

Glen Arbor Township Future Land Use Plan



March 2013

Glen Arbor Township FUTURE LAND USE PLAN

Prepared Under the Direction of the

**Glen Arbor Township
Planning and Zoning Commission**

By the

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Adopted by the Glen Arbor Township Board
on February 15, 2005**

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Chapter 1 INTRODUCTION AND REGIONAL SETTING



CHAPTER 1

INTRODUCTION & REGIONAL SETTING

This chapter presents introductory information on the location of Glen Arbor Township, on its highly valued physical character, on the relationship of this Plan to Zoning and on the process used to create this Plan. This plan was adopted February 15, 2005 and updated March 2013.

Introduction

Glen Arbor Township is one of eleven townships in Leelanau County in the northwestern most corner of the Lower Peninsula. It is accessed primarily by M-72 from Traverse City and M-22 from Frankfort. It is not on the road to any other major community (see Map 1-1). There is no long distance bus or rail service, no trucklines nor deep water ports. The closest commercial airport is in Traverse City about 40 minutes away. No one comes to Glen Arbor Township by accident. Yet it is a prime destination for over a million visitors a year, the permanent home of about eight hundred persons and the seasonal home of another two thousand or so. Nearly half of the acreage of the Sleeping Bear Dunes National Lakeshore (a national park) is located within the Township. The small settlement of Glen Arbor, an unincorporated village within the Township, is nestled between the National Park, Lake Michigan and Big Glen Lake. The local economy is largely driven by summer tourist trade, and tourists provide revenue for a wider range of restaurants and stores than would normally be found in a settlement this size.

Map 1-1
Regional Location Map



The Township is a tourist attraction largely because of its spectacular beauty and recreational opportunities. The first time that a visitor enjoys this beauty is often an unforgettable experience. For example, when one drives north across the Narrows Bridge on a clear sunny day in the spring, summer or fall, and sees the Sleeping Bear sand dune at the west end of Little Glen Lake and the shades of aquamarine blue of the waters of both Big and Little Glen Lakes, a variety of thoughts are common. (See Photo 1-1).

“I’m in paradise.”

“This must be what heaven looks like.”

“How did a piece of the Caribbean get so far north?”

There are abundant opportunities for swimming, boating, sailing, waterskiing, tubing, canoeing, kayaking, fishing, hiking, and bicycling. Fall adds hunting as deer are abundant, and winter brings new opportunities for cross country and downhill skiing, snowshoeing, and ice fishing. But what brings visitors back year after year is the opportunity to enjoy nearly unparalleled scenes of incredible beauty.

Photo 1-1
Sleeping Bear Sand Dune



Photo by Terry Gretzema

The unique combination of geology, forests, dunes, rivers, lakes, streams, islands and Lake Michigan make up the natural character of Glen Arbor Township. But it is the homes, businesses, rural quaintness of the village, and tree lined public roads on the one hand, and the National Park land and facilities on the other that gives the area its unique appeal and character. One without the other would indeed be only half a loaf. Both share the common goal of protecting the natural quality of the environment and the visual splendor of the area for the benefit of both present and future generations. The challenge for the future is how to accommodate change in a manner that preserves the special character of the area. While the quality of life in the Township and of visitor experiences in the Township are both very high at the present, there is a strong tendency to want everything to stay the same and for no change to occur. However, it is unrealistic to expect there will be no change. New homes and businesses will be built. This Plan identifies current trends and needs, and presents preferred options for meeting those needs. It is one tool the Township will use to guide future changes in a manner that preserves all that is highly valued by those that live and visit here.

The National Park Service manages the lands under its control via a General Management Plan adopted in October 1979. The Park Service attempted to update their Plan seven years ago but met stiff resistance on several of their main proposals. The Park Service later began holding meetings with citizens and local government officials for input on the direction and content of updates to its General Management Plan. Glen Arbor Township is looking forward to the opportunity to work with the National Park Service in accordance with the Plan that reflects the needs of all users of the Park. Of course that means special attention must be given to meeting the needs of those who live in the shadow of the Park. Working cooperatively, the needs of local citizens and the interests of citizens throughout the nation can best be met.

Plan and Relationship to Zoning

The Glen Arbor Township Future Land Use Plan is a document to guide Township officials and citizens in making decisions about use of the land and public facilities. It defines the existing character of the area and sets forth the Township's objectives and guidelines for change on the privately owned lands and Township owned lands in Glen Arbor Township.

The Glen Arbor Township Future Land Use Plan has been prepared under the provisions of the Township Planning Act 168 of 1959. The Future Land Use Plan is a long-range guide for use of land in the Township and is comprised of text and supporting maps. The most significant map is the Future Land Use Map which shows the location and relationship of land in the Township for the next twenty years. By law, this Plan will be reviewed by the Township Planning Commission every five years, and if necessary, updated. If circumstances warranting a change to the Plan come up before the five year review, then this Plan would be changed. Changes may be necessary because the Plan is based

upon present goals, knowledge and technology and these do change through time.

The Township Zoning Act, Public Act 184 of 1943 provides that "the provisions of the zoning ordinance should be based upon a plan designed to promote the public health, safety and general welfare, to encourage the use of lands in accordance with their character and adaptability and to limit the improper use of lands." This Plan is adopted to help provide a stronger legal basis for the Township Zoning Ordinance and it contains a Zoning Plan element in Chapter 8 which sets forth the principal district and use regulations of the Ordinance.

Adoption of this Plan does not directly control land use. Such control is left to the Zoning Ordinance (including the zoning map), to land division and subdivision regulations, and to other local ordinances. Plan implementation is made with final decisions on rezonings, special use permits, site plan and plat approvals as well as by the expenditure of Township funds on various capital improvements.

Public Input

This Plan was prepared as the result of a public process which examined existing conditions, public input on a vision of what the community should be like in twenty years, analysis of key issues identified by the public, consultation with adjoining units of local government and other governmental agencies and consensus among the Planning Commission and Township Board on specific elements in the Plan. A public hearing was also held prior to Plan updating in September, 2012.

Overview of Chapters

This Future Land Use Plan has nine chapters. The first five chapters are background information. The last four chapters provide a planning framework for future decisions on land use, zoning and infrastructure investments. More specifically, the second chapter summarizes recent demographic and economic characteristics. The third chapter presents data and maps describing current conditions related to the land and buildings in the Township. The fourth chapter summarizes the basic characteristics of the infrastructure and public services available in the Township. The fifth chapter discusses key issues facing the Township in the future and describes options for addressing them. The sixth chapter presents a vision statement, goals, objectives and policies for guiding future land use and infrastructure change in the Township. The seventh chapter presents a future land use map and text describing the existing character of various parts of the Township and proposed land use in each area. The eighth chapter describes the essential parts of the strategy behind the districts in the Zoning Ordinance and sets forth a series of proposed Ordinance changes to be consistent with this Plan. The last chapter lists a set of actions that should be taken to implement this Plan. A brief bibliography completes this Plan.

Chapter 2 DEMOGRAPHIC AND ECONOMIC CHARACTERISTICS



CHAPTER 2 DEMOGRAPHIC AND ECONOMIC CHARACTERISTICS

This chapter presents information on the size and characteristics of the people of Glen Arbor Township and regarding a few characteristics of the local economy. Little economic data is available for rural communities below the County level.

Population

Total Population

The population of Glen Arbor Township grew by 71 persons to 859 between 2000 and 2010, or 9%. Not a large increase in numbers, it is only one half the 144 person increase from 1990 to 2000. Females represent 51% of the population.

Table 2-1 Glen Arbor Population, 1990-2010

	1990	2000	2010	% Change 2000-2010
Glen Arbor Township	644	788	859	9%
Leelanau County	16,527	21,119	21,708	3%

Source: U.S. Bureau of Census

Age of Population

Twenty-nine percent of the population of Glen Arbor Township was above the age of 65 in 2000, while forty percent were over 65 in 2010. Only 16.8% were under the age of 18 in 2000 and only 14.8% in 2010. The median age is substantially older (60.9 years) than that of Leelanau County (50.3 years) in general and even more so than the state of Michigan (39 years). See Table 2-2. The median age has grown 11.2 years since 1990. This reflects Glen Arbor Township's popularity as a retirement area.

Table 2-2 Median Age in Glen Arbor Township, 1990-2010

	1990	2000	2010
Glen Arbor Township	49.7	53.1	60.9
Leelanau County	36.5	42.6	50.3
Michigan	32.6	35.5	39

Source: U.S. Census Bureau

Households

The total housing units in 2000 was 1,617 and in 2010 it was 1,630, an increase

of only 13 (some question the accuracy of the 2010 census). Housing units occupied year around increased by 74, (23.3%) to 377 in Glen Arbor Township between 1990 and 2000. Between 2000 and 2010 occupied units increased by 31 (8%) to 408. See Table 2-3. About 91 percent of the households were owner-occupied in 2010. There were only 36 renter occupied units in 2010 when the Census was taken, with 75 rental units vacant and available for rent.

Table 2-3 Households in Glen Arbor Township, 1990-2010

	1990	2000	2010	% Change 2000-2010
Glen Arbor Township	303	377	408	8%
Leelanau County	6,274	8,436	9,255	10%

Source: U.S. Census Bureau

Glen Arbor had 1,102 seasonally occupied housing units in 2010. This is about three times more seasonal homes than year around homes. However, seasonal homes had a very small increase between 1990 and 2010 compared to year around homes. The U.S. Census reports only 44 new seasonal homes in Glen Arbor Township between 1990 and 2010, a 4% increase. Most likely, seasonal homes have been converted to year around use or torn down and replaced with a home for year around occupants. See Table 2-4. Leelanau County experienced a growth in seasonal homes during the period 1990-2010, with Census figures showing a county-wide increase of 12%..

Table 2-4 Seasonal Housing in Glen Arbor Township, 1990-2010

	1990	2000	2010	% Change 1990-2010
Glen Arbor Township	1,058	1,068	1,102	4%
Leelanau County	4,172	4,111	4,681	12%

Source: U.S. Census Bureau

With the possible exception of the Homestead, the tourist economy in Glen Arbor Township is likely similar to that of Leelanau County in general, in that there are likely more people staying in second homes during popular seasons than in overnight lodging.

With the retirement of the "baby boomer" generation, it is reasonable to assume that more seasonal homes in the Township will be occupied on a year round basis.

The size of families in Glen Arbor Township follows the Leelanau County and Michigan trend of becoming smaller. The average size of a household in Glen Arbor Township declined 7% from 1990 to 2010, from 2.13 to 1.98 persons. In Leelanau County population per household declined by 12%, but from a larger average size of 2.62 to 2.31 persons, while the Michigan average household size declined 7% to 2.45 persons. See Table 2-5. The general trend toward smaller family size is due to many factors, including divorce, widowed older persons and young people waiting longer to get married. Glen Arbor Township's smaller family size reflects an older population, many of whom are empty nesters, and/or single person households.

Table 2-5 Average Household Size in Glen Arbor Township, 1990-2010

	1990	2000	2100	% Change 1990-2000
Glen Arbor Township	2.13	2.09	1.98	-7%
Leelanau County	2.62	2.48	2.31	-12%
Michigan	2.66	2.56	2.45	-7%

Source: U.S. Census Bureau

Education

Year-around Glen Arbor residents are a well educated group, with 48% with college degrees and very few over 25 years of age without a high school diploma. See Table 2-6.

Table 2-6 Educational Attainment of Glen Arbor Township Residents, 2010

Percent of population 25 years or older						
Grade or less	9 th to 12 th grade no diploma	High School (incl. equiv.)	1 or more years college no degree	Associate Degree	Bachelor's Degree	Master's Degree
0.5%	4%	14.2%	26.9%	6.5%	28.8%	19.3%

Source: U.S. Census Bureau

Economic Characteristics

Income, Poverty and Employment

Year-around Glen Arbor households had a median income of \$64,583 in 2010. This compares with \$47,062 for Leelanau County and \$44,667 for the State of Michigan. Only 5 families were receiving food stamps in 2010. Reflecting the age of the population, 226 persons received Social Security income in Glen Arbor Township in 2010, but no one received supplemental Social Security income.

The estimated labor force of Glen Arbor Township (residents only) was 270 persons in 2003. The estimated yearly average employment was 242 persons, with only 28 estimated to be unemployed, on average, or 10.4%.

Table 2-7 Glen Arbor Employment and Unemployment, 2003

Labor Force	270
Employment	242
Unemployment	28
Unemployment Rate	10.4%

Source: Michigan Department of Labor & Economic Growth, Employment Service Agency, 2003

Note: Residents only.

Assessed Value

Glen Arbor Township's assessed value is primarily based on residential development. In 2011, at a state equalized value (SEV) of \$574,011,351 residential land accounted for 94.7% of SEV of real property. Commercial SEV was \$30,575,500 or only 5.3%. Over the past 21 years, agricultural SEV and timber cut-over SEV disappeared entirely. There is very slight industrial assessed value in Glen Arbor Township. See Table 2-8. What is most significant is the fact that 95% of the tax base of the Township is residential, thus Township services are supported almost entirely by taxes on seasonal and year around residences. If for some reason the value of residential property in the Township were to fall significantly, there would be a dramatic reduction in the amount of tax revenues available to support Township services and school millages.

Table 2-8 Glen Arbor Township SEV, 1990-2011

Category	1990	1995	2003	2011	Percent of Total Real Property 2011
Agriculture	\$95,000	\$300,000	\$337,500	0	0%
Commercial	\$5,699,700	\$7,704,500	\$19,566,454	\$30,575,500	5.3%
Industrial	\$0	\$0	\$0	\$66,500	0.0%
Residential	\$75,810,650	\$145,367,010	\$403,979,350	\$543,369,351	94.7%
Timber Cut-over	\$314,200	\$0	\$0	0	0%
Total	\$81,919,550	\$153,371,510	\$423,883,304	\$574,011,351	100%

Source: Michigan Department of Treasury, State Tax Commission, and Glen Arbor Township.

Chapter 3 CURRENT CONDITIONS



CHAPTER 3 CURRENT CONDITIONS

This chapter presents information on the characteristics of land, natural features and buildings in Glen Arbor Township. It is based in part on the General Characteristics section in the 1984 Plan, but contains updates and additional information.

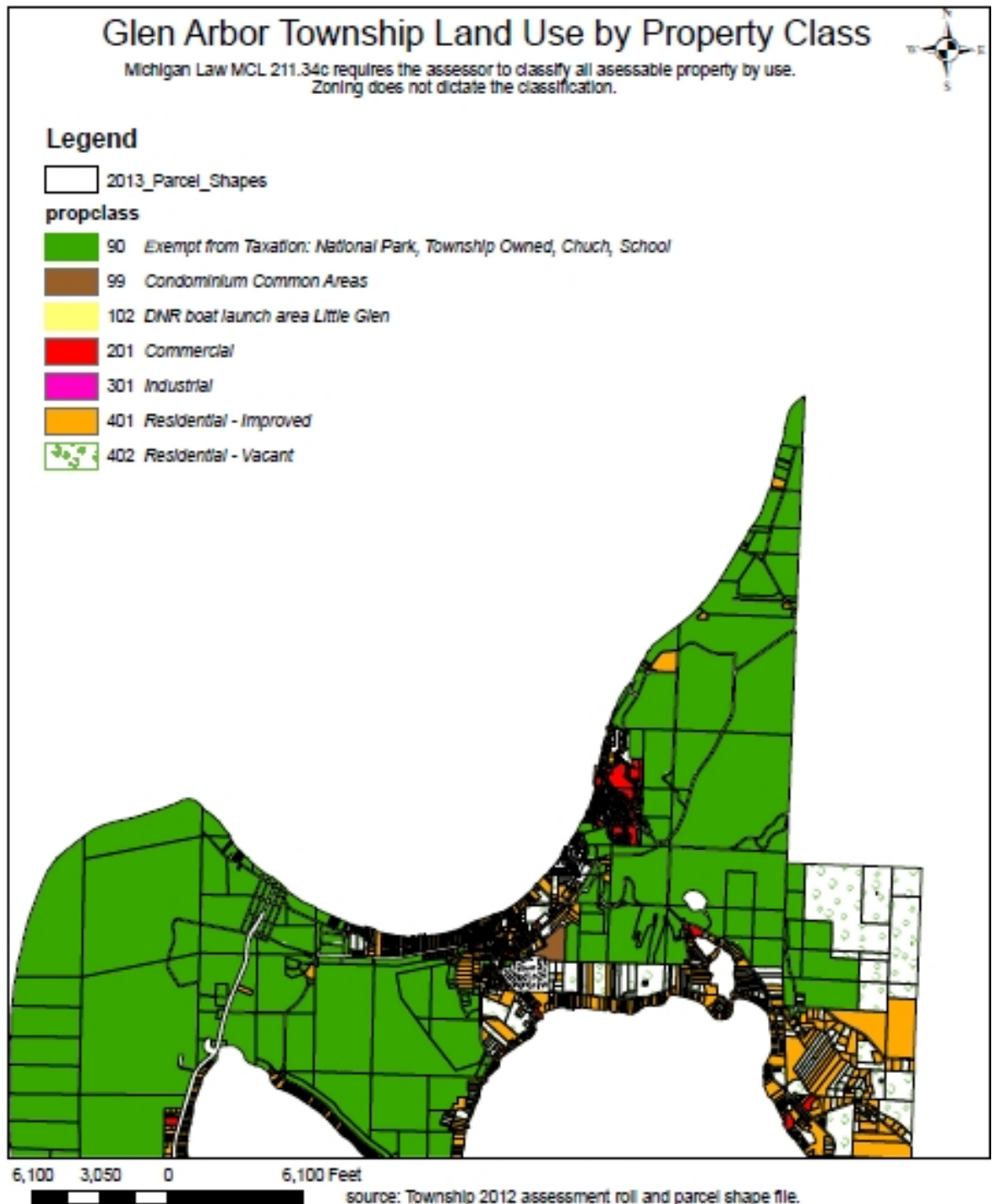
Land Overview

Glen Arbor Township consists of a total area of land and inland lakes, rivers and streams of approximately 39 square miles (22,607 acres). Of this, South Manitou Island is 5,286 acres and rests about 6 miles from the closest mainland point and for most people is accessed by ferry from Leland. The Sleeping Bear Dunes National Lakeshore accounts for 75 percent of the area, (and includes South Manitou Island) and Big and Little Glen Lakes another 17 percent. The privately owned land area of the Township amounts to only about 3,800 acres (almost six square miles).

The characteristics that are most representative of the Township include the waterfronts of Glen Lake and Lake Michigan, the Sleeping Bear Dunes, the Crystal River, high hills and steep hillsides and the extensive tree vegetation. These natural features have influenced the major land use patterns in the Township. Residential development is most evident around the Glen Lakes, Fisher Lakes, Lake Michigan, and on high hills, while Glen Arbor village, the Homestead and the Leelanau School are the only concentrations of development. As elsewhere, residential development is attracted to the waterfront for the visual beauty, recreation and serenity associated with it.

Land Use by Property Class

Map 3-1 show land use by the classifications used by the Michigan MCL in 2012.



Map 3-1

The tax classifications include agriculture, residential, commercial, and exempt (publicly owned or other lands not required to pay property taxes, such as

federal, state, county and Township-owned lands). The total acres and percentages by tax class are depicted on Table 3-1.

The largest tax class is tax exempt land which is about 80% of the total land in the Township (not counting lakes and road ROW – 13,836 acres). The majority of exempt land is in the National Park Lakeshore. Residential tax class is second at 3,738 acres. Commercial (123 acres) properties exist in the village area, at the Homestead and at a few other scattered locations (mostly marinas and motels).

Table 3-1 Land Use by Property Class in Acres

Tax Class Category	2000 Acres	% Total	2012 Acres	% total	
Residential - Total	3,518	20.1%	3,738	20.1%	
Residential – vacant			1,899		
Residential – improved			1,839		
Commercial	128	0.7%	123	0.7%	
Agricultural	2	0.01%	0	0	
Tax Exempt	13,836	79.1%	14,123	79.2%	
Total	17,483	100%	17,984	100%	

Note: S Manitou Island accounts for 5,286 of the total tax exempt acres.

Total acres in Table 3-1 are less than the actual area of Glen Arbor Township because inland lakes and road rights-of-way are not included and account for several thousand acres. The exact amount is not known as there are no boundaries for those areas on the parcel map.

Source: 2003 & 2012 Township assessment rolls and parcel map.

Topography

Glen Arbor Township has remarkably dramatic topography. The predominate land features are dunes and dune ridges. The sand dunes along Lake Michigan and within the Sleeping Bear Dunes National Lakeshore tower hundreds of feet above the beach and inland plains. In some locations the face of the dunes are steep. Inland dune ridges rise over four hundred feet above the level of Lake Michigan and Glen Lake. See Map 3-2.

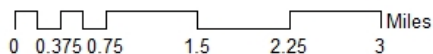
Relatively flat areas exist between dune ridges and between Glen Lake and Lake Michigan. These flatter areas are where roads and settlements occur.

Dunes and dune ridges are especially sensitive to disturbance. Development for roads, buildings or recreational activities needs to be limited or done very carefully in order to prevent erosion that can pollute streams with sediment. The disturbance of dune ridges can also affect the scenic quality of the Township, which is the backbone of commerce in the community. The most significant hills in private ownership are on the east side of the Township. Vistas toward the west

and of the Lakes from this area are excellent with many residential structures already located here. Hillside development that was not designed to blend into the forest could quickly destroy the quality of the view of the hills themselves from other vantage points in the community.

Map 3-2 Topography in Glen Arbor Township

Glen Arbor Township - Topo Map



for more information on this map: http://goto.arcgisonline.com/maps/USA_Topo_Maps

March 2013

Natural Features

Overview

The natural features of Glen Arbor figure prominently in the lure of the Township as a destination resort and as a place to live. They are given considerable weight in the Vision, Goals, and Objectives of this Plan. Much of the scenery and vistas in the Township are unparalleled. Views of Lake Michigan, the Manitou Islands, the Sleeping Bear dunes and Glen Lake are but a few. Vistas from many points are such that one can view all of these features. Planning and zoning policies should encourage protection, in a reasonable manner, of the wooded areas, the ground water, water quality in lakes and rivers, the wetlands and the dune areas, both as ecosystems and as important scenery.

In addition to Map 3-1 Land Use/Cover and Map 3-2 Topography, three other maps portray natural features which are significant: the Soils with Limitations for Septics Map (Map 3-3) and the Wetlands Map (Map 3-4) and the impervious surfaces map (Map 3-5).

Soils with Limitations for Septics

Large areas of the Township have soils that pose problems for septic systems and residential development. This is due to a combination of factors, including highly permeable soils that permit septic waste to infiltrate to the groundwater without adequate soil filtration, high groundwater or steep slopes. This and related topics are discussed at length in Chapter 5-Significant Issues.

Some areas of the Township depicted as having slight limitations for septic systems have actually developed severe limitations due to the concentration of septic systems on small lots and because ground water is close to the surface. This is especially true in part of the village of Glen Arbor.

Wetlands

The Wetlands Map (Map 3-4) shows wetland areas that serve to provide wildlife habitat, stormwater storage, water quality improvement, natural scenery and other benefits. Generally these areas exhibit severe limitations for the use of individual waste disposal systems. Many of the wetlands are located along the Crystal River, although there are isolated wetlands elsewhere in the Township. See Photo 3-1.

Hydric soils are also identified on Map 3-4. These are soils that have formed in the presence of water for sustained periods. They can be used to help locate wetlands, especially those that have been disturbed or altered by fill or excavation. Hydric soils may be unsuitable for certain types of development and can be an indicator of high groundwater levels.

Photo 3-1
Wetlands Along the Crystal River



Photo by Mark Wyckoff.

The Land Use/Cover Map (Map 3-1) clearly illustrates that nearly all of the Township land is wooded. This is a characteristic that residents want to maintain and doing so will require efforts to preserve mature trees and the planting of new trees as the primary landscape treatment in areas cleared for development.

Also of significance, from a planning standpoint, are those open areas which are not covered by woodland vegetation because they could be developed for relatively intensive uses (or any use for that matter) without seriously affecting wooded characteristics. However, development in open areas would be highly visible and could detract from the character of the community if not developed in a sensitive manner or screened by thick vegetation. An advantage of the open areas in private ownership, is that they could be used for on-site sewage disposal without the necessity of clearing trees.

Coastal Hazards

Flooding

According to the Federal Emergency Management Agency (FEMA) Flood Hazard Boundary Map, the entire Lake Michigan shoreline in Glen Arbor Township is in a flood zone. It extends from about 50' to about 125' inland from the shoreline. Most of this is beach. There are no other flood-prone areas identified in Glen Arbor Township.

Shoreline flooding occurs most often when Lake Michigan water levels are high. This is a natural, periodic occurrence. In areas where there are bluffs, there may be little or no usable beach. Flooding is most likely to occur during high Lake Michigan levels when there are severe storms or seiches (sudden rises of up to several feet in water level due to wind or changes in atmospheric pressure.) In order to protect both privately owned

structures and public health and safety, structures and septic systems should not be placed within the flood zone. FEMA maps are periodically updated and can be viewed on-line at

<http://store.msc.fema.gov/webapp/wcs/stores/servlet/FemaWelcomeView?storeId=10001&catalogId=10001&langId=-1>.

High Risk Erosion Areas (HREA)

Eroding areas of the Lake Michigan shoreline are addressed in Part 323, Shorelands Protection and Management, of the Natural Resources and Environmental Protection Act, PA 451, as amended. The Michigan Department of Environmental Quality has prepared maps that identify Lake Michigan shoreline areas that are susceptible to erosion. These maps are based on a variety of factors, primarily past erosion history. The only area in the Township that has a HREA zone identified on the shoreline is an approximately ½ mile segment of shoreline with single family homes between the Homestead Beach Club and the Sleeping Bear Dunes National Lakeshore property along Sunset Shores Drive. Within this area, minimum setbacks for 30 years of protection are 55' and 95' for 60 years. Local governments can assume permitting authority (instead of the MDEQ) for development in HREA zones, if the local ordinance is approved by the MDEQ.

Critical Sand Dunes

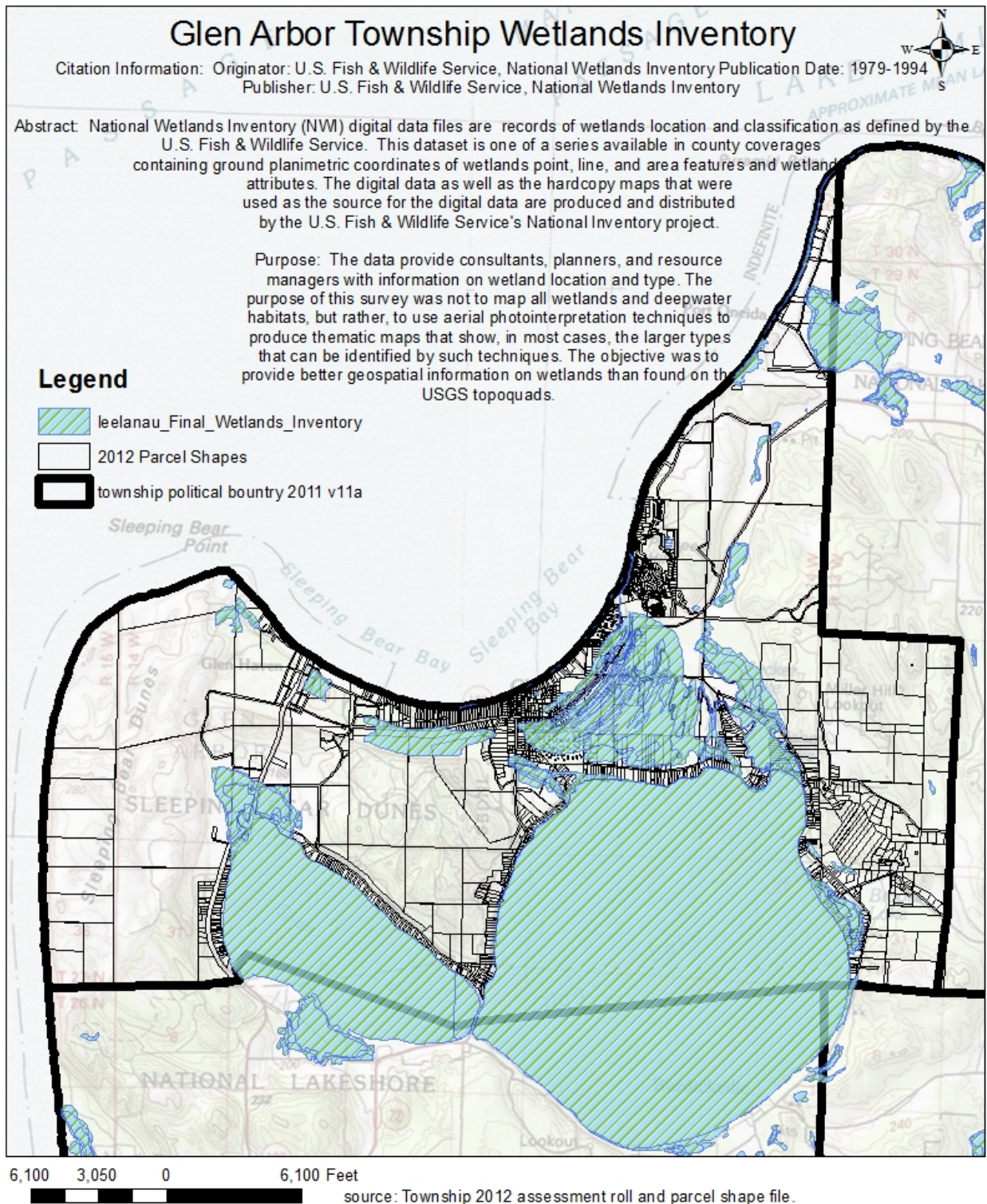
Michigan is home to the largest assemblage of fresh water dunes in the world. They support diverse habitats, including forests, interdunal ponds and open dunes. The Sand Dune Protection and Management Act (Part 353, of the Natural Resources and Environmental Protection Act, 1994 PA 451 as amended) was passed to help protect these resources. As a result of the Act, Critical Sand Dunes were mapped, in order to identify areas requiring protective regulation and permits for development. Glen Arbor Township would have the opportunity to assume local permitting authority for Critical Dunes through amendments to the Zoning Ordinance, except that the only area with Critical Dunes in Glen Arbor Township is within Sleeping Bear Dunes National Lakeshore. The National Lakeshore is already active in protecting the dunes.

Soils With Limitations for Septics Map 3-3

Wetlands

Glen Arbor Township

Lee



One of the emerging areas of scientific interest in the control of nonpoint-source pollution (NPS) is the detection and analysis of impervious surfaces within watersheds. NPS runoff from urban surfaces is now a leading threat to water quality, and the percentage of impervious surface within a particular watershed has been recognized as a key indicator of the effects of nonpoint runoff and of future water and ecosystem quality (Arnold and Gibbons, 1996; USEPA, 1994). The imperviousness issue has even been suggested as a unifying theme for overall study of watershed protection (Schueler, 1994) and as part of an urban ecosystems analytical model (Ridd, 1995).

Impervious surfaces can be generally defined as any material of natural or anthropogenic source that prevents the infiltration of water into soil, thereby changing the flow dynamics, sedimentation load, and pollution profile of storm water runoff.

Map 3-5 Impervious Surfaces

Glen Arbor Township - 2006 Developed Impervious Surfaces



Glen Lakes Water Quality

Most of the following information is from the Glen Lake/Crystal River Watershed Management Plan and Cooperative Lakes Monitoring Program report.

The Glen Lakes are two of the most important natural resources in Glen Arbor Township. Big Glen Lake (4,800 acres) and Little Glen Lake (1,450 acres) are adjacent to each other, but somewhat different in character. Big Glen Lake is a large, deep, oligotrophic to hyper-oligotrophic lake, meaning it is very clear and low in the production of organisms, including plants and fish. See Photo 3-2. This is due to a lack of nutrients in the water that would stimulate the growth of micro-organisms, plants, and other aquatic organisms—the food chain that would support a fishery. Little Glen Lake is shallower and is more productive, with a higher Chlorophyll a reading. Chlorophyll a is an indicator of nutrients that support life in the lake. Big Glen is also more transparent, with Secchi disk readings that typically are much higher than Little Glen. Transparency is an indicator of the amount of microscopic life in the lake, and thus of the amount of nutrients in the water. Little Glen supports warm water fish, such as yellow perch, northern pike, bluegill, largemouth and smallmouth bass. Current Chlorophyll a, Secchi disk, and phosphorous readings can be found in the annual Cooperative Lake Monitoring Program Report.

Non-native invasive species (plants, fish, mollusks and other aquatic organisms from outside the Glen Lake ecosystem and that have no natural predators in the Glen Lake ecosystem) are a concern for the health of a lake ecosystem. The introduction of such species can alter the balance of plants and animals in the lake, causing a decline in desirable species and sometimes negatively affecting recreational activity in the lake. There are a number of non-native invasive species of concern in Michigan. These include the spiny waterflea, fish hook waterflea, the round goby fish, Eurasian Water Milfoil plant and Zebra Mussels. Zebra Mussels were found in Big Glen, Little Glen Lake and Fisher Lake in 2003. This measure has the potential to clog water intakes for household water supply, irrigation or the cooling water intakes on outboard boat motors. Their sharp shells can be a problem for swimmers. It is possible for a large population of Zebra Mussels to increase the clarity of the lake, but clarity is not a problem for Glen Lake. However, by removing microscopic life, the basis of the food chain for fish, the supply of fish in the lake may fall even further. In lakes that contain enough nutrients to support water-born algae populations, Zebra Mussels are thought to promote the occurrence of blue-green algae blooms that produce toxins that can cause adverse reactions in humans. This is because the Zebra Mussels only eat other species of algae that are the competitors of blue-green algae for whatever nutrients are in the water. With their competition reduced, blue-green algae “bloom,” or expand dramatically in population.

Photo 3-2
Big Glen Lake from Inspiration Point



Photo by Mark Wyckoff.

A study of aquatic plants in both Little Glen Lake and Big Glen Lake has been going on since 2002. Trained volunteers and school students have been involved. While densities of plants are not great in either lake, species are primarily native. No Eurasian Water Milfoil, one of the most prolific non-native invaders, has been found in Little Glen Lake. The study of Big Glen Lake has not yet been completed. Volunteers have been posted at a boat launch site to help ensure that boats being launched are washed to remove pieces of foreign plants or other aquatic organisms that could be transferred to the Glen Lakes.

A shoreline survey was conducted in 2002 to identify locations of Cladophora algae patches in shallow water. Cladophora algae can serve as an indicator of nutrient pollution stemming from erosion, failed septic systems, waterfowl waste, over fertilization of lakefront lawns or other sources of phosphorus overload. While the exact information in the survey is kept confidential, discussion with homeowners revealed many are engaged in practices such as septic tank pumping, limited fertilizer use and an interest in planting natural vegetative buffers that will help limit phosphorus pollution of the lake. Others not engaged in lake-friendly practices learned about their potential impacts on the lake and watershed.

Swimmer's Itch organisms exist in the Glen Lakes. This organism can enter the skin of humans who have been swimming in the Lakes and cause a lingering rash. The extent of the rash can vary, depending on the level of infestation. The organism requires both snails and waterfowl to complete its life cycle. It gets into humans by accident. Limiting the number of waterfowl on the Glen Lakes is important in reducing the potential for Swimmer's Itch, and refraining from feeding ducks and geese is one very important step.

Crystal River

The Crystal River is a pristine stream that winds from the north end of Fisher Lake (attached to Big Glen Lake) through wetlands, a dune and swale area and woods to discharge into Lake Michigan within the Homestead. It is a popular canoeing and kayaking stream. It is visible within Glen Arbor village and along portions of M-22 and County Road 675. See Photo 3-3.

**Photo 3-3
Crystal River**



Photo by Terry Gretzema.

The dune and swale complex along the Crystal River is an important and sensitive ecosystem, and one of the highest quality of such complexes in Michigan. The National Park Service has noted the importance of this habitat along the Crystal River for migratory birds, ducks, mink and weasels, and threatened or endangered species. The dune/swale complex is located wholly

within Glen Arbor Township.

Glen Lake/Crystal River Watershed Management Plan

The Glen Lake Association and the Leelanau Conservancy developed a watershed management plan for the Glen Lake/Crystal River watershed in 2002. The Plan was reviewed and accepted by local governments and the Michigan Department of Environmental Quality. This latter step qualifies the area for Clean Michigan Initiative (CMI) funding to implement portions of the Plan.

A watershed is all of the land that drains to a single place, such as an outlet. The watershed of the Glen Lakes drain the slopes into the Lakes and then out to Lake Michigan through the Crystal River. The Glen Lake/Crystal River Watershed extends into four communities: Glen Arbor Township, Cleveland Township, Empire Township and Kasson Township. See Map 3-6. The Watershed Management Plan can be downloaded from:

www.leelanaucounty.com/naturalres0006.asp. Information on best management practices of shore front and river front property to protect Glen Lake water quality can be found at: www.mlswa.org/gla-916/ShorelineMgmt.htm.

The Watershed Management Plan identifies Hatlems Creek and the Crystal River dune swale complex (described above) as areas requiring more extensive management consideration.

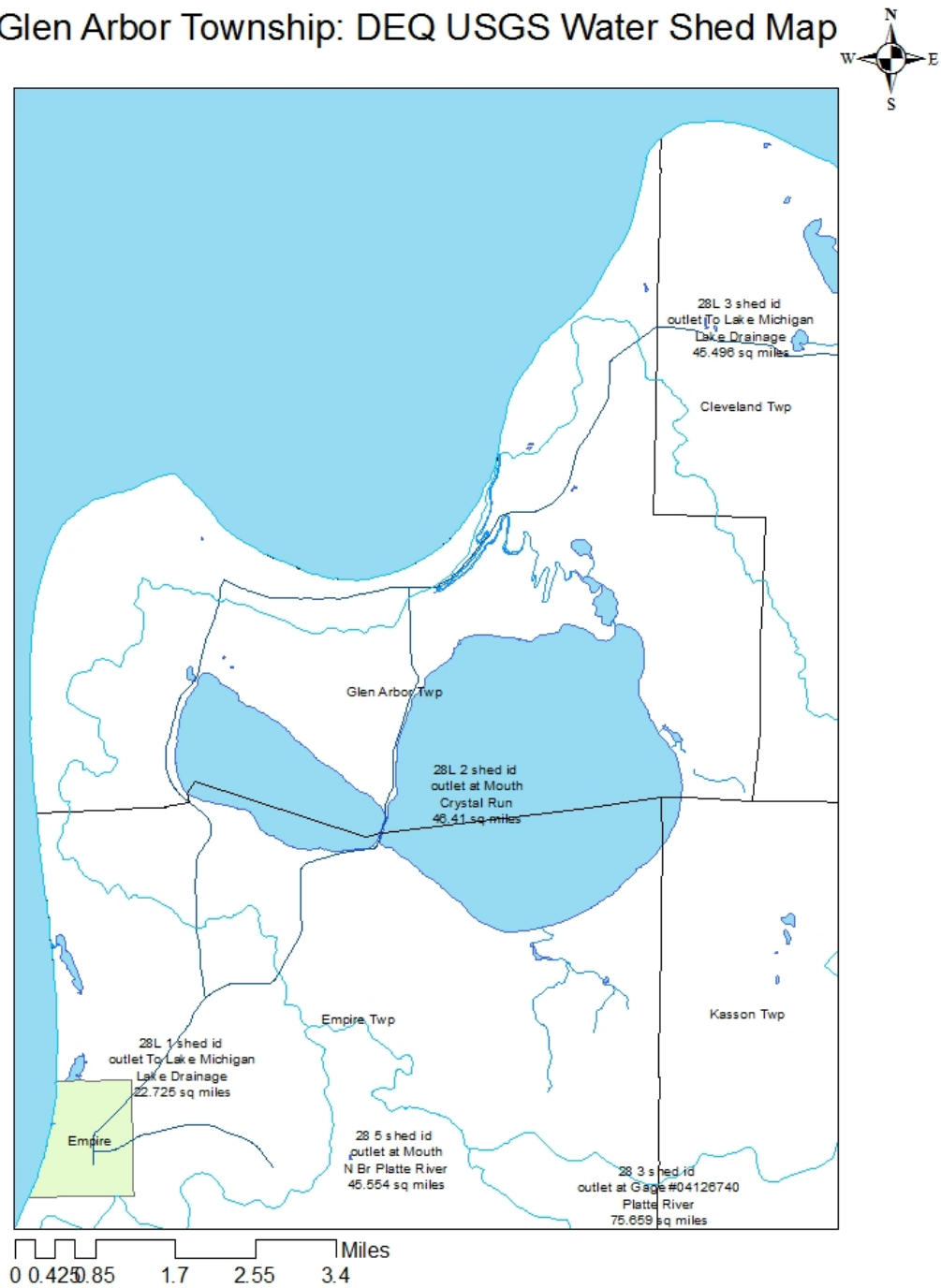
Hatlems Creek is the largest source of surface water flowing into Glen Lake. It is located at the south end of Big Glen Lake and is a coldwater stream and home to a diverse array of mayflies, caddisflies and stoneflies, indicators of high water quality. Hatlems Creek is a trout stream and has annual returns of coho salmon and steelhead. Preservation of the Hatlems Creek corridor is key to the recreational value of Glen Lake. However, the Hatlems Creek corridor is located within Empire Township, requiring Glen Arbor Township to work cooperatively with Empire Township and Kasson Township in order to ensure the protection of Glen Lake and the Crystal River.

The Watershed Management Plan identifies the following as the primary environmental stressors of Glen Lake and the Crystal River:

- Nutrients (phosphorus and nitrogen)
- Exotic species
- Habitat loss
- Sediment
- Harmful bacteria
- Thermal pollution
- Toxic substances.

Map 3-6 Glen Lake Watershed

Glen Arbor Township: DEQ USGS Water Shed Map



The Watershed Management Plan lists five “designated uses” of the Glen Lake and the Crystal River Watershed. Designated uses are defined by the MDEQ as recognized uses of water established by state and federal water quality programs. An evaluation of designated uses can reveal the water bodies to be either meeting legislated water quality standards, threatened to not meet the standards, or impaired (not meeting the standards). The designated uses of the Glen Lake/Crystal River Watershed are:

- Coldwater fishery
- Total body contact recreation
- Other indigenous aquatic life and wildlife
- Navigation
- Agriculture.

These designated uses are considered threatened from increasing human development along with exotic species introduction and proliferation, but are currently meeting water quality standards.

In addition to the designated uses, the Watershed Management Plan identified desired uses, or ways in which watershed residents might want to use the waters of their watershed. The Watershed Management Plan lists the following community concerns regarding the watershed:

- Wildlife habitat with emphasis on protecting rare, endangered and wetland species.
- Development and implementation of an effective swimmer’s itch management program
- Potable groundwater sources
- Navigable waters that do not exceed carrying capacity limits for use
- Natural and intact riparian corridors with an emphasis on private landowner stewardship and conservation easements
- Agricultural, irrigation and landscaping (including private homeowner) practices that emphasize current best management practices
- Scenic and natural environment.

In order to protect the quality of Glen Lake and the Crystal River, the Management Plan has included the following water quality goals:

- Watershed protection
 - Fish and wildlife
 - Maintain healthy populations
 - Self-sustaining fishery
 - Viewshed protection
 - Preserve scenic hillsides
 - Decrease erosion from recreational use
- High water quality
 - Exotic species prevention
 - Swimmer’s itch management

- Nutrient education
- Toxic substance prevention
- Harmful bacteria prevention
- Maintain safe navigation and recreation
- Native Species Management
 - Maintain low nutrient levels
 - Exotic species prevention
 - Toxic substance prevention
- Outreach and education
 - Increase watershed community awareness and concern for water quality
 - Evaluate effectiveness of outreach efforts.

The Sleeping Bear Dunes National Lakeshore

The Sleeping Bear Dunes National Lakeshore is the dominant land entity in Glen Arbor Township. See Photo 3-4 and Map 3-7. Its presence assures preservation of much of the Township's natural beauty. The Park attracts a large number of visitors, resulting in pressure for additional visitor services from the private sector. Total recreational visits for 2012 were 1,531,560 a significant increase, 12% from visits of 1,348,304 in 2011 (National Park Service). Development of the park is guided by the General Management Plan which was approved in 1979 by the Midwest Regional Director of the National Park Service. Drafts of subsequent management plan updates have been prepared, but none adopted.

Physically, the park is divided in two by the Glen Arbor village area and privately owned lands south to Glen Lake. These areas also separate the Dunes and Alligator Hill from the Crystal River, Miller Hill highlands and the meadow and farmlands to the north. Since the business and residential center of the Township lies between these areas, conflicts are created as traffic, both motorized and non-motorized, passes through the village.

A majority of the National Lakeshore's visitor facilities are located to the west of Glen Arbor village. The Stocking Scenic Drive, reconstructed and relocated to Empire Township in 1986, and the Dune Climb will continue to draw a majority of the Lakeshore's visitors. When combined with the Coast Guard Maritime Museum, the Glen Haven historic village, the Little Glen Picnic Area, D.H. Day Campground, various hiking trail systems, and convenient access to Lake Michigan beaches, this area makes a very attractive destination for visitors.

**Photo 3-4
Sleeping Bear Dunes**



Photo by Mark Wyckoff.

The northeastern portion of the Township encompasses the settlement district known as the Port Oneida area, quite distinct and different from the western areas of the Lakeshore. See Photo 3-6 and Map 3-10. Port Oneida is typified by a rural landscape which hosts several old farmsteads. The Lakeshore's goal for management in this portion of the Township is to maintain the pastoral setting and interpret early settlement of the area. To the east, an area encompassing approximately 600 acres is known as the Miller Hill Resource Preservation Area.

Map 3-7 Sleeping Bear Dunes National Lakeshore



Glen Lake Development

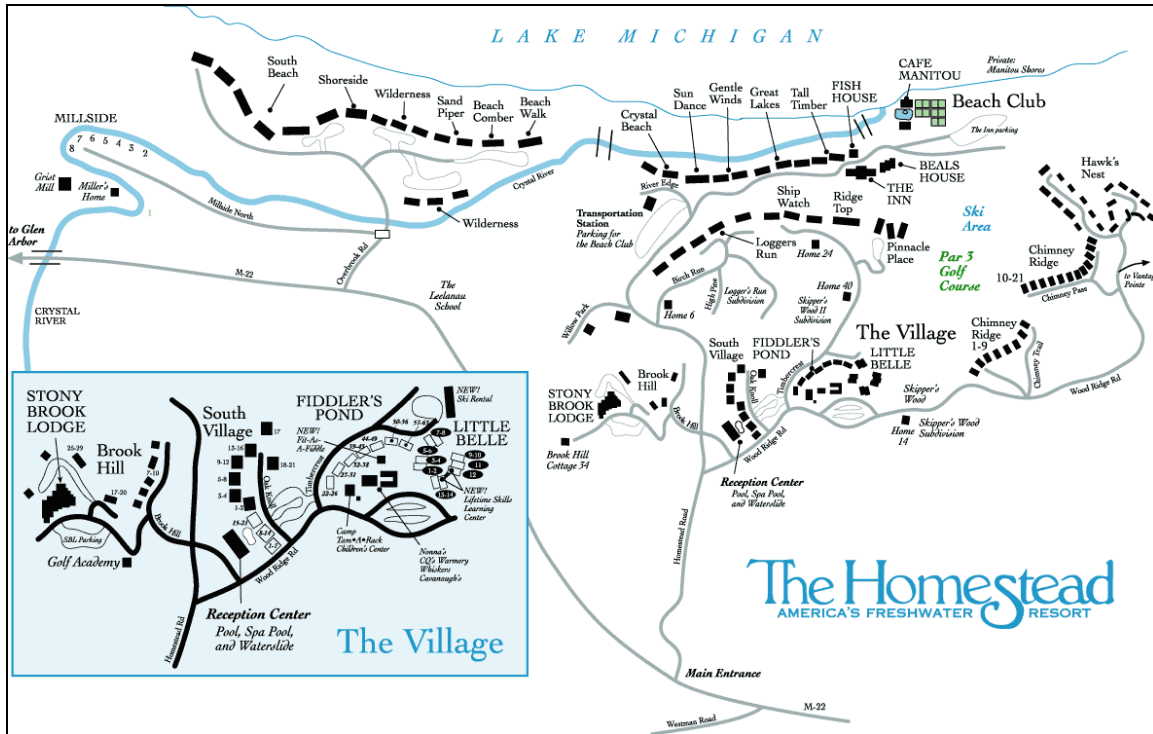
Most of the Township's frontage on Glen Lake has already been developed and is a mixture of year-round and summer homes. Three marinas serve the lake: one at the south end of Lake Street, one at the head of the Crystal River (not a full service marina) and one at "the Narrows". There are several lodges and cottage resorts on the lake and a public access point west of M-22 on Day Forest Road operated by the Michigan Department of Natural Resources. In most areas, adjacent land is near lake level, making access from cottages and homes excellent. The extreme western edge, the Fisher Lake area and the eastern edge of Brooks Lake are somewhat low and contain areas which have severe limitations for septic systems. The lakefront lots are characterized by 100 foot widths with varying depths to adjoining access roads which parallel the shorelines. Lots are very shallow between M-22 and Glen Lake. See the parcel pattern depicted on Map3-4. In some areas, the cottages are clustered and do not all have direct lake frontage, a characteristic of some of the older areas. Such conditions are most prevalent near the Narrows, at the western edge of the lake and to some extent near Fisher Lake.

There has been considerable change in the character of development on the Glen Lakes in recent years. "Mansionization," or redevelopment of small to medium size cottages and homes to very large, "big footprint" or "Bigfoot" homes, many that can house multiple families at one time have been built. The effect of this change can be to limit views of the water from the road, from adjacent or backlot cottages, to make the waterfront more urban looking, and to intensify the activity level on the lakeshore.

The Homestead

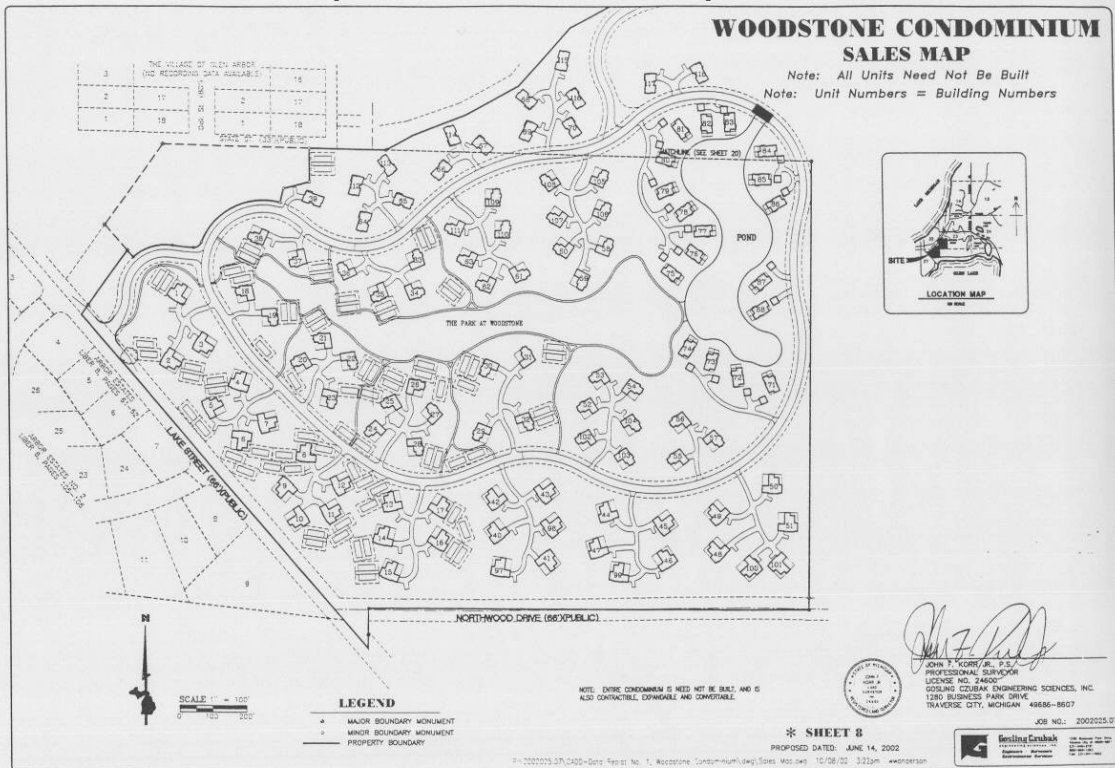
The Homestead is a resort/residential community located in the Township on approximately 500 acres of heavily timbered land with about a mile of beach frontage on Lake Michigan. See Map 3- 8. Great care has been taken in siting of facilities, including over 460 condominiums, 90 lodge units, four restaurants, two conference centers and two large recreational complexes. The facility is the largest single employer and taxpayer in the Township. In addition, a more recent Homestead development called Woodstone is under development along Lake Street, south of the village. It is slated for 96 homes. See Map 3-9.

Map 3-8 The Homestead



Graphic courtesy The Homestead website

Map 3-9 Woodstone Development



Graphic courtesy The Homestead website

The Leelanau School

The Leelanau School is a private secondary school which has operated in the Township since 1929. See Photo 3-5. It is located adjacent to and southwest of the Homestead and together they form an important activity center north of the village. The physical connection between this area and the village could be enhanced by bike and pedestrian trails. Facilities include the school itself, and the Leelanau Library and Lanphier Observatory, both of which are open to the public. An annual world affairs symposium attracts speakers from around the world. In addition, an annual arts fair and summer seminar sessions attract experts in the arts and sciences plus many visitors.

**Photo 3-5
Leelanau School**



Photo by Mark Wyckoff.

Other Land Uses

Township recreation facilities include the tennis courts, basketball court and children's playground, two swimming access sites, a park on top of Miller Hill, DNR launch site on Little Glen Lake, boat launch at Lake Street and the Township Hall gymnasium. These facilities are discussed in more detail in Chapter Four. There are no operating public schools in the Township and therefore no associated playgrounds. Glen Arbor Township school age children

attend the Glen Lake Community Schools, which were consolidated in 1956.

During fishing season, the Township boat launch at the north end of Lake Street is overtaxed, and there is no public parking available for trailers and cars, except in the road right-of-ways.

Buildings In Glen Arbor

Historic Sites and Buildings

Glen Arbor Township and the surrounding area have a long history of logging, fishing and farming, with settlement by people of European origin beginning in 1852. As a result, there are a number of historic sites and buildings remaining. Some of these have been neglected over time, in part due to the purchase of many as part of the National Lakeshore. The Lakeshore acquired nearly two hundred historic structures but had no funds to maintain them. While the NPS is mandated to preserve and protect its cultural resources through specific legislation such as the Antiquities Act of 1906, the National Environmental Policy Act of 1969, and the National Historic Preservation Act of 1966 as amended in 1992, lack of adequate funding is a continuing impediment. Recent efforts to preserve many of these structures have been somewhat successful due to increased federal funding, grants from Rotary Charities of Traverse City and the efforts of many volunteers in a local group, Preserve Historic Sleeping Bear. A controversial plan by the National Park Service to implement a national policy to authorize private concessionaires to operate in historic structures in order to provide restoration and maintenance funding has not been carried out in the Glen Haven and Port Oneida Historic Districts.

Photo 3-6
Port Oneida Historic District Farm Buildings



Source: National Park Service

Historic Sites

Many sites have been identified in the Township as having historic significance. The sites have been identified from the Inventory of Michigan's 1975 Historic

Preservation Plan and various written material regarding the history of Glen Arbor Township¹ and state and federal online historical references. See Photos 3-6, 3-7 and 3-8. The following have been included:

Sites

- D.H. Day Park (listed in State Register of Historic Markers) now in National Lakeshore
- Dr. Walker's Cranberry Marsh
- Glen Haven Historic District—160 acres and 12 buildings
- Prehistoric Indian Site - Fisher Lake
- Burial Site - Leelanau Schools
- Bluff Burial Site - Port Oneida
- Glen Arbor Cemetery
- Port Oneida Rural Historic District—3,000 acres and 121 buildings and 20 structures (See Map 3-7)
- George Conrad Hutzler Farm on S. Manitou Island
- South Manitou Island Lighthouse Complex and Life Saving Station Historical District—470 acres and 13 buildings
- Forest Haven Cemetery

Buildings

- Andresen House
- Brotherton House
- Bethlehem Lutheran Church
- Sleeping Bear Point Coast Guard Station
- D.H. Day Farm
- Dunn's Centennial Farm
- Ehle & Drumbrille General Store/The Arbor Light
- Glen Arbor School/Now athletic club
- D.H. Day General Store (Frank E. Fischer Store, Fisher was first Glen Arbor Supervisor—State Historic Register)
- Glen Haven Inn—now Sleeping Bear Inn
- Grady's Inn/Sylvan Inn
- G. J. Hutzler's Pig Farm (S. Manitou Island)
- Kelderhouse/Brammer Grist Mill
- Laird Store
- Port Oneida School/Port Oneida Community Club
- Ray House/Julie's Restaurant
- Township Hall

The Township should continue to encourage the preservation of historic buildings and sites.

Attention is drawn to the history of the area each year during the Manitou Music Festival, which holds some of its concerts in cultural and historic locations, such

as the Leelanau School, and the Thoreson Farm in the Port Oneida Historic District. In addition, the National Park Service and Preserve Historic Sleeping Bear have led to much greater attention to historic resources in the Township.

¹ Primarily from Beautiful Glen Arbor Township, Facts, Fantasy and Fotos by Robert Rader and the Glen Arbor History Group, 1975.

Photo 3-7
Sylvan Inn, Building on State Register of Historic Places



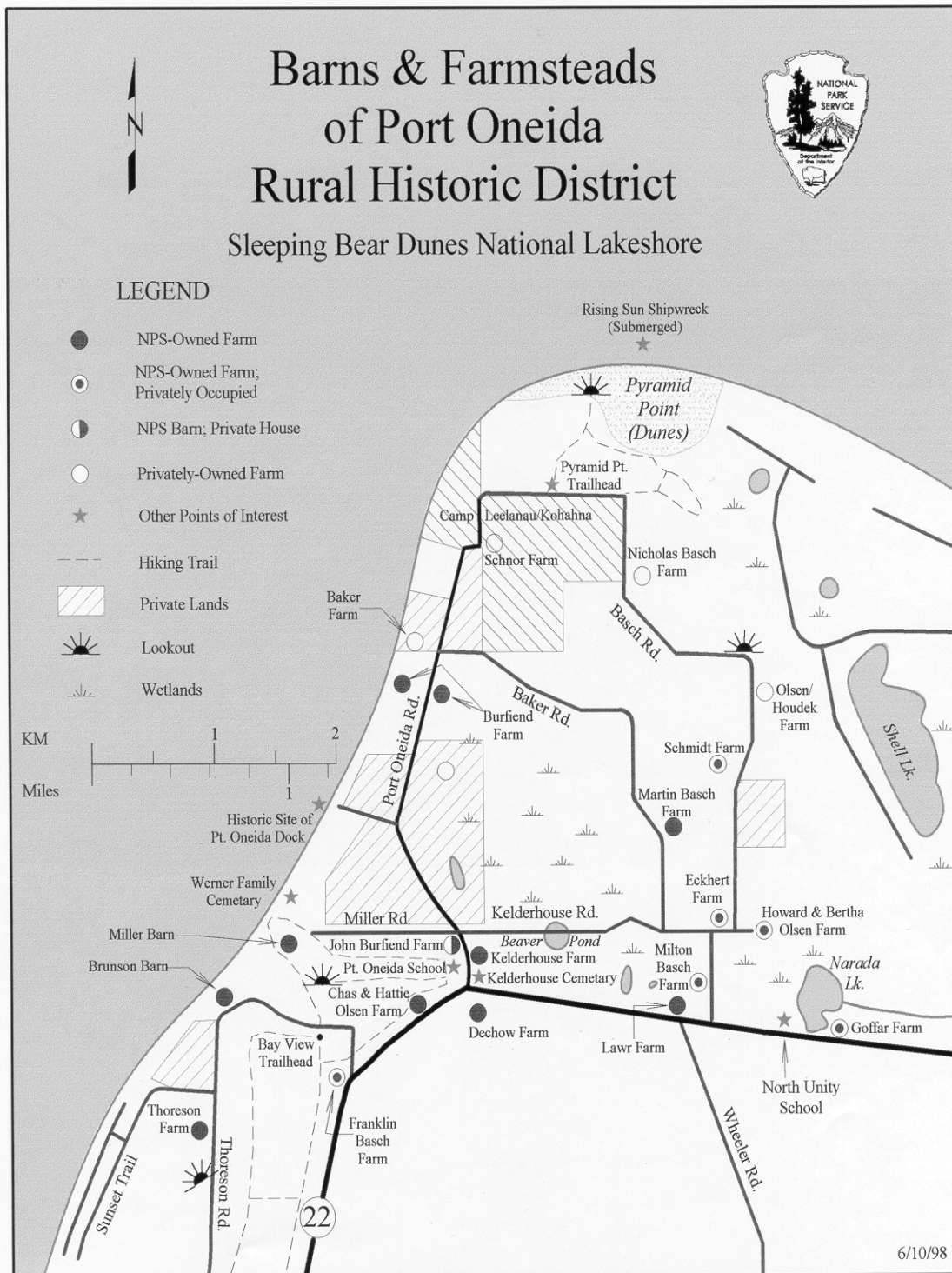
Image courtesy of the Michigan State Historic Preservation Office.

Photo 3-8
Glen Arbor Roller Mills, State Register of Historic Places



Image courtesy of the Michigan State Historic Preservation Office.

Map 3-10 Port Oneida Rural Historic District



Source: National Park Service.

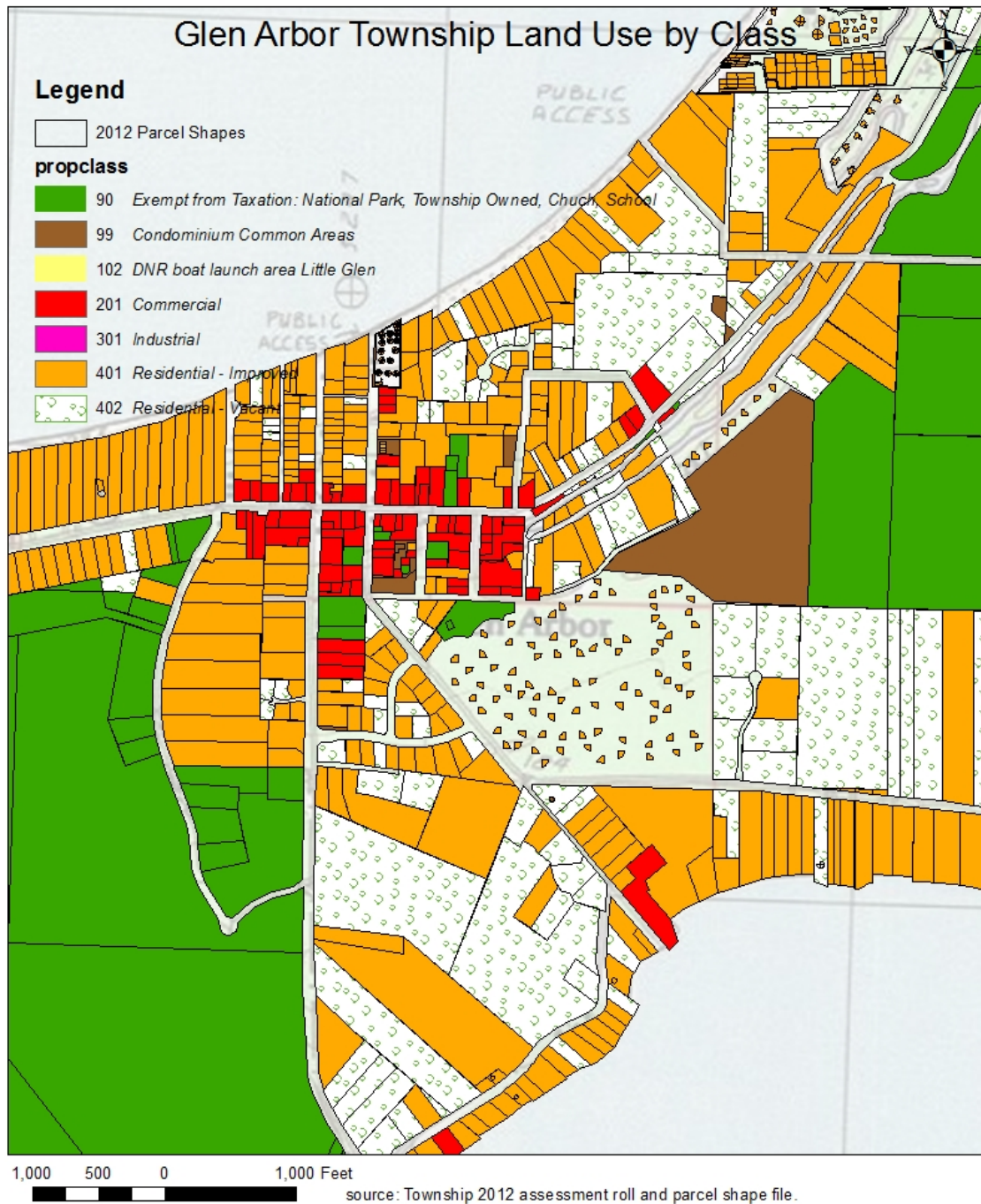
Glen Arbor “Village”

The village is the business and governmental center of the Township and includes two churches. The village is not incorporated, so it is a part of Glen Arbor Township. A boat launch ramp to Lake Michigan is presently provided by the Township at Lake Street. Recreation facilities include the Township tennis courts, basketball court, children’s playground and Township Hall facilities. The Township provides public restrooms in a garden setting as a service to visitors in the commercial district.

There is variety in the type and visual character of the buildings in the village. There are residences, businesses, and a few governmental facilities. The Township Hall, post office and fire department and rescue unit are also located in the village, as are several historic buildings. The visual character of the village is northwoods eclectic, in that there are a variety of architectural styles, some that are rustic and many that have representative materials, colors and details of buildings typical of the region. However, most of the newest buildings have a northwoods character or represent traditional American designs, and public opinion supports encouraging new buildings to have a northwoods or traditional American character. Although it is the center of activity in the Township, the village area remains heavily wooded, and the preservation of this characteristic is important to maintaining the northern Michigan character of the area.

The village experiences congestion in the summer and less activity in the winter. However, it is a prized stop for tourists in any season.

Map 3-11 Existing Land Use Village of Glen Arbor, 2012



Chapter 4 INFRASTRUCTURE AND PUBLIC SERVICES



CHAPTER 4 INFRASTRUCTURE AND PUBLIC SERVICES

This Chapter discusses the community facilities, schools, utilities and transportation system of Glen Arbor Township. It looks at present conditions and future needs.

Township Hall

The Township Hall is a large building located at 6394 West Western Avenue midway between Lake and Oak on the north side of the street, across from the old schoolhouse. See Map 4-1. The front three-quarters of the Township Hall is an historic gymnasium with an old barn-style roof. There is also a stage and a large kitchen. The room easily accommodates several hundred persons seated at tables and is used for a wide range of activities from Town Meetings to educational programs. The rear portion of the Township Hall is much smaller and the Township offices occupy one large room, while a smaller room is used for meetings by Township boards and commissions.

The Township Board is comprised of five members and meets regularly on the third Tuesday of each month. The Township Board is the elected, governing body of Glen Arbor Township that adopts ordinances and manages the operations of the Township. The Township Planning and Zoning Commission has seven members and meets the first Tuesday of each month. The Planning and Zoning Commission is an appointed group responsible for advising the Township Board on planning and zoning issues and administering land use regulations for the Township.

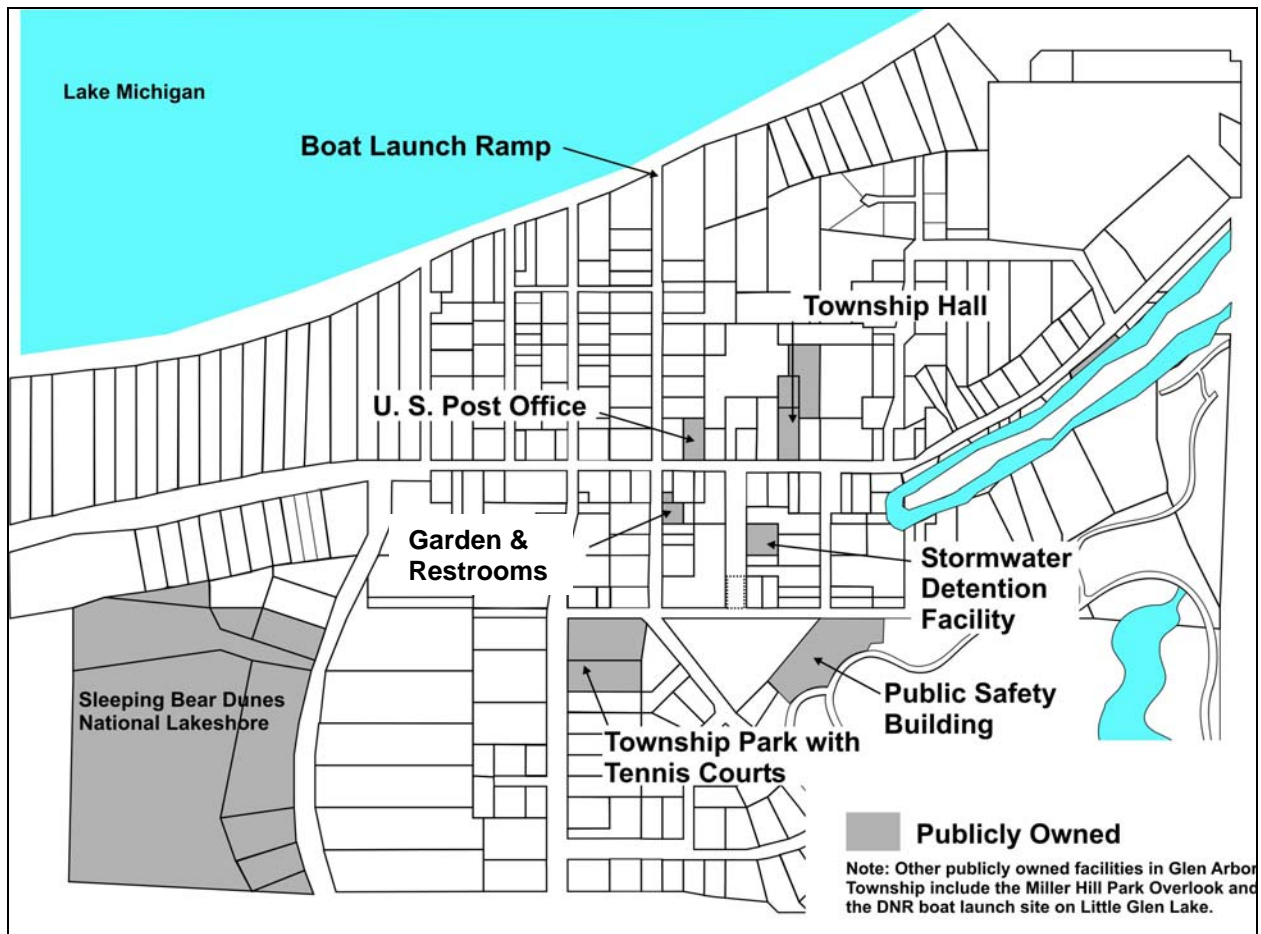
**Photo 4-1
Glen Arbor Township Hall**



Photo by Terry Gretzema

Located behind the Township Hall is public parking that is used seasonally for tourists, as well as for any other events. Weekly, during the summer, this parking lot is turned into a farmers market.

Map 4-1 Township Buildings and Recreation Facilities in Glen Arbor



Graphic by John Warbach, Planning & Zoning Center, Inc.

Fire, EMS and Rescue Services

The Glen Arbor Fire and Rescue Department, which operates as The Glen Lake Fire and Rescue Department (GLFD), is a 24 hour a day, seven days a week service, staffed by a full-time chief and full-time core members, supplemented by a small contingent of part-time personnel. Many Department members are certified Michigan firefighters and/officers and licensed as either paramedics (EMT-P) or basic emergency medical technicians (EMT-B). The Department operates from two stations: the Public Safety Building, located at 6401 W. State Street in Glen Arbor, is staffed full-time with one paramedic and three firefighter/EMT-Bs; The fire station in Empire, located at 11350 LaCore Ave, is staffed full time with two firefighter/EMT-Bs. Shift staffing is augmented during the peak, summer months and personnel and equipment from either or both stations will respond to calls separately or together, depending on the nature and location of each incident.

The Department provides Advanced Life support (ALS) medical services , including transport and ice rescue, plus fire fighting services, vehicle extrication, high angle rescue at the Dunes, search and rescue, plus a newly added 28 foot marine rescue/fire fighting boat to service Glen Lake and Lake Michigan, as well as surrounding properties, in coordination with the U.S. Coast Guard. This important new capacity will require continuing study for ways to improve the access to Lake Michigan available at the Township's Lake Street launch site.

The Department operates two ambulances, one ALS and one Basic, plus a Pierce Ladder Truck (105'), two Pierce Engines, two Pierce 2,000 gallon Tanker/Pumpers, one Pierce Rescue Squad, a Viking custom 28 foot Rescue/Fire Boat, two Polaris Ranger ATV's used for wildland fire and medical rescue, and a Ford Command Vehicle.

The Department participates with and provides assistance to other county fire departments under a mutual aid agreement. Public education programs and CPR classes are made available to the public throughout the year.

For the calendar year 2010, the Department responded to 171 fire calls and 398 medical calls. Staffing of the Department consists of 19 full-time and 12 part-time members, all of whom are cross trained and licensed/certified in both the fire and medical disciplines. An aggressive professional development program is conducted on a continuing basis through the year amounting to 4,580 hours during 2010.

Photo 4-2
Glen Arbor Public Safety Building



Photo by Terry Gretzema

Munson Health Care, based in Traverse City, is the major healthcare provider for Leelanau County. Leelanau Urgent Care in Lake Leelanau also provides medical

services. The Paul Oliver Memorial Hospital located southwest of Glen Arbor in Frankfort, Michigan is now the next closest hospital to Munson.

Public Safety

The Law Enforcement Division of the Leelanau County Sheriff's Office provides 24-hour law enforcement to 11 townships and three villages, including Glen Arbor Township. The Law Enforcement Division is comprised of three sergeants and 13 deputies that act as first responders to a variety of requests for police services. The division also conducts preliminary investigations, follow-up investigations, and self-initiated enforcement activities. Park Rangers work closely with the Leelanau County Sheriff's Department and provide emergency assistance to county officers when requested.

The Marine Safety Unit of the Sheriff's Office patrols the waterways within Glen Arbor Township and Leelanau County. This unit responds to distress and emergency calls in all weather conditions, while working in concert with the United States Coast Guard and the Michigan Department of Natural Resources.

Glen Arbor Township is located within the Michigan State Police's Seventh District. The community is served by the Michigan State Police post located in Traverse City.

Photo 4-3
Leelanau County Sheriff's



Photo courtesy Leelanau County website

Parks and Recreation

Glen Arbor Township's location amidst miles of National Lakeshore, sand dunes, inland lakes, rivers and streams provides numerous recreational opportunities to seasonal and year-around residents and tourists. Activities such as camping, fishing, hiking, skiing, and golfing are all readily accessible within the community. During the summer months, many seasonal residents and tourists flock to the area to take advantage of its intrinsic natural beauty and recreational opportunities.

Recreational facilities are located on Map 4-1 and include:

- Glen Arbor Township Hall Gymnasium: Contains indoor basketball court, restroom facilities, and a stage.
- Glen Arbor Township Park: Contains a basketball court, four tennis courts, and a childrens play area with a variety of playground equipment.

- Glen Arbor Boat Ramp: Boat launch located on Lake Michigan.
- Beach Facilities: Beaches are located on both Lake Michigan and Little Glen Lake and provide limited parking.
- Crystal River Canoe Access: A narrow strip of land from the road to the water, accessed along M-22. Two privately owned canoe outfitters rent canoes, kayaks, and bicycles.
- Little Glen Lake Access at the Narrows: Small beach with large amounts of poison ivy. This is a narrow strip of land from the road to the water with no public parking.
- Miller Hill Lookout Park: A small undeveloped park at the juncture of Miller Hill and the power lines.
- Sleeping Bear National Lakeshore: 26 square miles of National Park containing a campground, numerous historic buildings, a maritime museum, a dune climb and scenic drive, cross-country and snowshoe trails, canoeing and fishing opportunities, and a visitor's center.
- The Homestead: A privately owned resort that includes a golf course, swimming pools, tennis courts, ski trails and hills, and snowshoe and cross-country trails.

Golf Courses

Golfers in the Glen Arbor community have access to several golf courses within Leelanau County. Within Glen Arbor, golfers need to look no further than The Homestead Resort, which features a 9-hole course that is unique in that the golf facility shares the same area as the ski layout during the changing seasons. The Homestead is a par 3 course with a hilly design and an abundance of trees. The variable elevation provides beautiful views of Lake Michigan, Manitou Passage, and North and South Manitou islands.

; In addition, golfers can take advantage of The Sleeping Bear Golf Club north of Cedar; Dunes Golf Club, an 18-hole course east of Empire; and the Leelanau Club at Bahle Farms in Sutton's Bay. The old golf course of Sugar Loaf. The Manitou Passage Golf Course, is the former Kings Challenge Golf course located 7 miles from the Homestead Resort. This beautiful 18 hole golf course has been redeveloped and redesigned in the Arnold Palmer standard. Leland Country Club, is a private course that features an 18 hole course on rolling terrain with fairways lined with mature maple, birch, oak and beech trees.

School System

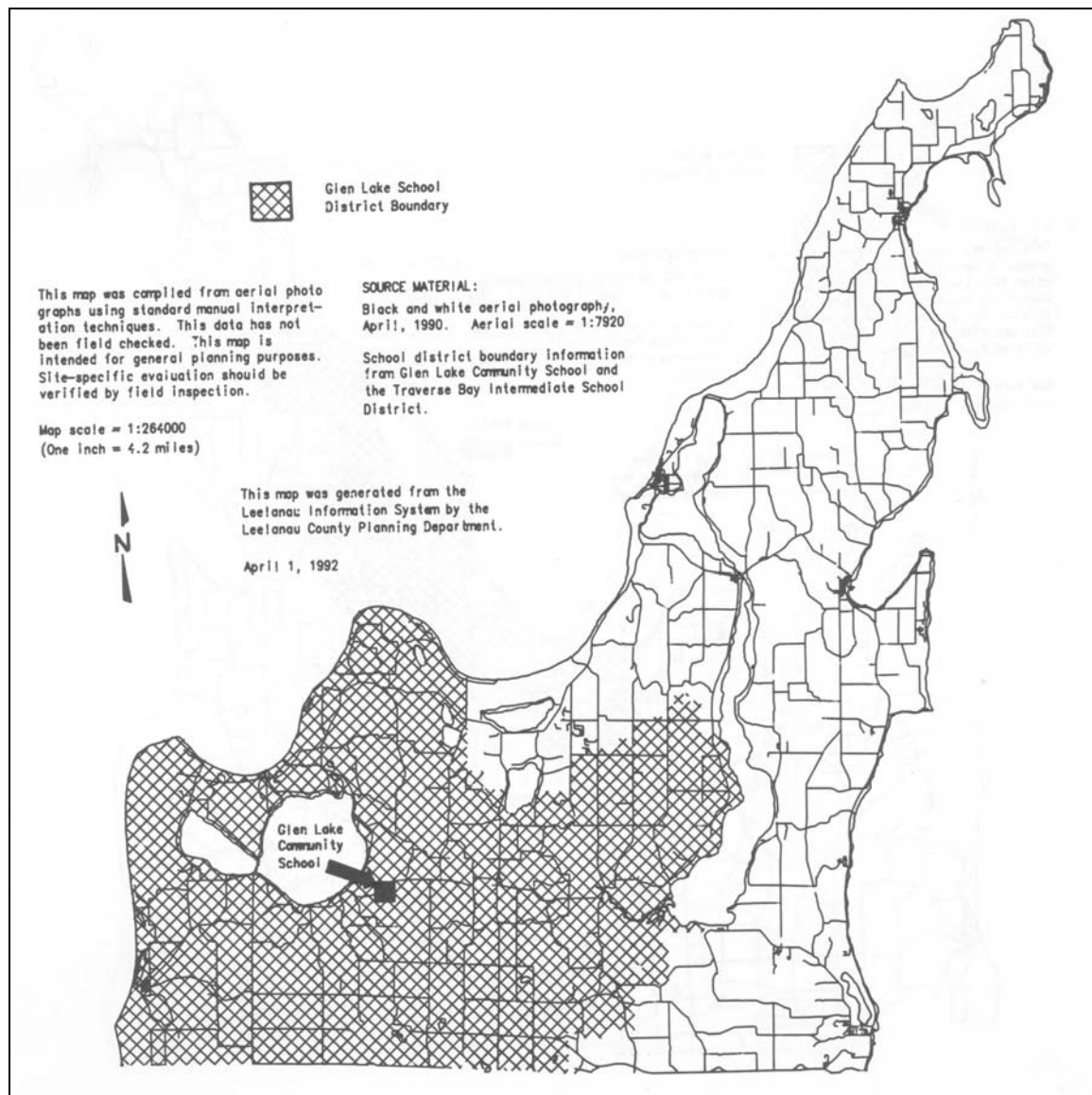
Glen Arbor Township is served by the Glen Lake Community School District, part of the larger Traverse Bay Area Intermediate School District. Glen Lake Community Schools encompass 200 square miles and serves 6,032 year round residents. See Map 4-2. Glen Lake schools have a district-wide enrollment of 930 students. In 2003, the district received operating revenue of \$6,888 per student from the state of Michigan. All Glen Lake schools are fully accredited by the North Central Association and the district was one of the first districts within the state to receive K-12 North Central accreditation.

Glen Lake High School was built in 1958 and received improvements in 1968 and 1969. The elementary school and middle school wing was added in 1979. During the 1992-1993 school year, the high school received 50% additional instructional space.

Presently, Glen Lake Elementary School educates students in grades kindergarten through fifth grade. Glen Lake High School, which also houses the middle school, has grades six through twelve. The student-teacher ratio at the elementary school is 18 to 1 while the student-teacher ratio at the high school is 21 to 1.

Interscholastic sports at both the middle school and high school levels allow students to participate in varsity, junior varsity and available freshman teams in any offered sport.

Map 4-2 Glen Lake Community School District



Source: Leelanau General Plan

Library

The Glen Lake Community Library has served Glen Arbor, Empire, and Kasson Townships since 1977. In 1983, the library moved into the former Empire Fire Hall. The

overwhelming approval of a property tax levy in 1996 by all three townships allowed for major renovation and expansion, which was completed in October 1997. The library offers over 19,000 items, including 13,000 book titles, 800 recordings on tape or compact disc, over 2,000 videotapes and DVD's, and nearly 50 periodicals and newspapers. The library also has public computers with high speed internet access.

The library provides information materials and services to all community residents and visitors on an equal, publicly funded basis. A Board of Trustees, comprised of residents from all three townships, governs operational and financial matters.

Highways

Glen Arbor is served by two state trunklines, M-22 and M-109. M-22 is designated as the major access route into the Township. It passes along the west side of Big Glen Lake and across the "Narrows." The road along Glen Lake winds and is tree-lined. The Narrows is a congregating place for visitors who like the view, for fisherman off the bridge, and for customers at the marina. This attraction sometimes creates hazardous traffic situations. Map 4-3 depicts the system of roads in Western Leelanau County.

Map 4-3 Roads in Western Leelanau County



M-22 serves as both a major transportation artery for the County and as a corridor for viewing some of the country's most scenic vistas. As such, MDOT has designated M-22 and M-109 as a Scenic Heritage Route. The Heritage Route program was initiated through legislation in 1993 and emphasizes cooperation among local residents, their government officials, landowners and interested groups to preserve unique scenic, historic or recreational highways. The Scenic Historic Route designation ensures that the rural character of Leelanau County is preserved and that the inherent qualities of the peninsula continue to be showcased.

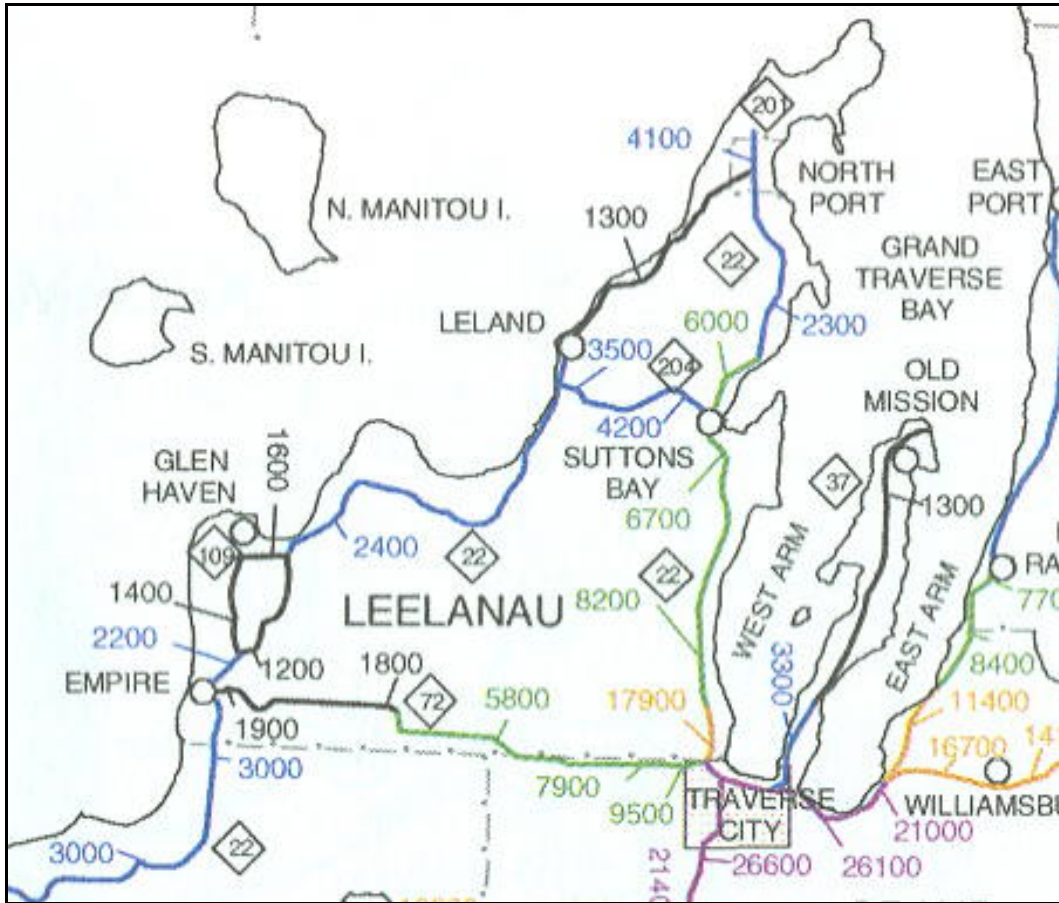
In 2002, MDOT helped secure funding from the U.S. Department of Transportation to designate M-22 in Leelanau County as a National Scenic Byway. National Scenic Byway funds enable states to embark on eligible projects along highways designated as National Scenic Byways and state-designated byways. Planning projects to inventory, preserve and enhance the qualities of the byway, safety improvements, construction of bike and pedestrian facilities, and resource protection such as scenic easements are eligible within this program. While MDOT paved much of M-22 from Empire to Glen Arbor in 2003 and 2004 as well as M109 in 2004, and maintained a paved shoulder which is useful for bicyclists, an ongoing effort is underway by the Sleeping Bear Heritage Trail (SBHT) to complete a bike trail. The SBHT will be a hard-surfaced multi-use trail paralleling M-22 and M-109 for 27 miles through the Lakeshore. It will provide a safe, non-motorized, multi-use transportation alternative connecting the Lakeshore's main visitor destinations with Glen Arbor and Empire. The SBHT will give walkers, runners, wheelchair users, bicyclists, cross-country skiers, baby strollers, and rollerbladers a safe, enjoyable and carefree way to access and explore the Lakeshore and neighboring communities.

M-22 is an arterial road, while M-109, Glen Haven Road (former M-209) and County Road 675 are collector roads. All other public roads are local streets. There are also many private roads that provide access to property like local streets. M-22 and M-109 are maintained by MDOT, while all other public roads in the Township are maintained by the Leelanau County Road Commission.

Traffic Counts

By most traffic engineering standards, traffic, even during the peak summer months is limited. However, that does not mean that residents are not sensitive to it nor concerned about it. The biggest concerns are on M-22 from the Narrows to Glen Arbor where many homes are very close to the road and there is little road shoulder in many places. Similar concerns exist along M-109 on the west end of Little Glen Lake where most homes are set farther back but speeds are higher. Map 4-4 depicts average daily traffic volumes as measured by MDOT and published in its 2003 traffic count map. These are days averaged across the year, not peak days.

Map 4-4 Traffic Counts
Average Daily Traffic (number of vehicles per day)



Source: MDOT, 2004

Utilities

In Glen Arbor Township, natural gas and electricity are provided by private companies. At present, public sewer and water services are nonexistent. Natural gas in Glen Arbor is provided by Michigan Consolidated Gas Company (MichCon). Consumers Energy provides electricity to residents, businesses and institutions in the Glen Arbor community.

Century Telephone and Ameritech provide local phone service. Cable is provided by Charter Communications, Inc. Fiber optic service is available.

Chapter 5 SIGNIFICANT ISSUES AND TRENDS



CHAPTER 5

SIGNIFICANT ISSUES AND TRENDS

This chapter discusses issues and trends that are important to the future of Glen Arbor Township. It looks at significant issues in four broad categories:

1. Community character;
2. Infrastructure improvement needs;
3. Affordable housing;
4. Intergovernmental relations.

Within each category a variety of issues are addressed ranging from residential development and its relationship to commercial development, the limited amount of land available for new development, waste treatment, the protection of natural features and natural resources, and the Glen Arbor village boat launch status among others. Alternative approaches to address these issues are discussed and recommended actions are suggested here and summarized in Chapter 9.

Community Character

Overview

The most significant set of issues facing Glen Arbor Township relate to preservation of existing community character. The Township is a highly attractive tourist, recreation and second home destination, with private development concentrated on a limited area due to extensive public land holdings, and all of the lands and the natural resource attractions are sensitive to the impacts of development. This means that while there is pressure to intensify development in areas where, if development doesn't tread lightly, the very resources that attract people to the area—the lakes, woods and dunes—will be degraded. Thus, there is growing concern over development that is too dense with too much lot coverage and mass to be safe for the environment (especially for groundwater and surface water runoff). There are also aesthetic dimensions to this character. When building mass becomes too great relative to the parcel size and out of scale with development on land around it, then the northwoods community character, so cherished by residents and visitors, suffers as well.

In order to systematically examine this set of issues, it is necessary to break them down into component parts:

- Relationship between residential population and commercial development as part of a buildout analysis;
- Waste treatments issues in the village of Glen Arbor; Related natural resource protection issues;
- Bigfoot development: building height, mass and density issues;
- Exterior design of buildings.

Photo 5-1
Western Avenue in the Village of Glen Arbor on a Summer Day



Photo by Mark Wyckoff

Relationship between Residential Population and Commercial Development

One of the issues raised at the August 2003 Town Meeting was what could be done to increase the range of local businesses in the village of Glen Arbor, especially on a year around basis. See Photo 5-1. Glen Arbor Township has both a permanent, year around, residential population and a seasonal tourist and second home population. As the permanent residential population of Glen Arbor Township grows, there can be an increase in businesses to support that population. Conversely, either the year around residential population needs to grow or tourists need to come all seasons for the businesses to increase. Normally a Township uses planning and zoning to provide sufficient land for both residential and commercial uses to support a healthy balance. However, the market must be there for the new businesses to flourish.

Township residential population growth is constrained by the limited amount of undeveloped private land. An analysis was conducted on the potential relationship between private, developable land remaining in Glen Arbor Township and in the immediately surrounding jurisdictions. The question is, is there sufficient undeveloped residential land in the Township to support a wider range of businesses in Glen Arbor (such as a full service bank or dry cleaners). The answer seems for a number of reasons to be no. That does not mean there will not be more businesses in Glen Arbor. There will be. However, unless tourism becomes four full seasons, and/or nearly all the seasonally occupied housing is

occupied on a year around basis (or equal shares of each), there does not appear to be a sufficient market to support a wider range of year around businesses in the village of Glen Arbor. A more detailed explanation follows.

Based on typical market standards, there are already more year around businesses in Glen Arbor than the year around population could support. That makes those businesses extremely dependent on tourists to supplement local business. For example, typically it requires a population of about 2,500 persons to support a small grocery store or drug store of about 30,000 square feet and a site area of about 3 acres (Urban Land Institute, 1977). There is an IGA as well as the Bear Paws grocery and a separate drug store already in Glen Arbor and another grocery store in nearby Empire. The 2010 population of the four-township area including Glen Arbor, Cleveland, Empire and Kasson Townships was 4681. See Table 5-1. It is likely only a portion of that population shops in Glen Arbor. This example demonstrates that it will take many more people to support a wider range of year around businesses in Glen Arbor.

Table 5-1 Population of Glen Arbor Township and Surrounding Communities, 2010

Community	2010 Population	Occupied Housing Units	Seasonal/Vacant Housing Units
Glen Arbor Township	859	408	1222
Cleveland Township	1031	480	445
Empire Township including Empire Village	1182	584	504
Kasson Township	1609	633	109
Total Four Townships	4681	2105	2280

Source: U.S. Census Bureau

An analysis of vacant land was made for Glen Arbor Township in order to estimate the number of residences that could be expected when the Township reaches “buildout,” or the point when all available land has a house on it.

It appears from the buildout analysis that, if current zoning regulations were to remain in effect, and ignoring for a moment the suitability of the land for a structure (i.e. whether it is wetland, or is not suitable for a septic system), then only 675 new residences could be built on land already divided, but not developed. Another 496 could be built on land that could be divided from current large parcels, and 65 additional units could be constructed at the Homestead and 96 at the Woodstone development. While this is a total of about 1332 new residences (and almost equal to the current number of dwelling units in the Township), the actual number of new dwelling units is likely to be about half of

that, the equivalent year around population increase is probably not very great. This is because many of the remaining lots and undivided land have either wetlands, groundwater close to the surface, or steep slopes (up on Miller Hill). This will greatly reduce the total number of dwelling units that get built. In addition, there is a longstanding practice in the Township for the development of large lot family “compounds” that accommodate a large number of family members for short periods, but also involve more land than the minimum ordinance requirements. Many of the potential new residences calculated as splits from existing homes on large lots may never be built as the owners intend to keep larger properties as an amenity, choosing not to sell off a buildable lot. Plus, the ratio of year around dwellings to total dwellings has remained about 1 to 4, and if this trend continues, then at most a couple of hundred additional dwellings would be for year around occupancy. At just over two persons per household, this only adds a couple of hundred potential year around customers for businesses.

Most of the new residences will likely be second homes. Only if zoning density were significantly increased would the new development result in significantly more people. However, to do so would require public sewers, which are not likely cost effective with such a low density population spread as widely as it is at the present (this conclusion is explained in more detail in a few pages).

But perhaps more important, it is likely the Township will approach buildout over the next twenty years. The “Baby Boomer” generation is approaching retirement and a part of that generation has more disposable income than any generation before it and could afford to buy or build a home in Glen Arbor Township. The Baby Boomer generation is familiar with the amenities of the area and has frequently visited here. That is probably why there was a mini land rush underway in Glen Arbor Township in 2004.

In recent years, new construction has been minimal, more existing homes are for sale, and the economic depression and Midwest unemployment have slowed development drastically. The national financial uncertainty, the global war on terrorism and the growing U.S. budget deficit have basically stopped current real estate activity. However, based on past trends, it is likely most of the available and buildable land in the Township will be developed over the next twenty years.

So does that mean the Township should plan for less commercial development than land is presently zoned for, since more land is zoned commercial than is used commercially at present? No, other factors contribute to a decision on how much land should be planned for commercial development. These include:

- What portion of the population is year-around versus seasonal? If the year-around population can support a larger commercial area, sufficient designated land should be provided. If the year-around and seasonal population is large enough, and the seasonal visitors enlarge the population in all four seasons, then there might be the equivalent of a year-around

population, although the visitors' needs for support businesses may be somewhat different than that for only a year-around population. Glen Arbor's seasonal population is generally highest in the summer, next highest in the fall. Winter and Spring are relatively low.

- Age of residents. The average age of the population in Glen Arbor Township is substantially older than that of Michigan and of Leelanau County. This group may be retired, and less likely to shop outside the community because they do not travel to work and because of the increased effort to travel for shopping. Glen Arbor Township appeals to an older population as a retirement destination, and this is likely to continue and may foster an increase in a variety of appropriate businesses. The multiplier effect of retired persons on the local economy is very strong. A 1985 study found that \$4,000 of social security payments is sufficient to create a job in the local economy compared to \$91,743 in manufacturing payroll or \$65,516 in agricultural sales to produce one job. (Chesnutt, Lee and Fagan, 1993) No more recent data is available.

Photo 5-2
Sylvan Inn Bed & Breakfast



Photo by Terry Gretzema

The exact relationship between the area of potential residential development in Glen Arbor and the appropriate related area of commercial development is difficult to estimate accurately. Documented research on the market needed to support commercial development is targeted at more urban populations.

Communities are often easier to sustain with a mix of land uses. Research suggests about 78% residential and 22% commercial/industrial has been a target for some communities. (Balance, 2002) While the large proportion of tax exempt National Park Service land in Glen Arbor Township may, over time, help limit the extent of residential growth to a manageable geographic area, there is very little nonresidential development. Glen Arbor Township's residential SEV is about 95% of total, while business is only about 5% and industrial SEV is zero (see Chapter Two). However, there is not much land available for business development, and the market is not presently there to support much more on a year around basis.

The land presently in the Business District in the village of Glen Arbor should remain zoned that way to accommodate new and expanded businesses that serve tourists and/or, tourists and year around residents. If the National Park were to attract anywhere near the 3 million visitors a year it was originally predicted to serve, there would be a demand for many more seasonal businesses in Glen Arbor. These additional businesses would help spread the tax base so that residential landowners did not bear almost all the burden for Township services.

Waste Treatment Study in Glen Arbor Township

The township decided in 2008 to undertake a feasibility study for a wastewater treatment facility for the critically threatened "downtown" Glen Arbor Township area, most immediately adjoining the high value receiving waters of the Crystal River and Sleeping Bear Bay of Lake Michigan, and most subject to shallow ground water depths and potentially compromised septic treatment capabilities. State of Michigan funds were available to support such endeavors, assuming the study warranted and resulted in a constructed facility. Further, in 2008-2009, federal/state economic stimulus funds were available, on a needs and time priority basis, for facility construction.

Make-up

Study participants were selected to include residential, commercial, planning, technical and county health department representation and for coordination with the Michigan Department of Environmental Quality (MDEQ.) Over time, 2008 through 2010, two professional engineering firms were also engaged.

Scope

The real and potential deficiencies, insofar as on-site treatment in the subject area, were well known to the Leelanau county Sanitarian, principally due to transient and/or high ground water levels, summer high usage demands for existing restaurants and receiving soils of primarily sand, largely absent organic content as desirable for acceptable septic treatment performance.

The more compelling existing conditions are currently handled by frequent removal by pumping or holding tanks or, in a few instances, by commercial owner installed additional treatment facilities.

The less compelling conditions, to the extent they comply with existing on-site health department code, are present in the subject area.

A service area with prioritized, need basis sub-areas was ultimately defined for the purpose of preserving and protecting the high value adjoining Crystal River and Lake Michigan receiving water quality.

Results

Preliminary collection and treatment systems were conceptualized.

The collection system chosen was pressurized and of small diameter that could be installed with minimal excavation in the sandy, high ground water levels of the area. The treatment system evaluated could be either a biological/physical chemical design requiring a minimal site size but continual operation and maintenance attention or a land treatment orientation requiring larger site size but compatible with the immediately adjoining National Lakeshore lands and requiring minimal operation and maintenance attention.

Capital costs were projected to be in the range of \$15,000 to \$25,000 per residential participant with O&M costs in the rate of +/- \$50 per month.

Location Issues

Treatment facility sighting availability proved to be an immediate problem. Would there be a surface discharge or a groundwater discharge? The study group, finding no reasonable alternative, eventually planned for a site in an adjoining National Lakeshore location with a groundwater discharge, selected to

- 1) minimize impact on National Lakeshore values and
- 2) minimize impact on down gradient potable groundwater use.

Discussions with National Lakeshore administrators were preliminary and initially unsuccessful for resolving locational issues. The study participants resolved to achieve answers to sighting issues via their elected representatives. Indeed, when the National Lakeshore was first contemplated, the National Park system generated an engineering needs report for the area that postulated the eventual need for a wastewater treatment facility for the "downtown" Glen Arbor Township. The Lakeshore was subsequently formed and totally surrounded the "downtown" area with no provision such a facility.

Needs Issue

Study participants were finally ready to take findings to the public and to tell potential users their anticipated costs. The county health department and supporting engineering firm were asked to collect, collate and present the existing data to justify the proposed collection and treatment scheme.

Such data are primarily the drinking water test data from the groundwater potable wells for the subject area. Not surprisingly, the body of data showed no significant deterioration due to up gradient groundwater septic discharges. Thus, while the inferential groundwater quality is suffering from compromised septic discharges, the degree of this problem is masked by a lack of appropriate and defining monitoring and by the dilution potential of the unaffected and up gradient virgin groundwater.

The compelling problems in commercial "downtown" continue and are managed through holding tanks and pump-outs as required, supplemented by the individual efforts of a few affected parties and all policed and monitored by the county health department and sanitarian.

Conclusions

Study participants concluded the following:

1) Recommend to Glen Arbor Township the placement of a group of groundwater monitoring wells in representative locations in "downtown" and undertake periodic sampling and analysis together with up gradient controls to maintain future vigilance.

2) Arrange a meeting with "downtown" commercial representatives via Chamber of Commerce and report study findings and request that initiative for specific follow-up, to the extent appropriate, reside with the commercial entities. Both of these recommendations were completed. the Glen Arbor Township board plans to make a report to the public on this subject at the 2012 Annual Meeting.

Documentation

The engineering firms enlisted in the study were:

2008-2009, Lapham Associates, Mount Pleasant, MI

2009-2010, Gosling Czubak, Traverse City, MI

The National Park Service engineering study referenced is:

Feasibility Study for Regional water and Sewer systems

Sleeping Bear Dunes National Lakeshore, Michigan

U.S. Department of the Interior, National Park Service

Consultant, Williams & Works, Inc.

Grand Rapids, MI 49503

August, 1973

A copy of this study is available for reference in the Glen Arbor Township offices.

Waste Treatment

The treatment of sewage is a very important concern in Glen Arbor Township. If human and commercial waste is not properly treated, high quality surface waters and groundwater would be polluted. The Glen Lakes, the Crystal River and Lake Michigan are high quality surface waters that are important to the quality of life and economy of the community.

Surface waters and groundwater are vulnerable to pollution from improperly designed or poorly functioning conventional sewage treatment systems. Conventional septic tank and drain field systems can cause pollution and public health problems if the water table is too high, the soil too porous to filter waste, the soil too dense to allow percolation or the system too close to water supplies. Even though they may be functioning properly, the treated waste discharged by municipal treatment systems generally contain small amounts of contaminants. The accumulation of those minute (and accepted under state DEQ permit standards) amounts can, over time, negatively affect streams and lakes.

Glen Arbor faces three problems regarding the treatment of wastes. These are:

- Much of the village area has a relatively high water table, as little as 1' to 2' below the surface. This makes conventional septic treatment systems difficult or impossible to use as County ordinance requires a minimum of 4' between the bottom of the drain field and the water table. For lands closer to Lake

Michigan, the water table fluctuates a considerable distance and is somewhat related to the level of Lake Michigan. The District Health Department found no water at depths of 8' to 9' in 2003 when Lake Michigan was close to its record low level in locations where the water table was within 3' of the surface during the high Lake Michigan levels of the late 1980s. Property owners seeking permits to install septic systems during periods of lowered groundwater may not understand the need to design the system in consideration of potentially higher groundwater levels at some future year.

- Soils are sandy and are exceptionally porous. As a result, they perform very little cleansing of biological or nutrient contamination. Septic systems may be installed according to permit requirements, but still not be fulfilling their function, and yet not showing obvious signs, like backing up liquids to the surface.
- Many of the existing lots in the village are small, which limits the size of commercial and residential buildings that can be developed on existing parcels. Lots need to be large enough for an adequate separation distance from the potable water source as well as large enough for the drain field and a replacement field (which is required by County ordinance). This means that some lots (such as those 50' by 100' and 100' by 100') may be impossible to develop for commercial purposes. It may be necessary for a lot to be a minimum of 100' by 200' to develop a small retail business, which is about ½ acre. See Figure 5-1 for an illustration of how much space a septic system, parking, building and other requirements would take on a half-acre lot. There is little space for additional parking or amenities such as landscaping. A business requiring more space, such as a restaurant or larger retail establishment, will need an even larger parcel or combination of parcels in order to be able to build. A small retail establishment with about 8 employees would require an area of about 4,900 sq. ft. for the septic system, including initial and replacement drain fields and setbacks from lot lines. A very small retail operation may be able to utilize a smaller septic system requiring less space but would never be able to expand. A restaurant with about 40 seats would require a total of about 18,000 sq. ft. for the septic system and septic system setbacks or an area of about 120' by 150'. Altogether, about 40,000 sq. ft. is needed for the restaurant, parking, loading, setbacks and septic system. See Figure 5-2. A much smaller restaurant, with about 10-15 seats may be able to fit on a lot smaller than 40,000 sq. ft. if it could also gain the 50' well separation distance, loading and parking space and never enlarge.

There are several potential solutions to these problems. These include:

- The use of single unit alternative treatment systems that have a different configuration than the conventional septic system. This option is not available for commercial development, only residential development.
- The use of group systems that permits multiple homes or businesses to be placed on one treatment system. Depending on the number of units, or types of businesses served, such a system could require an MDEQ discharge permit.

- Requiring future lot splits and subdivisions to maintain an adequate minimum lot size that would permit use of a conventional septic system. In most soils of Glen Arbor Township this would require a minimum lot size of at least an acre and probably larger for commercial developments, especially restaurants.
- Requiring prior to sale of property that every septic system be inspected and if substandard, brought up to code before the sale can be completed.
- Linking to the sewage treatment system at the Homestead. This is probably the least likely option as the Homestead must be willing, there must be available capacity or capacity must be able to be cost-effectively added, the cost of running lines with pumping stations must be acceptable, and a discharge location must be found to accommodate additional waste.
- Construction of a municipal waste treatment system with a waste treatment plant.

Photo 5-3
Pristine Waters of Big Glen Lake



Photo by Mark Wyckoff

Natural Resource Protection

In overall area, Glen Arbor Township will forever have the majority of its natural landscape preserved in the National Lakeshore. If residents want to retain nature in the privately owned areas, to protect water quality of the lakes and rivers, and to sustain wildlife populations as part of the nature experience, they will have to be diligent in caring for the pure water and plant and animal ecosystems in the Township. See Photos 5-3 and 5-4. Glen Arbor ecosystems are highly sensitive, so will need special care.

The Glen Lakes Associations, the Leelanau Watershed Council, various conservancy groups and others are dedicated to monitoring the quality of Glen Arbor natural resources and are able to provide guidance on how to protect area natural resources.

Because nature is part of the scenery and quality of life in Glen Arbor Township, property owners need to plan to retain or enhance vegetation in the most visible places, such as along roads. This can be difficult as property owners often want to provide as much visibility of their home or business as possible. However, the construction of hundreds of new homes in the Township could drastically “suburbanize” the privately owned areas if property owners are not sensitive to

their individual role in preserving Glen Arbor quality of life. One denuded property along a road does not destroy the north woods visual character, but the fifth property within a mile of each other will have a substantial effect.

Glen Arbor Township should maintain a positive posture for saving existing trees and natural vegetation as an important development issue. Providing informative brochures and guidelines in cooperation with various local conservancy groups should reinforce the value of our natural resources.

Photo 5-4
Hatlems Creek



Photo by Terry Gretzema.

Bigfoot Development

By overwhelming margins, the biggest issue of concern to citizens at the August 2004 Town Meeting was the negative impact of large buildings on small lots, especially when located on the waterfront. The impacts can include a reduction in light and air to adjoining properties, in some cases the large mass buildings cut off views of the lake from public roads, or adjoining properties. They also have the strong visual impact of a developed site in an area otherwise characterized more by nature than by buildings. There may also be impacts from additional cars, noise, light, and activity associated with more intensively used sites. This is especially significant when contrasted with single family homes, which in Glen Arbor Township are always nearby.

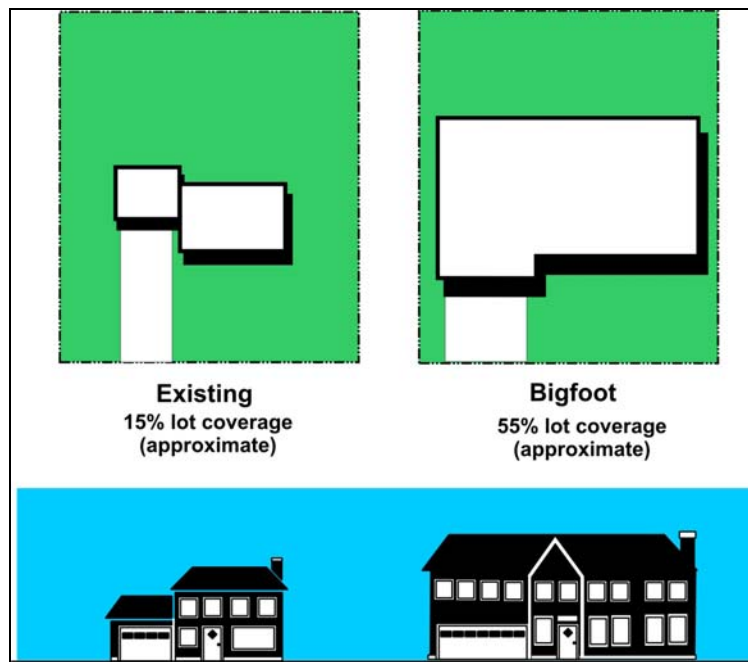
A single development at the end of Lake Street on Lake Michigan known as the LeBear development and several new large single family homes on small lots on Glen Lake are responsible for the major public concern over what is commonly called “bigfoot” (for big footprint) development. See Photo 5-5. The LeBear Development was constructed according to the zoning regulations then in effect. However, it has a height and mass that is much greater and a setback from the road that is much less, than any buildings nearby. This is characteristic of bigfoot development on individual single-family lots as well (see Figure 5-3).

Photo 5-5
LeBear Luxury Resort and Spa



Photo by Terry Gretzema

Figure 5-3
Comparison of Regular and Bigfoot Development



Graphic by John Warbach

In 2003, the Township amended zoning regulations to partially address the issue by establishing lot coverage requirements in the residential districts. However, it quickly became apparent this would not completely address the issue. As a result many drafts of a new “bigfoot” regulation were prepared before an approach was refined that prohibits building massing (relative to the lot size) while ensuring light and air for adjoining properties and reduces the risk of spread of fire. The new regulation seeks to ensure that the portion of buildings at the required side yard setback do not result in a solid mass up to the maximum permitted height of buildings. This is accomplished by preservation of an open plane above a 45 degree angle from a person standing near the side lot line to the top of the building. This provision does apply in all residential districts.

One action to prevent the kind of building massing associated with developments like LeBear, is to rezone properties zoned commercial in waterfront areas that are presently developed as residential. This will have the desired effect because multifamily development is a permitted use in commercial zones. Another is to reexamine waterfront areas zoned for multi-family development and reclassify into an exclusive single family zone. Both of these approaches are proposed in this Plan.

If these approaches do not have the desired effect, then reexamination of the current height limitation may be necessary. Currently the ordinance allows the roofline of buildings in all zones up to 40 feet in height. This is considerably higher than the more typical 28-35 feet maximum common in rural Michigan. As there are a number of residences that are presently built to the forty-foot maximum, there is some reluctance to change this requirement. Similarly, if the new “bigfoot” regulations do not adequately keep building mass proportional to the site and not overshadow abutting property on any side, then additional revisions to regulations may be necessary to preserve the northwoods character of Glen Arbor Township.

Exterior Design of Buildings

In the same vein, Glen Arbor Township should give serious consideration to developing business building guidelines that discourage the use of some materials on the exteriors of commercial buildings, and which encourage continuation of northwoods design in new commercial buildings. See Photos 5-6 and 5-7. Exterior building materials to be discouraged would include:

- Sheet metal, flat metal and other metal surfaces over much of the exterior
- Mirrored glass and glass block as a major design element
- Concrete block
- Other similar materials more in keeping with an urban or suburban character.

Exterior building materials to be encouraged would include:

- Log, rough cut and finished cut wood
- Indigenous rock and stone
- Wood or aluminum siding that looks like wood

- Other similar materials in keeping with a northwoods character.

Photos 5-6 Typical Northwoods Design

Photo by Terry Gretzema



Photo by Mark Wyckoff

In addition to northwoods designs, traditional coastal American designs like cape cod or variations of colonial, federalist or mountain designs may also be appropriate. The Township may develop a set of guidelines with encouraged design features. The Township working with the Chamber of Commerce and local architectural talent could develop useful design and material guidelines to maintain the local business character. The Grand Traverse Bay Region Development Guidebook should be consulted for ideas when preparing such a guidebook.

Infrastructure Improvement Needs

New Restroom and Garden on Old Fire Station Site

In our 2005 Master Plan reuse of the Fire Station property and the provision of public restrooms were the top two infrastructure needs. Mission accomplished! Thanks to the entire community plus a host of dedicated individuals and strong financial contributions, the Glen Arbor Garden/Restroom facility was completed and put in service with future garden maintenance endowment.

Photo 5-7
New Glen Arbor Garden/Restroom



Photo by Joanne Rettke

Photo 5-8
Boat Launch on Lake Street



Photo by Mark Wyckoff

Photo 5-9
Vehicles and Trailers Parked Along Lake Street



Photo by Mark Wyckoff

Public Boat Launch

The public boat launch on Lake Street in Glen Arbor village is a busy area during fishing and water recreation season. See Photo 5-8. Vehicle and trailer parking increase congestion on Lake Street in these periods. See Photo 5-9. No parking solution has been found. Twice in the past, serious attempts have been made by the Township to negotiate a launch location at Glen Haven. Although strongly supported by many groups, there has been some opposition to the idea. To date the National Park Service has not been cooperative in searching for a solution in the Glen Haven area. Based on this and the extensive changes recently made to the Glen Haven waterfront, it is clear the public boat launch will remain in its current location for the foreseeable future.

The Township should continue to monitor the congestion and parking near the current boat launch and implement any improvements possible. Further, if the National Park Service should consider a boat launch on their public land in the future, Glen Arbor Township should reconsider launch relocation.

Trails

As a whole, Leelanau County is home to a wide variety of trails and hiking paths. Sleeping Bear Dunes National Lakeshore has a number of unconnected trails meandering through wooded areas and sand dunes. The trail system on North and South Manitou Islands allow for incomparable hiking opportunities to see rare wildflowers, old farmsteads, and a wide variety of birds. The Leelanau Trail

winds 15 miles through the last of Leelanau County's railway corridors from Greilickville to Suttons Bay. The trail takes users over rolling hills, beautiful northern forests, orchards and meadows, and numerous streams, lakes, and ponds. Yet more could be done to improve biking, pedestrian and cross-country trails in Glen Arbor Township. Among the stated goals of the Township Recreation Plan, are the objectives of furnishing sufficient recreational facilities to serve the increasing population in the Township and to coordinate with the County and region to provide recreational facilities for citizens and visitors. Creating a network of trails in the Township that also link other parts of the National Park is one way to do this. This need was recognized in the 1984 Plan with the following observations:

"The character of the National Lakeshore attracts visitors who desire to experience the outdoors and the scenic nature of the Township. Glen Arbor is actually in the central part of the National Lakeshore with large sections beyond the Township to the south near the Platte River and to the north near Good Harbor Bay. Thus, there is the need for hiking, skiing and biking trails through the Glen Arbor area. Since private lands separate the park lands, a recreational path route through Glen Arbor Township should be designated.

The recreational path should serve three principal functions: (1) to provide a connection through the Township between sections of the National Lakeshore, (2) to provide for continuity and physical relationship between activity centers of the Township, namely the Dunes, Glen Haven, Glen Arbor, the Leelanau School and the Homestead, and (3) to provide a safe and enjoyable place to walk and ride bikes."

Based on citizen input received at a 2004 Town Meeting, there is substantial support for improving bicycle and pedestrian trails around Big and Little Glen Lakes (presently there are only narrow paved shoulders along the road) and from the Homestead and the Leelanau School through the woods to Glen Arbor. Other desired trail locations within the National Park include from the campground to Glen Haven with views of the bay and from the Homestead to Port Oneida through the woods and old fields. Connections off the road from Glen Lake south to Empire and into the National Park land in Benzie County are also desired.

While the paved shoulders of main roads are sufficient for bike trails in much of the Township at current traffic volumes, if volumes rise, the danger for bicyclists will rise appreciably. Already sections of road with 45-55 mph traffic pose significant risk to bicyclists, especially when younger children are involved. Leelanau County is one of the top destination locations for bicyclists in Michigan. A network of multi-season non-motorized trails separated from road pavement should be carefully planned and constructed. This will require cooperation between the National Park Service, the Township, MDOT, the County Road Commission and private landowners.

The Leelanau Scenic Heritage Route, LSHR, is a State designated Scenic Heritage Route following the Leelanau peninsula perimeter. It is coordinated by the Northwest Michigan Council of Governments and was developed by a large number of State, County Township citizens groups and individuals along with the Sleeping Bear National Lakeshore, SBNL. At the suggestion of the LSHR committee the SBNL embraced the concept of a non-motorized hard-surfaced trail which would generally parallel M-22 and M-109 starting at the south Leelanau County line at Manning Road north through Empire and Glen Arbor village and on to the County Road 651 at Good Harbor Beach,

The Sleeping Bear Heritage Trail, SBH, is fully on public land using SBNL property wherever possible and the State and County roads rights of way where necessary. No private land will be used. Environmental impact on the Park has been carefully minimized. Trail use safety for all hiking biking, skating and handicapped use was given full priority. The trail will be a minimum of ten feet in width and separated from motorized traffic as much as possible. Significant portions of the trailway will leave road right of way to maximize user safety. Increase trail scenery and link Park and countryside highlights together. The SBHT has been integrated into all recent public reviews and is a part of their long range plans. The first portion of the trailway to be built links the Dune Climb with Glen Haven and the DH Day Campground on to Glen Arbor village. The route plan is completed, a federal award of \$1.3 million was received, and construction was completed in July 2012. Glen Arbor has and will continue to support and cooperate with the trail's completion. This unique project was envisioned and encouraged in earlier Glen Arbor planning activities. It should provide significant benefits for residents, tourists and local business.

Traffic Safety

A traffic safety concern exists on M-22 as it exits the east side of the village. A restaurant complex, a boat livery, a convenience store and gas station and two retail stores generate heavy street parking and random pedestrian crossing of M-22. Tourists with children tend to hurry out from between parked cars and cross M-22, making frequent close calls with M-22 thru traffic. Every effort should be made, working with MDOT, to reduce this traffic hazard with future increased parking, marked cross walks and additional M-22 warnings and reduced speed limits.

Public Rights-of-Way

The original Glen Arbor Plat included several dedicated rights-of-way that have not been maintained by the public. Some of these may soon be needed for public purposes and may be difficult to use without controversy. The first are the two alley sized rights-of-way between Lake and Lake Isle Streets (with Manitou Boulevard in the middle). Presently there is no pedestrian or bicycle connection between these streets and each is a very long block causing walkers or bikers to

go a long way around to get from one to the other. Assuming there have been no infringements on these public-rights-of-way, and that they are in fact still publicly owned, it would improve the pedestrian character of the village if they were improved and maintained as a pedestrian/bicycle path, but not for vehicular access. This improvement is in keeping with the major investment in sidewalks the Township has made in the last three years and which have dramatically improved the safety and quality of movement for pedestrians. The other location in which sidewalks should next be constructed is from the Township Park on M-22 south to Lakewood Drive on at least the east side of the street and possibly on both sides. This will provide a pedestrian connection to this growing subdivision and better define the start of the village part of Glen Arbor Township. It will be necessary to go around several large trees to put sidewalks in here and doing so will add more interest to the path while protecting important tree cover. Within twenty years, sidewalks will also be an asset from County Road 675 to Oak St. on the north side (although a trail permitting bicycles would be better here because of heavy summer traffic and narrow road shoulders). Sidewalks will also be valuable from the western edge of the village along M-109 to Lake Isle on at least the south side of the street. Again, protecting existing trees will be important.

The second public right-of-way that may need to be used within the next twenty years is the unconstructed part of Pine Street to State Street. Every map of the village, including that used by the Glen Lake Sleeping Bear Chamber of Commerce, shows Pine Street going through to State Street. But it stops 50-60 yards short. This is unfortunate as many visitors do not realize there is public parking on Pine (which is one reason Pine Street parking is often underutilized during peak summer retail hours) and are dissuaded from searching for a proper parking space when going around the block means going around two blocks. If Pine Street were extended to State, not only would the street system be completed as originally platted (and the grid is the most efficient street system there is), it would open up substantial space for additional parking. If the existing width of the pavement on Pine were continued, with perpendicular parking for the full length, at least thirty additional parking spaces could be created. There is one major problem with this option. There is a natural swale that would need to be crossed and the Pine Street right-of-way is adjacent to dedicated conservation land south of the art colony. Any crossing of the swale would likely require a permit from the DEQ and the road design would need to be very sensitive to the wildflowers that live there and the seasonal wetland vegetation. This is a natural area that is already recognized for its value and function, and any road extension would destroy some of that value. As a result, this option should not be pursued unless the parking problem becomes much worse, and simpler, less costly options fail to meet the need.

Parking

The simplest ways to meet the immediate need for more parking on Lake Street from State to Western Ave. (see Photo 5-10) are to:

1. Restripe the parking area on Pine Street (it is very faded) and place a conventional parking sign (blue background with a white capital P and arrow pointing south down Pine). A second parking sign should be ordered (with a north facing arrow) and installed at the Township Hall to better let visitors know about parking behind the Township Hall (which is also very underutilized).
2. Widen the pavement on State Street from Lake at least to where the Pine Street right-of-way is (and possibly to Oak if necessary) and marking the pavement for parallel parking. See Photo 5-11. Businesses in the area should instruct all employees to park there first, once parking behind businesses is used up, freeing street parking for customers. This would add about 30 parking spaces and when combined with the option above, would make better use of about a hundred spaces in an area in need of additional parking.
3. Construct a walking bridge from State Street to the Pine Street parking area. This will make it more accessible to some users.

In general, if parking needs grow further, the Township should first look to widening existing streets and adding parking there, before investing in off-street lots. However, the character of Glen Arbor would be irretrievably altered if all unused space became parking lots. Some congestion and limits on parking are good, as it slows traffic, making the area safer for pedestrians. But if congestion becomes too bad because of inadequate nearby parking, then local businesses will lose customers, and the image of Glen Arbor will slowly shift from a desirable place that is fun and convenient to one which is desirable, but a risky prospect when it comes to finding parking within a convenient timeframe. Some visitors and potential future residents will not come back. Thus, additional parking needs must be periodically monitored and addressed with serious proposals, but providing more parking “at all costs” is neither desirable nor necessary. That said, future parking needs should be considered as new development takes place, and as businesses ponder future changes on their property.

It should always be remembered that any shortage of street parking exists only for a short period of time in the summer and for occasional special events. However, as the popularity of Glen Arbor grows as a destination, parking resources will continue to be stretched to its limits. A complete study of current and future parking needs should be conducted with solutions provided in keeping with Glen Arbor’s unique characteristics.

**Photo 5-10
Lake Street Parking**



Photo by Mark Wyckoff

**Photo 5-11
State Street Parking**



Photo by Mark Wyckoff

Affordable Housing

Typical Options

There is a need for affordable housing in the Glen Arbor area. Local businesses are primarily in the service sector: retail sales, restaurants, lodging and residential services including construction. It is very difficult for these workers, many of them seasonal, to find adequate housing close to their jobs. This is a disadvantage to both the workers and to their employers. The cost of residential property is very high, in part because much of it is waterfront.

Affordable housing is often provided in the following ways. These include:

- Manufactured housing. These can be either mobile homes or modular units, assembled on site. Manufactured housing is fairly common in the northwest region of Michigan on individual, rural lots, and less common in mobile home parks, where it is likely a sewage treatment system would be required. There is very little privately owned undeveloped land in Glen Arbor Township that is suitable for a mobile home park, and land values are high throughout the Township. This makes it unlikely a mobile home park would be proposed within the Township.
- Multi-family developments, with relatively small unit size. Apartments for low to moderate income families are scattered in cities throughout northwest Michigan, but are not very common.
- Older, smaller existing homes. Unless in a prime location, older, smaller homes can often be an affordable housing alternative. Making sure older homes are well maintained or meet modern building codes can be a problem. In a resort area such as Glen Arbor, small, older homes may have been built as summer cottages, and they may serve poorly as year around homes without substantial improvements that would drive up costs.
- New construction where building costs are low. Factors that contribute to lower building costs include lower cost land, building at a high density and access to public sewer and water. Public sewer and water is not available in Glen Arbor Township and land costs are very high.

None of these options are very viable in Glen Arbor Township. That suggests the need for affordable housing may need to be met outside the Township by working with neighboring jurisdictions.

Affordable Housing in Adjoining Jurisdictions

There is relatively little area zoned to accommodate mobile homes in the three township area of Cleveland, Empire and Glen Arbor Townships. There are no areas zoned for mobile home parks in Glen Arbor and no zoning districts permit mobile home parks by right. This is because there are no affordable parcels in the Township large enough and level enough for a mobile home park, and no public utilities available. Empire Township has an existing mobile home park on the south side of Little Glen Lake, but no other areas zoned for mobile home parks. The Recreation (REC) and Commercial Resort (CR) zoning districts in

Cleveland Township both permit mobile home courts as a use by right. The REC district is primarily designed for outdoor recreation, such as golf courses, tennis courts and ski areas. The CR district is designed primarily for lodging businesses. There are about 800 acres of REC district in Cleveland Township, but much of this is associated with the Sugar Loaf Ski Resort and Golf Course. There are about 130 acres of CR district in Cleveland Township, but these are in generally small pieces and are in prime locations next to inland lakes.

There is some provision for smaller homes within the three townships. Glen Arbor Township permits multiple family units as small as 480 square feet. Multiple family units are permitted in both the Business District and the R-V District, and there is substantial undeveloped land in each district. However, since there are no public sewers, multiple family use is a problem as a large septic field would be required and undeveloped lots in areas zoned to permit multiple family uses are few and far between.

Photo 5-12
Apartments above Manitou Mercantile



Photo by Mark Wyckoff

Thus it appears that affordable homes are not likely to be built in Glen Arbor Township in the typical fashion. However, the need can be met in several ways in adjoining jurisdictions. What can occur in Glen Arbor Township is the provision of affordable housing as apartments above businesses in the commercial district. This is already occurring to a limited extent, most notably in the Manitou Mercantile building. See Photo 5-12. As more commercial buildings are erected in the Township, apartments could be encouraged on the second floor, where the lot had adequate area to handle the septage. Over time, this could significantly

help meet some of the need for affordable housing in the Township. The balance of the need will have to be met in adjoining jurisdictions, and Glen Arbor Township should periodically meet with its neighboring jurisdictions to see what role it could play in helping to ensure this need is being met in the area.

Intergovernmental Relations

Adjoining Units of Government

It is very easy for governmental bodies or agencies of government to focus attention only on managing the lands and services they provide at the exclusion of attention on relationships with adjoining units of government. However, while local governments must manage the lands they own and services they provide, if they do not make an effort to regularly communicate with adjoining units of local government, future unexpected problems are likely, as are missed opportunities. This is of course, because a decision by one unit of government often has an effect on adjoining units of local government and vice versa. The Michigan Legislature has recently acknowledged the importance of intergovernmental cooperation in the planning arena, by requiring local governments to notify adjoining units of local government at the start of local planning projects and prior to adoption of new or amended plans. This was done for the last Glen Arbor Township 2005 Master Plan and will be done again for this revision.

Adjoining Townships, Glen Arbor and Empire Townships, have a history of active cooperation in everything from fire and ambulance service to libraries and there is no reason that cooperation should not continue into the future. This is an issue that will likely be of even greater significance in the later part of the next twenty years as the odds are growing that there will be an effort made statewide to consolidate local governments, probably by voluntary means. This will likely be driven more by fiscal considerations than ideology, as a structural budget deficit will not only continue to cut into the total state budget, but will especially hurt state revenue sharing and that in turn will reduce local ability to provide necessary services. Since Michigan has the third largest number of units of local government in the nation, and fragmentation of local governments can be shown to be fiscally inefficient when the area involved is relatively small, it is likely that efforts will be made to encourage local governments to consolidate with adjoining units of government. Such efforts are likely to be tied to fiscal incentives for consolidation. It may be useful for Glen Arbor Township to keep this in the back of its collective mind in case an opportunity comes up that requires a relatively quick decision (as occurred with the opportunity for school consolidation two years ago).

National Park Service

In the future Glen Arbor township needs to maintain a cooperative working relationship with the SBNL to successfully pursue projects such as ongoing discussion to maximize the use and value of the new Sleeping Bear Heritage Trail and finding potential land areas for a village septic system if required in the future.

Chapter 6 VISION, GOALS, OBJECTIVES & POLICIES



CHAPTER 6

VISION, GOALS, OBJECTIVES & POLICIES

VISION

Introduction

Following is a vision statement that describes Glen Arbor Township as residents in 2012 want it to be in the year 2025. The vision is organized into topic areas that separately focus on key elements of the community and the process of planning for and managing its future. What emerges when all sections are read together is a complete image of Glen Arbor as residents would like it to be in 2025 and beyond. Following the vision statement are goals, objectives and policies to chart a path for achieving the vision. These provide a clear direction for both short and long term decisions to achieve the vision.

When reading this vision, it is necessary to mentally “*transport*” yourself into the future. Thus, there are references “*back*” to the early 2000’s. This approach is intended to give the reader a clearer sense of the desired future. This statement was prepared based on a survey of local leaders and a Visioning Town Meeting conducted in 2003 and refined following subsequent Planning and Zoning Commission input and public input at two Town Meetings in the summer of 2004.

Proactive Planning and Sustainability

Glen Arbor has entered the third decade of the 21st century in a familiar position as one of the most desirable places to live and recreate within northern Michigan. Residents are reaping the benefits of planning and public commitments made years ago. The alluring characteristics of a north woods landscape of clean rivers and lakes, Great Lakes shoreline, fragrant trees, dunes, meadows and a small, compact village that have long attracted residents to Glen Arbor have not only been maintained over time, but enhanced.

Quality of Life: Impressions, Standards and Visual Character

When asked about Glen Arbor, residents use descriptive terms like “slow pace,” “quiet,” “attractive village,” “clean, clear water” and “beautiful forests and dunes.” Glen Arbor has a rustic beauty. The arts and a creative, active lifestyle also characterize Glen Arbor.

The most common landscape view in Glen Arbor Township continues to be forests, meadows, lakes and dunes. This is because settlement occurs in a compact pattern close to the village or as a linear residential neighborhood around the Glen Lakes which twinkle like a string of pearls at night. Even though the landscape has accommodated new housing, new rural

residences are seldom visible from scenic roads because of the retention of trees and other native vegetation.

The rural landscape does more than simply provide scenery. The benefits of nature to residents' mental well-being and the attraction for tourists are important. Woods, fields and swamps help with water filtration, maintaining biological diversity and provide habitat for wildlife. The Crystal River and tributary creeks as well as the Glen Lakes have natural vegetation along the shore to help protect water quality.

Glen Arbor is known as a walkable and bikeable community, providing safe connections, separate from roads when practical, between key activity areas such as the Homestead and Leelanau School, the village of Glen Arbor and major attractions at the National Park. Within the village, residential areas and the businesses are connected by sidewalks. As a result of its increased walkability, the more physically active Glen Arbor residents have enjoyed a greater level of health than was common early in this century. While most roads have paved shoulders that are used as bike lanes, some non-motorized trails go cross country, opening more of the scenic beauty of the Township and the National Park to enjoyment by residents and visitors.

New residential and commercial development in the Township is limited as most of the land in the Township remains in public ownership, reinforcing the north woods visual character. Nearly all of the private land in the Township has been developed.

Photo 6-1
Tourists Enjoying the Dunes



Photo by Mark Wyckoff

Quality of Life - Recreation

The Glen Arbor community has long held recreational opportunity as an important aspect of quality of life. The elderly and handicapped enjoy increased access to Township facilities and sites in the National Park compared to two decades ago.

Citizens enjoy fishing, canoeing and kayaking on a pristine Crystal River. Swimming and boating on Glen Lake is still of the highest quality.

Quality of Life: Education

The schools continue to provide an excellent K-12 education and students continue to score among the highest in the state on achievement tests. Opportunities for continuing education for all ages have been enhanced. The population is computer literate and uses the best available high-speed telecommunications.

Economic Development - A Glen Arbor of Opportunity

The village in Glen Arbor continues to seek compatible new businesses and has expanded beyond just a summertime economy. Tourism is still the primary industry, but businesses are somewhat more diversified since more of the population lives in the Township year around. The land devoted to commercial development in Glen Arbor is adequate to serve the residential population and tourists.

Glen Arbor leaders understand that a healthy tourism economy includes affordable housing. However, there is little space for higher density housing in Glen Arbor Township and septic waste disposal presents even more challenges. As a result, the Township has worked with adjoining jurisdictions to be sure this need is met and new businesses have built apartments above the retail shops helping to meet the need for housing for workers in tourist businesses.

Over the past twenty years, developers have worked with local officials to build or rebuild responsibly, fitting into the visual character of Glen Arbor, while protecting neighborhoods and sensitive environments. Where the visual character, sounds, dust, smells and level of activity of commercial development would not be compatible with residential neighborhoods and important views of open space, they were separated or buffered to minimize conflicts. Where commercial uses serve neighborhood residential needs, they were accommodated adjacent to residential neighborhoods, with architectural design and layout that fits the character of the neighborhoods.

Photo 6-2
The Glen Lakes from the Overlook on Stocking Drive



Photo by Mark Wyckoff

Village

Glen Arbor officials long ago recognized that the village is important to the vitality of the community. To remain vital and “alive”, the village must be a place where citizens and businesses want to be. In achieving that end, Glen Arbor leaders recognized they had a solid historical, cultural and visual heritage on which to build. Using that heritage as the foundation, a number of initiatives were undertaken which together have created the results evident today. The village has been retained and is continuously rejuvenated as the center for township residents and most of the business activity.

The downtown maintains its unique and appealing, northwoods visual character with new buildings that capture the human scale, level of detail and compact arrangement of structures from various periods. Structures and places of historical and architectural significance have been renewed and serve as reinforcing elements of visual character.

The village remains a small, vital, exciting and active place where sidewalks are lined with shops and full of people in the summertime. New commercial buildings have affordable rental units on the second floor. Improved on- and off-street parking helps reduce congestion, improves traffic safety and reduces the visual intrusion of the automobile on the character of the village.

Friendly, Cooperative Community

Glen Arbor business, citizen and township leaders long ago recognized that working together was critical to the long-term vitality of Glen Arbor Township. This characteristic of the people of Glen Arbor still remains strong today. Civic groups also play an important role, assisting in keeping Glen Arbor clean, attractive, and healthy with a sustainable environment and positive community spirit. Volunteer participation in community events is high, as is voter registration and voting rates.

Glen Arbor is a friendly and caring place to live and visitors feel the hospitality. The community is supportive of its citizens and helps provide constructive guidance. Members of all generations of the community share in its identity. Both cultural and natural resources are preserved through wide community support by citizens who understand the value of, and principles of preservation. Homes remain well repaired and cared for while village businesses have a quality, northwoods appearance.

Leaders work to encourage a high level of citizen involvement from both residents and nonresident property owners. In return, community leaders are responsive to the direction expressed by citizens. Leaders uphold the public's trust when enforcing regulations that protect the environment, implement the Future Land Use Plan and Zoning Ordinance and otherwise act to enhance the public health, safety and welfare.

Infrastructure

Good quality roads help move people and goods around the Glen Arbor community and access management has helped preserve the public investment in roads. Traffic safety has been improved by 4-way stop signs at M-22 and M-109 along with marked pedestrian crosswalks.

By developing innovative approaches to handling sewage from small clusters of users that protects water quality, Glen Arbor has demonstrated the capacity to protect water quality on par with any small community in Michigan.

Intergovernmental Coordination

Glen Arbor Township has developed a close working relationship with the National Park Service, and works cooperatively to address common issues, such as traffic and access to natural resources.

Close coordination and cooperation with other jurisdictions has significantly contributed, not only to the success exhibited by Glen Arbor over the last twenty years in achieving its long term goals, but also to that of the entire region as one of the most popular living, working and recreational areas in the entire State.

GOALS, OBJECTIVES & POLICIES

Introduction

The goals, objectives and policies that follow were based on the results of the visioning session held in Glen Arbor Township in August 2003 and a survey of local leaders. Goals, objectives and policies are organized by broad categories: General, Natural Resources, Residential Use Areas, Business Use Areas, Economic Base and Service Industry, Vehicular and Pedestrian Movement, Community Facilities, Governmental.

Goal: Goals are broad-based statements of intent and establish the direction for the Glen Arbor Future Land Use Plan. Goals could generally be thought of as the desired "ends" of successful implementation of the Future Land Use Plan.

Objective: Objectives are the stated "means" of achieving each goal, or the tasks to be carried out in the process of realizing goals.

Policy: Policies serve as a guide to decision-making that ultimately affects the outcome of various objectives. Decisions affected by policies ideally contribute to successful implementation of the Plan's goals and objectives. Many of the policies in this Plan will require regulatory or program changes at the County and local level in order to be implemented.

General

Goal: Develop and maintain a distinctive identity as a small, self-sufficient, highly desirable waterfront community with a broad base of economic activities within a uniquely beautiful area.

Objectives:

- Adopt and periodically update an environmentally sensitive yet imaginative Future Land Use Plan and a Zoning Ordinance that uses incentives to achieve key objectives of this Plan.
- Encourage land uses that create a visibly pleasing, coherent and workable environment while protecting the area's unique natural attributes and preventing pollution.
- Establish and maintain a close and cooperative relationship with the major public and private enterprises within the community so as to maximize the benefits the community derives from their presence while minimizing their adverse impacts.
- Encourage new development that will be consistent with the Future Land Use Plan, will enhance the quality of life in the community and will improve year-round economic conditions.
- Implement the Future Land Use Plan, Zoning Map and Zoning Ordinance and administer and enforce the zoning ordinance in a way that is fair, consistent, efficient and economical.

It is the Policy of Glen Arbor Township that:

- The Future Land Use Plan will be the guiding document for addressing land use and infrastructure issues in the Township.
- The Future Land Use Plan will be a “living” document, in that it will be actively utilized to make land use decisions and will be thoroughly reviewed at least once each five years and updated as needed.
- The Zoning Ordinance and Zoning Map will reflect the guidance of the Future Land Use Plan.

**Photo 6-3
Sand Dune**



Photo by Mark Wyckoff

Natural Resources

Fundamental Goal: Land use and infrastructure decisions in the Township shall be made in a manner that meets identified needs consistent with local, County, State and Federal laws and gives high regard to protecting the quality of the area’s unique natural resources and pristine environment.

Goal 1: The clarity and quality of the water and the condition of the banks and shores of rivers, lakes and streams are the same as or close as is feasible to pre-settlement conditions.

Objectives

- Watershed associations that encompass all lakes, rivers and streams in Glen Arbor Township will be encouraged to be maintained with the purposes of:
 - Monitoring the quality of the water and other ecological factors
 - Educating citizens regarding lake ecology issues such as fertilizer runoff, bank and shoreline protection, the need for safe septic systems, etc.
 - Developing watershed management plans to recommend solutions to water quality problems.
 - Monitoring any destructive, disruptive or illegal activities of lakeshore residents and visitors, and working with State, County and Township officials to identify and correct problems.
- Waterfront development occurs in a manner that does not completely block views of the water from public roads.
- Waterfront property owners on lakes and rivers will enjoy privacy while public access to the water is retained.
- Encourage natural greenbelt setbacks on all rivers, streams and lakes.
- Encourage landowners to provide natural vegetation buffer strips along all rivers, streams and lakes.
- Provide education and increased enforcement for the proper installation of erosion control techniques.
- Limit impervious surfaces (parking lots, driveways, roofs, etc.).
- Road and trail crossings of rivers and streams should be by bridges instead of culverts where feasible.

It is the Policy of Glen Arbor Township that:

- Each watershed planning group will be encouraged to continue to monitor water quality in each of the major water bodies for a variety of parameters that indicate the health of the lake for body contact, fishing, boating and water sports, appearance and odor. Results provided to the Township will be shared with the public on the Township web site.
- The Glen Arbor Township Planning and Zoning Commission will monitor the effectiveness of setback requirements and use of vegetative buffers for lake, river and stream shorelines and if necessary, strengthen regulations to protect water quality.
- The Glen Arbor Township Planning and Zoning Commission will review and where necessary, revise side yard setback and other provisions of zoning ordinances to maintain the space between structures along waterfronts so light and air flow easily between buildings, so views of the water can be retained by adjacent structures and from a public road, so structures do not become too massive relative to the lot size and so that chance of rapid fire spread in dense areas is diminished.
- The Glen Arbor Township Planning and Zoning Commission will examine the setbacks of each existing principal structure on lots which front on Lake Michigan and compare to: FEMA floodplains, the current required setback in

the zoning ordinance, and existing setbacks of adjoining principal structures. The Commission will then make a determination as to whether or not a deeper zoning setback should be established for property along Lake Michigan, and/or whether a system to average setbacks based on the setbacks of adjacent principal structures, or some other approach should be used instead.

- The Glen Arbor Township Planning and Zoning Commission will recommend adoption of changes in site plan review standards that promote bridged crossings of rivers and streams instead of culverts.
- The Glen Arbor Township Planning and Zoning Commission will recommend adoption of changes in the Zoning Ordinance to limit impervious surfaces in the Township.
- The Glen Arbor Township will work with watershed and lake associations to encourage landowners to limit the application of fertilizers containing phosphorus within 100' of lakes, rivers, drains and streams.
- Require all septic systems to be inspected prior to sale of homes and businesses and brought up to code if found substandard.

Goal 2: Groundwater in Glen Arbor Township is not contaminated nor threatened.

Objectives

- Sites of contaminated groundwater will be de-contaminated as required by county, state and/or federal authorities.
- Sites where groundwater is threatened with potential contamination will be closely monitored and threats removed as required by county, state, and/or federal authorities.
- Groundwater contamination violators will be required to restore contaminated sites and remove plumes of contaminated groundwater as required by county, state and/or federal authorities.
- Property and business owners will be provided educational opportunities to learn how to protect groundwater from contamination.
- Existing and future abandoned wells will be identified and properly capped.

It is the Policy of Glen Arbor Township that:

- Glen Arbor Township will urge the Benzie-Leelanau Health Department to conduct groundwater education programs for local officials and business owners.
- Glen Arbor Township will promote action by the Department of Environmental Quality to cap abandoned wells.
- Glen Arbor Township will urge the Benzie-Leelanau Health Department to work with the Department of Environmental Quality and County prosecutors to insure the clean up of sites of environmental contamination.
- Glen Arbor Township will adopt groundwater protection standards as part of its site plan review standards in the zoning ordinance.

- Glen Arbor Township will urge clusters of landowners with existing septic system problems or potential problems to explore shared alternative treatment systems.

Photo 6-4
Sleeping Bear Bay Glimmers on a Cloudy Day



Photo by Terry Gretzema

Goal 3: Wetland functions are preserved in Glen Arbor Township.

Objectives

- Wetland delineation by a certified wetland specialist will be required for each permit application of a property containing wetlands.
- Provide realtors, developers, builders, planning and zoning commissioners and elected officials with educational sessions on wetland preservation.
- Provide educational materials, including design guidelines, for new and existing property owners on the actions they can take to protect sensitive environments and water resources.
- Require that prospective buyers be informed of regulated environmental characteristics of their property.
- Ensure all new land divisions within the Township contain only land with sufficient area for a structure that can be built upon without disturbing wetlands or encroaching on natural features setbacks.

It is the Policy of Glen Arbor Township that:

- The Glen Arbor Township Board will adopt wetland and natural feature protection ordinances. These ordinances will:
 - Require properties on which there are wetlands to have wetlands delineated by a certified wetland specialist as part of the permit and site plan review process.
 - Require that in all subdivisions of land, wetlands and other sensitive natural features (such as endangered plant habitat) will be excluded from division and remain as designated open/conservation space.
 - Require that all land use permits indicate whether there are wetlands on the property, where they are and what measures are necessary to protect them.
 - Require a minimum 25' greenbelt and setback from wetlands and adhere to any other standards that are more restrictive.
 - Prohibit fill, dumping, excavation and foundation building within wetlands, sensitive natural features and the setbacks from natural features, unless there is mitigation of disturbed wetlands per State standards.
- The Glen Arbor Township Planning and Zoning Commission will work with the Conservation District, NWMCOG and other interest groups to prepare and distribute educational materials about Glen Arbor Township wetlands for residents and visitors.
- The Glen Arbor Township Planning and Zoning Commission will work with the Conservation District, NWMCOG and other interest groups to prepare and distribute design guidelines for property owners and developers on how to develop and manage properties in ways that protect wetlands.
- Property assessments will be adjusted downward on property that is largely unbuildable due to sensitive natural features such as wetlands.

Residential Use Areas

Goal 1: New residential development is of higher quality and is constructed in locations consistent with this Plan and the Township Zoning Ordinance.

Objectives:

- Maintain high quality residential development throughout the Township.
- Maintain a system of pedestrian and auto-free paths or lanes that connects residential areas with public facilities and with the village of Glen Arbor.

It is the Policy of Glen Arbor Township that:

- All new residential development shall occur in areas planned for such use, and shall conform with the requirements of the Zoning Ordinance.
- All Health Department requirements for well and septic waste disposal must be met at all times.
- Apartments (either free-standing buildings or over businesses) should continue to be permitted in the village Business District, or in Commercial Resort Districts.

- Where parcel size is large enough, new residential development should be clustered to protect sensitive natural features or open space, and an incentive in the form of limited higher density and/or exceptional design should be used to encourage cluster development.

Photo 6-5
Tree Covered Road



Photo by Terry Gretzema

Goal 2: Land is not divided into parcels of such size and shape that they negatively affect transportation, the environment, provision of services by local governments and rural character.

Objectives:

- All land divisions are reviewed and approved by the Township.
- Appropriate land division standards prevent the creation of unbuildable lots or those that create traffic hazards, harm the environment, limit existing residential, commercial, or forestry activities, create premature public service burdens or contribute to the destruction of rural character.
- Density based zoning will be permitted on large lots to cluster development on a portion of the parcel and leave the rest in permanent open space.

It is the Policy of Glen Arbor Township that:

- Support efforts to revise the Land Division Act to provide greater local control of land division and permit platting on a faster basis with adequate public protections than is presently permitted.
- The Township will maintain appropriate zoning standards which permit rural clustering rather than relying simply on a large minimum lot size to protect rural character.
- All new land divisions will be reviewed to ensure each lot has sufficient buildable area to meet local zoning and Health Department regulations prior to approval.

Goal 3: Residential development fits the scenic, rural character of Glen Arbor Township.

Objectives:

- New residential subdivisions, site condominium projects and individual land divisions maintain permanent open space where there are sensitive environments, as well as provide greenway, trail and wildlife corridor opportunities along roadsides and water bodies.
- Residential development is designed to protect roadside vegetation and scenic quality.
- Design guidelines (such as the **Grand Traverse Bay Region Development Guidebook**) are used to educate landowners about how residential development can protect scenic quality through vegetative buffering and other techniques.
- Preservation of open space and the natural environment is encouraged through coordination of County and Township planning and zoning efforts that discourage inappropriate land fragmentation.
- Utility lines are placed underground where feasible or relocated in separate corridors away from roads.
- Lighting is down directed and minimized to preserve viewing of the night sky.

It is the Policy of Glen Arbor Township that:

- The Township Planning and Zoning Commission will prepare residential development standards that set aside open space and employ vegetative buffers along roadsides and where there are sensitive environments (such as wetlands, dunes and hillsides), along greenways and potential trail and wildlife corridors. These standards will be incorporated as part of site plan review, cluster ordinances, conservation subdivision regulations, site condominium regulations and planned unit development regulations.
- The Township will adopt, implement and maintain, coordinated zoning, site condominium, subdivision, private road and lot split regulations to ensure safe access to all properties.
- The Glen Arbor Township Planning and Zoning Commission will help develop and distribute design guidelines that illustrate for property owners how to manage roadside areas of their properties to enhance scenic quality. This

would include guidelines on vegetation, access control, signs, hillside and shoreline development.

- The Glen Arbor Township Planning and Zoning Commission will enforce regulations for lighting that encourage shaded down-directed lights and limit or prohibit upward-directed lights.

**Photo 6-6
New Home**



Photo by Terry Gretzema

Goal 4: Provide for a broad range of housing opportunities that respond to the varying economic, family and lifestyle needs.

Objectives:

- Increase the supply of affordable housing within and adjacent to Glen Arbor Township.

It is the Policy of Glen Arbor Township that:

- The Township will permit residential units above commercial and office uses in the village, and work with adjoining units of local government and the County to ensure an adequate supply of affordable housing in a wide variety of dwelling types within the area.

Goal 5: New residential development enhances the village and is compatible with historic sites.

Objectives:

- Encourage rehabilitation of existing older homes, reinforcing and strengthening the character of residential neighborhoods.
- Encourage new residential development that creates a sense of place and achieves harmony with existing development.
- Establish guidelines for protection of historic sites and structures in the Township.

It is the Policy of Glen Arbor Township that:

- The Township will encourage new residential development to be consistent with the existing character of homes in the Township.
- The Township Planning and Zoning Commission will develop and promote design guidelines for residential development that identifies local architectural character.
- The Township will encourage rehabilitation of older homes and direct landowners to County and State programs designed to assist with this goal whenever warranted.
- The Township Planning and Zoning Commission will continue to work with local interest groups to assist in protecting historic structures within the Township.
- The Township Planning and Zoning Commission will support efforts to develop design guidelines for historic preservation within the Township.

Goal 6: Encourage improvements to existing development and new development along roads that will preserve the rural and scenic character that supports the tourist economy of Glen Arbor Township.

Objectives:

- Ensure that as road improvements are made, rural roads remain rural in character (instead of taking on a suburban appearance, such as occurs by cutting all trees within the right-of-way).
- Consider encouraging the County Road Commission to use the authority under the Natural Beauty Roads Act to designate and protect roads with special scenic beauty.
- Promote guidelines such as those in the **Grand Traverse Bay Region Development Guidebook** regarding access, signs, land division and rural character.
- Limit the frequency of driveways along scenic roads (with a rural character that supports tourism) and heavily traveled roads (to promote safety) by encouraging compact and cluster development.

It is the Policy of Glen Arbor Township that:

- The Planning and Zoning Commission develop a system of “Rural Roads” which are to be maintained into the future for their scenic/aesthetic attributes, including:
 - Encourage the use of setbacks and vegetative screening along rural scenic corridors.
 - Limits on the number of driveways and ensure proper spacing between driveways by working closely with the Leelanau County Road Commission and Michigan Department of Transportation.
 - Prepare rural road design guidelines and ordinances.
- The existing Heritage Route designation should be fully utilized to preserve the rural character of land adjacent to M-22/M-109 and to help finance non-motorized trails along the road.

**Photo 6-7
Boone Docks Restaurant**



Photo by Mark Wyckoff

Business Use Areas

Goal: Businesses grow while retaining the character of the community.

Objectives:

- Except for existing marinas and existing resorts, commercial activities are located in the village, convenient to residents and visitors.

- Commercial development is coherent, visually pleasing and provides for safe and efficient traffic flow.
- Mixed uses are encouraged within the village Business District.
- On-street parking is expanded in and adjacent to the busiest commercial areas.
- Off-street public parking is available to reduce congestion on busy streets and improve safety.

It is the Policy of Glen Arbor Township that:

- Commercial activity that fits the character of the community will be encouraged.
- The amount of land zoned for commercial development should continue to reflect a balance with the limited residential development area.
- Except for existing resorts and marinas, commercial areas should be compact and within the village, so that strip commercial development does not destroy the visual character of the community and create congestion.
- Commercial areas should continue to be located where they are convenient for visitors and residents while protecting the character of the community and the environment.
- Commercial development and redevelopment should be designed to provide for safe and efficient traffic flow with a limited number of driveway accesses and shared parking lots wherever feasible.
- Locations for off-street parking will be sought and existing streets will be more efficiently used for parking.
- Public restrooms will continue to be provided in the village.
- Sign ordinances will continue to prohibit off-premises advertising.
- Readable, non-garish signs will be strongly encouraged for use by individuals and businesses in Glen Arbor Township. Wood signs and down-directed lighting are strongly encouraged.
- A dark, night sky will be preserved in Glen Arbor Township.
- The conversion of single family, owner-occupied residences to short-term rental use should be studied and regulations adopted if warranted, to prevent nuisances on adjoining residential properties.

Economic Base and Service Industry

Goal: Maintain and broaden the tourist and service economic bases of Glen Arbor Township.

Objectives:

- Businesses catering to both tourists and year around residents locate in Glen Arbor Township.
- Private sector businesses and public entities, such as the Township, County and National Park Service collaborate on planning for business development.

- Existing and new commercial development contributes to the quality of life of the community, consistent with the Future Land Use Plan.

It is the Policy of Glen Arbor Township that:

- Glen Arbor Township encourages diverse businesses to locate in appropriate locations in the Township that meet the needs of both a seasonal and year around population.
- As the opportunity presents itself, Glen Arbor Township will develop and maintain private/public partnerships to foster business growth in appropriate locations.
- Glen Arbor Township will cooperate with the establishment of businesses or upgrades in existing businesses when located consistent with the Future Land Use Plan and Zoning Ordinance.
- The overwhelming bulk of commercial development in the Township will continue to be located in Glen Arbor village.
- Existing resorts and marinas will continue to be well maintained and upgraded as necessary to provide quality tourist services while minimizing negative impacts on abutting property.
- The Township will cooperate as appropriate, with adjoining units of local government and the County in monitoring the need for industrial development and in siting such facilities in the area given that there are no suitable locations, nor the necessary infrastructure to support such development in Glen Arbor Township.

Vehicular and Pedestrian Movement

Goal: Maintain a safe and simple circulation system to move automobiles, bicyclists and pedestrians.

Objectives:

- Transportation improvements including changes in traffic signs, road and intersection improvements, non-motorized circulation path development and parking improvements will be made consistent with this Plan.
- Off-street parking will be provided in new development in the village.
- Additional on-street parking will be provided in or near busy shopping streets.
- Non-motorized paths will be developed to help separate pedestrians, bicyclists, in-line skaters and cross-country skiers from roadways.

It is the Policy of Glen Arbor Township that:

- The Township will work with the Leelanau County Road Commission and Michigan Department of Transportation to fix inadequate traffic signs and unsafe intersections.
- Off-street parking will continue to be required of new businesses in the village and existing streets should be more efficiently utilized for parking.

- Non-motorized paths should be provided for safer pedestrian circulation in the village, to connect the village with residential areas, other businesses and area attractions, and to serve as a recreational facility for walking, running, biking, in-line skating and cross-country skiing.

Photo 6-8
Path to the Water



Photo by Terry Gretzema

Community Facilities

Goal: Limited public facilities will be improved to provide maximum possible use and enjoyment to visitors and residents.

Objectives:

- Quality fire and emergency services will continue to be provided at a high level of service for a rural community.
- Public restrooms will continue to be provided in Glen Arbor village during the summer season.
- The appearance of public facilities will fit the visual character of the community.
- A Lake Michigan boat launch will be provided in Glen Arbor. If other options appear more viable relocation of the boat launch will be evaluated.

It is the Policy of Glen Arbor Township that:

- The analysis of the need for public facilities in the Future Land Use Plan shall be used as a guide for the future development or rehabilitation of public facilities.
- Existing public buildings will be upgraded as necessary and re-used where needed to meet future needs.
- Public facilities will be designed or upgraded to fit the visual character of the community.
- Public restrooms serving summer season visitors will be provided in the village in facilities consistent with the character of the Township.
- The Township will locate future public buildings within walking distance of the village residents wherever possible.
- Wherever feasible, public agencies will utilize existing, available sites or buildings instead of building on undeveloped land outside of the village.
- The Township will promote the development of path/sidewalk systems to link public areas to residential areas.

Photo 6-9
Tennis Courts are Rarely Empty During the Summer



Photo by Terry Gretzema

Governmental

Goal: Glen Arbor Township has a cooperative and supportive working relationship with neighboring townships, Leelanau County, the state and the National Park Service.

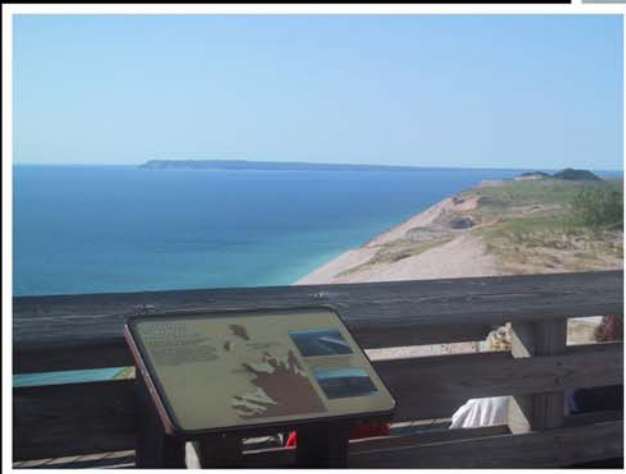
Objectives:

- Glen Arbor officials periodically meet with officials from neighboring townships and the County to identify and address issues of mutual concern.
- The Sleeping Bear Dunes National Lakeshore administration and Glen Arbor Township develop a close working relationship based on mutual interests and mutual respect that results in the best possible service to their respective constituencies.

It is the Policy of Glen Arbor Township that:

- Glen Arbor Township officials interact mutually with other jurisdictions and agencies as needed.
- Glen Arbor officials and staff of the Sleeping Bear Dunes National Lakeshore regularly meet to discuss issues of common interest to both parties.
- Glen Arbor Township and the Sleeping Bear Dunes National Lakeshore establish a set of goals, objectives and, where feasible, policies to deal with issues of mutual concern.
- Glen Arbor Township officials seek the assistance of elected officials at various levels of government to represent or help support the Township when cooperative intergovernmental efforts fail.

Chapter 7 FUTURE LAND USE



CHAPTER 7 FUTURE LAND USE

This chapter presents information on future land use in the context of existing land use in Glen Arbor Township. It begins by describing existing community character by subarea of the community, and then describes likely and desired future land use changes. The final section presents a summary of the elements of the Future Land Use Map.

Preservation of Community Character

Community Character: The image of a community or area as defined by such factors as its built environment, natural features and open space elements, type of housing, architectural style, infrastructure, and the type and quality of public facilities and services. Moskowitz and Lindbloom. **The Latest Illustrated Book of Development Definitions**, Rutgers University, 2004, p 83.

Glen Arbor Township is a community with unparalleled northwoods character, although that character is quite different in different parts of the Township. A primary purpose of the Glen Arbor Township Future Land Use Plan is to provide guidelines for the treatment of the areas of the Township which have varied characteristics. The orientation of the Plan is toward preservation of these characteristics rather than to accommodate significant potential development, as is the case with most local land use plans. Glen Arbor Township is the site of unique characteristics which must be preserved, or disturbed as little as possible, in order to maintain the basic attributes which make the Township a highly desirable place to visit and in which to live. This Plan provides the basis for preserving the outstanding natural features of the Township while accommodating limited future development. That means that when development does take place, it should be done with great concern for the natural and cultural features of the Township, both public and private, which make it unique. Success will mean that both the existing generation and future generations will be able to enjoy the natural landscape and other amenities of the Township.

Community Character by Subarea

One of the most fascinating and enjoyable aspects of Glen Arbor Township is the beauty that it's varied topography and waterfront lands offer. When the sun shines, few other places in the world offer as much splendor. Many of the spectacular scenic views available in the Township are captured in photographs used throughout this Plan. Following is a brief description of the Township by subarea. First the existing character is described, then observations are made about how that character should be maintained as change occurs in each subarea.

M-22/M-109/675 Corridors

The overwhelming bulk of what residents and visitors to Glen Arbor Township see of the Township is from the major public roads. Only a small number of people have seen the Township from the air, or by boat in Lake Michigan or the Glen Lakes.

M-22 at the south end of the Township winds from a marina and small resorts at the Narrows Bridge into the village. See Photo 7-1. It is an elevated residential corridor with a mixture of cottages and year-around homes under a tree canopy with frequent views of Big Glen Lake. Alligator Hill frames this corridor (as well as the homes along Day Forest Road on the north side of Little Glen Lake). The primary changes in this subarea are likely to be continued replacement of cottages and smaller homes with larger, year-around homes. There is a strong desire to maintain existing vegetation, and especially the tree covered highway as this development occurs.

Photo 7-1
Looking East across Big Glen Lake from the Narrows



Photo by Mark Wyckoff

Where M-22 meets M-109 is the heart of the village of Glen Arbor. The village is a small tourist-oriented northwoods town. See separate description of the village later.

On the east side of the village, M-22 winds past the entry to the Leelanau School and the Homestead, before passing under a canopy of trees that serves as a passage into the historic agricultural area known as Port Oneida. This area is largely in National Park ownership and efforts to maintain its rural agricultural character and heritage are well underway. It is desired that these efforts be maintained and expanded, if feasible, to ensure this character and its heritage is preserved for the benefit of future generations.

M-109 on the west end of Little Glen Lake winds north past the Sleeping Bear Dune Climb area, perhaps the best known natural feature in the Township. It also goes past the historic D.H. Day farm almost into Glen Haven and then turns east along nearly flat terrain into the village. See Photo 7-2. The few privately owned parcels along this corridor are concentrated on both sides of M-109 along the west end of Little Glen Lake and as one gets closer to the village, along Lake Michigan. Again, the primary changes in this area are likely to be continued replacement of cottages and smaller homes with larger, year-around homes. The few undeveloped lots are likely to be developed over the next twenty years. There is a small motel which is the only nonresidential property in this area.

Photo 7-2
D.H. Day Farm



Photo by Terry Gretzema

Eastbound County Road 675 from M-22 provides stunning views of the clear shallow waters of the Crystal River. The sandy bottom and varied vegetation along the river are easily viewed from the road and the many river crossings that exist between M-22 and Fisher Road. Only a few private structures remain along this segment. At Fisher Road is a private marina at the headwaters of the Crystal River and Fisher Lake (which is linked to Big Glen Lake). From Fisher Road to the south end of the Township on 675 is a mixture of tree-covered roadway, waterfront residences with occasional views of Glen Lake and short strips of second tier residences. There is also a motel and restaurant on the east side of the road. Again, the primary changes in this area are likely to be continued replacement of cottages and smaller homes with larger, year-around homes. The few undeveloped lots are likely to be developed over the next twenty years.

Much of the undeveloped land for residential lots in the Township is 2nd tier. That means it is not on the waterfront side of the road, rather it is on the other side of the road. For example there are a number of lots along M-109 west of the village, and along Northwood Drive where the land has been split and is only awaiting a buyer before new single family homes are constructed. These areas are tree lined, and it will be important to ensure retention of the bulk of the trees as land is cleared for building sites, or the character of the area will suffer greatly.

National Lakeshore

The Sleeping Bear Dunes National Lakeshore with bluffs rising 450 feet above Lake Michigan surrounds most of the private land in the Township (see Photo 7-4). Among the most notable features within the Township include the Dune Climb, Stocking Drive with many scenic overlooks, the historic unincorporated village of Glen Haven, many trails such as Alligator Hill and Pyramid Point, and South Manitou Island. These lands will be forever protected as part of the National Park system. The only significant changes to the geography of the Park expected over the next twenty years are the acquisition, as the opportunity presents itself and funds are available, of most of the few remaining private parcels already surrounded by National Park land. Additional desired changes include adoption of a new Park Management Plan that preserves all the existing access in the mainland parts of the Park, the construction of new non-motorized trails, and an expansion of the preservation efforts at Port Oneida. These issues are all described in more detail in Chapter 5.

Photo 7-4
Looking Down the Sheer Face of a Sand Dune



Photo by Mark Wyckoff

Lake Michigan Shoreline

The Lake Michigan shoreline throughout all the National Park property has reverted from single family homes to a natural state. Except for the boat launch in Glen Arbor, the LeBear development, the Leelanau School, the Homestead, and other smaller resorts, nearly all the rest of the shoreline is single family homes on large lots. Very little land remains that is not already split at the minimum zoning requirements. This is high value property that continues to change from cottages to permanent year around homes. The trend to build homes on all remaining shoreline lots is expected to be complete over the next decade.

There is considerable public opposition to building mass and type along the Lake Michigan shoreline that is different from single family homes on large lots. See Photo 7-5. Viewed from Lake Michigan, single family homes largely blend into the trees along the shoreline, whereas, larger structures, like the LeBear condominiums, stand out in ways that are considered undesirable by Township residents. New single family homes should be constructed to blend into the shoreline and more intensive and larger mass uses like multifamily structures should not be permitted along the shoreline.

There are very few docks along the Lake Michigan shoreline and frequent high waves make it difficult to build seasonal docks on Lake Michigan. This helps maintain a natural appearing shoreline.

Photo 7- 5
Natural Vegetation Screens Buildings along the Shoreline



Photo by Terry Gretzema

Glen Lakes Shoreline

Similarly, almost all the shoreline along the Glen Lakes is already divided into lots that meet the 100 foot frontage requirement and have a residence upon them. This is also very high value property. While the depth of the lots varies dramatically, from very shallow along the west shore of Glen Lake to very deep along much of the north shore of both Big and Little Glen Lakes, much of the shoreline has a natural appearance. That is because most of the lots have large trees and few lots have large lawn surfaces. The trend of switching from cottages to year-around structures is far advanced and expected to continue. However, there is a public concern that lots should not get overbuilt with too much building mass. This can cut off views of the lake from adjoining residences, as well as from the public road. It can also result in water runoff problems.

Many shoreline lots have accessory structures which accommodate vehicles, boats, guests and family visitors, although some lots have separate structures for visitors. In some cases these are boathouses that are on the waterfront. Most residential lots have a single dock. Much of the shoreline is shallow to a great distance so docks are often long, with multiple boats moored on each dock.

The Township has keyhole zoning provisions, continual review of these ordinances should be conducted to keep a future back lot development from funneling a large number of lake users onto the lake through a single lakefront lot. We should review other keyhole provisions and consider strengthening our keyhole regulations.

At one time there were many small resorts around the Glen Lakes. See Photo 7-6. However, only a few remain. Small resort property is now usually more valuable for single family homes, either as part of a condominium arrangement (as per the original resort arrangement) or as separate lots. The conversion of the remaining resorts around Glen Lake to single family homes is likely over the next twenty years.

Photo 7-6
Two Small Resorts on Glen Lake



Photo by Mark Wyckoff

Crystal River Shoreline

Much of the Crystal River shoreline is within the National Park and will be forever protected. See Photo 7-7. Another large segment (the Oxbow by M-22 and 675 depicted on the right side of Map 7-4)) was recently protected through acquisition by the Township. The property is managed by the Leelanau Conservancy. The remainder of the private property on the Crystal River has widely spaced

cottages and year-around homes, mostly near the village of Glen Arbor, or flows past buildings in the Leelanau School and the Homestead. Homes and other buildings along the river that are a part of The Homestead and it's Woodstone development are connected to privately owned and operated wastewater disposal systems. Otherwise there are few places privately owned along the river where existing lots are large enough, or dry enough to permit the construction of new homes. Because of the environmental sensitivity of the clear shallow waters of the Crystal River, new homes need to be carefully sited and constructed to prevent degradation of the water quality. This will require minimal vegetation disturbance and the installation of few, if any, lawns.

**Photo 7-7
Crystal River**



Photo by Mark Wyckoff.

The Homestead

The Homestead is a well-known resort which is the largest single private development in the Township. It is designed as a planned development. It is accessed across National Park Service land on M-22, north of Glen Arbor and sits next to the Leelanau School. A total of 730 dwelling units are planned. Currently 461 condos; 76 site condos; 54 units in three subdivisions; 25 quarter, 16 eighth and 2 twelfth-ownership condominiums; and 90 units in three hotels. The quarter, eighth and twelfth ownership options are time shares for a certain number of weeks per year. The Homestead is zoned as a resort and is expected to be built out over the next twenty years (see Map 3-8).

Photo 7-8
The Inn at the Homestead



Photo by Terry Gretzema

The Woodstone Development is a part of the Homestead properties. It is a relatively new residential site condominium project east of Lake Street and north of Northwood Drive and southeast of the center of the village of Glen Arbor. It will have 96 units on about 100 acres. So far about 35 dwellings have been built and several more are under construction. The Woodstone Development is expected to build out within the next twenty years. See Map 3-9.

Miller Hill

The only other large privately owned, undeveloped area in the Township is up on Miller Hill on the east side of the Township overlooking Sleeping Bear Bay and the Glen Lakes. While there was little development on the Hill in 2004, more and more of the land is being divided and readied for sale. Slopes are steep and as a result, roads are very limited, are made of gravel and are not well suited for year-around use. There are serious questions about the ability to get fire trucks into many of the existing private driveways on the Hill. Miller Hill is also largely clay and erodes easily, posing serious problems for septic waste disposal and storm water runoff. As a result, future density should remain low. A special effort needs to be made to ensure that as new homes are constructed on Miller Hill, that significant attention is paid to removal of natural vegetation. The vegetation helps

Photo 7-9a
Homesites Cut Into Forest on Miller Hill



Photos 7-9a and 7-9b by Mark Wyckoff

Photo 7-9b
Clear cutting in Forest on Miller Hill



keep the soils on the Hill in place, and can also help screen the new development from being viewed on the Lake. In 2004 there was a clear string of homes on Miller Hill visible from the west side of Big Glen Lake, all of which could be screened with natural vegetation, if the home sites were carefully designed. It is especially important that new homes not be allowed to be constructed so as to be visible above the tree-line in order to preserve the natural appearance of the entire Glen Lake setting. This will require education of new owners and builders. Reference Photos 7-9a and 7-9b.

Village of Glen Arbor

The unincorporated village of Glen Arbor is not a separate political entity, but rather is an integral part of the Township. It has no formal boundaries, yet the residential portion is significantly larger than when the 1984 Plan was prepared. It is the area with the densest population and the bulk of the commercial and institutional uses in the Township. Lot sizes vary widely from very small in the oldest platted parts of the village to large along Lake Michigan and between Lake St. and M-22 south of State St. Commercial businesses are a mix of tourist and those serving the year-around population with most providing some services or products to visitors. Businesses include everything from retail clothing to toys and restaurants. During the summer the village is very busy and parking is sometimes a problem. However, part of the charm of the village is the high level of activity associated with busy shops and crowded streets. As noted in Chapter Five, there are measures the Township can take to increase parking in the village as the need and opportunity present themselves.

This concentration of retail and services within the village is very important to the long term viability of the village. It promotes efficient shopping and less vehicle use by keeping businesses within walking distance of convenient parking. It enhances sales by giving shoppers more opportunities and thus enhances the economic well-being of the businesses and in turn the commercial part of the village itself. The policies of this Plan, the Future Land Use Map and the Zoning Map are all designed to strengthen the function of Glen Arbor as a retail center for tourists and residents. As noted in the 1984 Plan, and reinforced again:

“Preventing scattered business locations in other parts of the Township helps preserve the natural features in these areas. It is the intent of this Plan that scattered business uses will not be encouraged. Examples of areas which will be subject to increased pressure for business use are on M-22 south of the village and east along the Crystal River. The trend is already in evidence. Expansion in both areas may begin to dissipate the village area’s strength.”

This Plan continues the policy of only allowing new commercial uses in the village on land zoned for that purpose, as there is ample land zoned for business use in the village that is presently underutilized.

Photo 7-10
Becky Thatcher Jewelry Shop Combines Home and Business

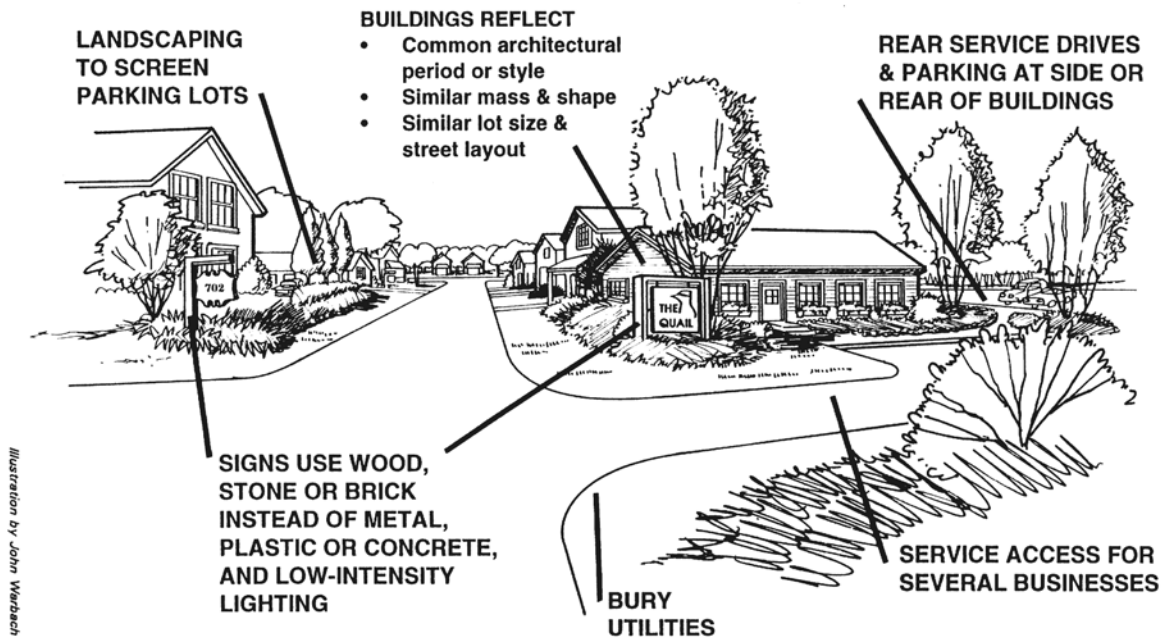


Photo by Terry Gretzema

There is a mix of homes and businesses in the central part of the village with a slow conversion of most homes to businesses. See Photo 7-10. This is in part a response to market demand, and in part because the Township Zoning Ordinance has most of the property in the village core in a business classification. In order to preserve adequate land that is well sited for business use, it is important that the Township keep the existing lands zoned business, whether they are presently used that way or not. The Zoning Ordinance permits dwelling units in the Business District only as part of a multifamily dwelling, or on the second or third floors above businesses. This has the benefit of providing more affordable housing opportunities for both year-around and seasonal residents, as well as for seasonal workers.

A key dimension of maintaining the character of the village is to encourage that as new buildings are constructed, they have certain common elements (as illustrated in Photo 7-10) and do not use certain materials. For example, buildings in the Business District should be encouraged not to have exteriors made of predominantly metal, glass, concrete, cement block, corrugated fiberglass or similar materials that are inconsistent with a northwoods appearance.

**Figure 7-1
Protection of Visual Character**



Source: Leelanau County General Plan

Natural Carrying Capacity

As indicated in Chapter Five, public sewers are not likely a feasible option in Glen Arbor Township, without a very high cost and little benefit to most private landowners. This is largely because existing septic systems are working fine except in some parts of the village. There are also serious issues associated with where waste treatment facilities could be constructed and where treated waste could be disposed of, because of the limited amount of private land and the pristine water quality of the Glen Lakes, Lake Michigan and the Crystal River. With the limited amount of undeveloped, privately owned land, and the absence of public sewers, it is unlikely that development much more intensive than that which already exists in the Township will be proposed. This situation makes it both easier and more certain to make future decisions that will retain the existing character of the Township that is so cherished by residents and visitors alike.

To a very great degree, the boundaries of the Township, the lands owned by the National Park Service, the natural limitations of soils for septic wastes, and the high water quality of the lakes and river create a natural carrying capacity for development in the Township. That capacity is nearly reached and is likely to be achieved within the next twenty years. The existing land use pattern has been set and most of the opportunities for development are infill or replacement of existing structures. This means that future land use decisions must largely focus on ensuring conformance with local setback and design considerations. These will

ensure retention of existing character and protection of the natural environment. Any proposed change to this land use pattern or to the density or intensity of development beyond that which is presently planned and zoned, should be closely scrutinized and will likely be met with little public support, unless a very strong set of public benefits were to be achieved. If the proposed change were inconsistent with this Plan, then this Plan would need to be amended, along with the Zoning Ordinance, before such a change were approved and implemented.

Relationship to Plans and Zoning in Adjoining Jurisdictions

Three local units of government border Glen Arbor Township. These are Cleveland Township to the east, Kasson Township to the southeast and Empire Township to the south (see photo 7-11). Only a very small portion of Kasson Township borders Glen Arbor Township, along the southeast shore of Big Glen Lake. The existing Master Plans and Zoning Ordinances of Cleveland Township and Empire Township and the Zoning Ordinance of Kasson Township were reviewed to determine compatibility with existing and future land use as proposed in this Plan.

It is apparent that since Glen Arbor Township has very high land values, and no land well suited for a mobile home park or for industrial use, it is important that the Township cooperate with its neighbors to ensure any area wide needs for these uses are adequately met. Other observations from a review of the existing plans and zoning ordinances of these adjacent jurisdictions follow.

All three bordering communities have policies consistent with the preservation of the wooded, low density character that currently exists in those townships and in much of Glen Arbor Township. Large portions of two of these townships are also publicly owned by the National Park Service.

Off the lake, and near to Glen Arbor Township, all three communities have plans or zoning regulations (or both) that seek to maintain a density of from 1 dwelling unit per 5 acres to 1 dwelling unit per 10 acres. Along the Glen Lake shoreline in Empire Township, density is closer to 1 unit per acre. In general, permitted uses include single family and two-family dwellings.

In Cleveland Township, the adjacent area is zoned for agriculture while the future land use map shows it as low density residential. This difference occurs because the future land use map indicates what the area is to be zoned when it is no longer zoned agriculture. It will still have a density of 1 dwelling unit per 10 acres, but will also permit planned unit developments (PUDs) that have a minimum impact on slopes and roads.

Photo 7-11
Entry Across the Narrows Bridge from the South in Empire Township



Photo by Mark Wyckoff

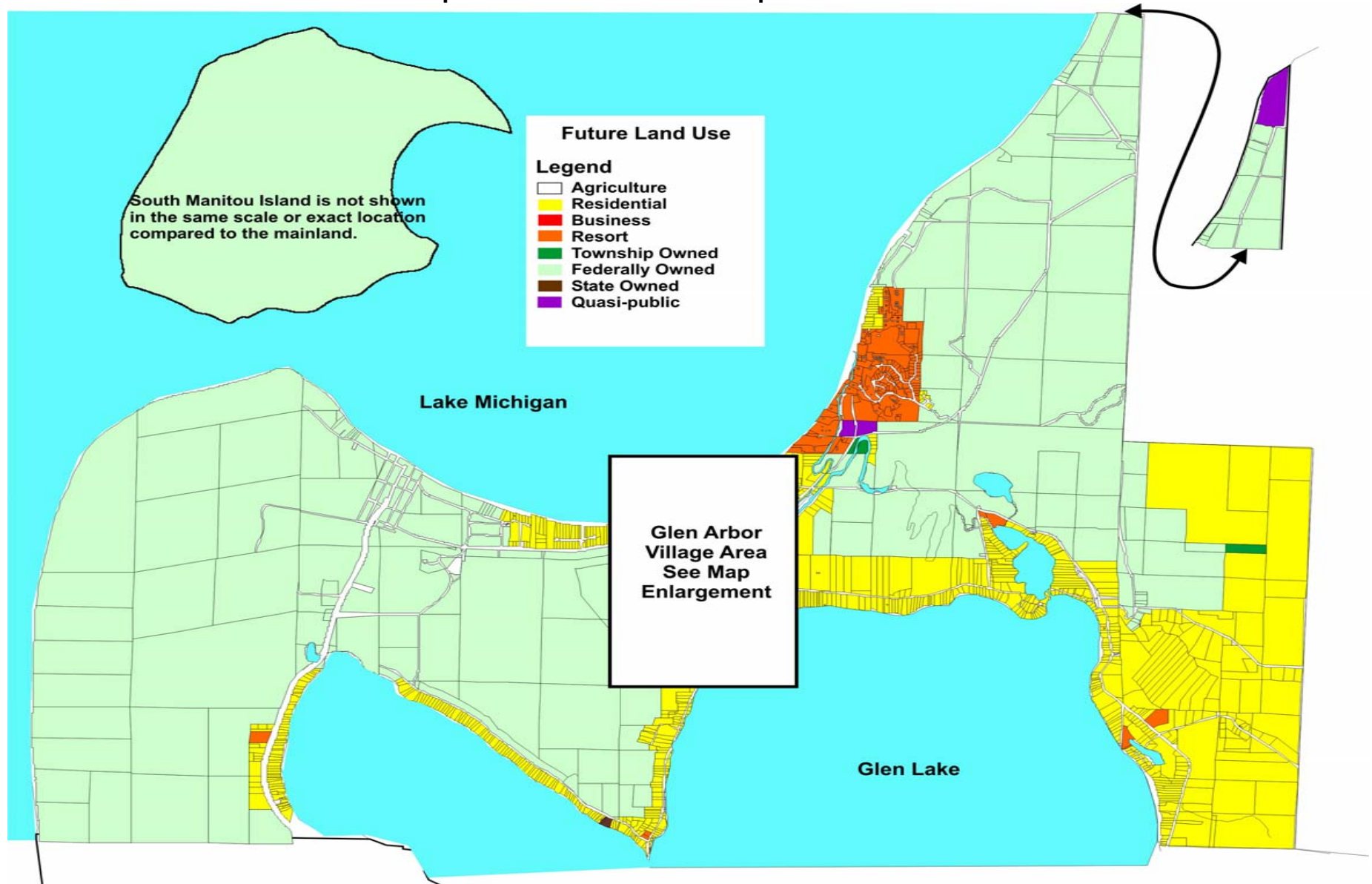
There was great concern over protecting water quality in the Glen Lakes and trying to achieve more uniformity with regard to lakefront development. Both Empire Township and Kasson Township have relatively developed shorelines along Glen Lake, which are similar in development pattern to those portions of Glen Lake shoreline in Glen Arbor Township and are similarly zoned. The Empire Township Plan identifies a potential need for a public sanitary sewer system to serve the low to moderate density shoreline areas, due to a lack of suitability of some shoreline segments for on-site septic systems.

Future Land Use Map

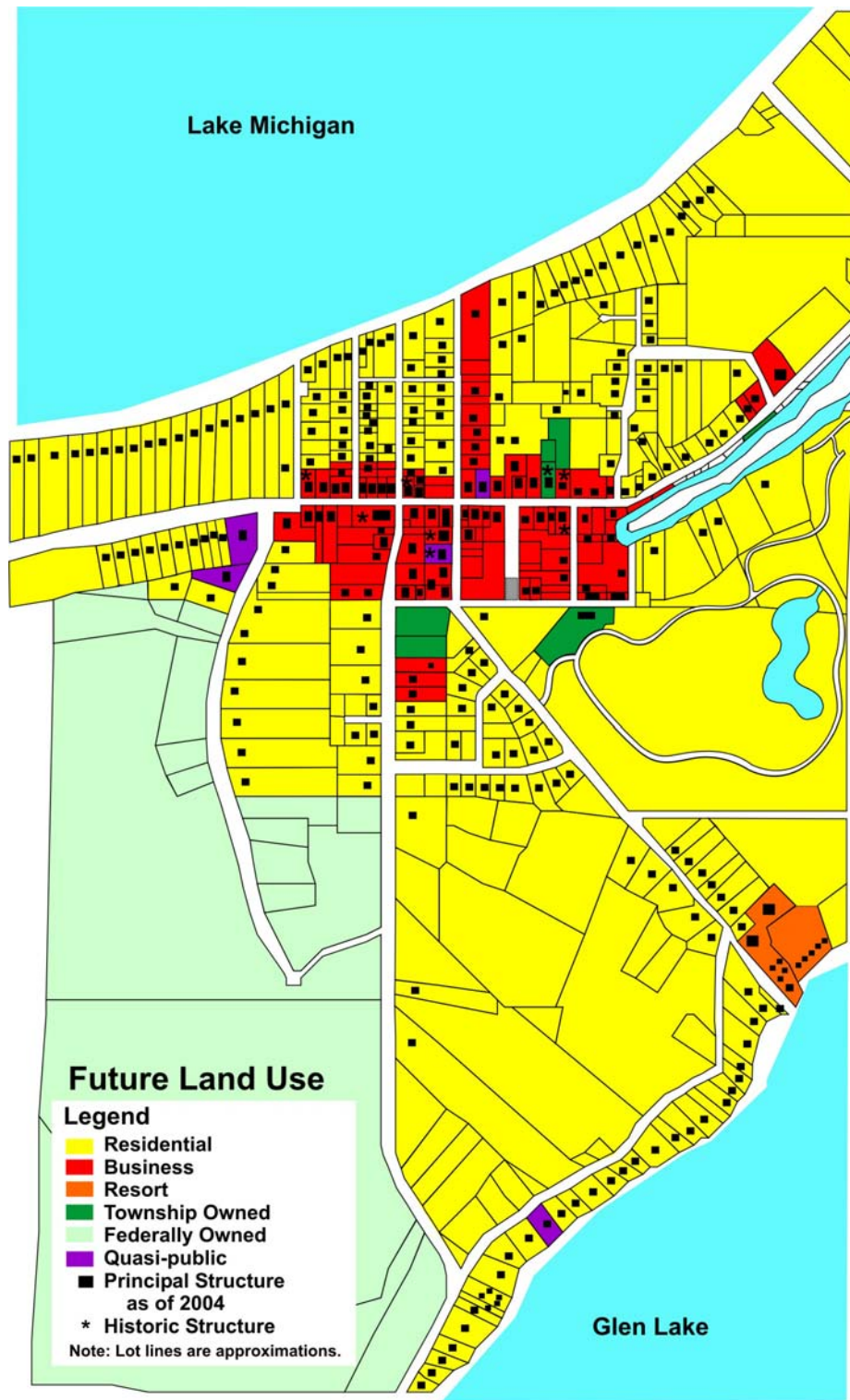
The Future Land Use Map (comprised of Maps 7-1a and 7-1b) sets forth the proposed general arrangement of future land use for Glen Arbor Township. The dominant use area depicted is, of course, the Sleeping Bear Dunes National Lakeshore. Some infill is anticipated over the next twenty years. The comparatively few acres in the Township outside the National Lakeshore are divided on the Map into categories that reflect the policies which the Township intends to continue to implement through the Zoning Ordinance, other controls and investments.

Map 7-1a depicts the whole Township, while Map 7-1b shows just the village of Glen Arbor and surrounding area. To a long-time resident very familiar with the Township, there is very little proposed change to land use on the Future Land Use Map compared to the present. That is because there is little privately owned land and the Township will likely reach buildout within the next 20 years. As a result, the land use pattern is well established, and once filled out as planned and zoned, will adequately serve the needs of both year-around residents and visitors. Density is not depicted on the Future Land Use Maps. General density ranges are discussed below. Permitted density is established by the Zoning Districts (which are summarized in the next chapter) and depicted on the Zoning Map, which is a part of the Township Zoning Ordinance and not illustrated in this Plan.

Map 7-1a Glen Arbor Township Future Land Use



**Map 7-1b
Glen Arbor Township Future Land Use – Village Area**



The following categories of land uses are depicted on the Future Land Use Map:

Residential (yellow and a small amount of agricultural land in white)

1. Very low density because of significant natural limitations on the land.
2. Waterfront residential is predominately low density, but includes some areas of higher residential density based on historic platting and includes some back lot areas where waterfront access rights are common.
3. Low density adjacent to areas in the very low density area, or adjacent to (and often across the road from) developed waterfront areas.
4. Medium density in the village of Glen Arbor.

Resort (orange)

5. Resort residential and resort business as part of planned developments.

Business (red)

6. Village business.

Public and Institutional (four colors, depending on entity owning land)

7. Public and quasi-public.

Very Low Density Residential

Characteristics

Areas shown as very low density residential are characterized by natural features which are either worthy of protection or incapable of supporting relatively intense use. [The words "intense" and "intensity" are used in this text as relative terms in comparing the various use areas. The Township is not characterized by what would normally be called intense development, and it is not intended that it will be.] The former would be typified by the steep hillside and wildlife wetlands and the latter by areas which have severe limitations for individual sanitary waste disposal (septic tank) systems. In other words, the natural features of the very low density residential areas need a high level of protection from the impact of development. The very low density residential areas include:

- Land currently in agricultural use up on Miller Hill and the Port Oneida area.
- Areas of steep hillsides. These are located primarily in the eastern part of the Township. Although there are other hillside areas (such as the west side of Big Glen Lake) they are already developed.
- Areas well suited to wetlands wildlife habitat. The cranberry marsh south of the village and some lands near the Crystal River fall into this category. Although, similar conditions exist near Fisher Lake and Brooks Lake, the predominant characteristic of those areas is of waterfront development.
- Areas with "severe limitation" for individual waste systems. Lands near the Crystal River are included. Similar conditions exist on parts of the Fisher Lakes and Brooks Lake.

Objectives

It is the intent of this Plan that the very low density residential areas will be the least developed of all areas of the Township so that the natural features are preserved as much as possible. When land is used, it would be at very low

density with options available which would allow development in small portions of a parcel while major portions are preserved. Minimum land parcel sizes are three acres (130,680 square feet) or more in area. Most of the very low density residential areas are on the east side of the Township and fall within the current Agricultural District which is a minimum parcel size of three acres. They are also the furthest from and hardest to reach for fire and emergency services.

Uses Intended

Zoning districts permit agricultural use, forest management, and single family dwellings. Passive recreation uses and trails can be compatible with the objective of preservation provided that natural land features are not altered significantly.

Low Density Residential

Characteristics

The low density residential areas can be divided into two main categories:

- Areas which consist of fairly level, undeveloped open terrain that generally border areas of more intensive development (such as waterfront residential areas).
- Areas which are sparsely developed and in close proximity to more intensively used land, such as near the village of Glen Arbor.

Three of the areas planned in this manner are already occupied by dwellings. They include the M-109 frontage west of the village, the area north of M-22 and generally between the Homestead and the village and the east side of Fisher Road near Northwood. The major emerging areas at this density are on the north side of Northwood Drive from Lake to Fisher Road and part of the area bounded by Lake, Sunset, M-22 and south of the lots on Lakewood (not including the cranberry marsh).

Another common characteristic of these areas is that they do not fall easily within the other categories: they do not front on lakes and usually they do not contain soil problems or steep hillsides.

Objectives

Low density residential use areas have densities ranging from roughly one to three acres (45,000 to 131,000 square feet per dwelling). This land is largely in the R-III Zoning District. Policy for the low density residential areas is to maintain significant open spaces by allowing densities which make it possible. Density can be higher than in the very low density residential areas because existing natural features do not require as much special attention.

Uses Intended

Zoning districts applicable to the low density residential areas should permit a full range of uses normally associated with single family, detached residential areas. Clustering is permitted to allow flexibility so that open spaces can be maintained. Limitations should be placed on uses other than residential so that natural

features are preserved.

Waterfront Areas

Characteristics

The waterfront properties in Glen Arbor have characteristics which require special consideration in plan implementation. Most of the waterfront is almost exclusively characterized by both seasonal and year-round single family housing. Most parcels are already developed. Waterfront parcels not in single family use are in small or large resorts, or used for marinas.

The waterfront areas include shoreline on Lake Michigan, the Crystal River, Fisher Lake and the Glen Lakes. They also include some non-waterfront land such as the land between the west side of M-109 and the Sleeping Bear Dunes and between M-22 and Alligator Hill. Although not directly abutting the water, the orientation of homes in these areas is toward the water. Some properties include waterfront access parcels which are separated from them by roads.

Objectives

Policies for the use of waterfront property recognize that these areas are primarily developed and land use controls are tailored to fit the situation. All single family property on the waterfront should be in a single zoning classification. Currently, several different zoning classifications apply. Existing lot sizes range from 15,000 sq. ft. to 30,000 sq. ft. depending on how the land in the area has been platted or split. Currently, the R-II District establishes requirements for waterfront residential lots. New splits must have at least 100 feet of frontage on the waterfront and at least 30,000 sq. ft. New structures must not exceed 30% of the lot, and must conform with anti-bigfoot requirements.

Uses Intended

The predominant use of the waterfront areas is for seasonal or year-round dwellings. New nonresidential uses on lots not already used for that purpose are not permitted. Controls relating to preservation of lakefront views from the road and adjacent properties are necessary, as are (bigfoot) regulations to prevent overbuilding of structures on a parcel. Excessive mass of structures on waterfront lots is out of character with the shoreline area, often prevent viewing the water from the road, and increases storm water runoff with negative effects on water quality.

Since the waterfront areas of the Township are mostly developed, and the demand for water access is expected to increase, it is anticipated that there may be increased pressure for the use of keyhole or funnel development. This is typically where one or two waterfront lots are acquired and used to funnel backlot users onto a lake, often with a very large dock and many boats. Zoning regulations prohibit this type of development, or any other overuse of waterfront resources in Glen Arbor Township. Funnel development is prohibited because it can cause overcrowding of public waters, create hazards to life and property by

increasing the risk of boating and other similar accidents, adversely affects the recreational experiences of both riparian owners and the public, adversely affects property values of shoreline property located near funnel developments, and can destroy residential communities.

Medium Density Residential

Characteristics

These are residential areas with the greatest density in the Township that are not on the waterfront or part of the Homestead or other resort. All medium density areas are within the village of Glen Arbor. They are close to and surround the businesses in Glen Arbor. When and if public utilities are needed such as centralized sewer and water systems, they will be needed in the village area.

Objectives

The objectives of the Plan in the medium density residential area are to provide for the Township's most intense residential development outside of the Homestead resort. Currently there is a wide range of lot sizes in the village, running generally from 6,000-30,000 sq. ft. However, lots under 15,000 sq. ft. often face serious septic and well separation problems. The R-I District has a 15,000 sq. ft. dwelling minimum and should continue to guide future land division and use in this area. Shorefront residential property within the village should be rezoned to be consistent with other waterfront residential areas.

Uses Intended

Zoning districts for the medium density residential area primarily permit one-family dwellings. However, multiple-family dwellings would be permitted where lot size is adequate to accommodate septic systems and density is not more than one dwelling unit per 15,000 sq. ft. Churches, schools and recreation uses are also permitted.

Village Business

Characteristic

The village business area is, of course, characterized by the present businesses. Most of the original platted part of the village is presently zoned Business and those parts of the original village south of Western Avenue not yet used for business use are planned for future business use.

Objectives

It is the intent of this Plan to concentrate retail stores and services in the village business area in order to strengthen it as a commercial center and not to allow it to expand outside the edge of existing business use as presently zoned in the village, except for a few peripheral lots on M-109 at the west edge of the village and a few lots used for residential and commercial uses on the west side of M-22, north of State Street.

Uses Intended

The village business area is typified by a broad variety of uses which serve the retail needs of the summer and winter visitor and of the year-around resident.

Examples of uses include:

- Grocery, pharmacy, hardware, clothing, gifts, novelties and other retail sales
- Financial, real estate and other service establishments
- Restaurants and taverns
- Medical, dental, optical and related health and fitness services
- Electrical, plumbing, and building trades
- Office buildings.

Multiple family dwellings are also permitted in village business area, either as free-standing apartment buildings, townhouses, apartments over businesses or other forms of shared wall dwellings. However, all parking for residents must be on site and all Health Department requirements for well and septic must also be met.

Resorts

Characteristics

Two types of resorts are provided for.

1. The Homestead, a large planned development with a compatible and well designed mix of a wide variety of residential living options for short and long time occupants, as well as a variety of food service, retail, and commercial recreation options (including a par three golf course and ski hill).
2. Small resorts with cottages or other residential units and the owner/operator living on site, possibly with other limited commercial services such as a marina, boat sales, rentals, food service or sales, laundry and/or other personal services.

Objectives

There are only a few family oriented resorts remaining with 3-6 cabins rented on a weekly basis. Three marinas are also located along the waterfront (one at the Narrows, one at the end of Lake Street, and one at the north end of Fisher Lake where Fisher Road and 675 intersect). Existing small resorts and marinas in the Township have a proud and long heritage that is desired to be maintained and thus such uses are permitted uses in a Commercial Resort district. Many existing residents first visited the Glen Lake area by staying at traditional resorts.

However, the closure of most small resorts along the shores of the Glen Lakes and Lake Michigan over the last decade, and their replacement with year-around homes indicates a market and community preference for single family homes on individual lots, so, no new resorts or marinas are desired to be established on these bodies of water, although existing resorts or marinas could be redeveloped consistent with the Commercial Resort requirements. Future dwelling units should be limited to 15,000 sq. ft. per dwelling on that land suitable for building upon, all parking must be on-site and all Health Department requirements must be met.

Redevelopment of resorts over 2-3 acres into anything other than a single family homesite, should be done as a planned unit development (PUD). A PUD is a development planned to meet specific objectives with regard to a mix of land uses in a manner that involves creative preservation of most of the natural features and/or open space on a site. Planned developments are usually large enough to support a variety of uses which are all related. They can include not only housing and recreation uses but also businesses such as restaurants and shops designed to serve users of the planned development and sometimes other patrons, as does the retail area at the Homestead. A planned development must be undertaken in accordance with an approved site plan (which carefully looks at number, type and arrangement of land uses, parking, signage, ingress, egress and related aspects of the project on the site), so that businesses and other nonresidential uses can be permitted and buffered from residential areas both within and outside the development.

Uses Intended

New resorts, or expansions of large existing resorts like the Homestead are expected to involve a wide range of land uses and will be handled as planned unit developments under appropriate zoning provisions. While a smaller range of uses is involved in the older style, small resorts, the land area involved is also much smaller and nuisance impacts from higher intensity use levels on adjoining single family lots is greater. Thus, either PUD or special use permit standards should guide future expansions of existing small resorts, although the traditional range of cottages and related recreation uses in small resorts should be permitted.

Public and Quasi-Public Uses

Public or quasi-public uses include government buildings, parks, institutional uses, churches, private schools like the Leelanau School and private clubs, such as the Glen Lake Yacht Club. The Plan recognizes such existing uses. The Future Land Use Map also depicts the location of most such uses including all Township-owned, State-owned and Federally-owned parcels (including anticipated acquisition of some privately owned lands within the National Park boundaries). The designation of public and quasi-public areas and uses on the Future Land Use Map is not intended to represent or suggest a specific zoning district as these uses are intended to be allowed in any zone.

Chapter 8 ZONING PLAN



CHAPTER 8 ZONING PLAN

This chapter opens with a general description of a zoning plan. It is followed by a brief explanation of the relationship between this Future Land Use Plan and the Township Zoning Ordinance. The districts in the Zoning Ordinance are briefly described, and the last major section of this Chapter presents a list of proposed changes to the Zoning Ordinance which are desirable to make in order for the Zoning Ordinance to more closely conform with this Plan.

Explanation of a Zoning Plan

A “zoning plan” is another term for a “zone plan” which is used in the Michigan planning and zoning enabling acts. Section 1(a) of the Township Planning Act, PA 168 of 1959, as amended, requires that the plan prepared under that act (as this Future Land Use Plan is), serve as the basis for the zoning plan. Section 7 of the Township Zoning Act, PA 184 of 1943, as amended, requires a zoning plan be prepared as the basis for the zoning ordinance. It must be founded on an inventory of conditions pertinent to zoning in the Township and the purposes for which zoning may be adopted (as described in Section 3 of the Township Zoning Act). The zoning plan identifies the zoning districts and their purposes, as well as the basic standards proposed to control the height, area, bulk, location, and use of buildings and premises in the Township. These matters are regulated by the specific terms in the Zoning Ordinance.

Relationship to the Future Land Use Plan

The Glen Arbor Township Future Land Use Plan is a document to guide Township officials and citizens in making decisions about use of the land. A primary purpose of the Future Land Use Plan is to provide guidelines for the treatment of the areas of the Township which have varied characteristics. It is the result of a process of survey of existing conditions, public input on a vision of what the community should be like in twenty years and analysis of alternatives by the Planning Commission, synthesized with public awareness and input. This Chapter presenting the Zoning Plan, along with the rest of the relevant parts of this Future Land Use Plan, is intended to guide the implementation of and future changes to the Township Zoning Ordinance.

Districts and Dimensional Standards

Following are six land use categories within which the eleven zoning districts in the Glen Arbor Township Zoning Ordinance are organized. The general purposes of each of these categories are also indicated. The purposes of each district are listed in the specific district provisions of the Zoning Ordinance. The Section references indicate where detailed ordinance language for each district is located within the Zoning Ordinance. The Zoning Map, which is part of the Zoning Ordinance and is posted on the Township web site

(www.glenarbortownship.com), depicts which lands are in which districts. It is the only map depicting the official boundaries of zoning districts.

Agricultural District

The purpose of the Agricultural District (Article IX) is to provide for and encourage agricultural uses of land, related uses, and limited residential uses in a rural environment. A parcel of land must be at least three acres to qualify as a farm under this zoning classification. The minimum lot area for each single-family dwelling with its accessory buildings is 131,000 square feet and the minimum road frontage is 200 feet. There is little farmland left in the Township and most is in the east side along the border with Cleveland Township. Once agricultural operations cease on those parcels that are not acquired by the National Park Service, the name of the agricultural district should be changed to reflect the very low density residential character of the district and nonresidential uses should be removed as permitted uses.

Residential Districts

The following zoning districts are considered “residential districts.”

Article V, Section 5	Single-Family Residential District (R-I)
Article V, Section 6	Single-Family Residential District (R-II)
Article V, Section 7	Single-Family Residential District (R-III)
Article V, Section 8	Single-Family Residential District (R-IV)
Article V, Section 9	Multiple-Family Residential District (R-V)
Article V, Section 10	Single-Family Residential District (R-VI)

The principal purpose of these districts is to provide for a range of residential dwelling types at various densities within individual zones tailored for specific uses. Minimum lot sizes range from 15,000 square feet in the R-I and R-V districts to 131,000 square feet in the R-VI District. The bulk of land zoned into R-I and R-II Districts is located along the shoreline of Glen Lake and Lake Michigan. The R-III, R-IV, and R-VI Districts provide for low density housing and are predominantly found in the interior of the Township, between the village of Glen Arbor and Glen Lake, and in the eastern portion of the Township on Miller Hill. The R-V Multiple-Family District is centered on the north side of the village and south of the Leelanau School.

While the district scheme has generally served the Township well and fairly closely matches the size of existing lots, the differences between several of these districts is very small and serious study should be initiated to determine if the six districts can be successfully collapsed into not more than four districts. This is especially pertinent since there are three more districts allowing significant residential use—the Recreational Open Space, Resort and Agricultural Districts. All waterfront land not in the Commercial Resort classification would be zoned R-II, while all village residential lots would be R-I and all remaining land that is not zoned agricultural or resort would be R-III. Multiple family uses are currently

allowed in the Business District and would continue to be. They are also allowed in R-I, but at a low density of 15,000 sq. ft. per dwelling unit (not per lot).

This should be structured to allow lots smaller than 15,000 sq. ft. in return for more common open space. There are large parcels on the east side of the village (north and east of Egeler Road) that are well suited for multiple family uses. Incentives (such as a small density bonus) should be offered to cluster multiple family uses and preserve an open space buffer from single family residential uses.

These are all related issues that should be carefully examined together prior to consolidating districts or rezoning. In the end, all this land should retain a residential classification, but it may be pertinent to change some of those classifications to better match lot sizes in the area, and provide a wider range of housing options in the township. It may be that six districts cannot be collapsed into three, but a strong effort should be made to try, as a simpler system will be easier for all to remember and properly apply. Multi-family uses are permitted in the Business District and should continue to be allowed there.

Commercial Districts

The following zoning districts are considered “commercial districts.”

Article VI, Section 1 Resort District

Article VIII, Section 1 Business District

The principal purpose of the Resort District is to accommodate demand for land suited for hotels, motels, lodges, rental cottages, rooming houses and other land uses that are principally intended for vacationing, relaxation and conference activities for visitors to the community. Minimum lot sizes range from 10,000 square feet to 20,000 square feet. The main resort area in Glen Arbor Township is the Homestead, a planned development located in the northeast portion of the Township. There are also a few scattered small resorts with cabins on Little Glen, at the Narrows, at the end of Lake Street and along Dunns Farm Road. All future changes on these properties should be guided by new PUD requirements. The next time the Homestead proposes a change in use or expansion of use, it should be reviewed under the new PUD provisions and a PUD approval should be granted that incorporates all existing uses on the Homestead. Thereafter, changes would be processed as PUD amendments.

This will better protect the huge investment in the Homestead and ensure a means of reviewing future changes so they are consistent with the Township Zoning Ordinance, as all uses must be.

Some of the areas zoned Resort should be reexamined in light of changing conditions. Most of the property zoned Resort near the Narrows is owned and used for single family uses, not resort uses, and this is unlikely to change. These properties should be rezoned as R-II (although the marina should remain in the

Resort District). Some property on the west side of M-22 and north of Day Forest Road is used as resort, but not zoned that way, and should be. Similarly, the Woodstone Development on Lake Street is part of the Homestead, a resort, but is zoned Recreational Open Space, a PUD classification adopted in anticipation of a golf course that was never built. Serious consideration should be given to zoning the Woodstone Development either Resort, or into the residential use classification closest to the dwelling unit lot sizes, with recognition of its PUD status.

Similarly, a number of other properties used as resorts are not zoned that way and consideration should be given to rezoning them. For example:

- The R-V area that is part of the Homestead consider rezoning into Commercial Resort and include under the same PUD for all of the Homestead.
- The marina on Fisher Road and Dunns Farm Road could be rezoned from Commercial to Resort.
- Existing resorts along the eastern shore of Big Glen Lake (by Brooks Lake) and the motel/restaurant nearby on the east side of Dunn's Farm Road could be rezoned out of Residential District and into the Commercial Resort District.
- Motel on the west side of M-109 could be rezoned from residential to Commercial Resort.
- The existing marina, boat sales, condos, and cabins at the south end of Lake Street, as well as the adjacent Glen Craft Villas are currently zoned R-II residential and would be more appropriately zoned into the Commercial Resort District.
- Consideration could also be given to rezoning the LeBear Development at the north end of Lake Street out of Business and into Commercial Resort.

These changes will better reflect existing use, prevent nonconforming use problems when owners wish to upgrade the property, and prevent too wide a range of uses from being established which could occur if these properties were zoned Business. These changes would also serve to better notify anyone looking at the Zoning Map about the actual use in these areas. The properties above that are presently zoned Residential would not be rezoned, if the long term desired use were for single-family dwellings on individual lots at the size and density currently allowed under the Zoning Ordinance. It is not the intent of these changes to provide a basis for examining the amount of land presently used for these commercial uses, nor are they intended to be used as the basis for rezoning other lands nearby into a commercial or resort classification.

The basic purpose of the Business District is to provide opportunities for regulated businesses and commercial activities serving both local and tourist markets. Minimum lot sizes range from one-quarter acre to one acre in size. Most of the land currently zoned for business is centered within the village. The other existing sites are marinas. These sites outside the village should be rezoned into

a Commercial Resort classification, as too great a range of uses is possible in the General Business District. Some properties in the village that are zoned for business are being used for residential purposes and as the business district grows, apartments and multiple family residences could be located on second or third floors. Multi-family uses should continue to be allowed in the Business District. The next time the Zoning Map is updated, the legend should also be amended to use exactly the same term as the official district name (i.e. use "Business" instead of "Commercial", or the text of the Ordinance should be changed to match the Map).

Recreational Districts

The following zoning districts are considered "recreational districts."

Article VII, Section 1 Recreational District

The purpose of these districts is to provide for the orderly and attractive grouping of recreational lands, including golf courses, ski slopes, private clubs and commercial resorts. However, none of the lands included in the district have these characteristics, the only lands in the Recreation District on the Zoning Map are quasi-public, owned by the Leelanau School or Camp Leelanau and Kohahna adjacent to Pyramid Point. It may therefore, be desirable to eliminate this zone and allow these uses as special uses, or planned unit developments by extending the appropriate adjacent zone.

Governmental District

This district exempts land owned by governmental entities from the Zoning Ordinance. Currently the DNR boat launch on Little Glen Lake is zoned R-II and it should be zoned Governmental and the Public Safety Building property should also be zoned Government.

On the Zoning Map, a separate color depicts all the land in the National Park at the time the Map was made. As lands are acquired by the National Park, it is important that the Zoning Map be periodically updated to reflect all land owned by the Park Service. This will be most convenient to accomplish whenever another rezoning change is made—or every two years, whichever comes first. The legend on the Zoning Map should say Governmental instead of National Park Service, to match the name of the district in the text of the ordinance.

Dimensional Regulations

Table 8-1 lists the key dimensional standards that must be met when constructing principal buildings in any of the zoning districts. In addition, other key standards include a uniform 40 foot height standard, and a maximum six-foot fence height standard (with a minimum six foot and maximum eight foot height standard in the Business District). There are many more standards that apply to parking and signage that can be found in the Zoning Ordinance.

Table 8-1 Glen Arbor Township Zoning District Regulations

	Minimum Lot Area (per principal dwelling)	Minimum Lot Width	Maximum Lot Coverage	Minimum Setback from Adjoining ROW	Minimum Setback from Rear Lot Line	Minimum Setback from Water's Edge	Minimum Side Yard Setback
R-1 Residential	15,000 s.f.	100 ft.	30%	40 ft.	15 ft.	40 ft.	10 ft.
R-2 Residential	30,000 s.f.	100 ft.	30%	40 ft.	15 ft.	40 ft.	10 ft.
R-3 Residential	45,000 s.f.	100 ft.	30%	40 ft.	15 ft.	40 ft.	10 ft.
R-4 Residential	60,000 s.f.	100 ft.	30%	40 ft.	15 ft.	40 ft.	10 ft.
R-5 Residential	15,000 s.f.	None	30%	40 ft.	15 ft.	40 ft.	10 ft.
R-6 Residential	131,000 s.f.	200 ft.	30%	40 ft.	15 ft.	40 ft.	10 ft.
Commercial Resort	20,000 s.f. 10,000 s.f. per building	1 bldg. per each 50 ft. of frontage	25%	40 ft.	15 ft.	40 ft.	10 ft. or 15 ft. when adjacent to residential
Business	5,000 s.f. per DU/ 480 s.f. of main floor living area per DU	N/A	80%	10 ft.	N/A	N/A	zero, or 5 ft. when adjacent to residential
Recreational	40,000 s.f.	N/A	40%	40 ft.	15 ft.	40 ft.	10 ft. or 15 ft. when adjacent to Res.
Agricultural	3 acres to be a farm; 131,000 s.f. for residence	200 ft.	N/A	N/A	N/A	N/A	N/A
Governmental	None	None	None	None	None	None	None

Abbreviations: N/A = Not Applicable DU = Dwelling Unit s.f. = Square Feet ft = height

Proposed Changes to the Zoning Ordinance

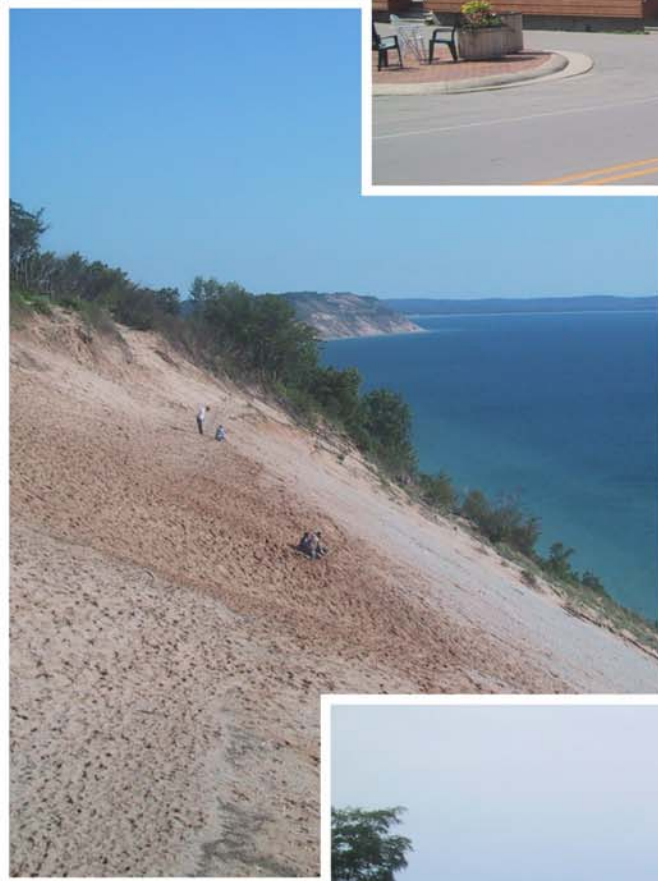
Because this Plan incorporates new policies, land uses, public improvements and other measures related to further improving quality of life in the Township, there are changes to the Zoning Ordinance that should be made to make it fully consistent with this Future Land Use Plan. These changes are listed below. They include changes proposed earlier in this chapter or in Chapters 5 or 7, as well as small changes identified by the Planning Commission and Zoning Administrator in the administration of the Ordinance. These changes should be pursued as the need or opportunity presents itself, but before the Township initiates action to implement one of the recommendations or new policies in this Plan. That means the Planning Commission should identify the major policies it first wishes to implement and begin work on the corresponding zoning changes at the same time. If a proposed development comes along that presents an opportunity to address another change in this list, it should be seized and changed at that time. In some cases, public discussion of proposed zoning amendments on any of the below listed elements will result in the need to refine some of the language in this Plan. When that occurs, this Plan should be amended before the zoning amendments are adopted—although both actions could be taken at the same meeting.

Serious considerations should be made to making the following changes to the Zoning Ordinance:

- Add the appropriate procedures and standards for administering site plan review, planned unit developments and special land uses to the ordinance per the requirements of the Township Zoning Act.
- Add regulations to protect the environment: notably to protect water quality thru new groundwater protection standards added to the site plan review process, link zoning approval to other agency permits, encourage the use of natural vegetation strips along shorelines, and link to new Township wetland regulations.

In addition, all the policies in Chapter 6 that rely on zoning standards should be reviewed and compared to Zoning Ordinance standards, to ensure that the policies are being effectively implemented through appropriate zoning regulations. Where zoning regulations need to be strengthened to implement the policies of this Plan, it should be a priority of the Planning Commission to do so.

Chapter 9 PLAN IMPLEMENTATION



CHAPTER 9

PLAN IMPLEMENTATION

As important a benchmark as this updated Future Land Use Plan represents, the initiatives proposed in this Plan will not implement themselves. It will take continued support and commitment for many years.

The central ingredients to successful Plan implementation will be:

- Commitment by the Planning Commission, the Board of Trustees, and staff of the Township.
- A citizenry better educated on the vision in this Plan. Information about natural resource protection options and northwoods design guidelines, need to reach citizens or they may not understand why and how local decision-making is directed to implementing this Plan.

Focusing on Priorities

As the body principally responsible for preparing and maintaining a land use plan for a community, but one which also has substantial responsibilities in review of proposed developments for zoning compliance, it is easy for a Planning Commission to become distracted with ongoing tasks or ad hoc, controversial issues. Still, the Commission needs to prioritize its tasks relative to implementation of this Plan and prepare for future growth. Time needs to be set aside for high priority items. These include the preparation of an annual report and work program for the next year, drafting updates to the Zoning Ordinance, assisting the Township Board with any capital improvements or public land acquisitions or disposals, and the five-year Plan update. These are discussed below.

Annual Tasks

As required by the Township Planning Act, the Planning Commission should prepare an annual report to the Board of Trustees on all the activities it undertook in the previous year, with a special focus on actions taken to implement the Plan. A proposed work program that identifies priorities and projected expenses for the next year should also be prepared and submitted in time to be included in the annual Township budget process.

Top Priorities

The Planning Commission cannot be expected to implement all of the measures listed Chapter Six (Vision, Goals, Objectives, and Policies), Chapter Seven (Future Land Use) and Chapter Eight (Zoning Plan) alone. Many of these can only be accomplished with support from the Township Board and with help from other agencies or groups. It is essential that discussions begin with each of these

entities so that they understand the goals, find agreeable common ground where there are differences, and obtain a commitment to a common action.

One approach to establishing priorities is to use the following guidelines:

- Establish as a high priority those actions that are the precursor to other actions or initiatives. One example is the action to reexamine the residential zoning districts with an eye to eliminating or consolidating some, and rezoning some lands.
- Those actions that are assigned to a particular group (like the Planning Commission) elsewhere in this Plan are a high priority.
- A lower priority may be those actions that are not assigned to a group or broadly identify the "Township" as the responsible party.
- If an action does not list a responsible party, it remains a lower priority until a group or agency steps forward.

The following activities should be the key priorities of the Planning Commission for the next five years:

- Educate all citizens about the vision, goals, objectives, and policies of the updated Future Land Use Plan and provide technical assistance in the integration of these elements into property owner development and redevelopment efforts.
- Update the Township Zoning Ordinance to be consistent with this Plan as outlined in Chapter 8.
- Review other land development regulations in the Township (such as land division and subdivision regulations) and update as necessary to be consistent with this Plan.
- Encourage the Township Board to restripe the parking spaces on Pine Street and to install standard "Big P" parking signs on Western Ave. pointing to public parking on Pine Street and behind the Township Hall.
- Develop a mechanism to monitor parking space use in the village, and as necessary, expand spaces based on the options outlined in Chapter 5.
- Encourage the Township Board to widen pavement on State Street from Lake to at least Pine (and possibly to Oak) and stripe it for diagonal parking
- Encourage provision of common parking areas.
- Assist the Township Board with decisions on public land acquisition, development or disposition.
- Prepare design guidelines that illustrate how to protect rural and scenic character and open space values on private residential, commercial, public and institutional properties. Examples are the design guidelines for northwoods development (**Benzie County Open Space and Natural Resources Protection Plan**, 2002) or the **Grand Traverse Bay Region Development Guidebook** that illustrates a preferred development approach that protects scenic quality, open space, water quality, sensitive environments, hillsides, and addresses lighting and sign character.

- Support efforts by the Glen Lake and Crystal River Associations to preserve water quality and reduce the amount of fertilizers and pesticides used.
- Coordinate with Empire Twp and Kasson Twp on preservation of water quality of Hatlem's Creek (which flows into Big Glen Lake)
- Create and preserve a permanent protected library of all past Plans and Zoning Ordinances prepared for Glen Arbor Township.
- Use this Plan in the analysis and review of proposed rezonings, zoning text amendments, site plans, and new or amended master plans of adjoining jurisdictions submitted to the Township for statutory review and comment.
- Review draft plans and plan amendments of adjoining jurisdictions in a timely manner.
- Monitor neighboring jurisdiction and County agency decisions and periodically inform other local governments and the County Board of Commissioners on the status of efforts to implement the Glen Arbor Township Future Land Use Plan.
- Join efforts with others outside the Township to modernize planning and zoning enabling legislation and to authorize or use new tools to better manage growth and preserve open space.
- Encourage use of cluster septic systems serving multiple properties where it will improve waste disposal and the long term viability of homes and businesses.
- Support management of the mainland part of the National Park as is, not for wilderness so that all existing access is preserved, and some additional access by means of an interconnected trail system is created.
- Support efforts to improve handicapped access in the National Park.
- Work cooperatively with the National Park Service on issues of mutual interest.
- At least once each five years, the Future Land Use Plan should be thoroughly reviewed and updated by the Planning Commission with support from the Township Board.
- Encourage the Township to develop a technology plan which would provide citizens with access to the internet.
- Develop standards and ordinances regarding non-traditional business enterprises and activities areas to be examined.

Photo 9-1
Sunset



Photo by Mark Wyckoff

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