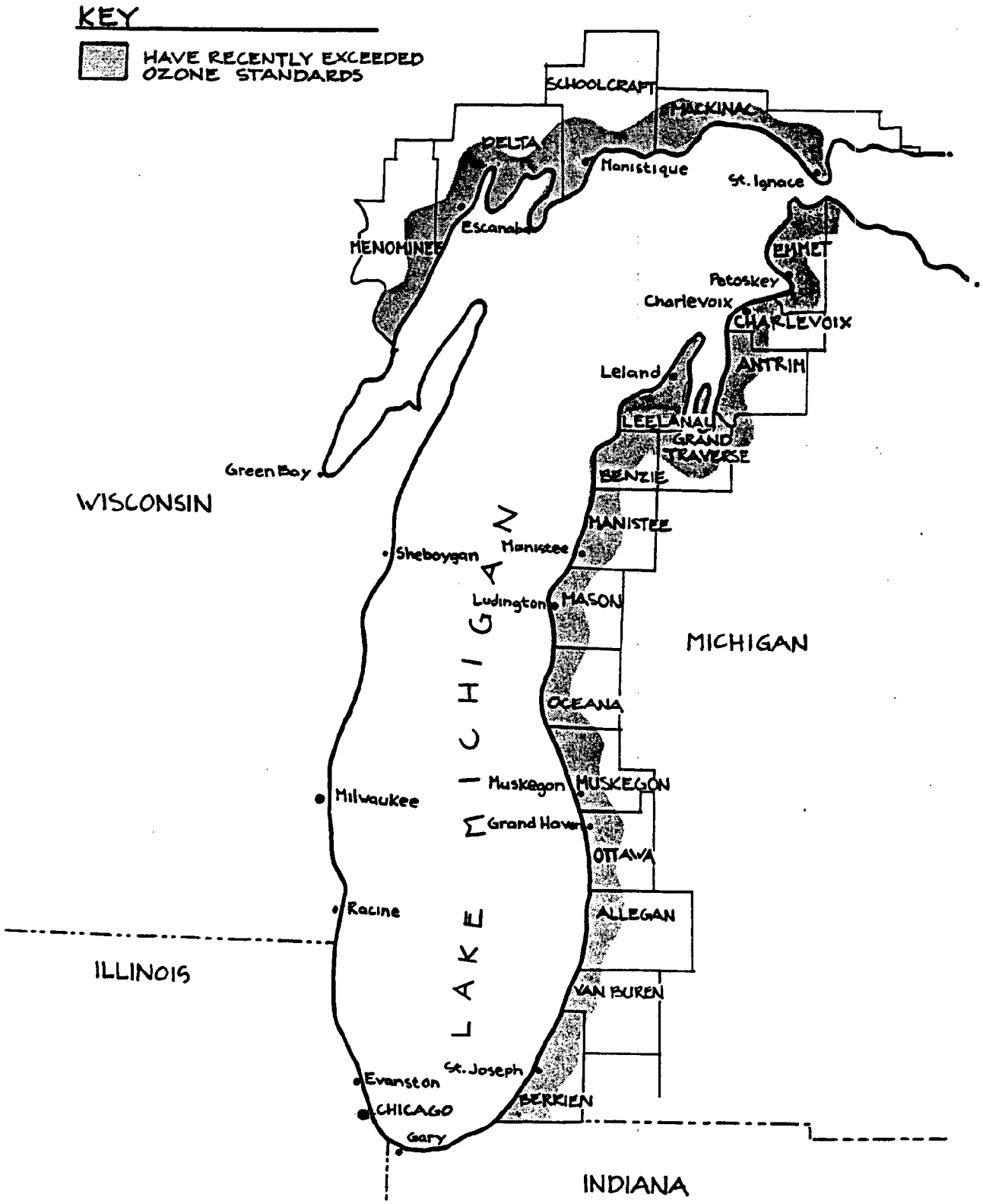
It is the splendor of the natural environment on the Leelanau Peninsula that annually attracts scores of tourists as well as a growing number of retirees and commuters to establish permanent residence. Yet, as the permanent and seasonal populations increase, the risk of environmental degradation also increases. The abundance of fish and wildlife and the vitality of vegetation is only as great as the surrounding environment will support. While many measures have been taken to protect the environment of the Peninsula, and many more are possible, the quality of the air, land and water is also impaired by human activities many hundreds of miles away.

The future quality of the environment on the Peninsula must not be taken for granted. While it currently is among the best in the state, it has a fragile foundation. The soils are largely sandy (and hence porous)—easily susceptible to surface contamination and a ready conduit for pollution of groundwater from hazardous chemicals. The air supply is heavily influenced by land use activities in the Lake Michigan Basin and increasingly includes pollutants carried from hundreds of miles away. Lake Michigan continues to serve as a dumping ground for a wide variety of chemical pollutants which make their way into fish and other wildlife farther up the food chain—including humans.

Specific patterns which are emerging include:

- Air quality continues to decline due largely to land use activities hundreds of miles away within the Lake Michigan Basin.
- Sprawl-like development is the leading threat to the quality of land and water resources.
- Surface waters are vulnerable to contamination due to the lack of a coordinated stormwater management program.
- New sites of groundwater contamination are being discovered.
- Significant losses of sensitive environments (wetlands, sand dunes, floodplains, high risk erosion areas, shorelines) are continuing from many small incremental encroachments.
- Solid waste disposal is not the huge problem it is in most counties for the foreseeable future, but is likely to be later unless a stronger multi-county solid waste disposal alliance is created.

Figure 8-1


KEY
HAVE RECENTLY EXCEEDED OZONE STANDARDS
SCHOOLCRAFT
MACKINAC
DELTA
Manistique
St. Ignace
Escanaba
MENOMINEE
EMMET
Petoskey
Charlevoix
CHARLEVOIX
Leland
ANTRIM
LEELANAU
GRAND TRAVERSE
BENZIE
Green Bay
WISCONSIN
MANISTEE
Sheboygan
Manistee
Ludington
MASON
MICHIGAN
OCEANA
LAKE MICHIGAN
Muskegon
MUSKEGON
Milwaukee
Grand Haven
OTTAWA
Racine
ALLEGAN
ILLINOIS
VAN BUREN
St. Joseph
Evanston
CHICAGO
BERRIEN
Gary
INDIANA

Air quality levels will remain high throughout the Peninsula, though pollution from hundreds of miles away will continue to lower air quality.

The most extensive public air quality monitoring program in Michigan, operated by the Air Quality Division of the MDNR, does not maintain a permanent monitoring site for Leelanau County. As a result, no long term air quality statistics are available for the Peninsula. However, this attests to the existing high air quality in the County as monitors are usually only placed in counties containing significant air pollution sources. Counties without a monitoring station are presumed to be in compliance with air quality standards (except ozone, which is a regional pollutant). The nearest counties to Leelanau which have been monitored, though not regularly nor for all pollutants, are Charlevoix and Grand Traverse and findings there have always attested to high air quality levels.

Industrial and vehicular emissions are the principal causes of air pollution. Thus, the biggest threat to future air quality in the Peninsula come from three possible sources: 1) a new large heavy industrial complex or incinerator in or near the County, 2) many more vehicles using the roads and/or 3) air pollutants which migrate long distances.

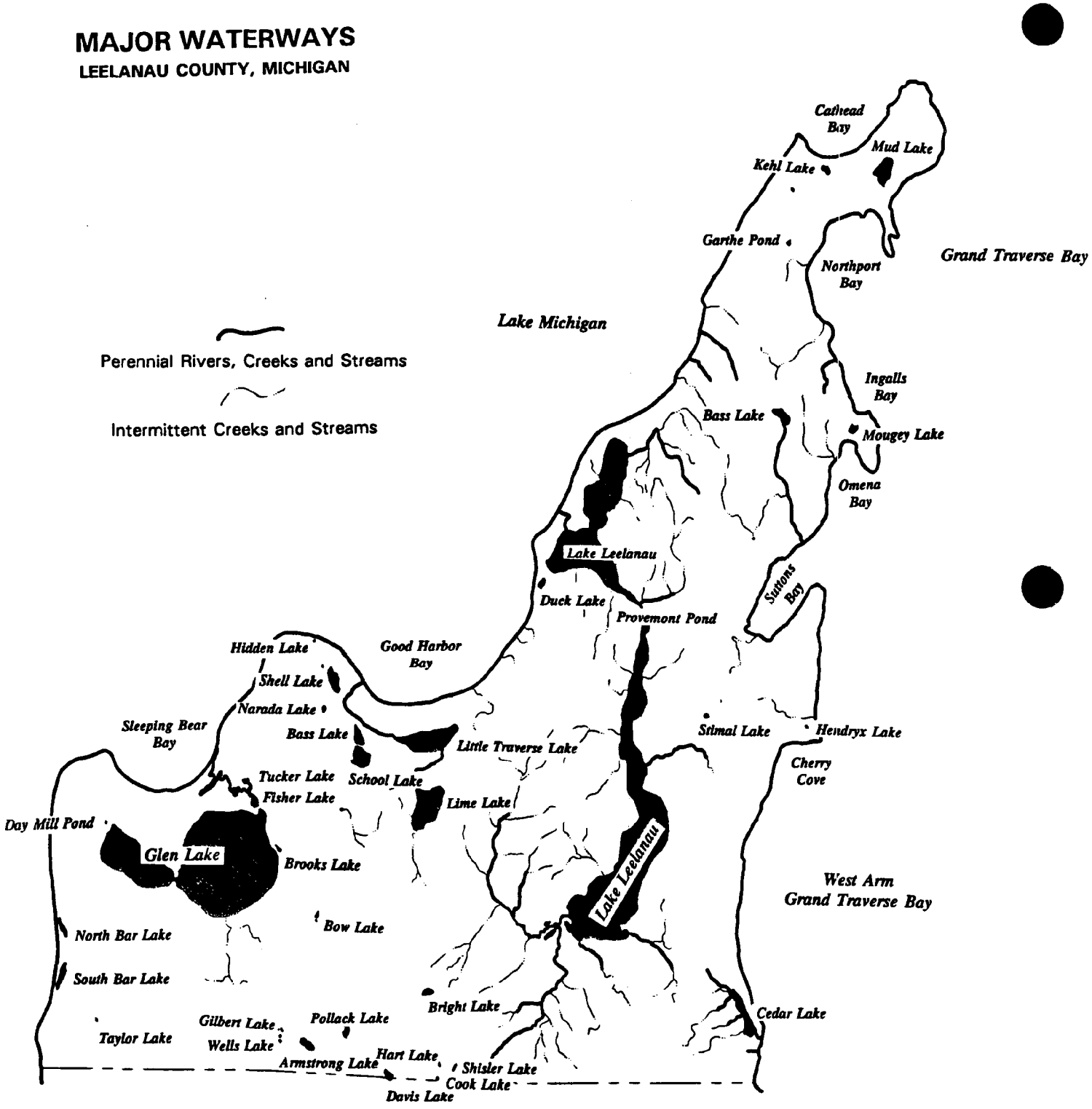
Though the future extent of industrial development in or near the County is unknown, vehicle emissions can be expected to increase with population growth, tourism, and expansion of retail and commercial services (increasing the number of vehicle trips, vehicle miles, and congestion). Reductions in the permitted level of vehicular emissions which may be brought about by new federal standards (currently being developed) may be offset by an increasing number of vehicles in the County.

At this point, it appears it is industrial emissions from urban centers outside of the state which pose the greatest threat to the local air quality. Preliminary results of a multi-state air pollution study suggest that major concentrations of smog are crossing Lake Michigan from the Greater Chicago area and significantly heightening ozone levels along shoreline areas of Michigan. The preliminary results of a temporary ozone monitoring station established as part of this study near the Village of Empire, suggest federal standards were exceeded three times between June and August of 1991. The Garden Peninsula, northwest of Leelanau Peninsula in the Upper Peninsula exceeded federal ozone standards during the summer of 1991 as well (see Figure 8-1). Federal sanctions can be levied upon communities which exceed ozone standards in excess of one violation per four year average.

Ozone is a pollutant formed when certain vehicular and industrial pollutants react in the presence of heat and sunlight. The ozone gas is an irritant and causes respiratory problems in humans.

Acid rain may also pose a future threat. Acid rain refers to rainwater which is acidic because of air pollutants. It can damage forests and increase the pH in surface waters to the point that fish cannot survive. Little is presently documented about the extent of damage if any, caused by acid rain in the Peninsula. However, data gathered on Beaver Island shows a nine year average pH of 4.2 and a 1989 (most recent year) average of 5.0. *"Pure"* rain water has a pH value of approximately 5.6, precipitation with a pH below that number is considered to be acidic. The source of acid rain is suspected to be industrial activities, often burning low sulphur coal, hundreds of miles away.

Figure 8-2


MAJOR WATERWAYS
LEELANAU COUNTY, MICHIGAN
Perennial Rivers, Creeks and Streams
Intermittent Creeks and Streams
Cathead Bay
Mud Lake
Kehl Lake
Garthe Pond
Grand Traverse Bay
Northport Bay
Lake Michigan
Ingalls Bay
Bass Lake
Mougey Lake
Omena Bay
Lake Leelanau
Duck Lake
Provemont Pond
Suttons Bay
Hidden Lake
Good Harbor Bay
Shell Lake
Narada Lake
Sleeping Bear Bay
Bass Lake
Little Traverse Lake
Stimal Lake
Hendryx Lake
Cherry Cove
Tucker Lake
School Lake
Fisher Lake
Lime Lake
Day Mill Pond
Glen Lake
Brooks Lake
Lake Leelanau
West Arm Grand Traverse Bay
Bow Lake
North Bar Lake
South Bar Lake
Bright Lake
Cedar Lake
Gilbert Lake
Pollack Lake
Taylor Lake
Wells Lake
Hart Lake
Armstrong Lake
Shisler Lake
Cook Lake
Davis Lake

The existing high surface water quality of inland lakes and streams may be reduced as new development occurs in the absence of a coordinated stormwater management program.

Though comprehensive programs of water quality testing have only recently been initiated, data generated over the past 15 years document relatively high water quality levels throughout the Peninsula. This is particularly true in the Peninsula's inland lakes. Of the eight major Peninsula inland lakes evaluated by the MDNR since 1982, all but one have been classified as oligotrophic—highest of three quality ratings attainable. The majority of these lakes are, however, in the upper range of this classification and are near or at borderline mesotrophic conditions. School Lake is the only lake evaluated which received a mesotrophic rating. The more eutrophic a lake, the more nutrients (and hence plant life) it has. A mesotrophic lake has more nutrients than an oligotrophic lake, and a eutrophic lake the most of all.

Current conditions of the Peninsula's streams do not uniformly suggest the same high quality. Studies prepared during the past ten years and as recently as 1990 have identified streams of high quality, including the Crystal River, as well as streams of lower quality such as Houdek Creek which are carrying elevated levels of nutrients such as nitrates and phosphorous.

However, relatively speaking, the water quality of rivers and streams in the Peninsula is very high. Nearly all the streams and major tributaries are designated trout steams.

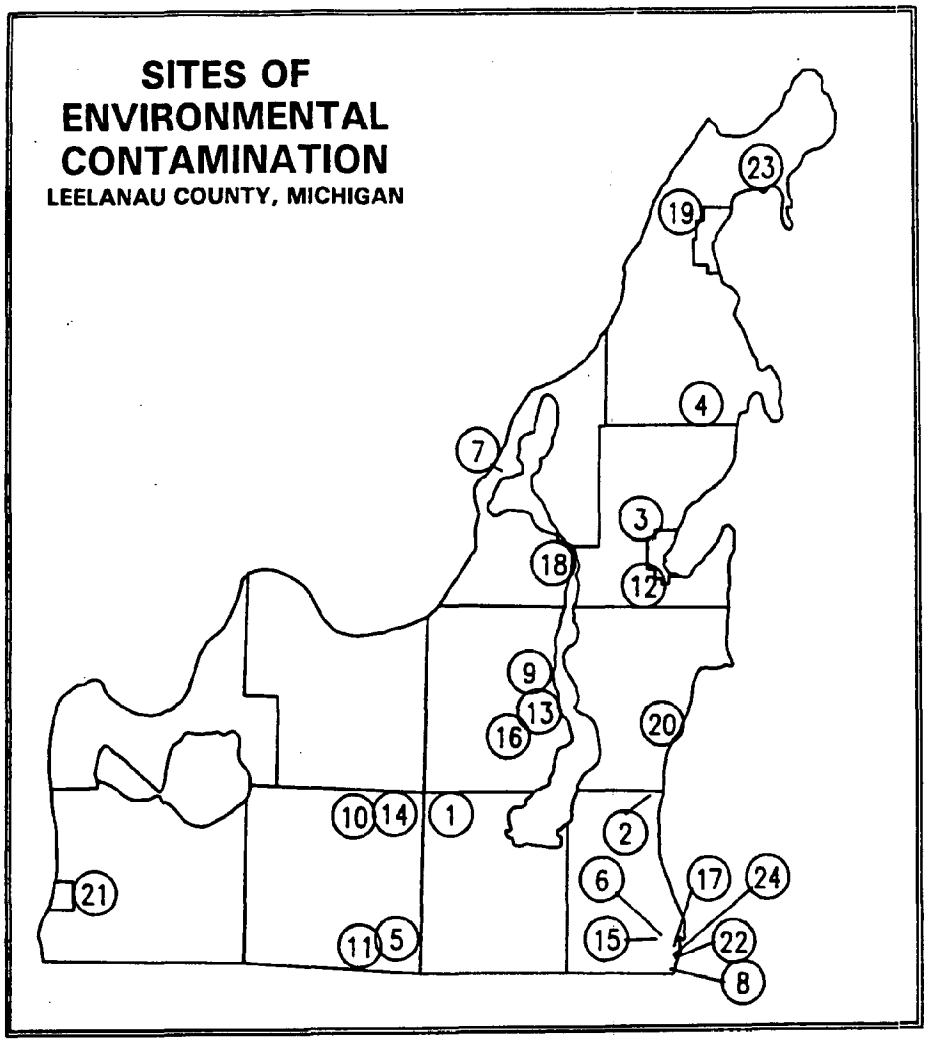
Trout require clean, cold, oxygenated water to survive and are a good indicator species of water quality. The only stream segments not designated as trout streams include Shalda or Sucker Creek at the Narada Lake outlet and the Crystal River between Fisher Dam and Glen Lake. No rivers or streams in the County have lost *"trout stream"* designation.

There are no health advisories against full body contact in Peninsula waters, nor any advisories against eating fish caught in any lake or stream within the County. There are health advisories against consumption of lake trout and salmon caught in Lake Michigan or Traverse Bay, but these apply to all Lake Michigan waters.

There are only four entities presently discharging treated liquid waste via approved NPDES permits. All discharges are to Lake Michigan or Grand Traverse Bay.

The future quality of the Peninsula's water resources will be impacted by pollutants discharged directly to surface waters. Concerns for and threats to these water resources will heighten as future residential development escalates the use of lawn fertilizer and pesticides. These pollutants and others from agricultural operations could damage Peninsula-wide ecosystems, as well as the continued marketability of the Peninsula as a tourist destination. Pressure upon lake and stream shoreline areas for future development will compromise area water quality unless very carefully designed and sited in accordance with coordinated stormwater management regulations.

Figure 8-3



LIST OF SITES OF ENVIRONMENTAL CONTAMINATION

1. Commercial wells - Cedar
2. Elmwood Township Dump
3. Frigid Foods Farms
4. Fuel Oil Spill - Leelanau Twp.
5. Glen's Sanitary Landfill
6. Grand Traverse Overall Supply
7. Groundwater Contamination - Leland
8. Holiday station
9. Konieczka Cottage
10. Leelanau County Road Commission - Maple City
11. Leelanau County Landfill
12. Leelanau County Road Commission - Suttons Bay
13. Peplinski Farm
14. Residential well - Maple City
15. Residential well - Elmwood Township
16. Residential well - Centerville Twp.
17. Speedway Station
18. Standard Gas Station
19. Stowe Oil Co.
20. Sunoco Quick Mart
21. Taghon's Service
22. Total Pet, Inc. Marine Terminal
23. Vulcan Cincinnati, Inc.
24. Zephyr, Inc.

Source: Michigan Sites of Environmental Contamination, Act 307, Environmental Response Division, Michigan Department of Natural Resources (March, 1991)

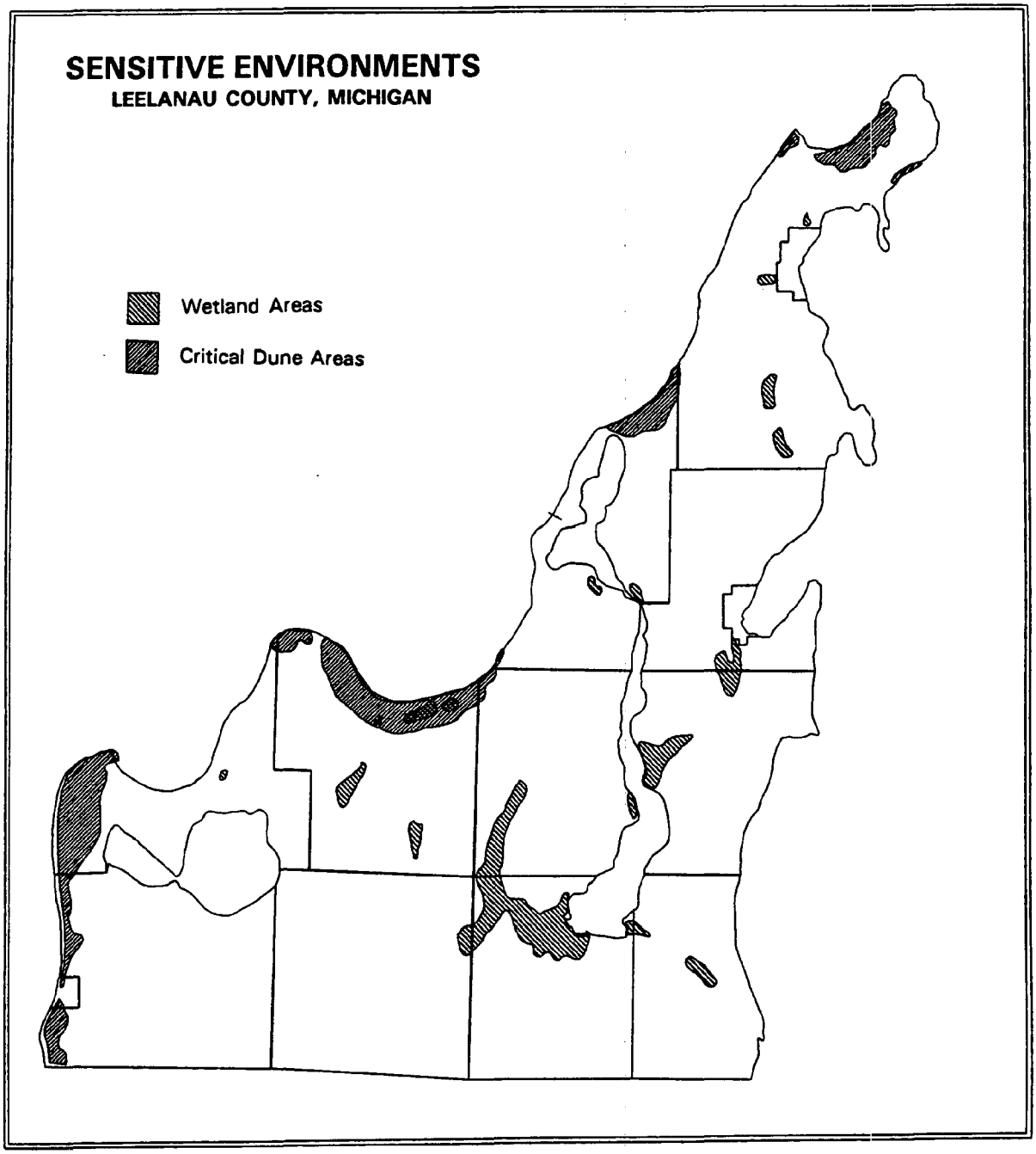
The identification of new sites of groundwater contamination will result in new efforts to clean up existing sites of contamination and to prevent future ones.

All residents and visitors of Leelanau Peninsula are dependent upon groundwater resources for their potable water supply. The vast majority of the population reside in single family homes and each household derives its potable water by an on-site private well. This condition, in the face of increasing land development and natural soil conditions, will present growing challenges for the assurance of a quality groundwater resource.

Annually the DNR publishes a list of known sites of surface soil and groundwater contamination in Michigan. Known as the 307 list (from PA 307 which requires compiling the registry), it is the leading record of surface and subsurface contamination. As of March 1991, there were 24 sites in Leelanau County on the 307 list (see Figure 8-3). While this is only 0.0085% of all the sites statewide (2837), one of these sites is on the federal CERCLA list of the top 79 in Michigan (Grand Traverse Overall Supply, a dry cleaning establishment). While many of these sites involve pollution from old industrial activities, gas stations and facilities using hazardous chemicals, new sites are still being discovered daily in Michigan. With the largely sandy soils on the Peninsula and the ready conduits sandy soils present for groundwater contamination, it is unlikely that all existing sites of contamination have as yet been discovered.

The highly vulnerable soils of the Peninsula require the use of careful measures when establishing new facilities using hazardous chemicals. Similarly, other potential pollutant sources, such as septic systems, need to be carefully sited and regularly serviced and inspected.

Likewise, existing contamination sites need to be cleaned up to prevent the spread of pollutants over a wider area and to prevent the eventual contamination of surface water. Unfortunately, the low density sprawl and linear development patterns along County roads which characterize the Peninsula, create cost prohibitive conditions for the establishment of more sophisticated public sewage treatment facilities which could reduce the threat of groundwater contamination.


SENSITIVE ENVIRONMENTS
LEELANAU COUNTY, MICHIGAN
Wetland Areas
Critical Dune Areas

Decreases in the quality and quantity of sensitive environments, including wetlands, woodlands, shoreline and dune areas, will likely occur with future growth.

Sensitive environments such as sand dunes and shorelines are often areas highly attractive for development, or in the case of wetlands (and sometimes floodplains or high risk erosion areas), unrecognized for the values that they possess (see Figure 8-4). State laws regulate, but do not prohibit, development in many sensitive environments. State laws have their greatest beneficial impact on large projects. Some activities which are destructive in sensitive environments are exempt from most regulation, such as agriculture and forestry.

However, the greatest threat to sensitive environments comes from the cumulative effect of many small actions over a long period of time. These include small fills for beach, land shaping for views, or drainage modifications. Over time, significant amounts of sensitive environments can be lost. For example, preliminary figures indicate that while urbanized land acreage increased by nearly 38% between 1977 and 1990, wetland acreage decreased by nearly ___. While this loss of wetlands may not be wholly attributable to the urban development trend, it does illustrate the pressure which the growing Peninsula is placing upon sensitive and irreplaceable natural environments. As development continues, whether it be of a low or high density character, wetlands and similar sensitive environments will increasingly find themselves being encroached upon, destroyed, and degraded.

These special resources play critical roles in the character and quality of life in the Peninsula. Water purification and animal habitats provided by wetlands and woodlands will be diminished as will scenic vistas of hillsides, shoreline and dune areas, and tourist generating features. It will take a well coordinated effort by all jurisdictions in the County to protect these sensitive environments.

Figure 8-5

Leelanau County
Projected Waste Stream
(Tons/Day)

	1982	1987	1992	2007	Unit Waste Generation Rate (lb/capita/day)
Permanent Population	14,143	15,428	16,525	20,300	
Seasonally Adjusted Population	18,723	30,000	32,000	39,000	
Organics					
Newsprint	0.9	2.2	2.3	2.9	0.1
Office Paper	0.5	0.7	0.7	0.9	0.0
Corrugated	2.7	6.3	6.7	8.3	0.4
Yard Waste	0.8	0.7	0.8	1.0	0.0
Textiles	1.0	0.6	0.6	0.7	0.0
Plastic	1.9	3.2	3.4	4.2	0.2
Magazines	0.0	1.6	1.7	2.1	0.1
Food Waste	2.4	3.8	4.0	5.0	0.3
Wood	1.0	2.0	2.1	2.6	0.1
Fines	0.0	1.1	1.2	1.5	0.1
Other Organics	5.9	6.4	6.9	8.5	0.4
Inorganics					
Glass	0.9	1.3	1.4	1.7	0.1
Ferrous	2.0	2.6	2.8	3.4	0.2
Non-ferrous	0.2	0.3	0.3	0.4	0.0
Other Inorganics	0.5	0.3	0.3	0.4	0.0
Total	20.6	33.0	35.3	43.3	2.2

The Peninsula's solid waste disposal needs for the foreseeable future will be adequately addressed by implementation of the County's current solid waste management plan. However, long term needs will require a stronger multi-county alliance.

The disposal of solid waste is an issue which all communities must address. In 1989, Leelanau County adopted a solid waste management plan under Act 641 which provides for the solid waste disposal needs of the Peninsula as well as regions beyond. The plan was approved by the DNR in 1989.

Solid wastes currently produced in the Peninsula originate from residential, commercial, and industrial sources. Approximately nine solid waste haulers operate throughout the Peninsula; no municipality within the County provides collection services. Nearly all solid waste collected, except that which is subsequently recycled or collected by the National Park Service, is disposed of at Glen's Landfill, a private landfill operation.

The Plan estimated approximately 33 tons of solid waste were produced in 1987 and that this quantity would increase to 43.4 tons a day in 2007 based upon projected population growth.

The Five Year Plan calls for Glen's Landfill (in the south central region of the Peninsula along M-72) to serve as the principal solid waste disposal site and has a estimated life expectancy of 50 years based upon current population growth rates of the Peninsula. The Plan also provides for programs in the area of solid waste recycling, composting, collection of household hazardous wastes, and solid waste source reduction. The Twenty Year Plan includes recommendations for the continuation of private sector waste disposal responsibilities and the expansion of recycling as the primary methods of meeting disposal needs.

The sandy soils in the County and rising standards for environmentally safe disposal will require greater regional cooperation in the future. A strong multi-county alliance will likely be necessary to meet long term regional disposal needs.

POSTSCRIPT

The trends described in this working paper are the result of patterns and pressures that have been building for decades. They are stimulated in large part by powerful market forces. Unfortunately, these forces generally respond to short term considerations, and fail to consider either long term or broader public interests. Unchecked, these forces present the potential to *"kill the goose that laid the golden egg."* The natural beauty and unique natural environment of the Peninsula is what attracts both permanent and seasonal residents. *"Too much"* development, or the *"wrong kind"* of development, or development in the *"wrong place"* will greatly damage the natural environment and hence the two key economic bases of the Peninsula--tourism and agriculture.

There used to be a careful balance on the Peninsula between resource based industries, like agriculture and forestry, and the tourist industry. The balance has dramatically shifted in the last two decades with the introduction of a third land use whose primary job creation benefits are related to the one time construction of year round houses.

Permanent and seasonal residents who live outside of established villages, away from inland lakes and are not engaged in activities related to resource use of the land or water, reside in the homes which comprise the bulk of the sprawl development taking place on the Peninsula. The more nonfarm residential construction that occurs, the less able resource producers can operate because of the basic incompatibility between nonfarm residences and farming. As agriculture declines, the rural character of the area--one of its strongest assets--will also erode. The process is slow and initially invisible, because the land fragmentation greatly precedes the actual construction of the house in most cases. As the balance shifts, the opportunities to protect and enhance rural character, and the natural environment dramatically decline. First the goose dies, eventually the last golden eggs are lost, broken or tarnished.

If current trends continue, this is the future of the Peninsula. The goose won't die in the next twenty years at current rates of change. But the number of options (eggs) that are left to work with will dramatically decline. By then, our children will have far fewer choices than we.

The Trend Future Does Not Have to Happen

Because the trend future will happen merely by the continuation of existing trends, neither citizens nor governmental agencies have to do anything different than they are presently doing for it to occur. Thus the trend future is perhaps the truest form of self-fulfilling prophecy.

However, that does not mean it must occur. In fact, there are many private and public actions that could be initiated to alter the trend future. These could range from efforts to try to hasten new development of some types in some areas, to slowing it in others. They could include measures to import new jobs or develop new skills and thereby reduce unemployment and reliance on public assistance. They could include the initiation of new infrastructure to attract growth in some areas and keep it away from others. They could involve incentives to

farmers and other large land owners to keep resource productive lands in resource use. These and many more options exist.

However, all such options depend on:

1. consensus about a common future for the Peninsula,
2. on the ability to establish effective public-private partnerships, and
3. on the degree of commitment of all local governments within the County to use the planning, regulatory and incentive tools at their disposal in a coordinated fashion to achieve common ends.

These are the three purposes of the planning process being employed to produce the **Leelanau General Plan**.

Following the preparation and analysis of more technical information, and the completion of many maps, a series of alternative futures for the Peninsula will be prepared. These will be based on the draft goals and objectives presented in Working Paper #6. The alternatives will have a strong physical development/environmental protection orientation. One of the alternatives will be based on a continuation of existing trends. Each option will be analyzed in light of its implications on the carrying capacity of the Peninsula, on the environmental impacts it implies, and on its ability to provide a sustainable future compatible with identified quality of life considerations. This analysis will be submitted to the Steering Committee and the general public for review and comment. Eventually, one alternative will be selected as the basis for organizing the **Leelanau General Plan.**

Thereafter, success in implementation of the Plan will depend on the degree of consensus on the plan and commitment to its implementation by both the public and private sectors. The degree to which all local governments in the County coordinate their local planning and zoning efforts with County efforts will in the end, probably be the single most important factor in the success of the Plan.

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