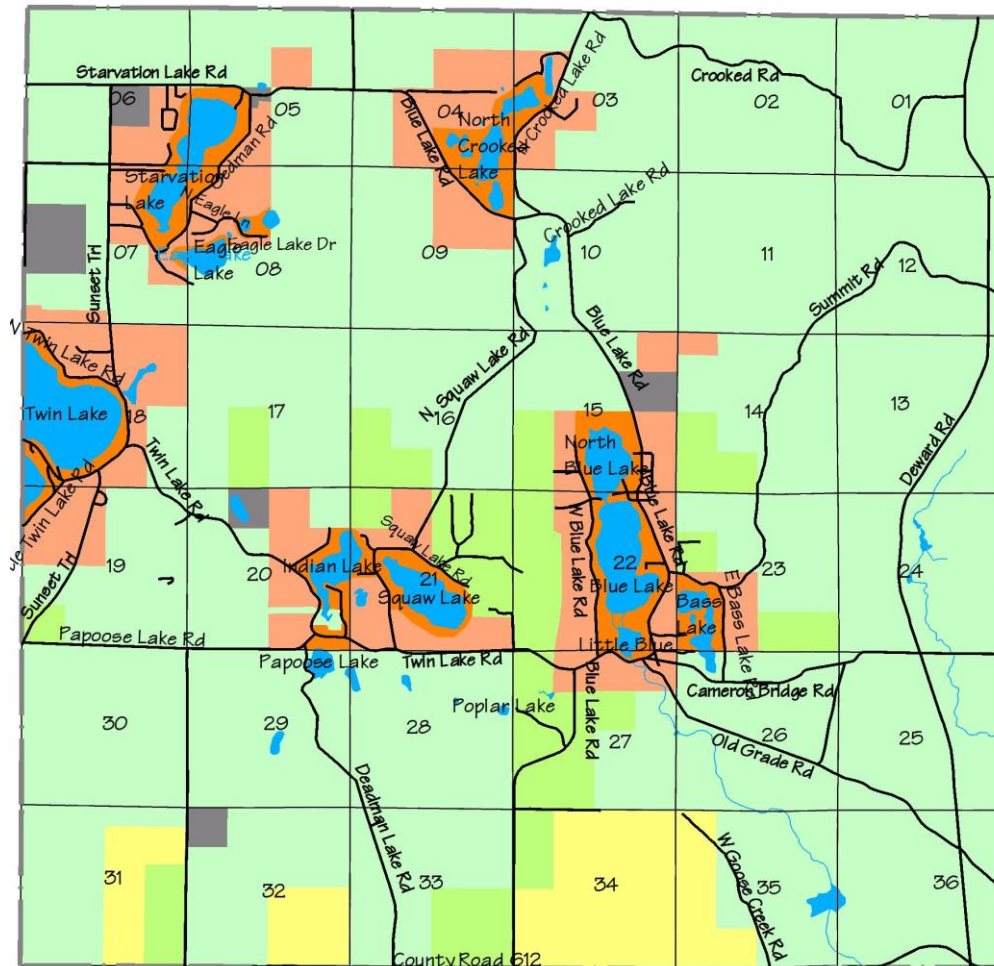


Blue Lake Township



Master Plan

PLANNING COMMISSION ADOPTED: OCTOBER 5, 2016

TOWNSHIP BOARD ADOPTED: NOVEMBER 2, 2016

BLUE LAKE TOWNSHIP

MASTER PLAN

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CHAPTER 1

Introduction

Purpose and Planning Process

The purpose of the Blue Lake Township Master Plan is to provide guidelines for future development, while protecting the natural resources and rural character of the Township. This plan presents extensive background information including socio-economic data on the Township; description and mapping of natural resources and existing land uses; and inventory of existing community facilities. The background information is analyzed to identify important characteristics, changes and trends occurring in Blue Lake Township. Community concerns were identified based on previous planning efforts, and public input throughout the master planning process. Goals and policies were developed to guide future development based on the background studies, key land use trends and community issues. These goals, along with a detailed map of existing land use, provided the basis for the Future Land Use Map which specifies where the various types of future development ideally will be located in the Township. This plan also provides suggestions for implementation of the identified goals and policies. The guidance provided by this Master Plan will be utilized in updating the Zoning Ordinance for Blue Lake Township, as appropriate.

Regional Setting

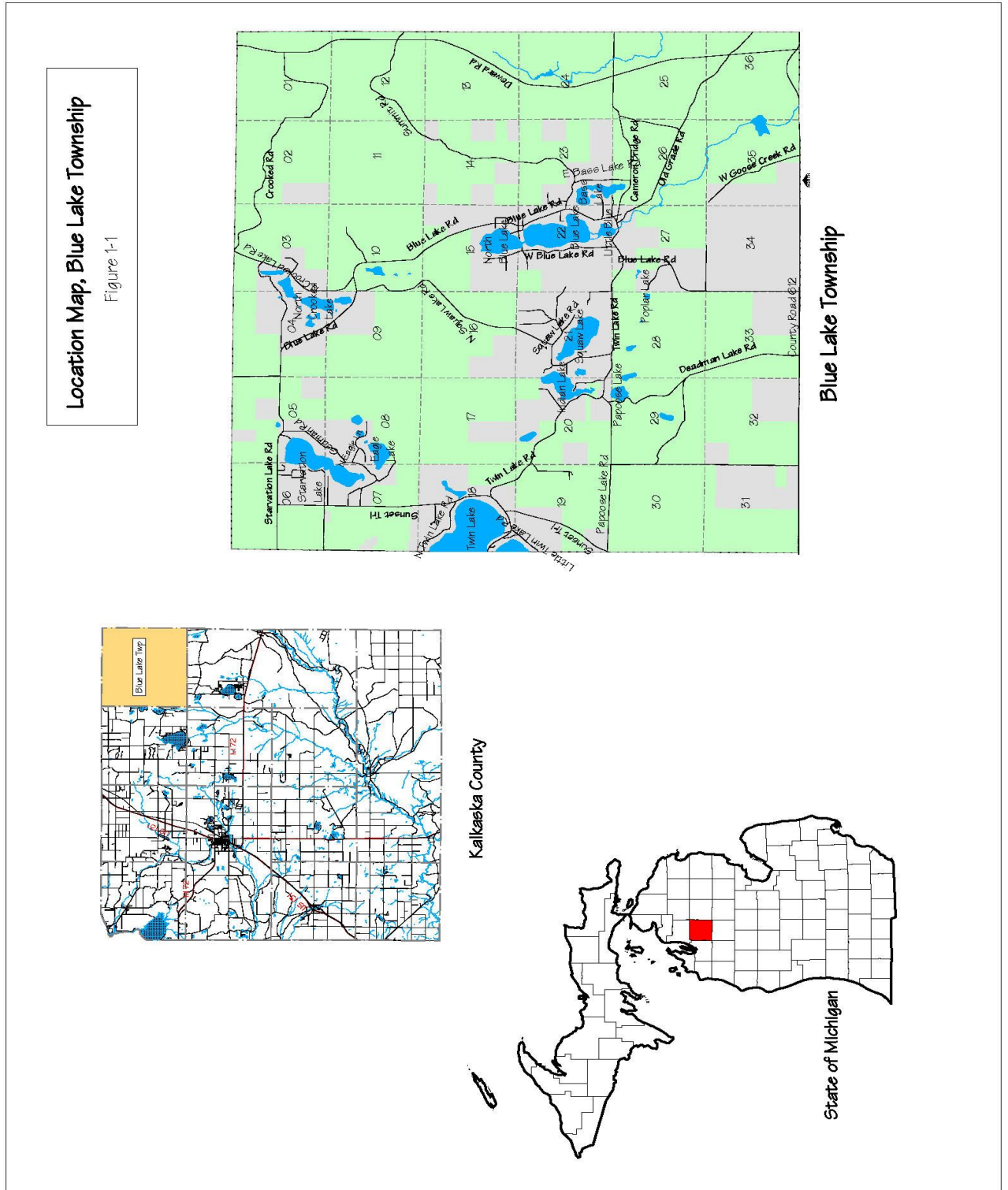
Blue Lake Township is located in the northeastern portion of Kalkaska County, which is situated in the north central part of northern Michigan's Lower Peninsula. Blue Lake Township is one standard geographic township in area, see Figure 1-1.

The Status of Planning and Zoning in Blue Lake Township

Blue Lake Township adopted their own zoning ordinance in 1967, being one of the early townships in northern lower Michigan to do so. The most recent Township Master plan previous to this update was adopted in 2009, which was an update of the original Master Plan adopted in 1975 and 1988.

Updated zoning ordinances supported by up-to-date, comprehensive land use plans are considered the main tool Michigan communities have at their command to control land use patterns and development pressures. To provide a strong legal foundation, a zoning ordinance should correspond to an up-to-date adopted Master Plan. Since the Township administers a Township Zoning Ordinance, it is advisable that the Township adopt an updated Township-specific Master Plan to guide future development and provide a stronger legal foundation for the

Township Zoning Ordinance.



CHAPTER 2

Township Social and Economic Characteristics

Population

According to the U.S. Census Bureau, the population of Blue Lake Township in 2010 was 387 persons (189 male - 198 female), averaging 11.1 persons per square mile for the Township's 34.7 square miles of land area, a decrease from 12.3 persons per square mile in 2000. This 2010 population density can be compared to 30.6 persons per square mile for Kalkaska County and 174.8 persons per square mile for the State of Michigan.

In discussing the population for Blue Lake Township, however, it is important to note that the figure presented by the 2010 Census does not reflect the actual number of persons residing in the Township during the summer months. This situation can be seen throughout much of northern Michigan. The Census tally, taken on April first, does not count residents who winter elsewhere. Respondents are asked to declare a permanent residence different from their April location, if more than six months are spent at the alternate address. However, many fail to do so for reasons of misunderstanding or for tax purposes.

In reviewing the social and economic information derived from Census data, the figures presented for housing characteristics show 561 units or 71.4 percent of the total 786 housing units as seasonal, recreational, or occasional use homes. With this in mind, it is reasonable to expect that the Township's resident population increases significantly during the summer months. Based on the average household size in Blue Lake Township of 1.94, the expected seasonal increase would be at least 1088 persons. In addition, many summer visitors stay at private lodging places or at the homes of family or friends.

Table 2-1 provides population statistics for Blue Lake Township and Kalkaska County for the period from 1960 to 2010. As can be seen, the Township has experienced significant population growth during each of the decades between 1960 and 2000, with the most substantial growth occurring between 1960 and 1970, when the township grew more than 167 percent. From 2000 to 2010, we have seen the first decrease in population since 1960. Kalkaska County, as a whole, has also experienced positive growth each decade since 1960, with the greatest rate of growth between 1970 and 1980 when the County experienced an increase in population of over 107 percent.

Table 2-1:

Population Changes 1960-2010

Blue Lake Township & Kalkaska County

	1960	Percent Change	1970	Percent Change	1980	Percent Change	1990	Percent Change	2000	Percent Change	2010
Kalkaska County	4,382	20.3	5,272	107.7	10,952	23.2	13,497	22.8	16,571	3.5	17,153
Blue Lake Twp.	89	167.4	238	26.1	300	26.0	378	13.2	428	-9.6	387

Source: Bureau of Census.

Age Distribution and Racial Make-up

Information on age distribution within a population can assist the community in matching public services to community characteristics and in determining what, if any, special needs specific resident groups might have.

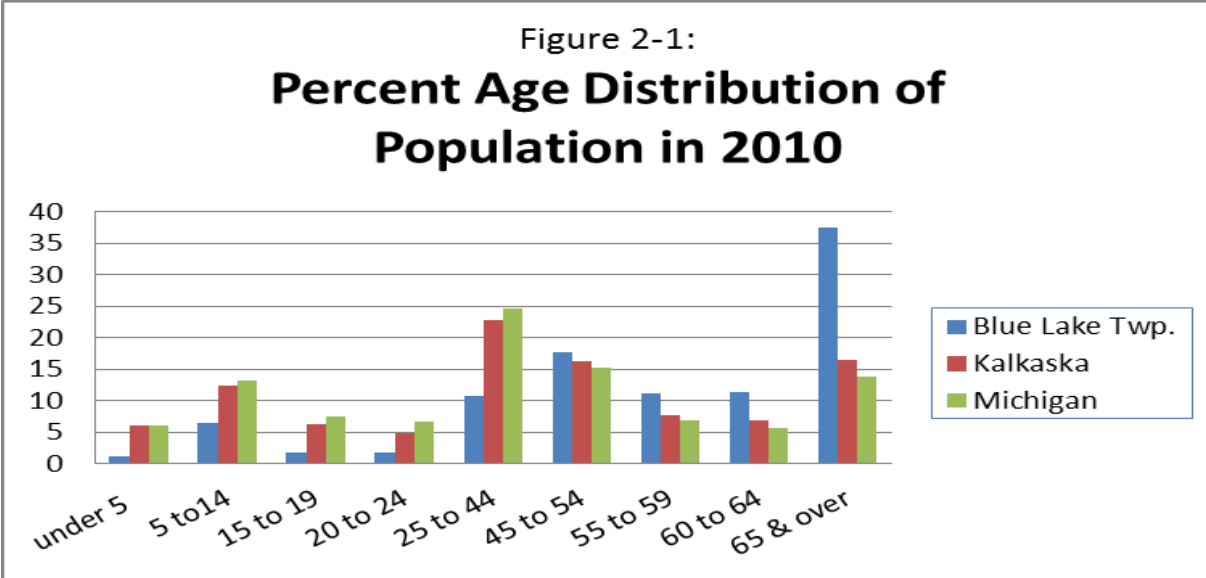
Age distribution for Blue Lake Township in 2010 reflects a population above the median age from that of Kalkaska County and the State of Michigan, as illustrated in Table 2-2. While it appears that young adults in the college years (18-24) and the (25-44) age group are somewhat underrepresented in the Township as compared with the County and State of Michigan, the proportion of adults in the years (45-59) is very close to the County and State norms. The (60 and up) age group data shows percentages higher for Blue Lake Township compared to the County and State figures. Table 2-2 provides the statistical comparison of the age distribution for the Township, the County and the State, based on the 2010 Census.

At the time of the 2010 Census, the median age for Blue Lake Township was 59.4 years, which is up from a median age for the Township residents of 57.5 in 2000 and 56.1 in 1990. The median age (2010 Census) for the Township is higher compared to that of Kalkaska County at 43.0 years, and significantly higher than the State, 38.9 years. Additionally, it is important to remember that these statistics do not include the seasonal resident population, which is likely to have a larger proportion of older persons.

Between 2000 and 2010, the Township experienced decreases in the percent of pre-school age residents (under 5) and school aged residents (5-19). Family-forming age group (21-44) also experienced decreases in the Township, however a significant increase took place in the empty nester age group (45-59) as well as slight increases in the older age groups (60 and up).

Table 2-2: Population Age Blue Lake Township, Kalkaska County, State of Michigan - 2010					
Age	Blue Lake Twp.	Township %	Kalkaska Co.	County %	State %
under 5	5	1.3	1,043	6.1	6.0
5 to14	25	6.5	2,146	12.5	13.3
15 to 19	7	1.8	1,091	6.4	7.5
20 to 24	7	1.8	818	4.8	6.8
25 to 44	42	10.9	3,911	22.8	24.7
45 to 54	69	17.8	2,799	16.3	15.3
55 to 59	43	11.1	1,335	7.8	6.9
60 to 64	44	11.4	1,173	6.8	5.8
over 65	145	37.5	2,837	16.5	13.8
Total	387	100	17,153	100.0	100.0
Median age	59.4		43		38.9

Note: Due to rounding, percents may not equal 100
Source: Census of Population and Housing 2010.



The racial make-up of the Township is primarily white (376 persons). There is a small Hispanic or Latino minority population (2 persons), and 9 persons listed as biracial in Blue Lake Township.

Income and Employment

Income statistics for the 2010 Census reflect information from the 2009 calendar year, because the Census was taken in April of 2010. Historically, income levels for northern Michigan fall behind those found in the State as a whole, however, during the decade between 2000 and 2010, the per Capita income for the Township rose significantly to surpass the statewide per capita income. Table 2-3 compares income statistics for Blue Lake Township to Kalkaska County and the State.

Table 2-3: Income Statistics Blue Lake Township, Kalkaska County and State of Michigan (in 2009 dollars)				
	Median Household Income		Per Capita Income	
	2010	2000	2010	2000
Blue Lake Township	\$41,250	\$37,045	\$26,445	\$20,543
Kalkaska County	\$39,350	\$36,072	\$19,770	\$16,309
State of Michigan	\$48,432	\$44,667	\$25,135	\$22,168
Source: 2010 Census				

Employment data on the civilian labor force is compiled on a monthly and annual basis by the Michigan Department of Labor and Economic Growth, Office of Labor Market Information. Table 2-4 compares the civilian labor force statistics for the County and the State from 2010 to 2013. This Employment data is no longer available at the Township level. As the statistics show, the unemployment rate for Kalkaska County has traditionally been higher than that of the State.

Table 2-4: Civilian Labor Force Comparisons and Unemployment Kalkaska County and State of Michigan – 2010, 2011, 2012, 2013								
	County				State (in 1,000's)			
	2010	2011	2012	2013	2010	2011	2012	2013
Labor Force	8444	8339	8132	7833	4938	4,908	4885	4859
Employed	7145	7024	6870	6671	4370	4307	4270	4243
Unemployed	1299	1315	1262	1162	569	602	615	616
Unemployment Rate	15.38%	15.77%	15.52%	14.83%	11.51%	12.25%	12.59%	12.69%
Source: DLEG, OLMI, Annual Averages								

Another method of describing the economic characteristics of a community is to analyze the employment by occupations. A comparison of occupational employment for the Township, County and the State is presented in Table 2-5.

Table 2-5: Employment (by Occupation) Blue Lake Township, Kalkaska County and State of Michigan 2010					
Occupation	Blue Lake Township		Kalkaska County		State
	#	%	#	%	%
Management, professional, and related occupations	26	18.7%	1334	20.0%	34.4%
Sales and office occupations	47	33.8%	1644	24.6%	24.5%
Service occupations	34	24.5%	1551	23.2%	18.6%
Construction, natural resources, and maintenance occupations	12	8.6%	908	13.6%	7.8%
Production, transportation, material moving occupations	20	14.4%	1234	18.5%	14.7%
Total	139	100.0%	6671	100.0%	100.0%

Source: 2010 Census.

As shown by the data above, the majority of the jobs for the Township and the County are classified as *Sales and office occupations*. In 2010, these jobs comprised approximately 34 percent of the total related jobs held by Township residents as compared with roughly 25 percent for the County and 25 percent for the State.

Education

Of the 330 persons in Blue Lake Township over 25 years of age, 91.2 percent have attained an education of high school graduate or higher, while 22.4 percent have also attained a bachelor's degree or higher. This level of educational achievement is significantly higher than the County, with 84.8 percent of the population having earned a high school diploma and 11.6 percent a bachelor's degree or higher. The Township educational levels for high school diplomas are also higher than the State level of 88.0 percent for high school but lower than the state average of 25.0 for bachelor's degree or higher.

Housing Stock and Property Values

An evaluation of housing stock and property values can be very beneficial in determining community characteristics or housing needs. For example, a large percentage of seasonal housing units are indicative of an increased seasonal population, as is the case of Blue Lake Township.

Statistics from the 2010 Census show a total of 799 housing units for Blue Lake Township: 741 single-family units, and 58 mobile home dwelling units. Mobile homes represent about 7 percent of the housing stock in Blue Lake Township. The number and percent of mobile homes in the Township has increased since 2000, at which time there were 36 mobile homes in the Township and represented less than 5 percent of the housing stock.

The lure of lakefront living, combined with the abundant, forestland, and wildlife in the Township, has attracted many seasonal residents to Blue Lake Township. When compared to the State as a whole, seasonal housing in the Township and County is significant, as shown in Table 2-6.

Table 2-6: Seasonal Housing Characteristics Blue Lake Township, Kalkaska County and State of Michigan – 2000 and 2010							
	Total Units			Seasonal Units		% Seasonal	
	2000	2010	% Change	2000	2010	2000	2010
Blue Lake Township	738	786	6.50%	521	561	70.6	71.4%
Kalkaska County	10,822	12,171	12.47%	3,827	4,326	35.4	35.5%
State of Michigan	4,234,279	4,532,233	7.04%	233,922	263,071	5.5	5.8%
Source: 2000 & 2010 Census							

Household Size

Census data from 2010 shows Blue Lake Township has a household size of 1.96 persons per household, compared with 2.33 persons per household in Kalkaska County and 2.62 persons per household for the State of Michigan as a whole. These figures are a significant change from prior decades. In 1970 for example, the household size for Blue Lake Township was 2.45 persons, compared to 3.01 for the County and 3.27 for the State. This trend to smaller households is important, because it creates a demand for additional housing units, even in the absence of numerical increase in population.

Ownership

In Blue Lake Township, 93.0 percent of the permanently occupied housing units are owner-occupied, compared with 82.6 percent at the County level and 72.1 percent at the State level. The renter-occupied housing in Blue Lake Township accounts for 7.0 percent of the total housing units, compared with the County level of 17.4 percent and the State level of 26.2 percent.

Housing Value

Another comparative measure for housing is value, as shown in Table 2-7. The median value of owner-occupied, year-round housing units is \$231,000 for Blue Lake Township, more than double

2000's \$110,400. Kalkaska County's median value in 2010 is \$105,900 as compared to the value of \$85,100 in 2000, while Michigan's 2010 median value owner-occupied housing unit is \$144,200 as compared to \$115,600 in 2000. This information, while collected by the Census Bureau, is subjectively provided by the general population regarding what he or she thinks is the value of his or her house, therefore this information should be used with caution.

Table 2-7: Value of Specified Owner-Occupied Housing Units Blue Lake Township – 2000 and 2010		
Housing Values	Number of Units	
	2000	2010
Less than \$50,000	17	15
\$50,000 - 99,000	48	22
\$100,000 - 149,000	27	28
\$150,000 - 199,000	33	15
\$200,000 - 299,000	15	42
\$300,000 or more	0	64
Source: 2000 & 2010 Census		

Property Value

Property values can also be analyzed by reviewing State Equalized Value (SEV) figures. By law, SEV, which constitutes a community's tax base, is equal to approximately one-half of the true market value of real property and certain taxable personal properties. The total SEV for Blue Lake Township decreased by approximately 14.4 percent between 2010 and 2016, see Table 2-8. The largest valued, nonresidential class of properties making up the Township's SEV is industrial land, which decreased by 16.7 percent between 2010 and 2016.

The 2016 distribution of SEV values for Blue Lake Township and Kalkaska County is illustrated in Table 2-9. As shown in the table, the majority of the Blue Lake Township tax base is derived from the Residential category.

Table 2-8: State Equalized Valuation by Property Class Blue Lake Township						
Property Class	2010 SEV		2014 SEV		2016 SEV	
	Value	% of Total	Value	% of Total	Value	% of Total
Agriculture	0	0	0	0	0	0.0%
Commercial	536,900	0.4%	647,900	0.6%	699,500	0.6%
Industrial	1,713,800	1.3%	1,515,600	1.3%	1,427,000	1.2%
Residential	68,513,100	50.9%	65,095,362	55.8%	69,361,700	60.2%
Timber Cutover	0	0.0%	0	0.0%	0	0.0%
Developmental	0	0.0%	0	0.0%	0	0.0%
Total Real Property	70,763,800	52.6%	67,258,862	57.7%	71,488,200	62.1%
Personal Property	63,794,100	47.4%	49,348,000	42.3%	43,696,400	37.9%
Total SEV	134,557,900	100.0%	116,606,862	100.0%	115,184,600	100.0%

Source: Kalkaska County Equalization Department

In 2016 the residential property class was the largest percent of the Township total SEV, at 60.2 percent, as compared to 50.9 percent of the total SEV in 2010.

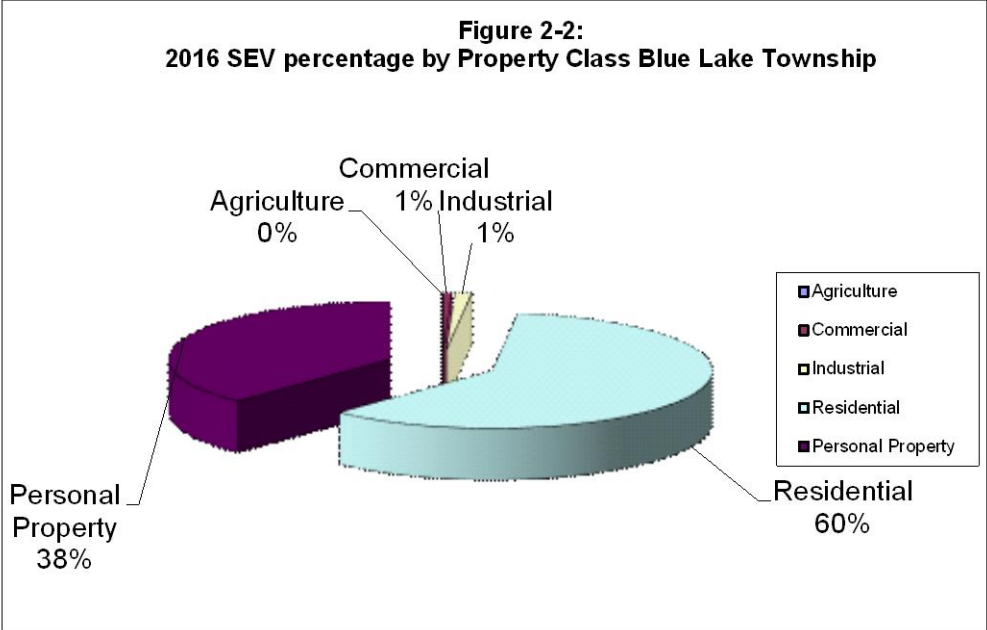


Table 2-9: Distribution of the SEV Blue Lake Township and Kalkaska County - 2016				
	Blue Lake Township		Kalkaska County	
Real Property:	Amount	Percent	Amount	Percent
Agricultural	0	0.0%	21,448,352	2.4%
Commercial	699,500	0.6%	50,055,100	5.5%
Industrial	1,427,000	1.2%	8,976,400	1.0%
Residential	69,361,700	60.2%	682,340,700	75.3%
Timber Cutover	0	0.0%	0	0.0%
Developmental	0	0.0%	0	0.0%
Total Real Property	71,488,200	62.1%	762,820,552	84.2%
Personal Property	43,696,400	37.9%	143,349,000	15.8%
Total SEV	115,184,600	100.0%	906,169,552	100.0%
Note:	Due to rounding, percents may not equal 100			
Source:	Kalkaska County Equalization Department			

CHAPTER 3

Natural Resources

Climate

Blue Lake Township's position in the interior of northern Lower Michigan means it lacks the climate-moderating effects of proximity to the Great Lakes. Due to the inland location, the growing season averages approximately 100-110 days. The township is considered to be a Zone 4 for plant hardiness, though snowfall cover will allow some Zone 5 plants to survive. However, the lakes provide slight moderation of temperature extremes to the Township. The average temperature in the summer months as recorded by the Grayling weather station is approximately 65.5 degrees Fahrenheit, while the winter average is approximately 19.5 degrees (data from Kalkaska County Soil Survey; 1960 through 1990). The overall annual average temperature for Kalkaska County is 43.3 degrees, although variations occur. Precipitation is well distributed throughout the year with the growing season, May to October, receiving an average of 18.7 inches, 58% of the total annual average. The average annual snowfall as officially recorded at Grayling weather station is 92.9 inches, however snowfall varies considerably throughout the area with unofficial annual average snowfall being approximately 130 inches for Mancelona.

Geology

Bedrock underlying the County was formed from an ancient sea, which covered the area some 250-600 million years ago. The bedrock underlying Blue Lake Township was formed during the early Mississippian ages of the Paleozoic Era. This bedrock is Coldwater shale.

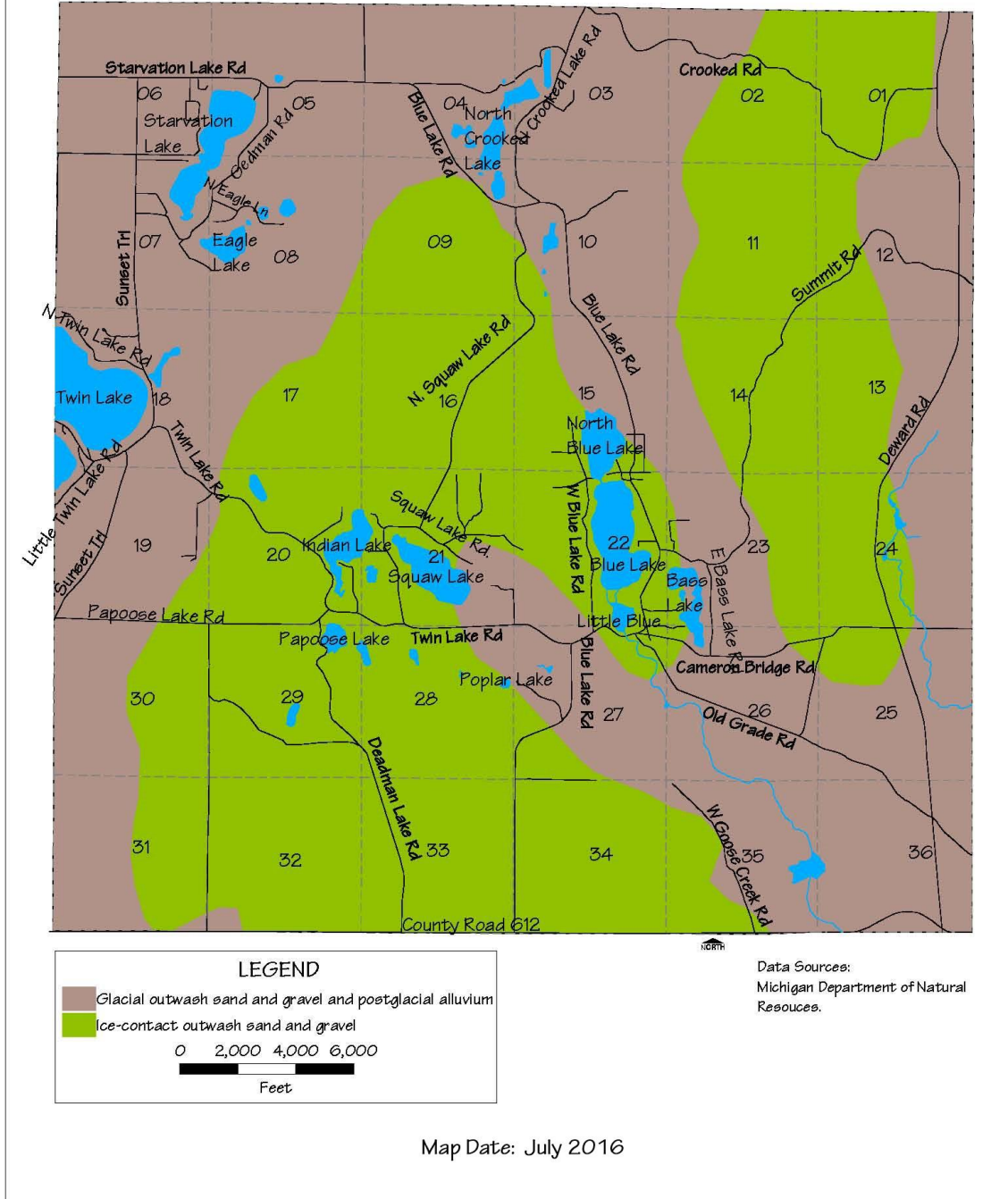
The primary surface geologic features in Blue Lake Township consist of course textured glacial outwash sand and gravel, as well as ice-contact outwash sand and gravel. The soil is primarily composed of unsorted sands and gravels left by the glacier. The surface geology of Blue Lake Township is shown in Figure 3-1.

Topography

Slope is an important development consideration associated with topographic features. Steep roadway grades, septic field failures, soil erosion and excavation costs are some of the difficulties associated with severe grades. Figure 3-2 shows the topography of the Township. Areas of steep slopes (12 percent and greater) are considered a potential constraint for development. The majority of the Township is primarily gently rolling terrain.

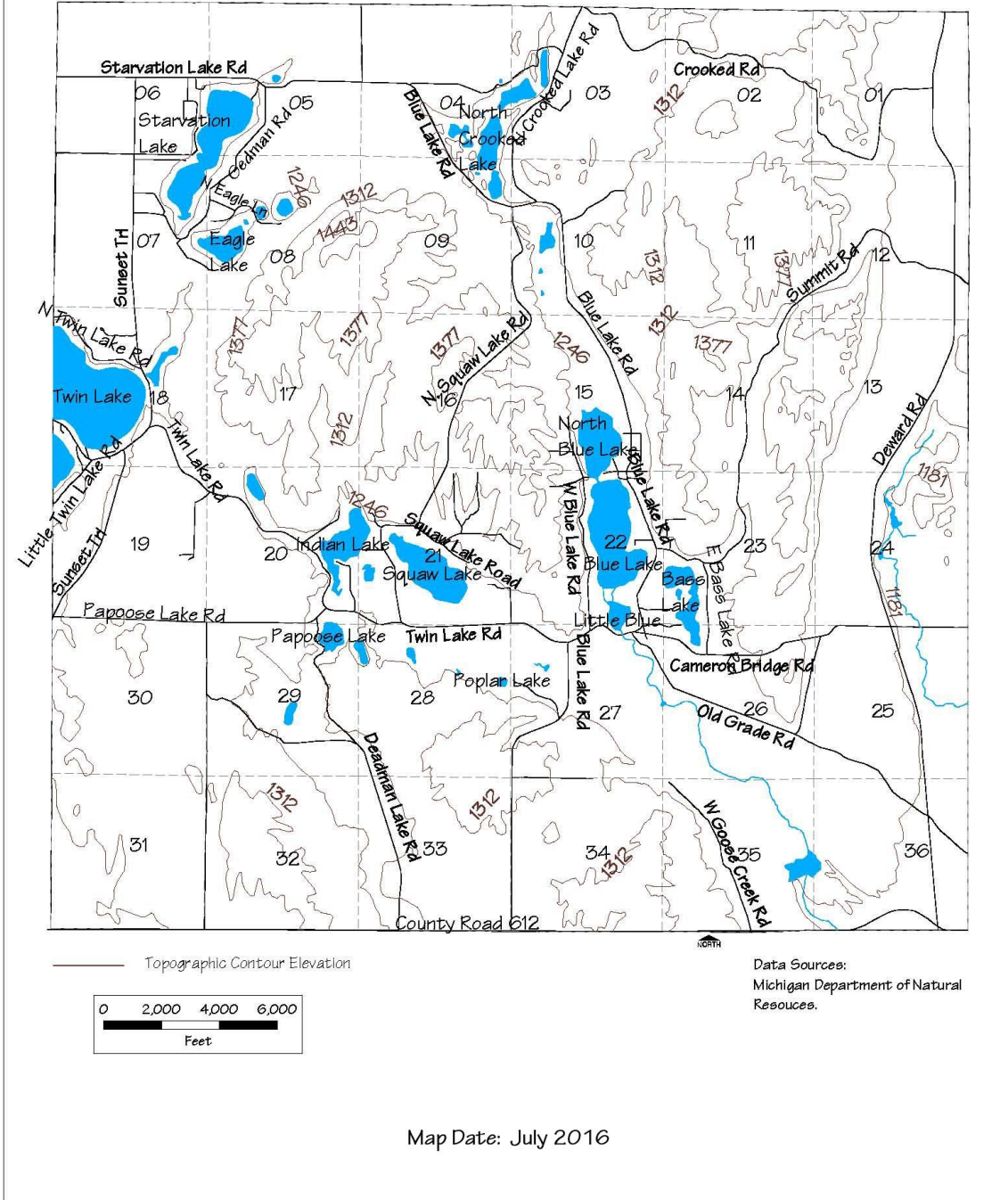
Blue Lake Township
Kalkaska County, Michigan

Figure 3-1: Surface Geology



Blue Lake Township
Kalkaska County, Michigan

Figure 3-2: Topography



Soils

One important determinant of land use is the soil's suitability for development. Land uses must correspond to the capacity of the soils on which they occur, and soil suitability for each use should be determined before development occurs.

The wetland areas of Blue Lake Township, comprised of soils which are hydric (wetland) soils or have hydric inclusions (see figure 3-3). Soils identified as having hydric inclusions are soil types which may have some wetland areas, but can not be determined by the soil type alone. Soils identified as having hydric inclusions must be field checked to verify whether or not wetland areas exist.

The soil limitations for septic systems were reviewed, and the entire Township is considered to have limitations either due to slope or poor filtration. Due to available engineering solutions, these limitations can be addressed. A more detailed analysis of the soils by the District Health Department will determine suitability for siting a septic system. Health Department approval is required by State law.

Figure 3-4 identifies areas with soil limitations for buildings without basements. In order to gain a better understanding of the actual impact of such limitations, the state-owned land is shown as an "overlay" on this map. The limitations identified are either related to slope, hydric soils or both. These limitations do not preclude the development of specific sites. The developer should realize, however, that construction on some soils may be costlier in time and money.

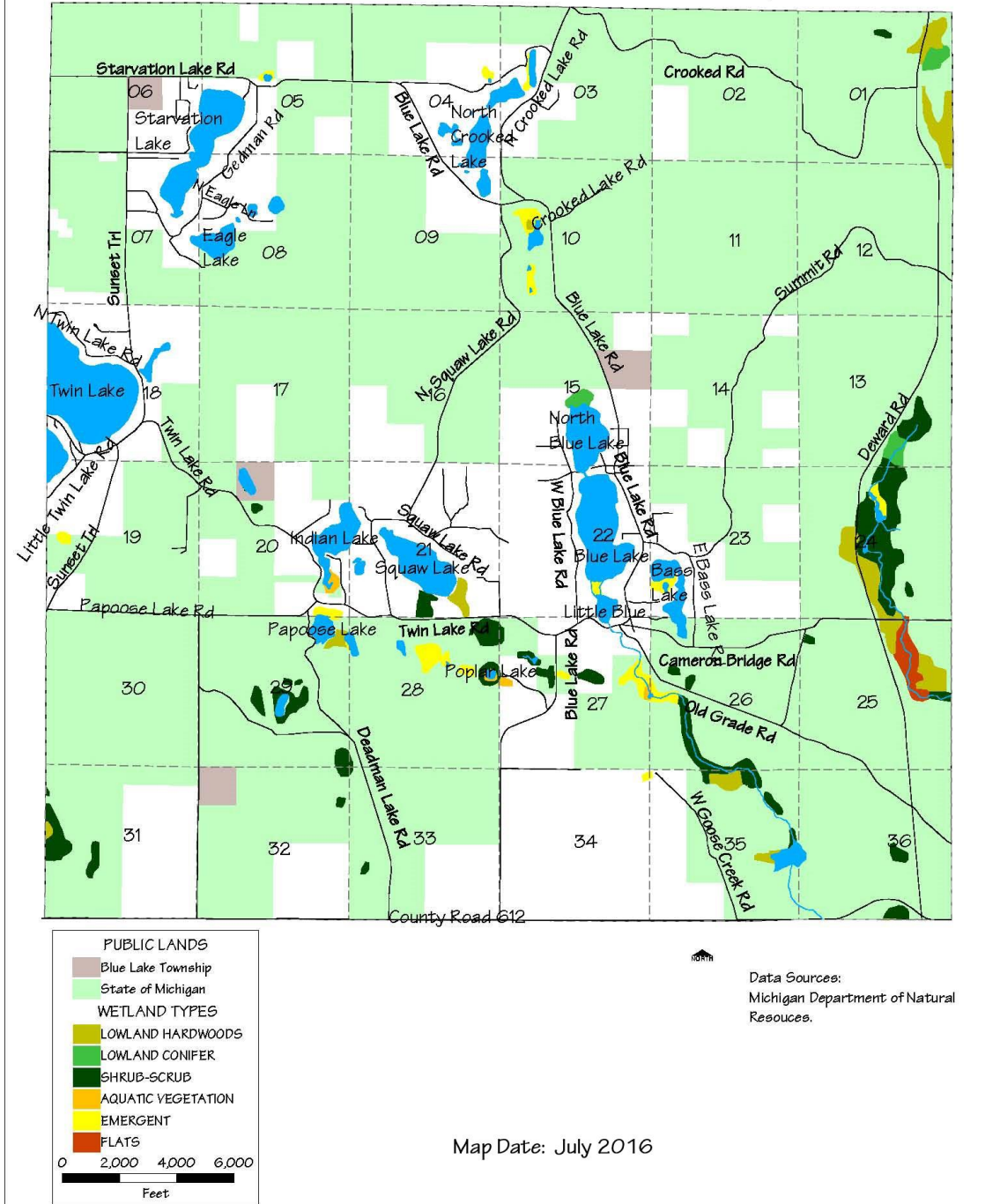
Water Resources

One of the valuable natural resources of Blue Lake Township is water. The lakes of Blue Lake Township provide for a variety of recreational activities such as fishing, boating and swimming.

Both groundwater and surface water are vital resources within Blue Lake Township. Because there is no central water distribution system, residents must rely upon individual wells for drinking water. The vulnerability of drinking water aquifers to surface contamination is high in the Township due to the highly permeable soils. Surface waters in lakes and creeks of the Township are an important resource for scenic, recreational and groundwater recharge amenities. It is therefore important that water resources be protected and managed in a manner which would ensure their quality.

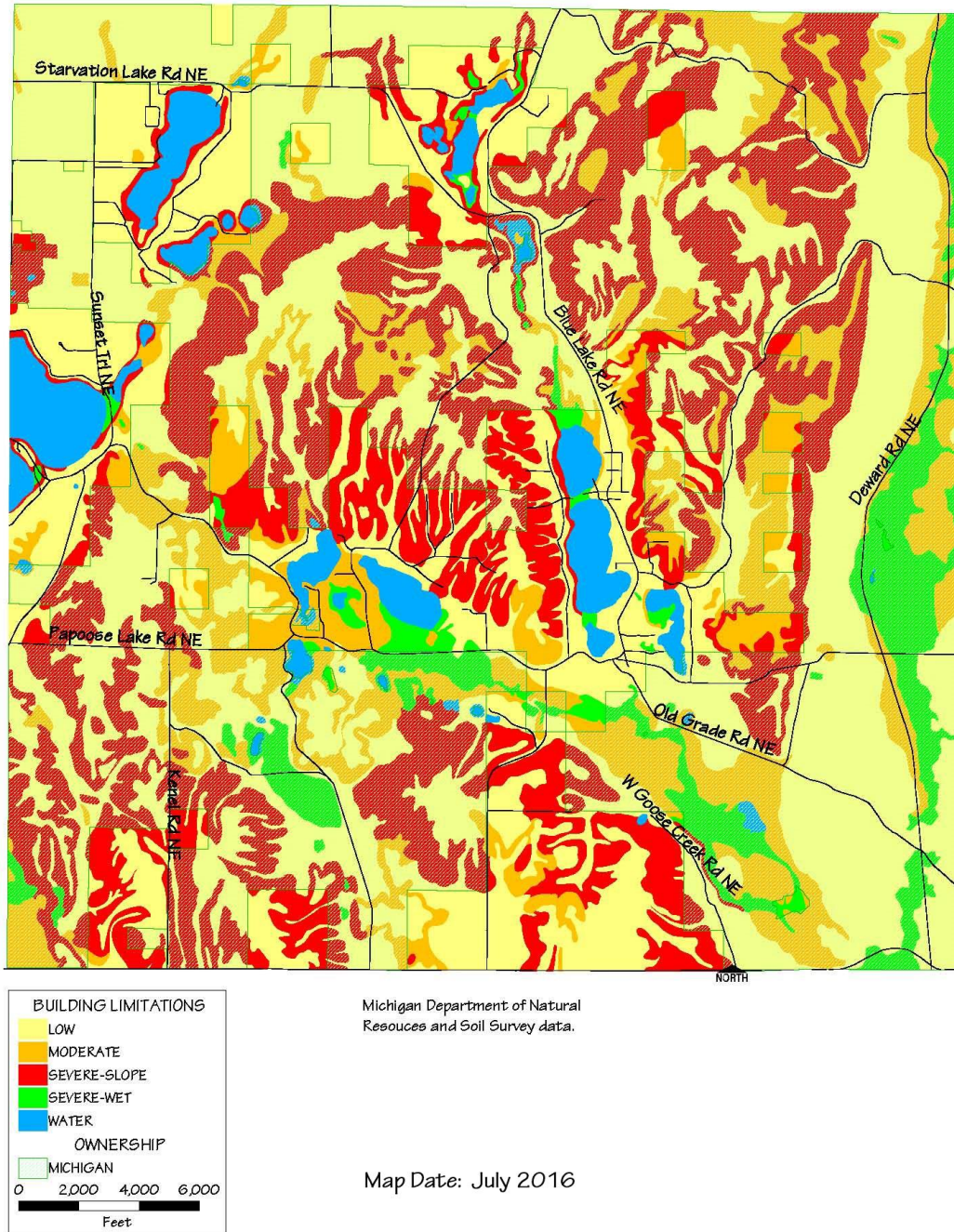
Blue Lake Township
Kalkaska County, Michigan

Figure 3-3: Wetlands and Public Ownership



Blue Lake Township
Kalkaska County, Michigan

Figure 3-4: Building Limitations for Buildings without Basements



Groundwater

Important factors in the evaluation of groundwater are the quantity and quality of the water. The geologic and hydrologic features of the Township provide residents with sufficient water quantities. Water availability will not likely be a factor in limiting growth. In Blue Lake Township, water quality is more of a limiting factor than water supply. A more significant concern is the potential contamination of wells by septic fields. Although the Kankaska County Health Department record has no documented occurrences of contamination to date, the possibility for such pollution exists.

Surface Water

The major bodies of water in Blue Lake Township include portions of the following lakes, Big Twin and Little Twin, Starvation, Blue Lake, North Blue, Little Blue, North Crooked, Squaw, Indian, Bass, Papoose and Eagle and additional small lakes and ponds. The surface area of the lakes is 800 acres. The lakes and its associated tributary streams and creeks offer scenic and recreational amenities to Township residents and visitors. It is extremely important that the quality of these surface waters be protected from the negative impacts of development, such as pollution and loss of scenic views to open water.

The Blue Lake Coldsprings Lake Association and Blue Lake Association are active organizations of interested citizens and property owners concerned with monitoring and protecting the lakes or specific lakes in the Township. The Au Sable Institute also monitors some of the lakes in the Township as part of their environmental education programs.

Lakes, creeks, and wetlands are important for surface drainage, groundwater recharge and wildlife habitat. Alterations to the water features can contribute to flooding, poor water quality, insufficient water supply and loss of valuable wildlife habitat.

While the current quality of surface waters in Blue Lake Township is good, the threat of potential water pollution from non-point sources is a concern. Proper land use management can help control water quality conditions in Blue Lake Township. Some methods to curb pollution include runoff control measures, septic field standards, proper treatment of sanitary wastes, and fertilizer applications restrictions.

Wetlands and Woodlands

In addition to the scenic characteristics of woodlands, forested areas provide habitat for wildlife, protect the soil from erosion, and act as a buffer from noise on roadways. Figure 4-1 shows the distribution of forested land within the Township. Much of the forested areas throughout Blue Lake Township are located on State-owned (public) lands. These state owned forest areas are managed for timber, with timber harvested and sold according to a management plan which is reviewed every 10 years.

The dominant forest type association in Blue Lake Township is the northern hardwood forest (maple, beech, oak and basswood). Also found in the uplands are Aspen–Birch Successional Forests and Northern Pines Forests (Red, White and Jack Pines). In the lowland or wetland areas, common hardwood species include ash, elm and red maple. The common coniferous associations in the wetland areas are cedar and tamarack.

Fish and Wildlife

Trout, Bass, Yellow Perch, Blue Gill and Walleye are the primary species found in the lakes in the Township, creating good recreational fishing opportunities. The fishery management strategy includes stocking, as well as periodic surveying of the survival and growth of stocked species and assessment of fish populations several of the lakes in the Township, including Big Blue, North Blue, Starvation and Big Twin.

Habitat for populations of songbirds, wild turkeys, muskrat, mink, and raccoon are also supplied by forests within the Township. Predominant mammal species found throughout Blue Lake Township are fox, skunk, squirrel, rabbit, raccoons, porcupines, coyotes and deer. Black bear are occasionally spotted in the Township. Additionally, several species which are listed as "endangered, threatened or special concern" on either a state or federal level are found in Blue Lake Township, including, four "threatened" species, the bald eagle, osprey, red-shouldered hawk and common loon. The following "special concern" bird species are also known to nest in Blue Lake Township: Cooper's hawk, northern goshawk, and American bittern.

Scenic Features

The dynamic, year round views from along its shorelines are another important asset to Blue Lake Township. Development which occurs along the shoreline areas is visible to many other property owners and boaters on the lakes. Just as consideration is given to the impact of development on water quality, the impact of development on visual quality should be considered.

Sites of Environmental Contamination

The Michigan Department of Environmental Quality provides for the identification, evaluation and risk assessment of sites of environmental contamination in the State, under part 201 of PA 451 of 1995. The Environmental Response Division (ERD) of the Michigan Department of Environmental Quality (DEQ) is charged with administering this law. A site of environmental contamination, as defined by the ERD, is "a location at which contamination of soil, ground water, surface water, air or other environmental resource is confirmed, or where there is potential for contamination of resources due to site conditions, site use or management practices." The agency publishes an annual list of environmentally contaminated sites by county, showing the sites by name, Site Assessment Model score, pollutant(s) and site status. As of May 2008, no environmentally contaminated sites were located in Blue Lake Township.

Surface Water Discharge Permits

All point source discharges into surface waters are required to obtain a National Pollutant Discharge Elimination System (NPDES) permit which is issued by the Michigan Water Resources Commission upon recommendation by MDNR (now DEQ), Surface Water Quality Division. Permit requirements generally address discharge limitations, effluent characteristics, monitoring and reporting requirements, along with facility management requirements. Currently no point source permit holders are listed in Blue Lake Township.

Air Quality

Air Quality is monitored by the Air Quality Division of the Michigan Department of Environmental Quality. Standards have been established as acceptable levels of discharge for any of the following air pollutants: particulate matter, sulfur dioxide, nitrogen dioxide, carbon monoxide, ozone, lead, and

trace metals. These pollutants are monitored on a continuing basis at selected locations around the state. Monitoring in recent years has shown the level of pollutants in the region to be within the established acceptable standards.

Air discharge permits are required for businesses discharging more than the acceptable level of any of the regulated air pollutants. None are currently listed in Blue Lake Township.

Summary

The review of the natural resources in Blue Lake Township indicates the natural features and agricultural resources are currently relatively unimpaired; however, these resources are extremely vulnerable to change. Residents highly value the natural resources and scenic features of the Township. The environmental features of Blue Lake Township are an important asset to the community, and need continued protection.

CHAPTER 4

Existing Land Use

Pattern of Land Divisions

As development occurs, larger tracts of land are generally broken down into smaller parcels. Therefore, studying the existing pattern of land divisions is one way to analyze the status of land use and development. Land division patterns for Blue Lake Township are discussed below.

The largest land owner in the Township is the State of Michigan (over 16,000 acres), with large areas of contiguous undeveloped land, which is primarily used for recreation and forest management purposes. Privately held tracts ranging in size up to approximately 200 acres or greater are scattered throughout the interior of the Township.

Subdivisions and small tracts are primarily located along the lakefronts. Other small tract land divisions are occurring as small parcels along the roads are split from larger parcels. A site condominium does not actually create lots by land division. Therefore, a site condominium project may continue to appear as a large, undivided tract when it has already been converted to relatively dense residential use.

Existing Land Use Statistics and Characteristics

According to the 2010 Census, Blue Lake Township's land area is 34.7 square miles.

The map of existing land use, shown as Figure 4-1, illustrates the distribution of land uses within the Township. Figure 4-1 graphically represents the percent of the township in each land use category. The existing land use map is a compilation of data provided by Michigan Department of Natural Resources, aerial photo interpretation and additional field checking.

Blue Lake Township
Kalkaska County, Michigan

Figure 4-1 Existing Land Use/Land Cover - 2016

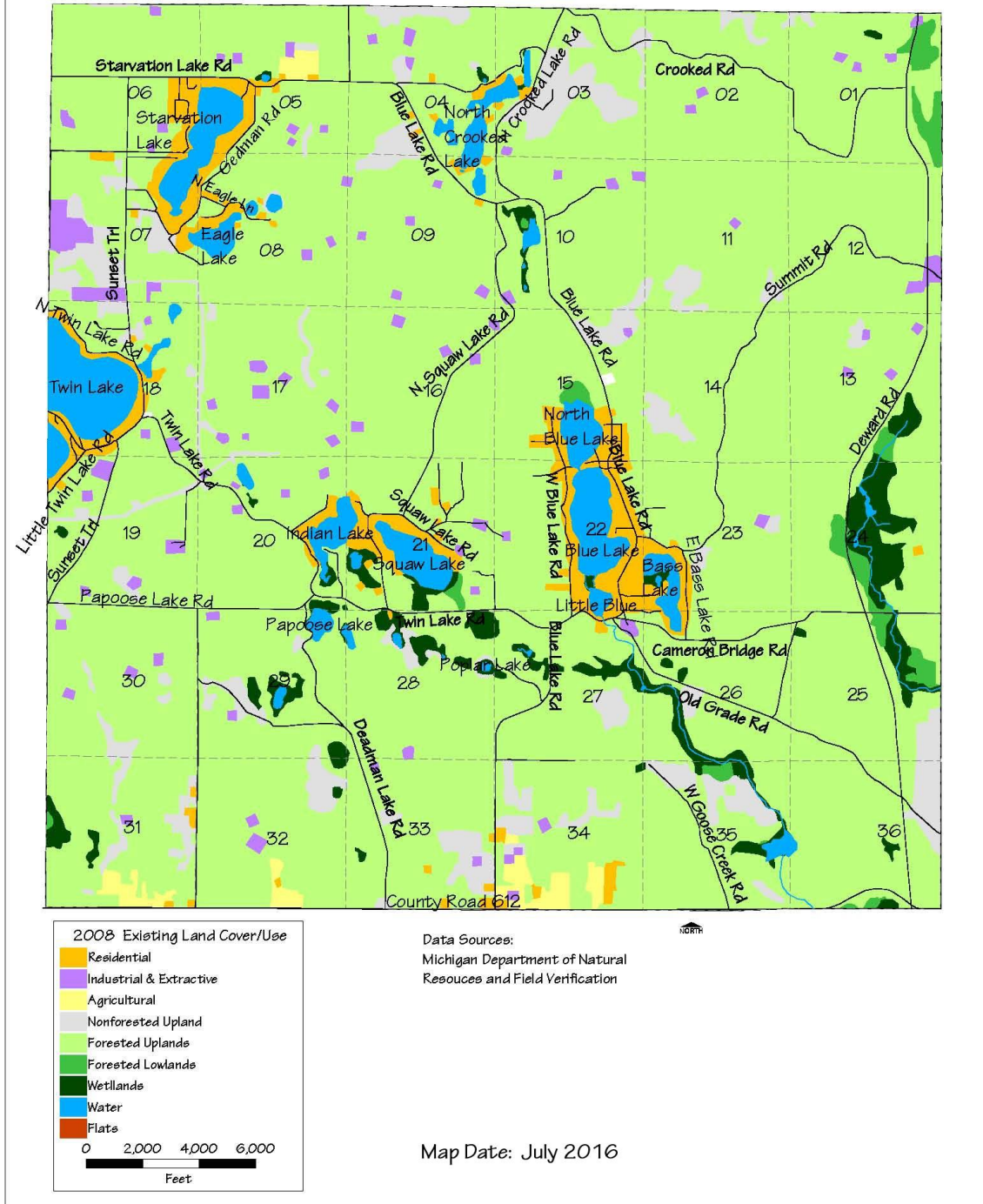


Table 4-1: Existing Land Use - 2016 Blue Lake Township		
Land Use Category	Acres	Percent of Township
Forested uplands	18,807.6	81.3
Nonforest	1,293.0	5.6
Residential	860.7	3.7
Wetlands	629.9	2.7
Industrial/Extractive/Util.	337.3	1.5
Forested lowlands	204.0	0.9
Agricultural	173.7	0.8
Commercial	5.0	0.02
Water	812.6	3.5
TOTAL	23,123.8	100.0
Source: Michigan Resource Information System, and MCP&D Field Verification and Map Updating.		

Forests and Wetlands

Forests, which include upland hardwoods and conifers, account for over 81 percent of Township land area in 2016. Heavily wooded areas are found throughout the Township, as can be seen in Figure 4-1.

Wetlands include land that has sufficient water at, or near, the surface to support wetland or aquatic vegetation. These areas are commonly referred to as swamps, marshes, or bogs. Wetland areas may also include land which supports lowland hardwoods and conifers. Wetland information was not verified by field inspection when these maps were compiled. Thus, the areas shown as wetlands by MIRIS may not actually meet State and Federal criteria for legally regulated wetlands.

Wetland areas comprise less than 3 percent of the Township in 2016.

Non-forested

The nonforested land category consists of herbaceous open and shrub land. As shown in Table 4-1, the percent of nonforested land in the Township is nearly 6 percent in 2016. Non-forested lands are Residential

As can be seen from Table 4-1 and Figure 4-1, the amount of land being used for residential purposes is approximately 4 percent of the township in 2016.

The pattern of residential development within the Township is shown in Figure 4-1. Residential use has been the predominant land use along the lakefronts. Additionally, small tract land divisions continue to occur along many of the Township roads.

Agricultural

As shown in Table 4-1, agricultural lands occupy less than one percent of Township land area in 2016. As is illustrated in Figure 4-1, the active agricultural lands are dispersed mostly in the southern part of the Township.

Industrial/Transportation/Extractive

The major component of this land use category is oil and gas well sites, as shown in Figure 4-1. Table 4-1 shows a combined percent for industrial and extractive uses. While as of 2016 this land category is less than 2 percent of the Township land area, the owners of the approximately 25-30 miles of gas pipelines and a gas storage facility located in Blue Lake Township are the largest taxpayer in the Township. Also included in this category are transportation and utilities, such as utility line corridors.

Commercial

Table 41 shows that the amount of land developed as commercial in Blue Lake Township is less than one percent, scattered throughout the Township, as shown in Figure 4-1.

CHAPTER 5

Community Services, Facilities and Transportation

Water and Sewage Disposal Systems

Blue Lake Township does not have a public drinking water system or a public sewer disposal system. Consequently, the Township residents have on-site private wells for domestic drinking water and individual septic systems. Septic systems and wells are regulated by the Kalkaska County Health Department.

Two important determinants for siting a septic system are soil suitability and depth to bedrock. Chapter Three – Natural Resources discusses the geology and soils of the Township.

Solid Waste

Blue Lake Township contracts to provide weekly curbside solid waste pick-up for Township residential households, and additionally annually provides four tags for large items (such as appliances) to be used for curbside pick-up on any regularly scheduled pick up day.

Recycling is available at the county level, and Blue Lake Township residents have access to a drop-off site located in Kalkaska.

Other Public Utilities

Blue Lake Township residents receive electric service from Great Lakes Energy. Natural gas service is available from DTE Energy in the western portions of the Township, including the Twin Lake area and near Starvation Lake. Residents choose from several providers of local and long distance phone service. Cable service, where available, is provided by Charter Communication. High speed internet service is currently available via satellite from several providers. Internet service is also provided by radio antenna from Chain Of Lakes Internet (COLI) and cell phone providers to residents in the Township. The property for a Verizon Wireless cell phone tower located behind the Fire barn is leased from the township. Three smaller towers owned by the Township are operated by COLI for providing internet service.

Police, Fire, Ambulance

Kalkaska County Central Dispatch agency provides emergency call receipt and dispatch service for Kalkaska County. Enhanced-911 telephone service, computer-aided dispatch and a multi-channel radio system are in place. Central Dispatch Authority is a system which identifies the location from which a cellular phone call is made. SMART 911 service is available through the Kalkaska County Sheriff's department via registration and will provide additional information to emergency responders.

The Kalkaska County Sheriff and Michigan State Police provide law enforcement services to Blue Lake Township, both from bases in Kalkaska. The Township is served by a community officer from the Sheriff's department, who is contracted to provide a specified number of hours for the Township per month. Law enforcement needs at other times are handled by the geographically closest officer at the time, either from the Sheriff's department or the State Police.

Fire protection is provided by the Blue Lake Township Fire Department, which is a 12-person volunteer fire department with a paid Chief and Assistant Chief positions. Several of the department personnel are cross-trained as medical first responders (MFR), as well as several as emergency medical technicians at the basic level (EMT-B) and one emergency medical technician at the specialist level (EMT-S). The department equipment consists of a Class A Pumper, a 2000-gallon Pumper Tanker, a Brush rig and a non-transport ambulance as a rescue vehicle. The Blue Lake Township Fire Department equipment is housed in the “fire barn” located on Blue Lake Road. The Blue Lake Township Fire Department participates in mutual aid agreements with other fire departments in area. The Fire Department has a dry hydrant on North Blue and a 6 inch well at the township hall.

Fredric Ambulance Service located at the Coldspring’s fire hall on County Road 612 primarily provides advanced life support (ALS) and ambulance transport service. Township residents have access to Kalkaska Memorial Hospital, Munson Healthcare Grayling Hospital in Grayling and Munson Community Health Center in Traverse City.

Recreation

The recreation opportunities in the Township consist primarily of water-related activities (boating, fishing, swimming, etc) and trails for hiking, skiing, biking, as well as some trails for snowmobiling. There are numerous public access sites on the lakes within the Township that are well utilized both in the summer and winter seasons. The extensive networks of trails in the Township are located on both public and semi-public lands, including snowmobile and ORV trails, as well as a portion of the North Country Trail. See Chapter 6- Recreation Plan for more details.

Municipal Facilities

The Blue Lake Township Hall, located on Twin Lake Road, was built in approximately 1969 and remodeled in 2008, including making the facility handicap accessible. This facility accommodates the Township public meetings and Township office space, with the addition of a kitchen. The facility is located on a parcel approximately 2.7 acres in size.

The Blue Lake Township Fire Barn is located on Blue Lake Rd on 45 acres and consists of the main fire barn containing 4 bays and office-meeting space built in 2001 and a smaller storage barn built in 1985.

Schools and Libraries

Blue Lake Township is part of the Kalkaska Public School District, however due to “schools of choice” many residents utilize other school systems. Post high school education and personal enhancement courses are available in Traverse City at Northwestern Michigan College/University Center and the M-TEC.

The Great Lakes Campus of the Au Sable Institute of Environmental Studies is located in Blue Lake Township. The institute provides university-level courses and services for sustainable community-building, environmental education and restoration for school children and adults, facilities for community and environmental organizations, community and regional conferences and retreats, and outreach services.

Blue Lake Township does not have a library located within the Township, however, residents have access to the Kankaska County Library in Kankaska. The Kankaska County Library also has an electronic lending system available to its patrons.

Transportation and Road Maintenance

There are a total of 63.7 miles of county roads passing through Blue Lake Township, including 23.3 miles of county primary hardtop roads, 40.4 miles of local roads including hardtop, gravel and seasonal roads. Additional there are private roads in the Township which are not maintained by the County. The Kankaska County Road Commission provides road maintenance and snow removal services on all public non-seasonal roads within the Township.

Blue Lake Township residents also have access to the Kankaska Public Transit Authority, which provides a scheduled route bus service three times a day, five days a week. With 24 hour notice, the service will pick-up a resident at his or her home, if located on a public road, and provide transportation within the County.

CHAPTER 6

Recreation Plan

Introduction

Because of the recreational opportunities in Blue Lake Township and the abundance of natural resources, the Township wishes to include recreation as a key component in the Master Plan.

In past years, the Township has provided recreation services and facilities to residents and visitors. The mix of Township owned facilities, along with other publicly owned and privately owned facilities offers a wide range of passive and active recreational opportunities. A description of these facilities is included in the recreation inventory, which begins on the following page. Blue Lake Township plans not only to continue providing recreation services to its residents and visitors, but also to make improvements at the existing facilities, including compliance with Americans with Disabilities Act (ADA), which mandates accessibility standards for citizens who have mobility difficulty.

As a recreation service provider, the Township recognizes the importance of planning for future recreation services and facilities. Blue Lake Township has not previously prepared a Township Recreation plan, but would have been included in the any past county-wide Recreation Plan. A major factor in the provision of any service is the question of how projects will be funded. One possible source of funding for recreation projects is through grants available from Michigan Department of Natural Resources (MDNR).

To become grant eligible for MDNR funding, a community must have an approved recreation plan. Components of a MDNR approved recreation plan include:

- Community Description
- Recreation Inventory
- Administrative Structure
- Description of the Planning Process
- Action Program
- Basis for the Action Program
- Plan Review and Adoption

Elements of the community description can be found in earlier chapters of this report. A community location map can be found in Chapter 1- Introduction. Chapter 2 discusses socio-economic characteristics of the Township, while data on the natural environment and existing land use patterns are found in Chapters 3 and 4, respectively. The remaining components of the recreation plan are covered in this chapter.

Inventory of Recreation Facilities in Blue Lake Township

An inventory of existing recreation facilities located in Blue Lake Township is provided below. Sites are grouped according to jurisdictional ownership. Township owned facilities are listed first, then other public sites, and finally privately owned recreation sites. Each listing is followed by a brief description of that location. Figures 6.1 illustrate the location of the public sites.

Blue Lake Township owns one property which is currently being used for recreational purposes. Table 6-1 contains information on these facilities.

Table 6-1 Facilities Owned and/or Operated By Blue Lake Township			
Name	Size	Facilities	Needs for ADA Compliance
Township Hall	2.7 acres	Meeting room, offices, full kitchen, available for community use.	None (Met with 2008/2009 remodel)
Fire Barn	50 acres	Meeting room, office and 2 equipment garages.	None
Other Undeveloped Township properties	40 acres each	Nature areas - - Corner of Sunset Trail and Starvation Lake - On Twin Lake Rd halfway between Sunset Trail and Squaw Lake Rd. - Middle of Kenel Rd (see figure 6.1)	If developed, ADA facilities will be needed.

DNR Water Craft Rules for Lakes in Blue Lake Township	
Lake Name	Water Craft Rules in Effect
Eagle Lake, North Crooked Lake	Slow – No Wake Speed
Bass Lake, Indian Lake, Little Twin Lake, North Blue Lake, Squaw Lake	No High Speed Boating or Water Skiing (Boat below Plane speed and no Towing)
Big Blue Lake, Big Twin Lake, Starvation Lake	No High Speed Boating between 7:30PM and 11:00AM

Table 6-2 contains information on other publicly owned land in Blue Lake Township, including a number of State owned facilities in the Township. All of these facilities are located adjacent to water and provide boat ramps and public access to the water bodies.

Table 6-2 Public Recreation Facilities in Blue Lake Township		
Name	Map Reference	Facilities
Blue Lake	Figure 6-1	Lake Access, Restroom facilities, limited parking off of Blue Lake Rd.
North Blue Lake	Figure 6-1	Lake Access, No facilities, Blue Lake Township Owned, off of Beaver Lane
Starvation Lake	Figure 6-1	Lake Access, Restroom facilities, limited parking off of Starvation Lake Rd.
Big Twin Lake	Figure 6-1	Lake Access, Restroom facilities, limited parking in Coldsprings Township off of North Twin Lake Rd.
Little Twin Lake	Figure 6-1	Lake Access, No facilities, Coldsprings Township owned, off of Twin Lake Rd.
Indian Lake	Figure 6-1	Lake Access, Restroom facilities, limited parking off of Birch Dr.
Eagle Lake	Figure 6-1	Primitive Lake Access off of Power Line access Rd.
Bass Lake	Figure 6-1	Primitive Lake Access off of Camron Bridge Rd.
Papoose Lake	Figure 6-1	Primitive Lake Access off of Twin Lake Rd.
North Country Trail – hiking trail	Figure 6-1	Hiking, X-C Skiing, and Mountain biking trail (non-motorized use only)
Snowmobile Trail – portions of routes 76,79 &679	Figure 6-2	Groomed Snowmobile Trails, Parking available at two locations on Starvation Lake Rd.
Kalkaska ORV Trails	Figure 6-2	
Bike – Trail Head	Figure 6-2	
Hike – Trail Head	Figure 6-2	
Beaver and Channel Park		Water Channel Between North Blue Lake and Blue Lake including foot bridge

Blue Lake Township
Kalkaska County, Michigan

Figure 6-1: Public Lands and Recreation Facilities

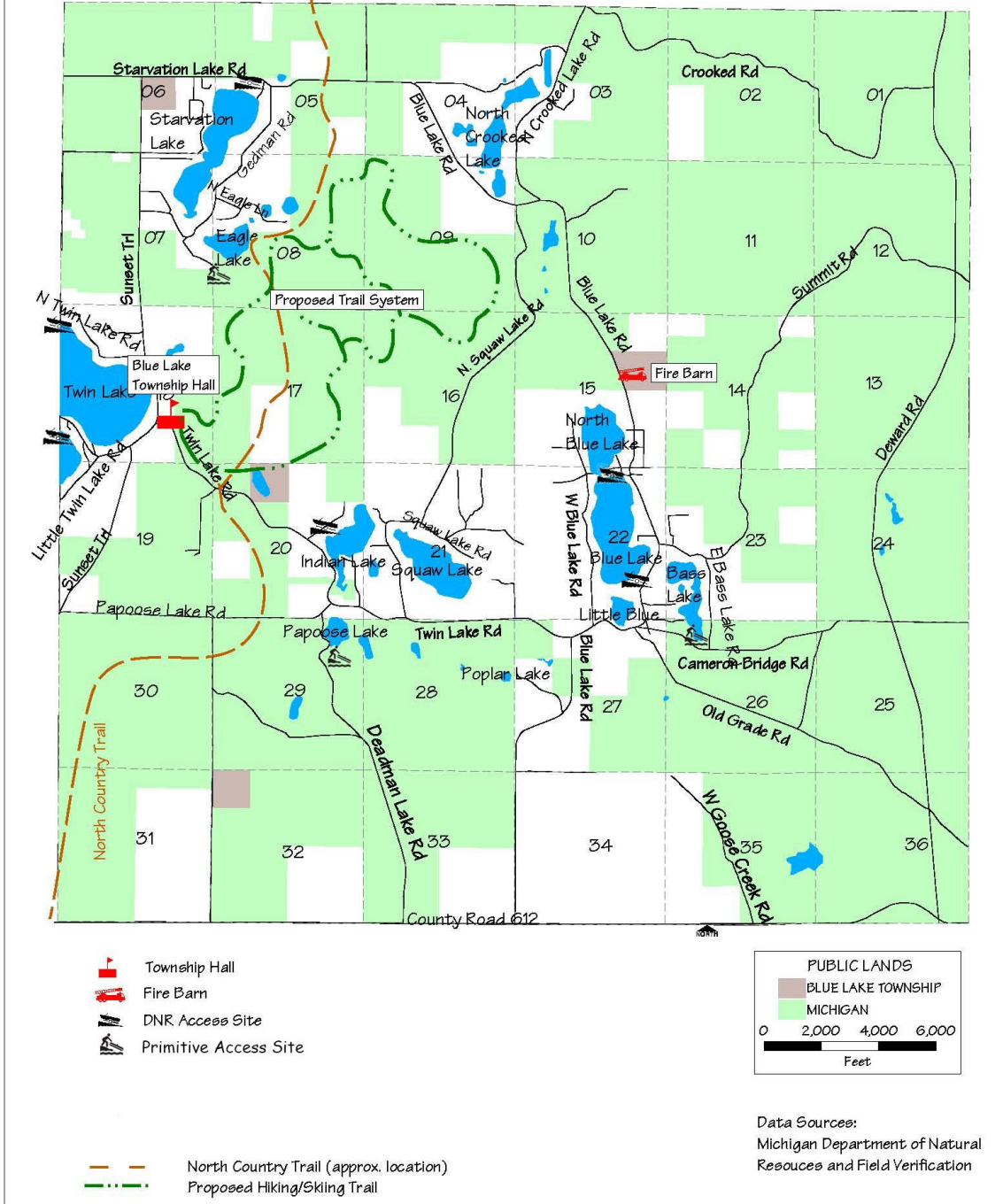


Figure 6-2
Grayling Area Recreation Map- 2007-08
Blue Lake Township – Excerpt
 Provided for Snowmobile and ORV trails reference only

Grayling Area 4-Season Map

▲ Local Park	✈ Airbase
▲ National/State Park	⚓ Fishing Access
▲ Public Campground	🚣 Canoe Access
▶ Nature Preserve	⚓ Boat Ramp
⛺ Picnic Area/Rest Stop	⚓ Marina/Harbor
🏞 Scenic Overlook	✈ Airstrip
🚗 Trailhead-Snowmobile	✈ Airbase
🚗 Trailhead-ORV	🏥 Hospital
🚗 Trailhead-Hike	🏪 Shopping Area
🚗 Trailhead-X-Country Ski	🗺 Tourist Info
🚗 Trailhead-Bike	⛪ Church
⛷ Downhill Ski Hill	⚱ Cemetery
🏛 Gov't. Office	⛏ Mine/Quarry
🏛 County Seat	🏟 Playing Field
👮 Ranger/Police	⌚ Golf Course
📖 Museum/Library	📍 Point of Interest
🎓 College/School	🚧 Barrier-Free

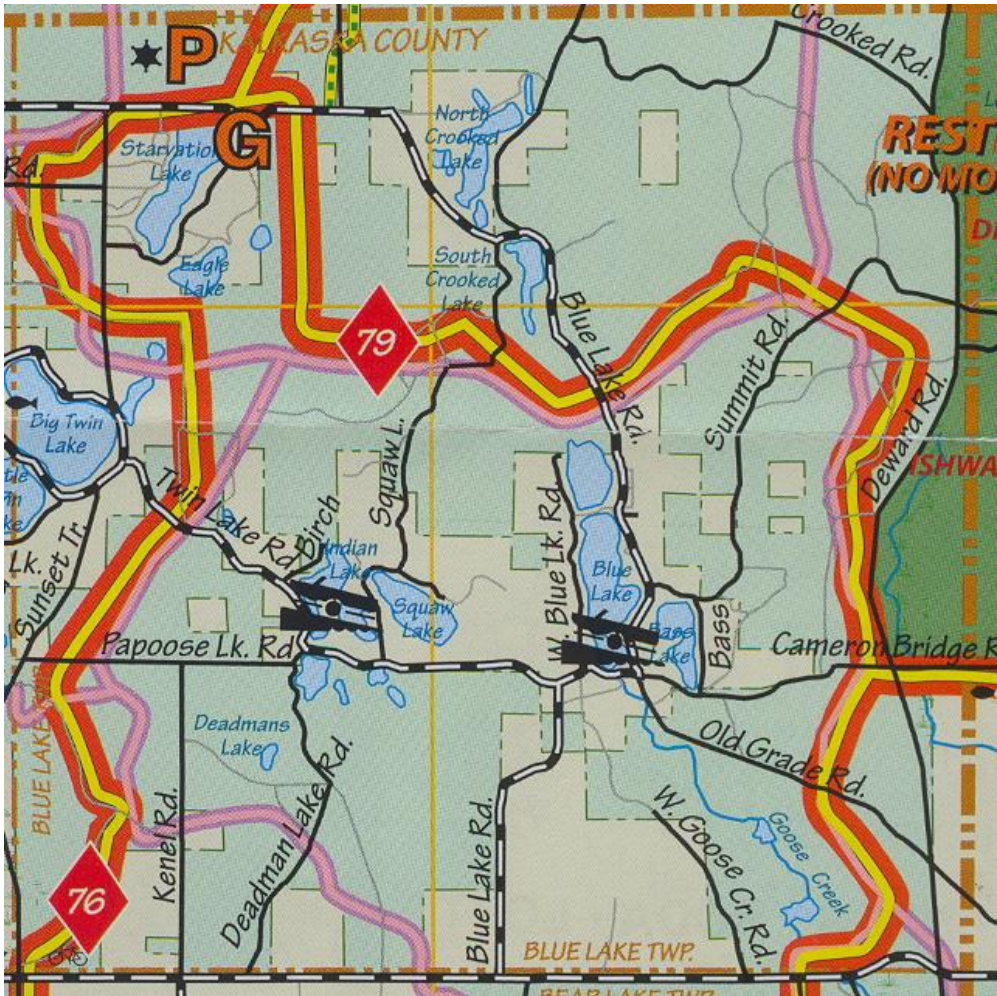
	Federal Interstate
	Federal Highway
	State/Provincial Highway
	County Primary
	Principal Local Road
	Other Roads/Trails
	Railroad
	ORV Trail
	Non-Motorized Trail
	Multi-Purpose Trail
	Interchange
	Settlement/Village
	County Boundary
	Township Boundary
	Latitude/Longitude Line
	Public/Open Land
	Other Land

Snowmobile Features:

	Groomed Snowmobile Trail
	Gas Available
	Parking

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Americans with Disabilities Act Compliance

With the passage of the Americans with Disabilities Act of 1990 (ADA), all areas of public service and accommodation became subject to barrier free requirements, including parks and recreation facilities and programs. The ultimate goal is to provide recreation opportunities that include everyone regardless of physical or mental impairment.

When evaluating the accessibility of parks and facilities, barriers should be recognized from the perspective of the participant. These perspectives aid in preparing the design and planning future improvements to both current and existing facilities. Therefore, we can determine whether a site, building, and/or facility is in compliance with the Americans with Disabilities Act Accessibility Guidelines.

Perspectives to Consider

- Could a person with vision impairment have a reasonable means of identifying the facilities?
- If a person is physically disabled, is there a means to access all facilities and if there are barriers, is an alternate route available?
- If a person has a reading disability, could the person recognize standard symbols indicating parking, restrooms or trailway?
- If a person uses a walking aid such as crutches or braces, could the person participate with a group in facilities and move from the arrival place (parking area) to the activity area?

Other Kalkaska County Recreational Facilities

Residents of Blue Lake Township can also utilize recreational facilities outside the township bounds. There are a number of additional public and private recreational facilities in Kalkaska County. County/state campgrounds and parks offer a wide range of recreational activities from picnicking and baseball to hiking and swimming. The local public schools within the county also all have recreational facilities. There are many sites that offer water recreational opportunities that are not classified as campgrounds or local government and private parks. These public access sites often have boat launches, parking areas, and toilets and are typically maintained by the Michigan Department of Natural Resources. In addition, there are many privately owned recreational facilities open to the public.

Trails

There are numerous recreational facilities classified as trails that are in or run through Kalkaska County. These trails include many miles of walking, hiking, biking and cross country skiing trails via the North Country Trail and extensive signed and groomed snowmobile trails, which connect to a larger trail network, see Figure 6-2. Additionally, the vast amount of state-owned land and numerous two-track roads throughout the area provide more informal hiking options. A portion of the North Country Trail, a 4,600 mile hiking trail from New York State to North Dakota, passes

north and south through the a portion of Blue Lake Township, in the vicinity of Starvation Lake, Eagle Lake south to 612 at Sunset Trail, see Figure 6-1.

Administrative Structure and Funding

Blue Lake Township may ultimately establish a separate Parks and Recreation Committee that oversees the general operation of the township parks and recreation programs. At the present time the Planning Commission is also serving as the Parks and Recreation Committee. This Committee will provide recommendations regarding park policies and projects to the Township Board.

The Parks and Recreation Committee and Township staff will serve as a community sounding board on recreation matters, and bring the concerns of the residents to the Planning Commission and Township Board for consideration. Routine park maintenance is handled by the Township staff, contractors and volunteers, operating under the direct authority of the Township Board.

The ultimate decision-making authority and responsibility for all park related projects resides with the Township Board.

Recommendations for recreation planning are made by the Blue Lake Township Planning Commission to the Township Board which has final authority for recreational policy, administration, and funding. The Planning Commission developed the Township Master Plan including the Recreation Plan component. The Planning Commission is also responsible for updating the plan. The Township Board must adopt the recreation plan and approve any amendments to the plan.

The Blue Lake Township Board consists of five members: supervisor, clerk, treasurer, and two trustees. All Township personnel are employed part-time.

The Township Supervisor is the chief executive officer of the township and chairs the board of trustees. The Township Clerk is responsible for keeping the Township records, paying bills and voter registration, while the Treasurer is charged with keeping the Township's financial records, including receipt of tax payments and management of investments. The fire chief is responsible for overseeing all activities of the fire department/first responder service.

Other recreational facilities and activities utilized by local residents are administered both formally and informally by organizations serving multiple jurisdictions. Blue Lake Township is located within the Kalkaska Public School district, making recreational facilities and activities of school districts available to Township residents. Township youth may also participate in non-school related recreation organizations.

Volunteers will be an integral part of the recreation projects in Blue Lake Township. While there is not a designated volunteer group, volunteers are solicited on a project by project basis to provide some of the labor for the Township "in-kind" match on projects as appropriate. For lake related projects, the Lake Associations and the AuSable Institute are expected to be active partners

Blue Lake Township's has not typically budgeted specifically for recreational activities and facilities in the past. Table 6-3 illustrates Township for the past three years. For the proposed 2016 budget, no money has been budgeted as a recreation line item. Note that labor for recreation areas is budgeted in the Township Hall and grounds as a maintenance line item in the general budget.

Table 6-3 Township Budget 2012 - 2015			
General Budget			
FY Ending – June 30	2014-2015	2013-2014	2012-2013
Total Township	\$152,031	\$137,304	\$142,684
Source: Blue Lake Township Balance Sheets, 2012-2015			

Description of the Recreation Planning Process

Prior to this Master Plan (including recreation plan), Blue Lake Township has been covered under a previous Township level Master Plan and Township Zoning Ordinance, which prepared a local recreation plan. The Township is aware of the need to plan for future improvements at locally owned recreation sites and consider in more detail how these projects could be funded.

The recreation plan is incorporated as a chapter in the master plan document.

To encourage public participation in the recreation planning process, all meetings with the Blue Lake Township Planning Commission are open to the public and posted in local public places and on the Township Website www.bluelaketwpkalkaska.org.

Recreation Goals

Blue Lake Township, because of its environmental attributes, expanses of state land, and low population density, currently enjoys a favorable reputation as an outdoor recreation area. To sustain and increase the current level of recreational activities for all age groups, the Township should encourage the growth of open-space recreation.

Develop a network of non-motorized trails throughout the Township, especially around the lakes.

Provide additional recreation facilities to meet the needs of residents and visitors of all ages.

Maintain open space and scenic vistas by encouraging PUD (planned unit development), clustering, and conservation easements.

Maintain existing and establish new trails for hiking, horseback riding, bicycle riding, motorized recreational vehicle, and cross-country skiing in the Township.

Recognize designated snowmobile routes through Blue Lake Township to connect the community to regional state designated snowmobile trails.

Blue Lake Township has a limited system of recreational facilities. To meet the needs of the population and the increased tourist activity, it is important to improve and expand these recreational facilities. Recreational facilities should be developed to meet the needs of the whole community, all age groups, and income levels.

Encourage the consideration of recreational facilities as an integral part of community development plans.

Community-wide programs that provide opportunities for year-round recreation, personal enrichment, art, musical, and theatrical groups are contributors to the quality of life and attractiveness of the Township. It is important to ensure accessibility to adequate public recreation facilities and cultural activities for area residents and visitors. Coordinated programs and facilities that reflect the character and desires of the community can play a key role in attracting new commercial and industrial activities.

Encourage the continuation of community arts and crafts, musical, cultural and personal enrichment programs for all age groups and for seasonal and year round residents.

Capital Improvements Schedule for Proposed New Trail Facilities			
New Facilities	Year	Development	Cost and Potential Funding Sources
Trails	2016-2018	Non-motorized trails in township	\$ [under investigation] by phase Mich. Nat. Res. Trust Fund River and Trails Program (NPS) Recreational Trails Program Wood in Transportation Project – for any pedestrian bridges Local grants Township

Rationale for New Trails:

Loop Trail System: Over the past few years, there has been some dialogue between Blue Lake Township, the Michigan Department of Natural Resources staff, and staff from the AuSable Institute regarding the potential development of a trail system on State and Township owned properties. The initial concept was prepared by cooperatively by AuSable Institute staff and DNR staff to have loop trails and was ‘generally sketched’ on a USGS topographic map, as shown Figure 6-3, and generally located on Figure 6-1. Parking for such a trail could be accommodated at the Township Hall, with restroom facilities available during Township business hours.

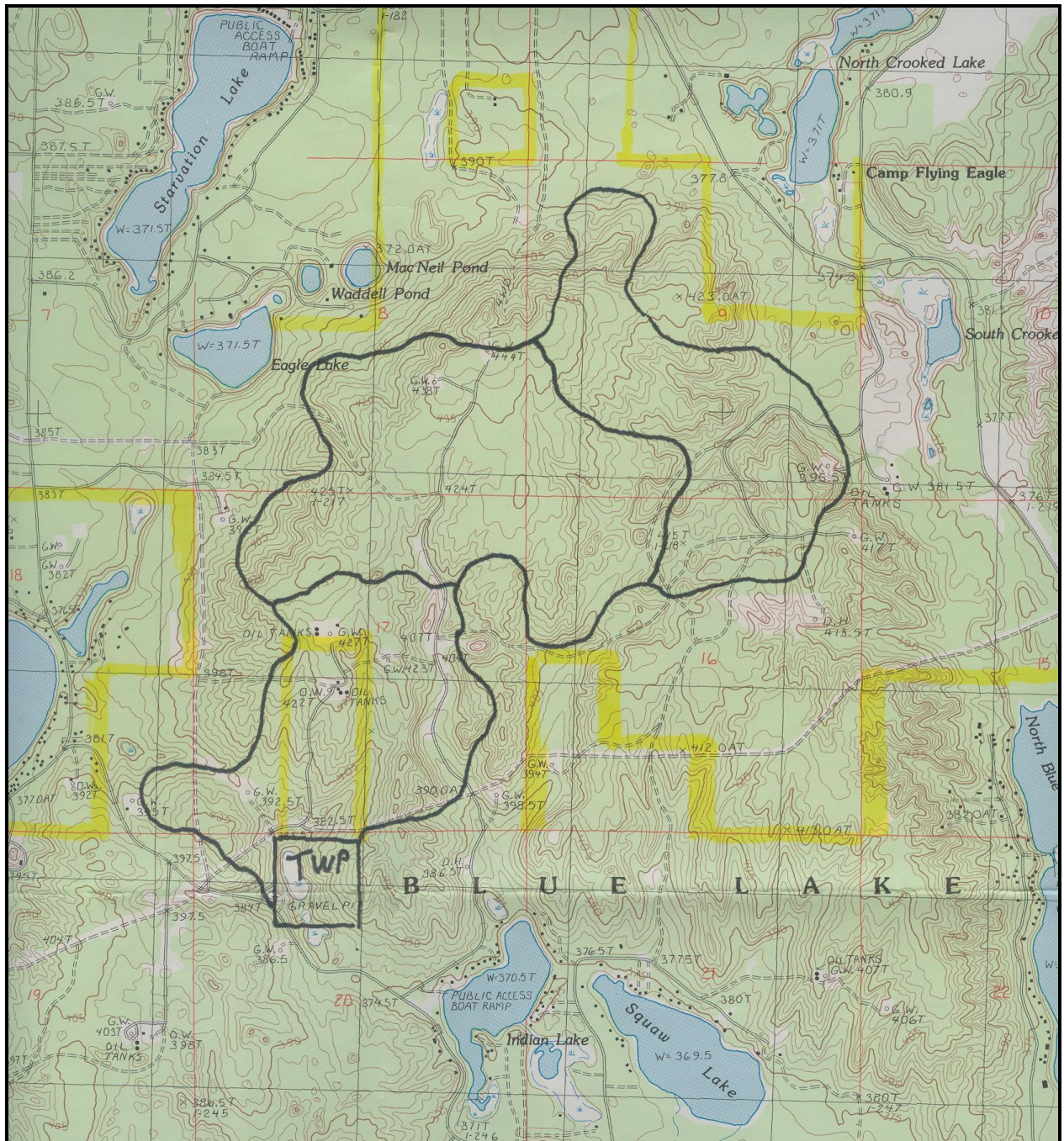


Figure 6-3: Proposed Loop Trail System- Preliminary route consideration

CHAPTER 7

Community Goals and Objectives

In developing community goals and policies, it is important to analyze existing community characteristics, such as: social and economic features, environmental resources, available services and facilities, and existing land use. In addition to examining existing characteristics, another important tool in the development of community goals and policies is to identify community assets, problems and other issues to be addressed.

Goals and Objectives

<i>Land Use Goal</i>
<i>Maintain an ecologically sound balance between human activities and the environment to retain the Township's scenic and rural character.</i>
OBJECTIVES: <ul style="list-style-type: none">• Review/modify Zoning provisions for consistency with this Master Plan.• Control the location of new development by designating appropriate areas for new residential, recreational, commercial, and industrial land uses.• Encourage access management standards, open space and landscape requirements for new development, such as appropriate setbacks, retention of green space, buffer zones between differing land uses, screened parking areas, and roadside landscaping; and encourage the retention of open space and scenic vistas with PUD's, clustering, and conservation easements.

Natural Resource Goal

Protect and preserve groundwater, surface water, woodlands, wetlands, open space wildlife habitat and steep slopes.

OBJECTIVES:

- Encourage a land use pattern that is oriented to the natural features and water resources of the area by evaluating type and density of proposed developments based on soil suitability; slope of land; potential for ground water and surface water degradation and contamination; compatibility with adjacent land uses; and impacts to sensitive natural areas like wetlands, greenways and wildlife corridors.
- Work to limit and control the density and type of development adjacent to lakes, streams, and wetlands.
- Encourage the maintenance of greenbelt areas adjacent to lakes, streams, and wetlands.
- Support the strengthening of groundwater protection and storm water management regulations in the Township's zoning ordinance, while encouraging the continued natural use of wetlands as groundwater recharge, storm water filtering and storm water holding areas.
- Limit developments on steeply sloped areas and require erosion control measures where construction is permitted. Require slope stabilization and revegetation on disturbed slopes or in extraction areas.
- Encourage planting of native tree and shrub species when properties are developed.

Forestry & Agriculture Goal

Acknowledge the importance of forestry management and agricultural practices.

OBJECTIVES:

- Recognize that the presence of forested and agricultural lands adds to the scenic and rural character of the Township.
- Work to provide economically feasible options for continued agricultural use of active farmland.
- Discourage the conversion of forested or farmland into other more intensive uses.
- Participate in efforts to educate the community regarding open space and agricultural preservation.
- Encourage the retention and management of existing forestland
- Promote re-forestation and sound forestry management practices for areas with productive forest soils.

Recreation Goal

Provide and maintain recreation lands and facilities for safe access and enjoyment by residents and visitors.

OBJECTIVES:

- Maintain an overall plan to address recreation needs (current and anticipated) and maintenance plan for all recreation facilities and parklands.
- Develop a network of non-motorized trails around the lakes and connecting to other trail systems and recreational facilities.
- Work cooperatively with trail organizations, including (but not limited to) the local chapter of the North Country Trail Association and local snowmobile associations.
- Seek grant funding for park and recreation improvements.

Residential Goal

Retain the Township's rural and scenic character, while providing for suitable housing opportunities for the varied economic and lifestyle needs of the residents.

OBJECTIVES:

- Designate areas appropriate for varying types of residential development consistent with environmental constraints of the area.
- Preserve the integrity of existing residential neighborhoods by protecting from intrusion of incompatible uses.
- Require a buffer between Residential uses and other more intensive uses.

Infrastructure & Public Service Goal

Maintain and improve the Township facilities, programs and systems consistent with the community needs, and the ability to finance the improvements.

OBJECTIVES:

- Continue to support the local emergency services including the local Fire and Rescue Department.
- Participate in efforts to establish a county-wide comprehensive waste management approach, with emphasis on recycling.
- Monitor and explore the needs for water, septic/sewer, and natural gas services as more development occurs.
- Pursue expansion of high-speed communications within Township.

CHAPTER 8

Future Land Use Recommendations

Overview

While growth is occurring in Blue Lake Township, according to the 2016 land use inventory (see Chapter 4), 91.3 percent of the land area was classified as forest, farmland, or open space including forests, non-forest open space, wetlands, agriculture, and water. Approximately 5.3 percent of the Township's land is developed, including property used for commercial, industrial, institutional/recreational, and residential purposes. Through land use planning and land use controls, Blue Lake Township intends to ensure that existing forest, open space, and recreational land uses can continue; that irreplaceable natural resources such as water, wetlands, and forestlands will be protected; and that reasonable growth can be accommodated with minimal land use conflicts or negative environmental impacts.

Future land use recommendations for Blue Lake Township were developed by the Planning Commission. Recommendations are based on an analysis of several factors including: the pattern of existing land use, social and economic characteristics, environmental conditions, available community services and facilities, the existing patterns of land divisions, and community goals and policies.

Land Use Planning Areas

Listed below are the six different land use planning areas used to develop the future land use recommendations, and the corresponding zoning district. Due to the large amount of State-owned land, the limited private land area for development, the environmental characteristics of the Township with the many lakes as well as the economy of northern Michigan, the Planning Commission determined there is not a need to accommodate extensive growth at the present time or within the planning period covered by this plan. Therefore, the Future Land Use map presented in this chapter is strikingly similar to the current Zoning Map (adopted November 2006). Detailed explanations of each land use planning area will follow. **Figure 8-1** is the Future Land Use Map of Blue Lake Township which depicts the locations of land use planning areas.

Future land use categories	Related zoning districts
Conservation - Reserve	Conservation Resource District
Farm - Forest	Agricultural District
Rural Residential	Rural Residential District
General Residential	Residential District
Waterfront Residential	Lakeshore Residential District
Local Commercial/Light Industrial	Commercial and Industrial District

Conservation - Reserve: The Conservation-Reserve category is the most extensive land use category recommended for the Township. All state owned lands within the township are shown within the Conservation-Reserve category. Primary uses to be encouraged in the Conservation-Reserve areas include research/education, recreation (such as hunting, fishing, skiing, hiking, camping), and forest management. This plan encourages the maintenance/protection of contiguous reserve areas, river setbacks, wetlands, quiet areas, scenic areas, and wildlife habitat.

The Conservation-Reserve category is further designed to provide protection to existing recreation property, areas planned for future recreation use, or other environmentally sensitive areas and natural resources, while allowing for very limited and low intensity development to occur. This development would be consistent with recreational and conservation uses. A minimum lot size of 40 acres is anticipated for the category. Very low density residential development (one single-family house or dwelling unit for every 40 acres) would be allowed. To protect sensitive areas and maintain larger tracts available for other uses, clustering based on density equivalents of not more than one single-family house or dwelling unit per 40 acres should be required in these areas.

Farm-Forest: The Farm-Forest land use category has been designated consistent with the Township's goal to encourage farmland preservation and recognize the importance of economic viability of farming and forestry operations. This future land use category has been designated consistent with the Township's general goal to "retain the scenic and rural character...", as well as the residential goal to "retain the Township's rural character, while providing suitable housing opportunities for the varied economic and lifestyle needs of the residents. The Township will encourage methods of preserving open space, natural resources, farmlands, and rural character of the Township, and at the same time assist landowners who want to reduce or discontinue farming. The methods could include innovative zoning provisions that allow for the preservation or conservation of essential natural resources, farmland, open space and allowing for forest management. Some methods which other communities have employed to help protect and preserve agricultural and forest land while protecting a landowner's economic investment include the Purchase of Development Rights (PDR), Transfer of Development Rights (TDR), clustering requirements for non-agricultural uses, and tax breaks or incentives for continuing agricultural use. It is recommended that these alternatives be investigated for possible application in Blue Lake Township, as a way to balance economic rights with the forestry and agricultural goals. This future land use category is supportive of the Agriculture related zoning districts. The maximum density proposed for this area is one unit per fifteen acres.

Rural Residential: The Rural Residential land use category has been designated consistent with the Township's goals to "maintain an ecologically sound balance between human activities and the environment to retain the Township's scenic and rural character" and to "retain the township's rural and scenic character, while providing for suitable housing opportunities...". While the designation of Rural Residential land use category will not prevent the conversion of farmland to other uses, it will help to control the scale and rate of conversion and direct attention to areas where farmland conversion may be an issue. The rural residential category is intended to have a maximum density of one unit per 2.5 acres.

The Township will encourage methods that accommodate the needs of preserving open space, natural resources, farmlands, farming, and rural character of the Township, and at the same time assist landowners who want to reduce or discontinue farming. The methods could include innovative zoning provisions that allow for the preservation or conservation of essential natural resources, farmland, or open space. Some methods which other communities have employed to help protect and preserve agricultural land while protecting a landowner's economic investment include the

Purchase of Development Rights (PDR), Transfer of Development Rights (TDR), clustering requirements for non-agricultural uses, and tax breaks or incentives for continuing agricultural use. It is recommended that these alternatives be investigated for possible application in Blue Lake Township, as a way to balance economic rights with agricultural preservation goals.

General Residential: The General Residential development category is designed to accommodate single family dwellings at a maximum density of one unit per one and one-half acres. The large residential lots provide privacy from neighbors and/or other development. This development is located on roads with light vehicular traffic. No municipal water or sewer service is currently available. Buffers or physical separation from potentially incompatible uses (industrial and agriculture) may be necessary when located adjacent to this type of development. Additional provisions are recommended to be incorporated into the Zoning Ordinance to allow for a cluster development pattern to avoid or minimize development impacts on environmentally sensitive areas, forests or farmland. This Residential land use category is consistent with the Township's resource goal to "Maintain an ecologically sound balance between human activities and the environment to retain the Township's scenic and rural character."

Waterfront Residential: To preserve the scenic beauty, property value and environmental integrity of areas adjacent to the lakes in the Township, a "Waterfront Residential" designation has been established. With a specialized designation it is possible to develop and strengthen residential standards specific to the unique environment found in waterfront areas. The Waterfront Residential designation is utilized along all privately owned lakefront property in areas of existing lakefront residential development. Development regulations within the waterfront residential area should be designed to address Township residents' concerns regarding congestion of the local roads, water quality and shoreline protection. Keyhole development or high-density second-tier development should be prohibited within this land use category.

Local Commercial/Light Industrial: The Local Commercial/Light Industrial future land use category is designated to accommodate local commercial or light industrial uses compatible with the limited services and environmental sensitivity of the Township. The Local Commercial/Light Industrial future land use area is designed to provide sites for a variety of retail and service establishments, as well as wholesale activities, repair operations, retail operations that require large outside storage areas, manufacturing, and other low-impact commercial or industrial operations. Due to the limited services and the sensitive environmental features of Blue Lake Township, very limited additional areas are planned for industrial use within the Township. Future rezoning to commercial may be considered in existing Rural Residential or Agricultural zoned areas along county roads. It is anticipated that industrial operations will be more attracted to nearby cities of Mancelona or Kalkaska where increased services are available. This land use category is compatible with commercial uses and light industrial uses.

Blue Lake Township
Kalkaska County, Michigan

Figure 8-1: Future Land Use

