

Livingston Township

Otsego County



Master Plan Adoption Date: Month X, 2018

Prepared by:
Livingston Township Planning Commission
With the assistance of:
Northeast Michigan Council of Governments

LIVINGSTON TOWNSHIP 2018 MASTER PLAN

**Livingston Township
Otsego County
Michigan**

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CHAPTER 1 – INTRODUCTION

Rationale of a Master Plan

In order to function in an orderly fashion and plot out the future, individuals, organizations, and businesses require some form or method of operation. Processes and operations of these entities generally require planning prior to actions being taken.

The same applies to a community of people. Once all of the facets of the community and its residents are set down in writing, all positive and negative elements are analyzed. Ideas and concepts in the form of goals and objectives are formulated. The community then has a guide to help it function in an orderly and consistent manner progressing toward the type of overall environment the people desire. This guide to development is called a Master Plan.

The overall Master Plan is not meant to be too detailed or to prescribe specific actions at specific times, because it is a comprehensive approach over a twenty-year planning period. That is, this plan concerns itself with the general aspect of the various personalities and activities that make up Livingston Township. However, specificity, for the short term, is essential to allow the Township to act in the best interests of its citizens. Consequently, this plan will have specific recommended actions for the short term (5 years) and much more general recommendations and directions for the long term (20 years) planning process.

Legal Jurisdiction

Livingston Township has been given the authority, by the State of Michigan through the Michigan Planning Enabling Act (PA33 of 2008, as amended), to "make and adopt a basic plan as a guide for the development of unincorporated portions of the Township". One of the primary purposes of this Act is to secure the general, health, safety, and welfare of the Township by distributing wisely the Township's resources - physical, economic, and social - "in accordance with their character and adaptability".

Location and Description

The rural community of Livingston Township is located in Otsego County, which is situated in the northeast region of Michigan's Lower Peninsula. The regional location map (**Figure 1.1**) on the following page shows the location of the community. The Township is approximately 35 square miles in size, consisting of the majority of the government survey township, T.31N. – R.3W. Portions of Sections 33 and 34 are incorporated into the City of Gaylord. Both I-75 and Old 27, as well as the North Central State Trail traverse the center of the Township in a north-south direction. State highway M-32 travels east-west along the Township's southern boundary. **Figure 1.2** shows the highway system of the community.

Figure 1.1
Regional Location Map

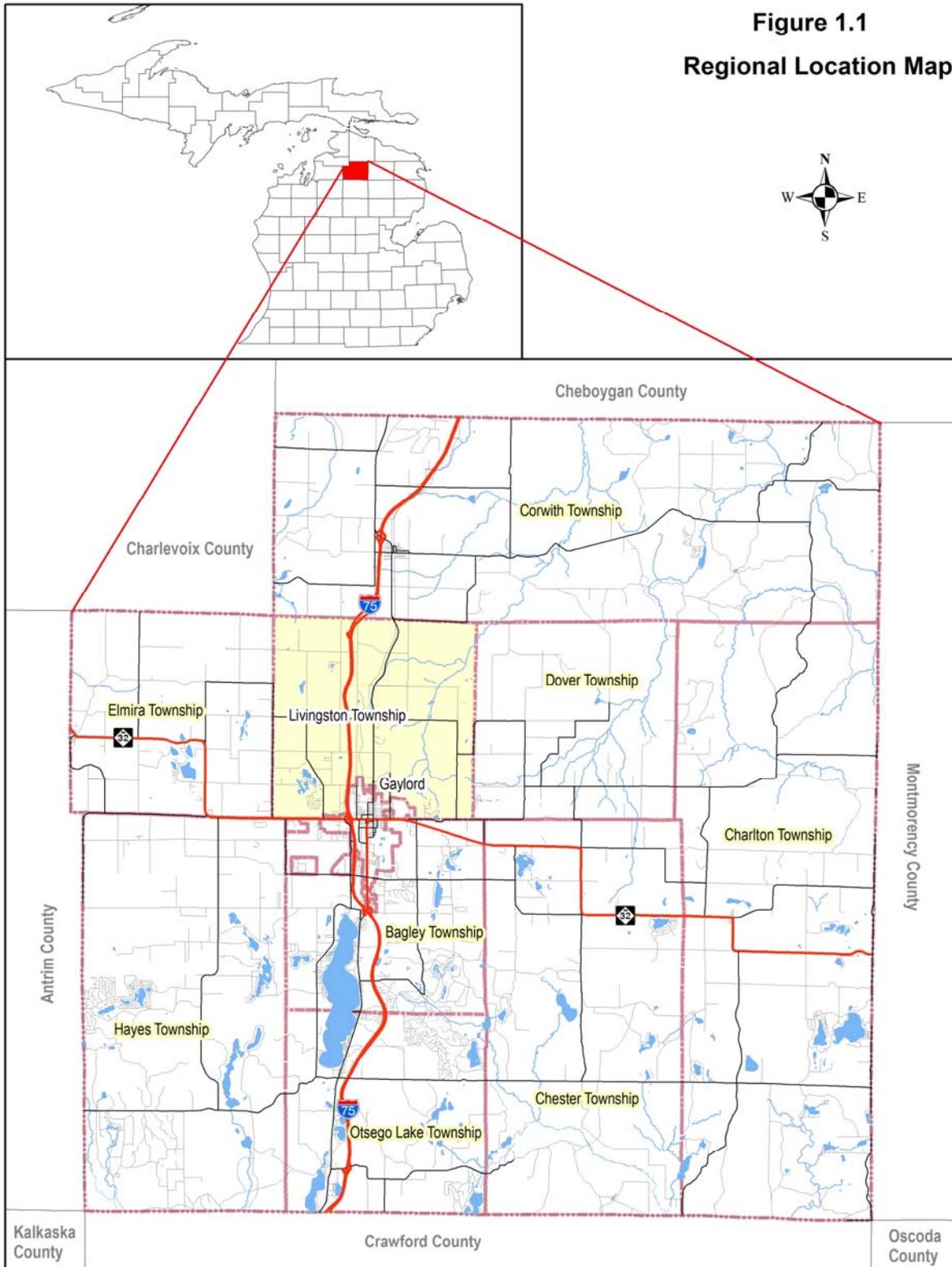
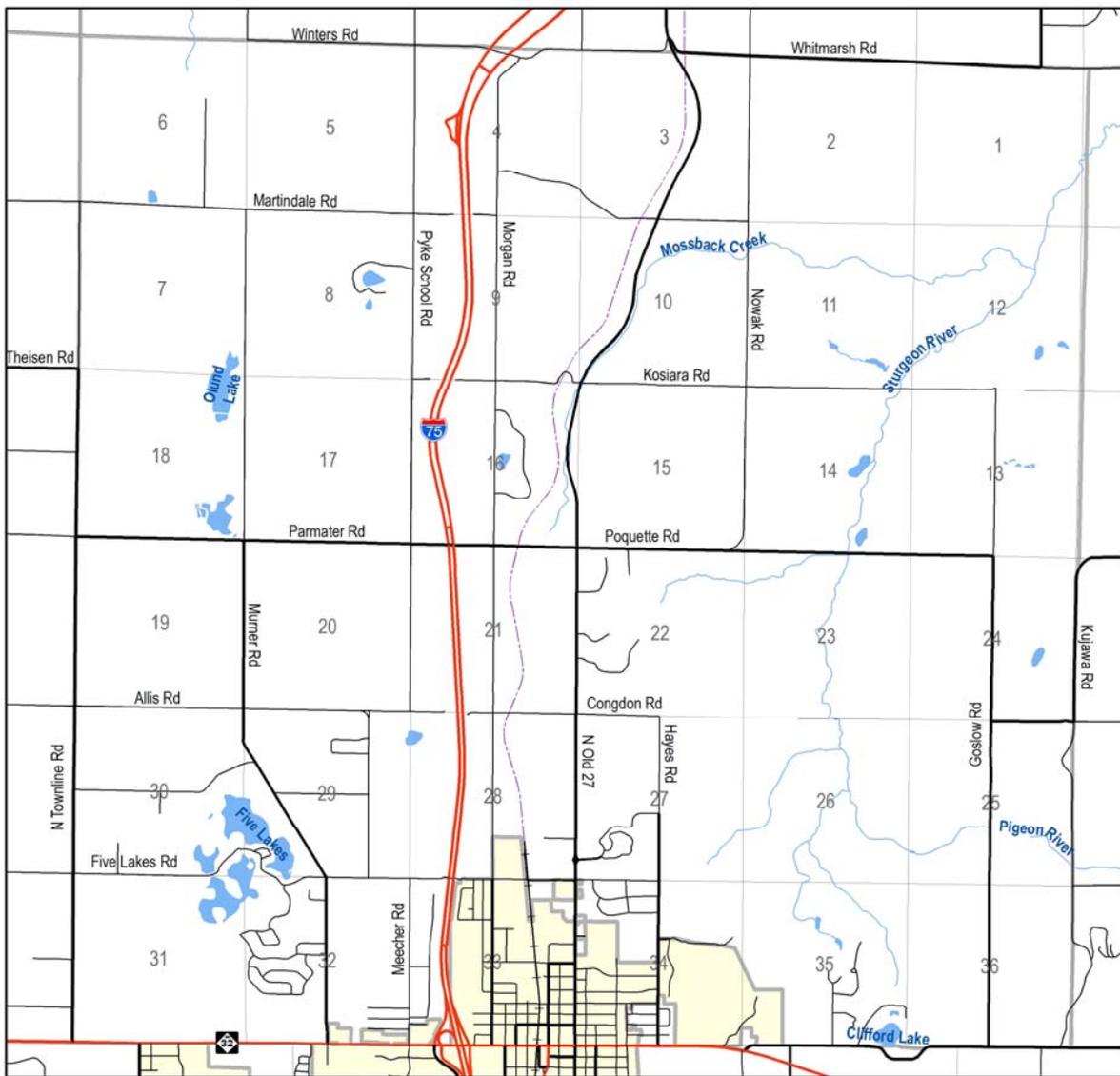


Figure 1.2

Livingston Township
Base Map

Map Legend

-  State Highway
-  Primary Road
-  Local Road
-  North Central State Trail
-  Detroit & Mackinaw Railway
-  Rivers
-  Lakes
-  Sections
-  Township Boundary
-  City of Gaylord



Historical Efforts of the Livingston Township Planning Commission

No master planning effort is possible without the input of the residents of the community. The Livingston Township Planning Commission is appointed by the Livingston Township Board. In 1991, the Livingston Township Planning Commission adopted its first Master Plan. The Master Plan was updated in 1999 and again in 2005. The Planning Commission conducted an extensive survey, which was mailed to resident property owners of the Township in September of 1998. Survey results were tallied in March of 1999.

In 1996, the Township conducted a *Community Growth Management Study and Citizen Forum*. The Study and Forum provided direction to the Township that was consistent with past surveys. The residents provided the same basic direction that had been expressed in previous surveys. The residents of Livingston Township preferred rural living, wished to continue that lifestyle in Livingston Township, and were not in favor of expanding commercial or industrial growth aside from the specified zoning districts.

Description of Planning Approach

The drafting of a Master plan requires a logical method of collecting data, analyzing this data, and forming a set of guidelines for future development. Equally important is the input of the residents of the Township, both historical and current. As with sound planning approaches, this plan is built upon work completed previously, but the goals and objectives of the Township are modified based on current attitudes and wishes of its residents.

The Township Planning Commission prepared this plan with guidance from a web-based citizen survey originally compiled in 2011. The web survey was updated and re-activated in 2018. The commission also relied on past planning efforts and the *Community Growth Management Study and Citizen Forum of 1996*. Imaginative as well as realistic thinking is necessary to encourage the best future for Livingston Township consistent with the wishes expressed in the *Livingston Township Citizen Survey*.

Regional Description and Goals

Our Federal system has been established so that a division of responsibilities and privileges exists among the various levels of government. Certain functions, through enabling legislation, are allocated to cities, villages, townships, and counties, as well as states. Those responsibilities, which are best suited for local units of government and which the state does not have the capacity or will to administer, are given to counties, townships, and cities, with each varying in extent of its authority. Even though each type of local government fulfills a different need, there must be a process of communication and coordination within local governments. As part of an eight county area in Northeastern Michigan, Livingston Township should be analyzed in relation to this region, as well as the county in which it belongs.

The counties in Northeastern Michigan contain 3,256,649 acres (5,088 square miles), of which 3,078,000 acres (96 percent of the total area) are land surface and 122,000 acres are inland waters (lakes and streams). From the higher elevations of the region's western boundary, the terrain gently slopes toward Lake Huron, giving way to less undulating topography on the eastern boundaries. Water resources include numerous lakes and streams within heavily forested areas. Important watersheds such as the AuSable, Pigeon, Sturgeon, Black, Ocqueoc, Thunder Bay, and Cheboygan occur in the region.

This region has been and still is primarily dependent upon its land and water resources. From the advent of the lumbering industry, through the utilization of cleared land for agricultural production, to its popularity as a recreation/second home area, the natural amenities of the physical environment have been the primary mainstay of the population. The protection of these resources and amenities is important to both the economic and social future of the Township. Overdevelopment and excessive growth can erode these amenities and destroy both the economic future and attractiveness of the Township.

The *Livingston Township Master Plan*, therefore, addresses the special concerns of the Township while broadly conforming to regional goals and policies. The residents of the Township support the continued wise use of our natural resources to enhance growth in the agricultural, forestry, and recreation industries. The citizens of the Township also support the improvement of transportation systems within the Township. The residents are cautious about the Township's involvement in a Downtown Development Authority (DDA) or water and sewer authority.

This 2018 update of the *Livingston Township Master Plan* is being developed with the following goals:

- A. To reflect the wishes of the residents of the Township.
- B. To provide the Township clear direction for development in the Township.
- C. To provide mechanisms to preserve farmland and forests in the Township.
- D. To identify infrastructure needs consistent with the goals of the Township plan.
- E. To develop a standalone recreation plan to guide recreational development in Livingston Township.

CHAPTER 2 – SOCIAL AND ECONOMIC CHARACTERISTICS

In 1900, Livingston Township was the most populous unit of government in Otsego County, with 1,506 persons. In 1930, following the incorporation of the City of Gaylord and the annexation of Township land, the population remaining in the unincorporated sections of the Township was just 591. Over the next 50 years the Township continued to grow, until in 1980 the population exceeded that of the turn of the century. Population growth then slowed significantly but rebounded to its second highest growth rate in the last fifty years.

Population Data and Trends

The most important component in any community is the population of the area. The actions of the population directly impact the characteristics and future of the community. The diversity of backgrounds and the similarities among residents merge to give a community its distinct and unique character and personality. The differences and similarities in education, employment, ethnic customs, and socio-economic factors need to be examined to define the “character” of Livingston Township.

This section of the Master Plan is an analysis of these social and economic factors that define the character of the Township. A composite statistical analysis of the population will identify the traits of the community, its needs, and help provide direction for the Township's future.

While the pace of population growth decreased during the last decade, unlike many communities in northern Michigan, Livingston Township experienced growth with a population of 2,525 persons in the year 2010, an increase from 2,339 persons in 2000.

Racial Distribution

Livingston Township's population is relatively similar in racial make-up. Based on 2010 Census data, 2,525 persons reside in Livingston Township with 97.2 percent white. American Indian and Hispanic each accounted for less than one percent of the total population.

Age Distribution

In addition to total population figures, analyzing the age distribution within a community is helpful in planning future programs and activities. The needs of Livingston Township residents vary according to the age and sex of each individual; a predominantly younger population has different attitudes and requires different activities than an older population.

Table 2.1 compares the number and percentages in each age category for Livingston Township, Otsego County, and the State of Michigan from the 2010 Census. The median age of residents in the Township is 41.6 years, an increase from the 38.2 years in the 2000 US Census. The Township's median age is 1.6 years less than the County, but 2.7 years higher than the state as a whole. As would be expected the percent of the population 14 years and younger, and 25 to 44 years fell during the last decade, while the percent population from 20 to 24 years, and 45 years and older increased.

Age Group	Twp. Pop.	Twp. %	Co. %	State %
Under 5	142	5.6%	5.9%	6.0%
5-19	564	22.3%	19.5%	20.8%
20-24	141	5.6%	5.0%	6.8%
25-34	217	8.6%	9.6%	11.8%
35-44	334	13.2%	12.6%	12.9%
45-54	462	18.3%	16.1%	15.3%
55-59	228	9.0%	7.6%	6.9%
60-64	117	4.6%	6.7%	5.8%
65 & over	320	12.7%	17.1%	13.7%
TOTALS	2,525	-	-	-
Med. Age		41.6	43.2	38.9
Source: 2010. U.S. Census Bureau.				

County Population

The 2010 population for Otsego County was 24,164 - a 3.7 percent increase from the 2000 population of 23,301. The Great Recession of the last decade resulted in population loss throughout much of northern Michigan. Seven of the eight counties in the NEMCOG region lost population, Otsego County was the exception. The County has sustained a relatively steady population increase, since the 1930's, indicating the increased popularity of the area. It is felt that the majority of this increase can be attributed to the influx of older retired persons. Retirees are returning or moving to Northern Michigan after spending their working years in large urban areas. **Table 2.2** shows the population for minor civil divisions and the County for 2000 and 2010.

Township Population

Livingston Township experienced steady growth from the 1960 to 2010. During several decades the Township experience growth rates greater than the county as a whole. The 2000 Census showed a substantial change in the growth rate in Livingston Township versus the slow growth rate experienced in the 1990 Census. Growth in the decade of the 1990's in Livingston Township, out-paced the County's growth rate of 29.8 percent. **Table 2.3** indicates population trends comparing Livingston Township and Otsego County for the period 1960 to 2010. In the last decade, Livingston Township experienced the third highest growth rate at 8.9 percent adding 186 people to its year round population.

Community Name	2000 Population	2010 Population	Percent Change	Numeric Change
Livingston Township	2,339	2,525	8.9%	186
Bagley Township	5,838	5,886	0.8%	48
Charlton Township	1,330	1,354	1.8%	24
Chester Township	1,265	1,292	2.1%	27
Corwith Township	1,719	1,748	1.7%	29
Dover Township	614	561	-8.6%	-53
Elmira Township	1,598	1,687	5.6%	89
City of Gaylord	3,701	3,645	-1.5%	-56
Hayes Township	2,385	2,619	9.8%	234
Otsego Lake Township	2,532	2,847	12.4%	315
Otsego County	23,301	24,164	3.7%	863
Source: U.S. Census Bureau				

Year	Livingston Township			Otsego County		
	Population	Increase	% Growth	Population	Increase	% Growth
1960	929	---	---	7,545	---	---
1970	1,393	464	49.9%	10,422	2,877	38.1%
1980	1,703	310	22.2%	14,993	4,571	43.9%
1990	1,755	52	3.1%	17,957	2,964	19.8%
2000	2,339	584	33.3%	23,301	5,344	29.8%
2010	2,525	206	8.9%	24,164	863	3.7%
Source: U.S. Census Bureau						

Projected Population Growth

As the “Baby-Boomer” generation reaches retirement age, more and more of them are looking at Northern Michigan as a retirement destination. Summer cottages are becoming either year-round or spring, summer, and fall retirement residences. Many retirees spend at least some of the winter in warmer climates. These trends are only expected to increase as the “bulge” in the population reaches retirement age. Consequently, due to Livingston Township’s beauty and “up north” character, it is expected that the population will increase in significant numbers in the next ten years.

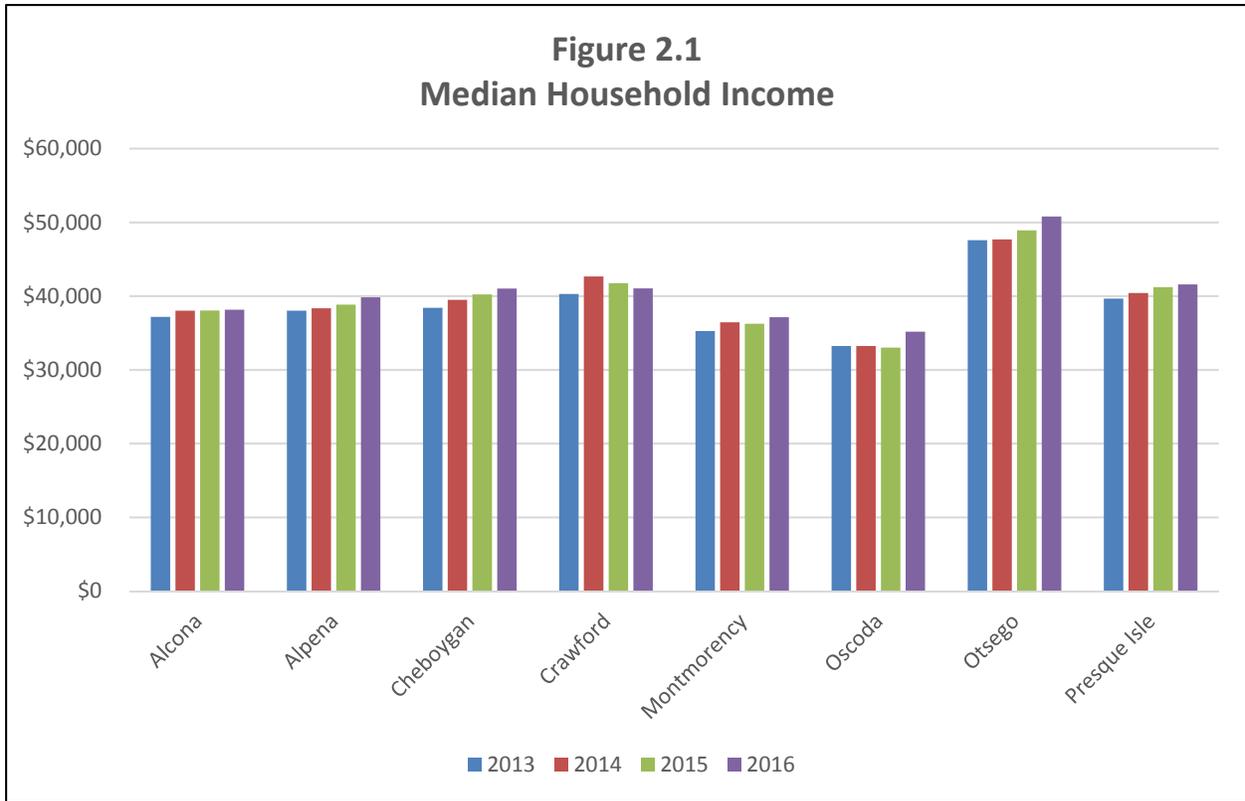
Considering Otsego County's population growth since 1940, it is not surprising that population projections predict the County's growth will continue to occur into the next decade. Projections produced by the Regional Economic Models, Inc. (REMI) by the University of Michigan for the Michigan Department of Transportation (MDOT) show a slight increase in the county population, see **Table 2.4**. The recession in 2008 slowed population growth in the county, which fell below projections developed by a number of entities. Irrespective of whether growth rates increase after the economy rebounds, the Township's rural appeal will bring in more residential development in the coming years. The Township needs to determine the shape in which it would like to see development in order to optimize land use and preserve the area's natural resources and protect its citizens and environment.

Table 2.4 Otsego County Population Projections 2020				
Source	2010	% Change 2000-2010	2020 Projected	% Change 2010-2020
U of M	24,164	4.9%	26,134	6.9%
Sources: U of M, Regional Economic Models, Inc. (REMI) by University of Michigan for the Michigan Department of Transportation				

Personal and Family Income

A reliable measure of the economic health of families is median household income, which is the midpoint of income for all households. While all eight counties have generally exhibited a steady increase in median income over the past several decades, Northeast Michigan still lags behind the state as a whole. **Figure 2.1** presents information on the median household income for counties in the NEMCOG region. According to the U.S. Census Bureau, Otsego County continues to have the highest median household income. The 2016 median household income for Otsego County was \$50,793, which was 99.8 percent of State's household income. This is unusual in Northeast Michigan, where the median household income of most counties is much lower than the State rate. All other Northeast Michigan counties also have much higher poverty rates than Otsego County. The reason for this is probably not that wages are so much higher in Otsego County than in other Northeast Michigan counties, but more likely because employment opportunities in Otsego County are less subject to seasonal fluctuations. Individuals who have steady, year-round employment will tend to have higher overall incomes than those laid-off for part of the year.

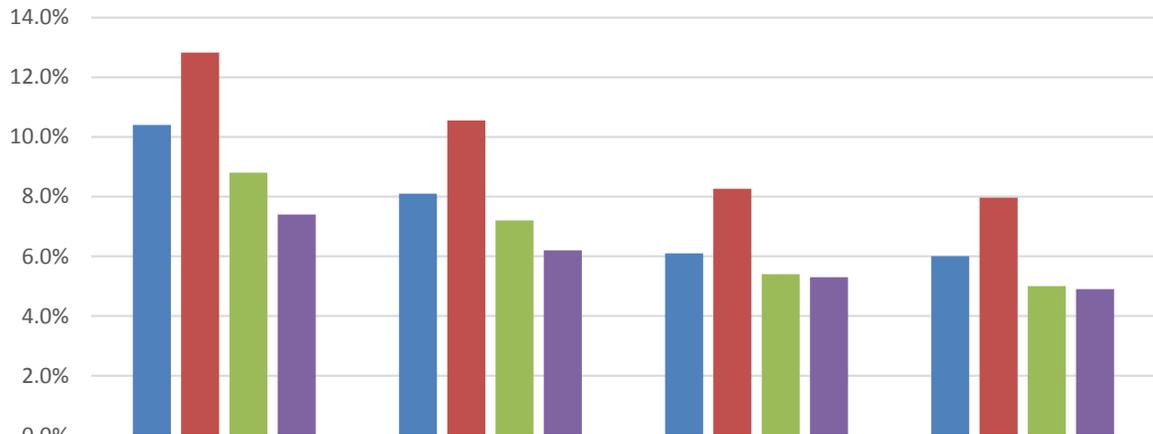
As more retirees move into the region and the local economy becomes more reliant on service and tourism job sectors, this trend of widening gaps between regional and state median household incomes is expected to continue. Lower incomes create challenges for balanced economic growth. As expenses for gas, food and housing continue to increase, families will be forced to move to areas that offer higher incomes. This could create an imbalance in the labor force necessary for positive economic growth.



Employment and Unemployment

The number of people in the labor force and employment dropped from the year 2004 to its lowest numbers in 2009. The unemployment rate for Otsego County also reached a peak in 2010 at 15.3%. Since that time the unemployment rate has declined annually, and has been consistently lower than region-wide rates (**Figure 2.2**). However, unemployment rates in Otsego County still lag behind those of the State and US. The median household income has steadily increased in recent years, with Otsego County having the highest median household income in the Region. The same holds true for persons 25 years and older with bachelor’s degrees, Otsego County has the highest percentage in the region.

**Figure 2.2
Jobless Rate**



	2013	2014	2015	2016
■ Otsego	10.4%	8.1%	6.1%	6.0%
■ Region	12.8%	10.6%	8.3%	8.0%
■ State	8.8%	7.2%	5.4%	5.0%
■ US	7.4%	6.2%	5.3%	4.9%

CHAPTER 3 – NATURAL ENVIRONMENT

The greatest attraction for the residents and visitors of Northern Michigan is the area's natural environment and the rural character. Hunting, fishing, cross-country skiing, down-hill skiing, golfing, snowmobiling, off-road trail riding, mushroom hunting, birding, wildlife viewing and scenic driving are outdoor-based recreational activities which bring thousands of visitors to Northern Michigan every year. Because of the abundance of outdoor recreation available, the natural environment of the area is a major economic base and income generator.

At the same time, the environment places constraints upon human activities. Certain sensitive parts of the natural landscape cannot be altered without creating problems that are not easily rectified. Wetlands filling and soil erosion, resulting from the clearing of land for construction, are two examples. It is essential then, that any future development respect the characteristics of the natural environment. This is important in preserving the attractiveness of this part of the State, preventing potential problems related to undue alteration of the land, and maximizing the economic benefits of the tourist and recreation industry.

Climate

Climate data obtained from the Michigan Climatological Resources Program (station located in Gaylord) indicates the County's climate is humid continental and is not strongly influenced by the climate moderation typical of areas nearer the Great Lakes. Given the prevailing westerly winds coupled with higher elevations, Gaylord experiences heavy snowfall amounts and is in the heart of northern Michigan's "snow-belt". Winter months characteristically have cloudy skies and frequent snow flurries. The average seasonal snowfall is 141.4 inches with 133 days per season receiving an inch or more of snowfall. The greatest daily snowfall of 15 inches was recorded November 7, 1971; the greatest seasonal total of 207.5 inches was recorded during the 1996-97 season.

Temperature data show the County to have had the following extremes: the highest recorded temperature of 105°F and the lowest recorded of 51°F below zero. On an average, 93 percent of the days between November to March are 32°F or below with 20 days a year experiencing below zero temperatures. The average date of last freezing temperature in the spring is May 28 while the average date of first freezing temperature in fall is September 17. The freeze-free period, or growing season, averages 112 days annually.

Precipitation is well distributed throughout the year with the growing season, April to September, receiving an average of 19.18 inches that is 57 percent of the total annual average. The total annual precipitation water equivalent is approximately 34 inches.

Topography

The terrain of Livingston Township is more extreme in relief than most other sections of the County. Elevation ranges from 1,400 feet above sea level in the northwestern portion of the Township, to 1,000 feet above sea level along the Sturgeon River in the northeastern areas of the community. The majority of the Township has a slope of zero percent to ten percent, although there are sections, particularly in the southeastern part of the Township, where slopes of ten percent or more exist. **Figure 3.1** shows areas with steeply sloping terrain.

These more dramatic topographic features of Livingston Township not only contribute to the attractiveness of the community, but also create a more fragile environment that needs to be

protected from over use or improper use. The scenic vistas and variety in Livingston Township's landscape are some of the major reasons people are attracted to the Township. Possibly the most important goal the Township could strive for is the realization of the importance of the area's variable topography and the need to protect and wisely use this natural attribute.

Soils

Soils often define the use suitability of various sites. The suitability of a site for recreation, housing, industry, commerce, agriculture, and other uses is dependent upon the characteristics of the soil, especially where individual septic fields are involved. The permeability of soil helps determine the degree to which groundwater may be polluted. Topographical features are closely allied with soil types and their characteristics. Various soil classifications have dominant slope categories and the greater the slope, the more susceptible a soil type is to erosion and side hill seepage, especially from on-site sewage. Vegetation altering activities such as building construction, agriculture, certain forestry operations, and road construction, can result in erosion on these sites.

There are five major soil associations in Livingston Township. These general associations are applicable only to large areas. Any site intended for specific use should be analyzed for impacts upon the soil on that particular site. The Otsego County Soil Survey may be referenced for site specific development.

A small portion of the southeastern part of the Township is composed of soils that have several possible management problems for field cropping, such as droughtiness, soil-blowing, and low natural fertility. Problems involved with residential development may include pollution of groundwater by effluent and difficulty in maintaining vegetative cover without irrigation. The eastern portion of the Township is composed of soils which are level to undulating, well drained, sandy, and gravelly. These soils may create droughtiness and soil blowing problems for farmers as well. Possible groundwater pollution from effluent and difficulty in maintaining vegetative cover without irrigation are concerns for residential development.

The majority of the Township contains soils that are nearly level to undulating, well-drained, sandy, and gravelly, which tend to be fertile and able to retain moisture. These soils may create droughtiness and soil-blowing problems related to agriculture, while pollution of groundwater from effluent and difficulty in maintaining vegetation without irrigation are possible problems resulting from improper land use activities.

Soils adjacent to the Sturgeon River are primarily poorly-drained sandy soils and mucks having low natural fertility. These soils experience possible problems of wetness, soil blowing, frost hazard, and low natural fertility when used for field cropping. Residential development on these soils may experience unstable foundations, uneven settling, and high water tables. **Figure 3.1** illustrates soils with hydric characteristics, as well as steeply sloped soils.

Soils primarily suitable for agriculture and forestry are mapped as **Figure 3.2**. Prime timber land soils for Livingston Township are noted in the northwest portion, the central region, and the east-central area. Prime agricultural soils are not as extensive as prime timber land soils; scattered small pockets are shown on the map.

Figure 3.1

**Livingston Township
Soil Constraints Map**



Map Legend

- State Highway
- Primary Road
- Local Road
- Rivers
- Lakes
- Sections

Hydric Soils & Steep Slopes

- Hydric
- D Slopes
- E Slopes
- F Slopes
- Undefined

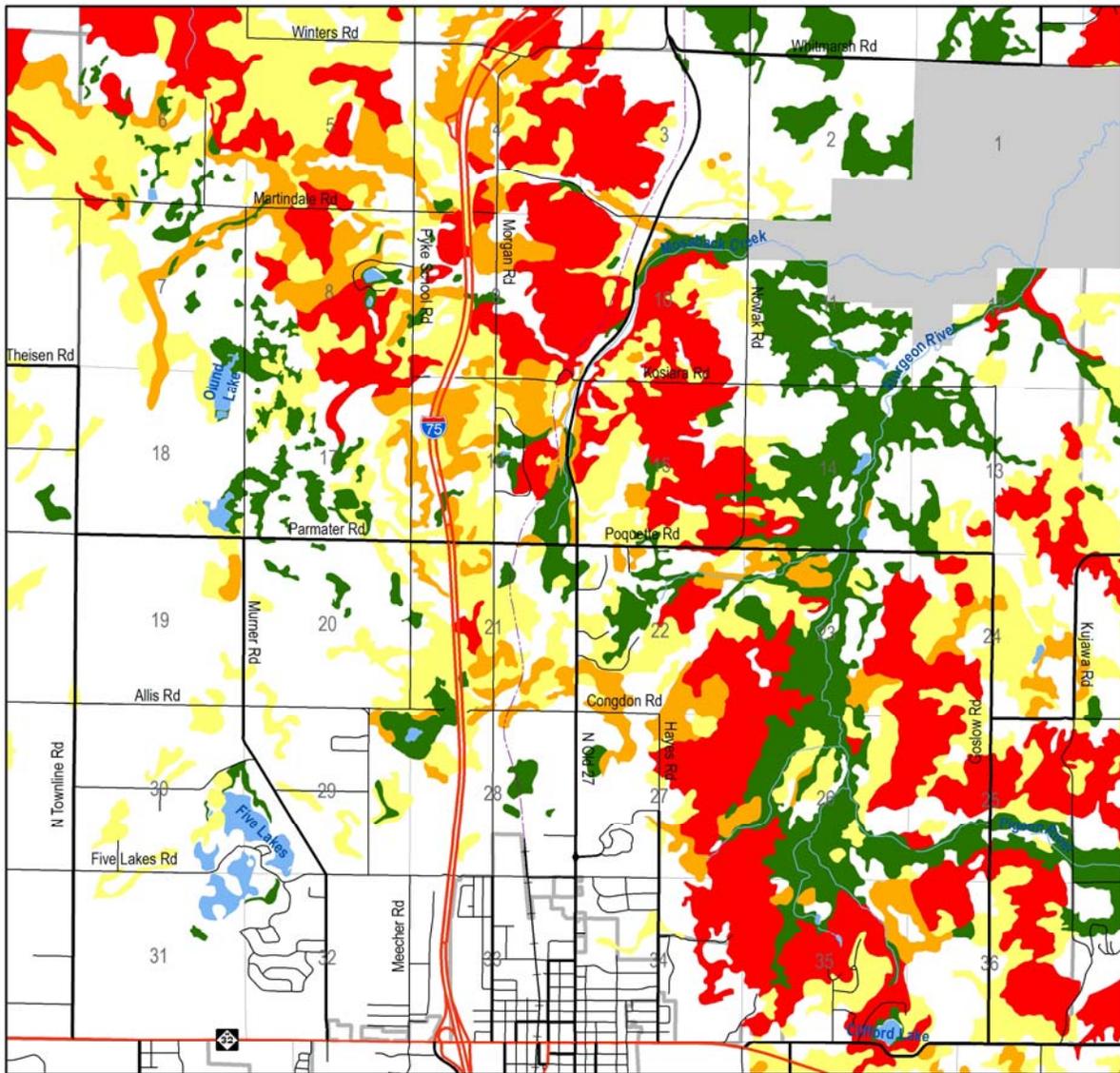


Figure 3.2
Livingston Township
Prime Forest &
Agricultural Soils

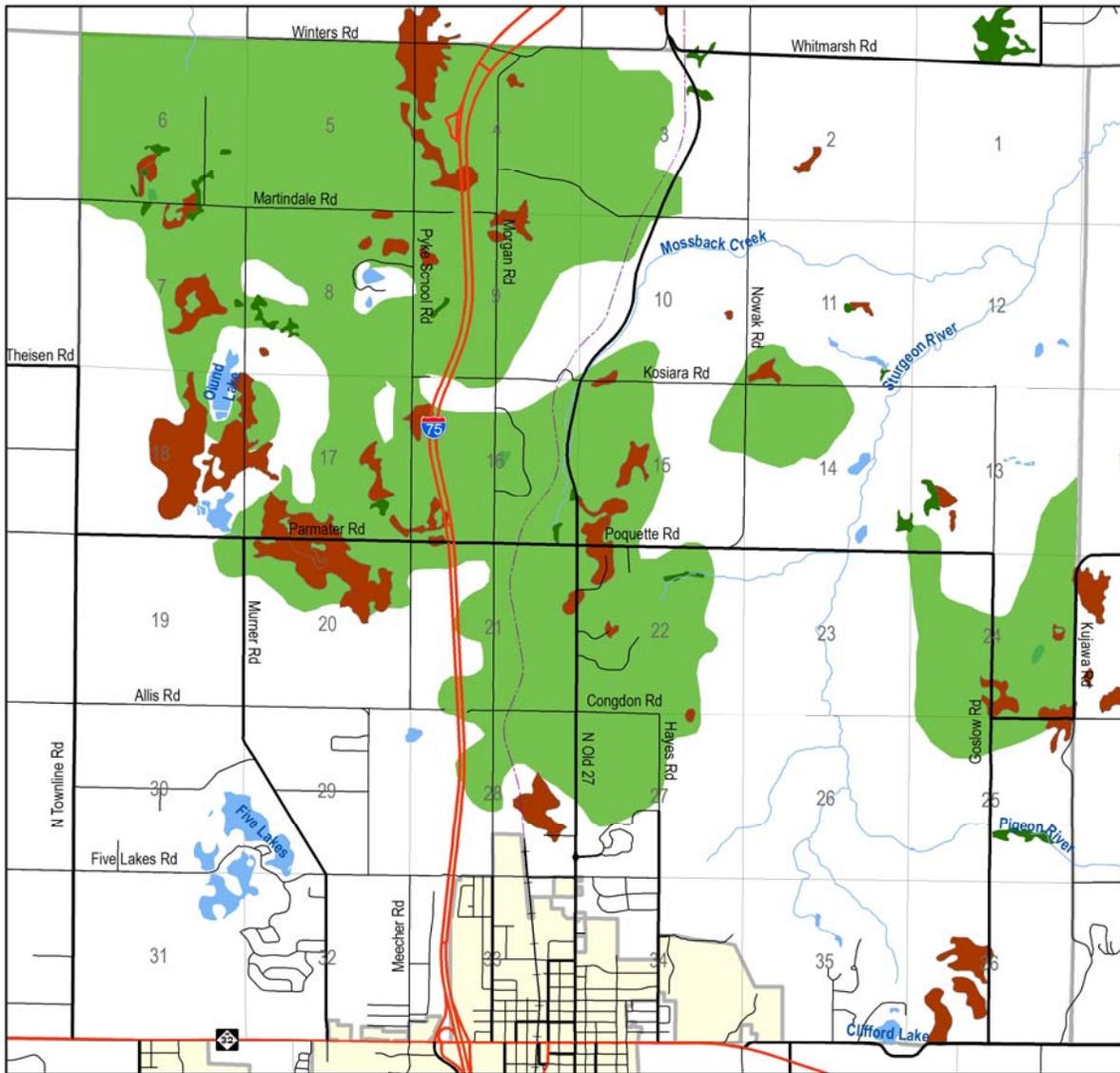


Map Legend

- State Highway
- Primary Road
- Local Road
- Rivers
- Lakes
- Sections

Prime Forest & Agricultural Soils

- Prime Farmland
- Prime if Drained
- Prime Forest Lands



Vegetation

In addition to contributing to the scenic qualities of the Township, the existing vegetation substantially aids in protecting the surface environment of the area. Without an adequate amount of forest, brush, or grass cover, soil erosion or sedimentation would become prevalent. If there were a decrease in the amount of natural ground cover, wildlife in the Township would begin to diminish. Furthermore, the absence of a natural sound barrier would increase noise pollution generated from industry and automobile traffic.

The variety of forest types in Livingston Township contributes to the attractiveness of the community. Along with aesthetics, forests provide habitat for wildlife, protect water quality and provide forest products. Forest types in Livingston Township include Northern Hardwoods (sugar maple, American beech, red maple, white ash, basswood, and yellow birch); Pine (red, jack and white pine); Lowland Conifers (northern white cedar, balsam fir, black spruce, white spruce and tamarack), Lowland Hardwoods (black ash, willow, elm, and balsam poplar); and Aspen-Birch. The prevalent type is Northern Hardwoods, which is concentrated in a wide band that runs from the southeast to the northwest corners of the Township. Pine plantations are concentrated in the southwest quadrant of the Township. Lowland conifers and lowland hardwoods are most common within the Sturgeon River Valley. **See Figure 3.3.**

In order to protect wildlife, soils, and aesthetic values in the area, the promotion of orderly and wise development of forest resources should be encouraged. With educational and technical programs this can be achieved. It would benefit the Township to insure that its residents, particularly owners of larger parcels of forest land, are aware of constructive forestry practices. Such practices will help to maintain and improve the environmental qualities of the community.

Wildlife

Closely associated with the amount and type of vegetation common to Livingston Township and its surrounding area, the community has a wide variety of natural wildlife. As the human population of the Township increases, the areas available for natural wildlife habitat become more confined. The clearing of trees and brush, the filling of wetlands, and erosion of cleared grassland all contribute to the lessening of the variety of forage on which wildlife survive. In order to accommodate an optimum balance between human and animal populations (whereby infringement of one upon the other is minimized) a more detailed study should be made of the forage and habitat characteristics of the various animal species in the Township. Measures should be taken to minimize the encroachment of residential activity upon these habitats.

As previously mentioned, forestry management and harvesting activities affect the overall quality of the environment, including the capacity of the land to accommodate wildlife species. Controlled cutting of timber enables younger trees to survive and mature and low-lying vegetation to grow, supporting wildlife more adequately. In addition, proper tree harvesting increases watershed supplies, since more snow and rain water gradually run into streams and lakes. Such water then becomes part of the water supply used by wildlife as well as humans.

Small game in the Township include birds and mammals, such as grouse, woodcock, turkey, cottontail rabbits, snowshoe hare, squirrel, raccoon, fox, and coyote. Waterfowl include ducks and geese of various species. Chickadees, pine siskin, finches, grosbeaks, sparrows, robins, blue jays, warblers, and various other bird species reside in or migrate through the Township.

Figure 3.3

**Livingston Township
Forests & Wetlands**

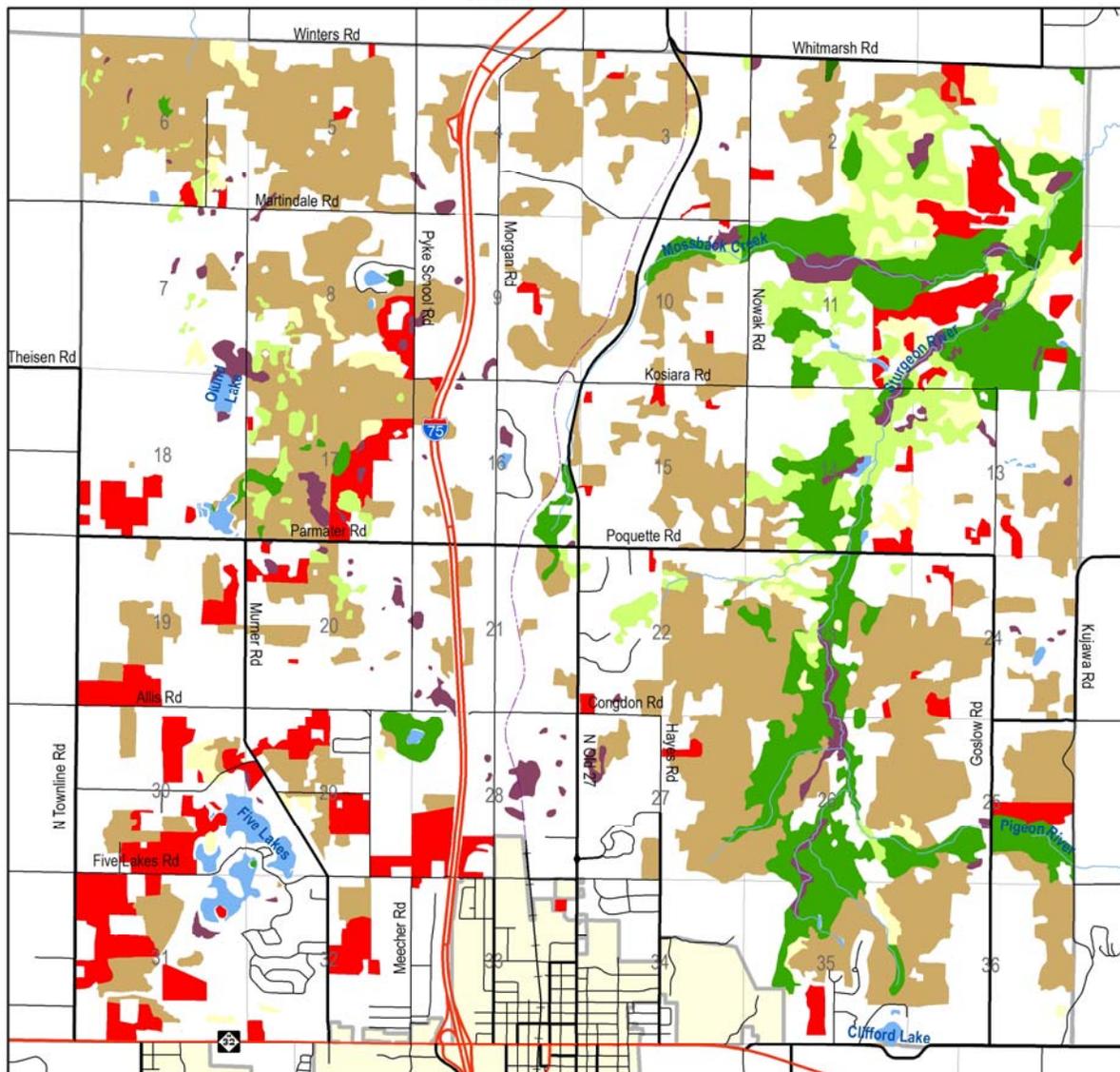


Map Legend

- State Highway
- Primary Road
- Local Road
- Rivers
- Lakes
- Sections
- Township Boundary

Forests & Wetlands

- Northern Hardwoods
- Aspen-Birch
- Lowland Hardwoods
- Pine
- Lowland Conifers
- Wooded Wetland
- Nonforested Wetland



Finally, it should be mentioned that in 2001, a select committee of the Pigeon River County Advisory Council identified part of northeast Livingston Township as an important wildlife corridor and bufferlands for the Pigeon River County State Forest. Known as the Pigeon River Habitat Initiative (PRHI), this multi-organization effort seeks to protect and augment the natural landscape level habitat within and surrounding the Pigeon River State Forest. In addition to landowner technical assistance and incentive programs, Huron Pines Resource Conservation and Development Council conducted an analysis of community planning and zoning. The 2010 report investigates to level of resource protection afforded by each community's master plan and zoning ordinance. Furthermore, the plan recommends the following: 1) incorporate "Pigeon River Country Area" language into master plans, 2) consistent zoning elements across all units of government in the PRHI project area, and 3) use a collaborative approach to acquire conservation easements, and engage with large landowners and units of government to offer support and expert advice regarding forest management and wetland protection/restoration.

All facets of the natural environment of Livingston Township - soils, climate, topography, vegetation, and wildlife - are important as separate entities. When combined they interact in a manner that creates a balance which defines the natural community character. This character needs to be understood and measures taken to minimize any negative impact that human development may create. Livingston Township's environment should be an important consideration in any future decision making affecting any part of the community.

Water Resources

Otsego County is the headwaters of six major river systems: the Au Sable, Black, Manistee, Pigeon, Sturgeon and Boyne. The Black, Pigeon, and Sturgeon rivers are also a part of a larger system, the Cheboygan River Watershed.

As noted in **Figure 3.4**, Livingston Township is located within the headwaters of three major river, the Sturgeon, Pigeon, and Au Sable. According to Michigan Framework GIS data sets, there are 179 acres of surface water found in many lakes and small ponds. The same source identifies 16 miles of streams and small creeks within the township.

Oil and Gas Development

Over the last twenty years there has been considerable activity in drilling natural gas wells in the Township. **Figure 3.5** is a map showing the location of well drilling activity. There are 353 permitted gas and oil wells, with 212 producing wells and 107 sites with terminated permits. **Table 3.1** shows the status of gas wells in the Township.

Figure 3.4

**Livingston Township
Water Resources**

Map Legend

-  State Highway
-  Primary Road
-  Local Road
-  North Central State Trail
-  Rivers
-  Lakes
-  Major Watersheds
-  Sections

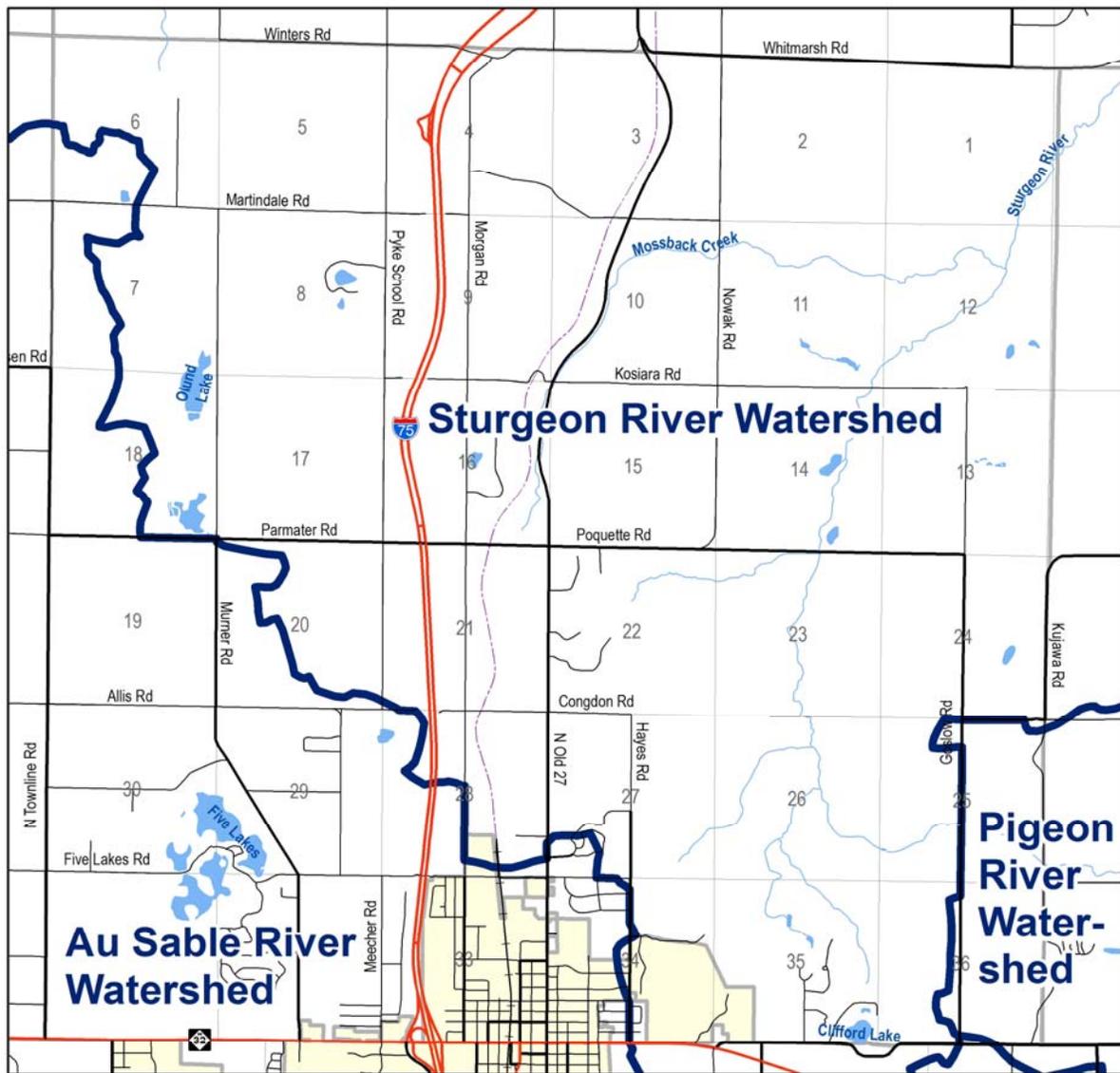


Figure 3.5

Livingston Township
Oil & Gas Development



Map Legend

- State Highway
- Primary Road
- Local Road
- - - North Central State Trail
- + + + Detroit & Mackinaw Railway
- ~~~~~ Rivers
- Lakes
- Sections

Well Status

- Active
- Plugged Back
- Plugging Approved
- Producing
- Temporarily Abandoned
- Terminated Permit

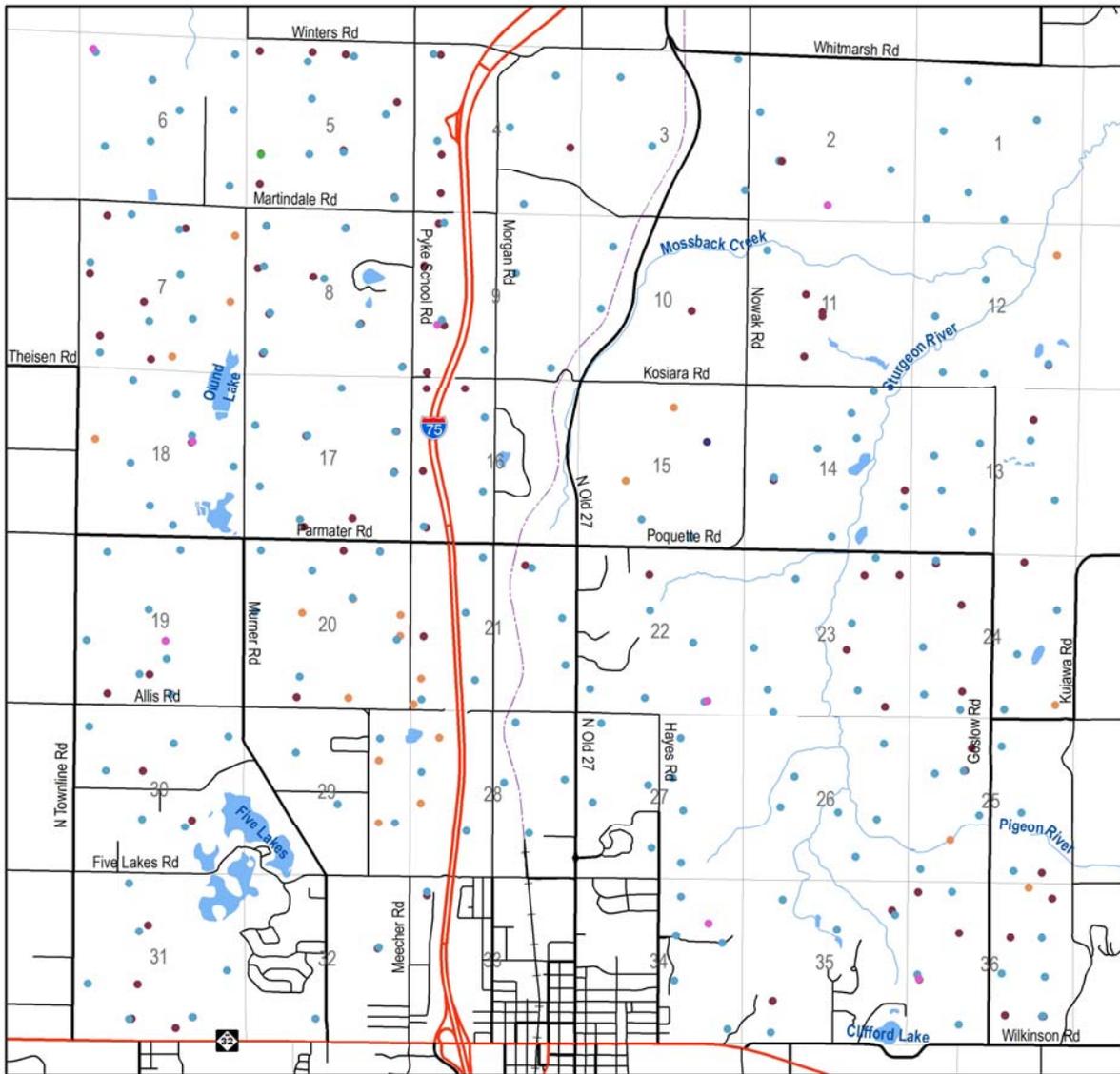


Table 3.1 Livingston Township Oil and Gas Well Information	
Oil and Gas Well Status	Number
Active	8
Drilling Complete	
Plugged Back	2
Plugging Approved (Properly plugged and site restored)	21
Plugging Completed (Plugged but site needs restoration and approval)	
Producing	212
Permitted Well - not yet drilled	
Shut In	
Suspended	
Temporarily Abandoned	1
Terminated Permit	107
Well Complete	2
Source: Michigan DEQ, 2011	

CHAPTER 4 – EXISTING LAND USE

Livingston Township is basically a rural community. Several subdivided properties, some having a potentially high density, are located in the southern portion of the Township. These are found along the northern boundary of the City of Gaylord and in the Five Lakes area in Sections 29, 30, and 32. A good portion of the community has a more extreme topographic relief where less dense development and open space predominate. **Figure 4.1** at the end of this chapter depicts the general distribution of land uses within the Township. The map was generated from the 2005 land cover/use inventory.

Originally, Livingston Township encompassed 36 square miles. However, about one-half square mile was transferred into the City of Gaylord when the City was initially incorporated. A major annexation of Township acreage occurred when over 1,400 acres devoted to a Planned Unit Development (Otsego Club) was transferred to the City under the Conditional Land Transfer Act (Public Act 425 of 1984). Numerous other small parcels have been annexed to the City under Act 425 agreements. According to the 1999 Citizen Survey, residents were generally opposed to further annexations.

Water (inland lakes) encompasses approximately another one-half square mile. The Sturgeon River originates in the Township, flowing in a northerly direction and eventually into Burt Lake in Cheboygan County. Topography is generally undulating, but somewhat more steeply sloped than normally found in the County, varying from 1,417 feet above sea level in the northwestern sections of the Township to 1,047 feet above sea level in the northeastern portions.

Residential Land Use

According to the 2010 Census, there were 1,051 total housing units, of which 920 were year round and 81 were seasonal. In 1980 the total number of seasonal homes was 60 units. In 1990 there were 52 seasonal homes and in 2000 there were 60 seasonal homes. The Township's seasonal housing rate of 7.7 percent can be compared to 27.5 percent for Otsego County. Typical for townships that border a city, homes are owned by year round residents. In 2010, owner occupied housing units made up 801 of the total, while only 119 were renter occupied. Renter occupied units increased as a portion of all residences since 1980. This indicates that the growth in rental units is increasing at a relatively consistent rate with the growth of owner occupied housing units in the Township.

The number of total housing units at the end of 2010 was 1,051 units. The distribution of residential land use within Livingston Township is predominantly in the southern portions of the Township. In 2000 the average household size was 2.77 persons in Livingston Township compared to 3.11 persons per household in Michigan. In the 2010 US Census, the average household size was 2.66 in Livingston Township compared to 3.01 persons per household in Michigan. This decrease in household density is primarily due to smaller family size and to children maturing and leaving the household, the Township, and even Northern Michigan for employment or additional education in other areas of Michigan. Another contributing factor is the influx of retirees, who normally have a one or two person residence.

In 1980 less than eight percent of all the dwellings in the Township were renter occupied, whereas in 2010 the percentage had moderately grown to 12.9 percent. The percentage of rental occupied dwellings within the adjacent City of Gaylord has historically been much higher, primarily due to the availability of water and sewer necessary for large rental complexes. For example, in 2010 some 54.7 percent of the dwellings units in the city were renter occupied.

All lots and parcels must comply with Ordinance Number Four of 2008, known as the Livingston Township Parcel Division Ordinance. There presently are approximately 700 lots in 19 residential development communities in the Township, plus various small tracts. In most cases, these individual parcels are adequate according to health department standards for on-site waste disposal and water supply. In a few cases, however, single-family lots are not adequate enough to meet the minimum lot width requirements of the health department. In such cases, two or more lots must be combined in order to allow proper septic tank drainage or exist as legal nonconforming lots.

Under the current Otsego County Zoning Ordinance, which has jurisdiction within the Township, approximately 2,900 acres are zoned residential, with a minimum lot size of 20,000 square feet (approximately one-half acre). While there are 15,800 acres in the Township on which residences can be built on parcels of two or more acres.

Housing values had more than doubled between the 1990 Census and the 2000 Census due both to inflation and to new home construction. For example, in 1990 the median value of owner occupied housing units in Otsego County was just \$56,000, as compared to \$102,500 in 2000. The steady increase in median housing values continued into 2008 when the recession and nationwide collapse in the housing market quickly reversed the trend. However, with the projected growth of Otsego County, and the continuing commercial development of Gaylord and the communities adjacent to Gaylord, there is a large possibility that residential development pressures in Livingston Township will increase within the planning period (up to the year 2020). It is important, therefore, to analyze as completely as possible, the various environmental, social, and economic factors that affect and are affected by residential development in the Township in order to properly prepare for the community's future.

Commercial Land Use

The economic well being of any community is enhanced by the proximity of commercial and industrial operations. Residential activities are closely interrelated with commerce. Usually, business enterprise will follow residential growth. As the amenities of a community increase, and the community becomes attractive to more people, additional housing will be needed. This cycle, identified by a close interrelationship between living and working patterns, is the basis for community development.

Politically, Livingston Township is an entity separate from the City of Gaylord. Because of the close geographic proximity of the City to the Township, sections of Livingston Township are identified with the City. Therefore, the commercial growth of Gaylord will tend to affect the residential development of the Township.

The majority of existing commercial facilities in Livingston Township are located on Old 27 North and M-32 west of Gaylord. These are extensions of the primary commercial activities located in Gaylord. The 1990's saw significant commercial development in the Township. Future commercial land uses in the Township should be located to compliment, and not compete with, services offered within the City of Gaylord. According to the results of the 1999 Citizen Survey, residents are strongly opposed to commercial expansion in the Township.

Industrial Land Use

Because of the rural, recreational nature of Northern Michigan, the greatest economic resource in the area is tourism and the commercial activities established to service the needs of tourists.

Natural resource based industries have been important to the regional economy. This was significantly diminished when one of the larger employers in the area, Georgia Pacific Corporation, closed in 2006. However, given the ample supply of forest products available in the region, natural resource will continue to be important to the local economy.

Livingston Township has very little in the way of industry and primarily has commercial development in those areas which had been previously identified in the 2005 *Township Comprehensive Plan* as industrial. Since the expansion of the Gaylord Air Industrial Park, the need for industrially zoned property in Livingston Township may not be required

As the County and the City develop, it is possible that larger industries may study the practicality of locating in Livingston Township area. Most industries require larger parcels of land for operations. The Gaylord Industrial Park, situated in west Gaylord, has the capacity to accommodate future industrial development. Some gas and oil well exploration is occurring in Livingston Township, but is exempt by State law from local zoning regulations.

Recreational Land Use

The low density of Livingston Township, with its abundance of private open space, appears to make recreational facilities less critical. However, formal public recreational areas, with on-site equipment and structures, are available throughout the County and in the City of Gaylord.

In Livingston Township, the County Parks and Recreation Department maintains Frank Wilkinson Memorial Park (Irontone Springs), a roadside picnic facility adjacent to Old 27 North. Located elsewhere in the County are the following facilities: Otsego Lake State Park, Otsego Lake County Park, and Libke Memorial baseball diamonds. Recreation sites located in the City include the Sportsplex, community center, Dumas Park, Mt. Carmel Cultural facilities, and the Gaylord Community School District has playground facilities. North Central State Trail traverses the center of the Township in a north-south direction and accommodates biking, hiking, and horseback riding.

Private enterprise also supplies a variety of recreational opportunities. The Otsego Club Resort is partially located within Livingston Township. Fourteen additional golf courses located in Otsego County with many more located in surrounding counties. There are two downhill ski areas located in close proximity to Livingston Township. The most prevalent recreational activities in this portion of the State are golfing, skiing, hunting, mushroom hunting, camping, hiking, and wildlife viewing, and fishing. As the area abounds in deer, elk, rabbit, woodcock, ruffed grouse, and a variety of other small game, it will continue to be attractive to hunters. Several lakes and streams in the County offer trout, bass, pike, walleye, and pan fishing, as well as boating activities. There are several isolated parcels of public land in the Township. Chapter 6- Recreation Plan provides information on the location and ownership of public lands.

As residential land is further developed in the Township, serious consideration should be given to providing facilities within easy access to more dense development. Such recreational areas should be designed to serve the more immediate residents of the Township. For example, where a new residential development does not select the open space option offered in the County Zoning Ordinance, the developer should provide recreational facilities (such as playgrounds or parks) proportionally to the size of the development.

If an attempt is made to locate a countywide or regional recreational facility in the Township, an intensive study will have to be undertaken to analyze the total effect of such a facility. This plan attempts to provide for a proper balance between residential and recreational land uses.

Forests, Agriculture and Open Space

A sizeable proportion of Livingston Township has potential value for agricultural production. However, the hilly terrain makes much of the Township less suitable to modern high-production farming. In addition, residential, recreational, and commercial uses compete for lands which might otherwise be put to agricultural use. Cropland remains the most extensive land use along the 1-75 corridor in the central and northern sections of the Township. Additional farmlands are located at the Township's eastern border, in Sections 13 and 24.

Specific agricultural data for Livingston Township are not available. According to the Michigan Department of Agriculture 2012 Survey, there were 180 farms with 32,293 acres of farmland in Otsego County (**Table 4.1**). The 2012 survey found annual value of agricultural production was \$7,065,000 with \$1,022,000 in livestock sales and \$6,044,000 in crop sales. **Otsego County ranks 6th in the state for barley production.** Current trends in local food based systems and organic food products have seen an increase in small specialty farms and producers.

Forested areas are abundant within the Township. As there is no Federal or State forest land, these forests are primarily privately owned. The western, southwestern, and northeastern sections of the Township are the major areas for pine trees, while hardwoods such as birch, beech, and maple are concentrated in the northern and central portions of the Township. Those areas adjacent to the Sturgeon River and Mossback Creek in the eastern sectors of Livingston Township are lowland areas subject to flooding. In any future distribution of activities, these areas should be considered as potentially environmentally sensitive. In addition, Michigan wetland laws limit construction in such areas.

Table 4.1 - 2012 Agriculture Activity in Otsego County	
Agricultural Lands	Amount
Total number of farms:	180
Total farmland:	32,293 acres (9.8% of total area)
Forage/pasture/non-crop farmland:	7,300 acres (21.7% of farmland)
Number of farms using organic production:	3 (2 certified organic farms)
Local Distribution	Amount
Farmers' markets:	2
Farms using Community Supported Agriculture:	1
Value of direct-to-consumer farm product sales:	\$164,000
Local food production index:	13
Agricultural Revenues	Amount
Total market value of agriculture production	\$7,065,000
Total crop sales	\$6,044,000
Total livestock sales	\$1,022,000
Source: Michigan Department of Agriculture	

In order to retain the rural character of the Township, attention must be given to the human activities which can substantially alter the existing distribution of forest and open space. The environmental integrity of Livingston Township must be understood and preserved especially in light of increased residential activity. **Figure 4.1** illustrates the general distribution of forests, open space, and agricultural land as they currently exist. Any future land use changes should be made only after their physical, social, and economic impacts upon environmental resources have been considered.

Figure 4.1

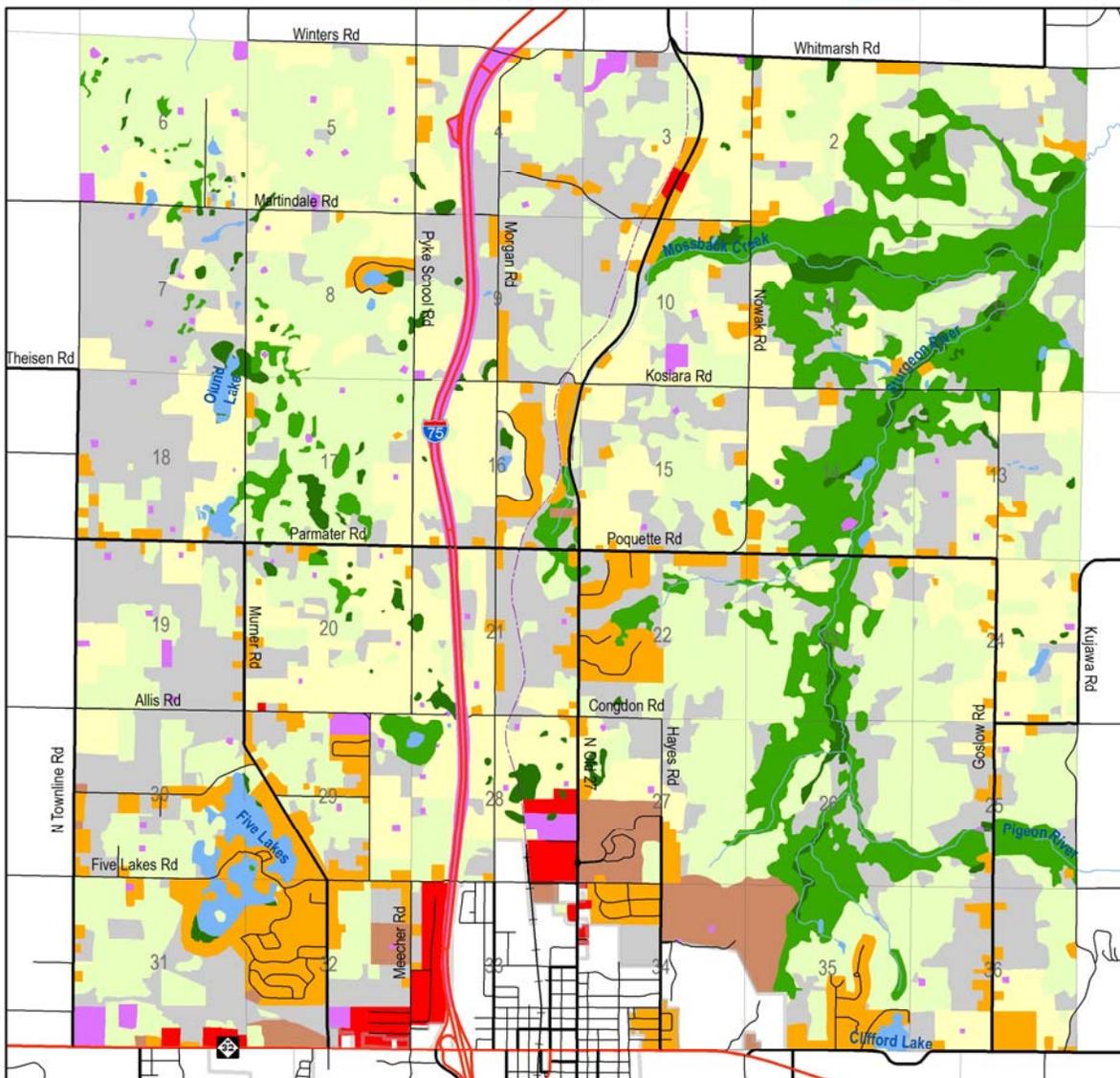
Livingston Township
2003 Land Use Map

Map Legend

- State Highway
- Primary Road
- Local Road
- Rivers
- Lakes
- Sections
- City of Gaylord

Land Cover/Use

- Residential
- Non-Forest Uplands
- Commercial
- Upland Forest
- Industrial-Extractive-Transportation
- Lowland Forest
- Institutional-Recreational
- Non-Forest Wetland
- Agricultural
- Water



CHAPTER 5 – COMMUNITY SERVICES AND FACILITIES

One of the primary contributors to the quality of life in a community is the type and variety of services available to both local residents and visitors to the area. In many cases, a smaller community does not have the financial resources to provide all or even most of the services which would normally be considered essential in an urban area. The more populated the community, the greater the variety of public, semi-public, and private services made available to residents.

This chapter of the Master Plan will identify the types and extent of services now available to residents and businesses in Livingston Township. Even though these services may be sufficient for the needs of the current population, future development may increase the demand to upgrade or expand the services and facilities the Township needs to maintain a satisfactory living environment in the future.

Township Government

It is a fact of our system of government that policies adopted by decision makers at the Federal, State, or local levels are the primary catalysts for the general shape of a community. Although national and state programs are not specifically designed to deal with local concerns, they do indirectly influence actions taken by both local leaders and private investors. Fiscal policies are a good example of this influence. Local government, through its powers given to it via state enabling legislation, has the capacity to determine its own land use patterns through various development controls, such as zoning and subdivision regulations.

It is true that private enterprise, in particular the real estate market, may be directly involved with development. However, the pattern and type of development is in most cases guided by the zoning ordinances, sewer and utility placement, and fiscal policies of the local government. Livingston Township is a non-incorporated, general law township. It also is limited in its powers to guide its own development, as it is dependent upon Otsego County for zoning administration, road construction and maintenance, police and ambulance services, and health and welfare services. Livingston Township does not maintain a full time administrative staff.

The Township Board is composed of five members, one Supervisor, one Clerk, one Treasurer, and two Trustees. This body has the responsibility of overseeing the general welfare of the Township, including participation of board members on panels and committees.

The Township Planning Commission was established in 1973. In accordance with the Michigan Planning Enabling Act of 2008, the Township reestablished the planning commission by ordinance in October of 2009. In accordance to the township ordinance, the planning commission has all powers authorized by the Michigan Planning Enabling Act of 2008, as amended.

Transportation

An important measure of the vitality of a community is its transportation system, which also helps define its physical pattern of development. The Township's road network has been constructed and maintained by the State and the County. Specifically, M-32, and I-75 are under the State's jurisdiction, while all other roads in the Township are primary and secondary roads.

The Otsego County Road Commission clears those roads in the winter which are normally used as access to residents, as well as all major, more heavily traveled streets. Livingston Township works closely with the Otsego County Road Commission for the purpose of road maintenance. The Township provides money from its general fund for road projects.

Circulation and transportation are important to the development of any community. The proximity of Livingston Township to major transportation routes, such as I-75 and M-32, can be an asset by increasing the normal rate of growth. On the other hand, it may be a liability for the same reason, particularly if accelerated development is detrimental to the social and physical welfare of the community and its residents.

As the City of Gaylord develops and expands, the population of Livingston Township can be expected to grow. Both communities will likely experience further development in the areas adjacent to existing Federal and State circulation routes. The City of Gaylord's growth areas are adjacent to I-75 and M-32 and will likely see more pronounced growth. But, Livingston Township, because of its proximity to Gaylord, will share in at least part of the future development pressures. **Figure 5.1** shows the general highway network surrounding and running through the Township.

The potential for commercial development within the Township is enhanced by major transportation routes. Commercial locations along Old 27 North and along the north side M-32 West can become logical extensions of the City. The Otsego County Master Plan provides structure for supporting new development which centers on urban areas. The plan recommends coordination between the County, City of Gaylord, and Bagley and Livingston Township for land use planning, zoning and capital improvement planning.

State thoroughfares (M-32, I-75, and Old 27 North) are maintained and plowed by State equipment and employees. The remainder of the roads within Livingston Township consists of local collector streets and minor thoroughfares, which are maintained and plowed by the County Road Commission. Each spring Township officials and the Otsego County Road Commission conduct a drive-around on the roads in the Township to examine the condition and discuss road maintenance activities. Livingston Township provides funding for road repairs and upgrades from its general fund.

Public transportation via bus is provided throughout the County on request to the Otsego County Bus System. The Lake State Railway runs parallel to Old 27 North and terminates in the southern portion of the Township. The termination at the southern end of the Township limits any further industrial development dependent upon rail service that may have wished to locate in the Township. Freight transportation via rail has been available on the Lake State Railway running from Gaylord to Bay City. The abandoned railroad right-of-way from Gaylord north to Cheboygan and onto Mackinaw City has been converted to a year-round multi-use nonmotorized recreational trail called North Central State Trail. Wheeled motorized vehicles are not permitted on the trail.

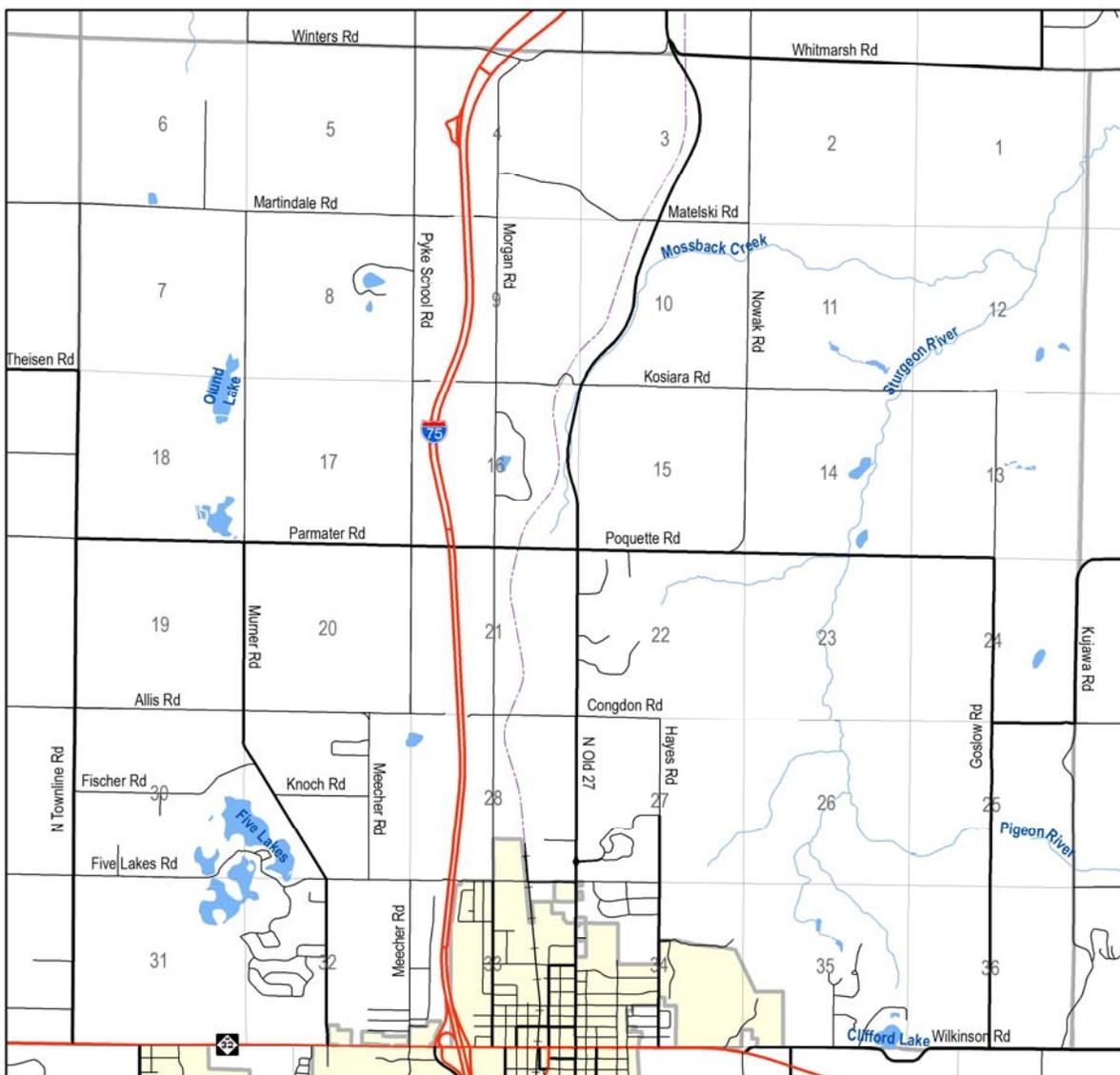
Air transportation is available at Otsego County Airport, located south of Livingston Township in adjacent Bagley Township. The County-owned, public-use facility has two runways, 5,000 ft. x 100 ft. and 3,000 ft. x 75 ft. Passenger service is available on a charter basis only, but the airport may be used by private planes. A portion of the airport is reserved as an air industrial park, and is used by United Parcel Service, United States Postal Service, Federal Armored Service, Federal Express, and United States Federal Reserve.

Figure 5.1

Livingston Township Road Map

Map Legend

- State Highway
- Primary Road
- Local Road
- - - North Central State Trail
- Detroit & Mackinaw Railway
- Rivers
- Lakes
- Sections
- Township Boundary
- City of Gaylord



Regional commercial air service is available at Pellston Regional Airport in Emmet County and at Alpena County Regional Airport, located west of the City of Alpena. Commercial air service at both facilities connects travelers to Detroit Metro Airport. The Cherry Capital Airport in Traverse City has commercial passenger service to Detroit Metro Airport and Chicago O'Hare Airport.

Communications

Many of the activities, opinions, and ideas expressed during daily events and circumstances are the result of various forms of communications. The variety and quality of the different communication media available to the residents of Livingston Township contributes to the area's quality of life. Television, radio, and newsprint help form attitudes and opinions on various political subjects, introduce new products through advertising and provide the entertainment to which we are accustomed. The forms of mass communication available to Livingston Township residents are described below.

Telephone

Landline telephone service is provided in the Township by Frontier and Spectrum. A number of cellular telephone providers offer services throughout the area. However, reception and transmission may be limited in areas away from major roads or in areas with low elevation.

Internet Access

Broadband internet (cable and DSL) service is available in the more populated areas of the Township. In less populated areas, internet access options are limited to dial-up, satellite or cell phone.

Radio

Radio is a media that has no definite boundaries in its ability to attract a listening audience. Certain stations, because of their locations, have specific broadcast or market areas, yet listeners outside those broadcast areas may also occasionally receive the station's transmission. FM stations available to residents include: WKHQ, WMJZ, WPHN, WJML, WCMU and WTCM. Two Christian radio stations serve the area. In recent years, the internet has enabled people to listen to radio stations from around the world.

Television

Television, like radio, has the capacity to reach a large number of people, even in remote locations. The location and number of television stations in northern Michigan enable residents of this part of the State to partake of a wide variety of network programming. The following television stations may be received within the Township: WPBN Channel 7 (NBC - Traverse City); WTOM Channel 4 (NBC - Cheboygan); WWTV Channel 9 (CBS - Cadillac); WWUP Channel 10 (CBS - Sault Ste. Marie); WGTU Channel 29 (ABC - Traverse City); WGTQ Channel 8 (ABC - Sault Ste. Marie); and WCMU Channel 6 (PBS - Mt. Pleasant). Cable television service for portions of the Township and the City of Gaylord are provided by Charter Communications. Television programming via cable and satellite enables residents of the Township and the City of Gaylord to enjoy a wide variety of programming beyond the network broadcasts. Residents may also obtain television programming similar to cable through satellite dish systems.

Newspapers

International, national, state and local events can be explained in greater detail, when published in newspapers. Advertising, including the selling of non-commercial items, is also more widespread in newspapers. At the local level, household items are often sold using this form of communication.

Several publications are offered in the immediate area, including *Detroit News/Free Press*, *Bay City Times*, *Traverse City Record Eagle*, *Wall Street Journal*, *U.S.A. Today*, and several small newspapers from towns in the area outside the County. The larger newspapers have daily circulation and the smaller have weekly circulation. The *Herald Times*, a bi-weekly newspaper printed in Gaylord, Our Home Town published in Vanderbilt, and the Weekly Choice provide coverage of events occurring in and affecting Otsego County.

Energy Supplies

Livingston Township is fortunate enough to have access to a variety of energy sources, including natural gas, LP gas, electricity, fuel oil, and wood. The variety of fuels available to the Township enhances the chances of locating a variety of activities in the area. Commercial and residential land uses, can be developed in a more uniform and cohesive fashion if there is a planned distribution of energy supplies. That is, the timed and sequential expansion of utility lines can aid in the determination of when, where, and how large future development will be.

Natural gas is supplied to the Livingston Township area by DTE Energy (formerly Michigan Consolidated Gas). This utility serves the eight county Northeastern Michigan Region via two main transmission lines paralleling U.S. 23 on the east and 1-75 on the west. The line runs through Livingston Township, enabling the residents of the community a greater variety in the choice of heating and cooking fuel than others may have that reside in areas further removed from this main line. In addition, industries look favorably upon sites offering a variety of energy supplies, especially natural gas. Propane fuel is also available, primarily from distributors in Gaylord and surrounding areas. Many seasonal and recreational homes in the Township use bottled, tank, or LP gas for heating. Additionally a large proportion of the homes in the Township use fuel oil for heating purposes.

Electrical service is available in Livingston Township. Consumers Energy and Great Lakes Energy serve the Township and surrounding areas. Otsego County adopted a wind turbine ordinance in 2011. The ordinance regulates the placement, size and configuration of wind turbines, which are categorized by small, medium and large sizes.

Water

Except for a very limited area adjacent to Gaylord, there is no public water system within the Township. The availability of groundwater and low density of the area has in the past precluded the need for a distribution system. However, if the Township should increase in density to the point where seepage into groundwater from a variety of sources creates pollution problems, a public water system may have to be considered.

With this in mind, the Township retained Granger Engineering, Inc. of Gaylord in 1983 to prepare a water system study. The five service areas included in the study covered the more

populous subdivided areas north of Gaylord. Additionally, in late 1984 a test well was drilled at the northwest corner of McLouth and Hayes Roads, just south of the Alpine Center.

The water quality test results from this well were within the standards for municipal water supplies. In terms of capacity, the well was anticipated to pump 375 gallons per minute or greater. While the well shaft was partially cased, the pump and distribution system were not installed, due in part to system construction costs. To offset high water system development costs, Livingston Township investigated possible shared utilities with Bagley Township. To that end, a joint water and sewer authority was organized between the two municipalities. The water system feasibility study was revised and updated in 1987 to reflect the service needs of both communities.

In 1987, Bagley Township reached agreement with the City of Gaylord to provide water service to a portion of that township. As a result, plans for joint service between Bagley and Livingston have not been carried out, and the water and sewer authority has been dissolved. Future municipal water supply for Livingston Township may depend either on the Township deciding to reform a water and sewer authority with Bagley Township or controlling development such that these systems would not be needed in the future. Unless the City of Gaylord revises its position that the provision of sewer and water services can only be accomplished under an Act 425 agreement, the Township should not consider further discussions with the City. The *Citizen Survey* indicated that 76.2 percent of respondents were not interested in any further annexations to the City for the provision of sewer and water services.

In 1995, when Otsego Club (formerly Hidden Valley) was developing a planned unit development, attention was again focused on developing the Township's well site for providing water to the Otsego Club development. Aquifer testing was again performed on the well during this effort. In addition, conditional approval was received from the Michigan Department of Environmental Quality and Michigan Department of Health to place the existing well into service and construct an additional production well. An Act 425 agreement was reached providing City water and sewer service to the Otsego Club.

In 1999 Wade-Trim, Inc. prepared an additional study on the feasibility of supplying water and fire protection services to the core commercial area along Old 27, north of McLouth Road utilizing the Township well site as the source. Again in 2003 Wade-Trim conducted an additional study on the feasibility of developing the Township well site and extending the water main to the two large parcels located along Hayes Road. The study reviewed several development options based on immediate and future needs. The study also presented financing options, expectant demands on the system, fire protection needs, procedures for developing the system, and operation and maintenance.

Sewer and Septic Systems

At present, there is no public sanitary sewer system in Livingston Township. Residents rely on private septic systems. This solution works well in many areas of the Township. However, in areas of concentrated residential development and private water wells, pollution is a real risk. Perhaps the most challenging area in this regard is the Five Lakes area, where high water tables and wet soils around the lake make siting private systems difficult. This situation illustrates the direct relationship between public utilities and future growth potential. Additional growth in these areas may require developers to provide package waste water treatment systems and include restrictive deed covenants for the operation and maintenance of them.

Solid Waste Disposal

Livingston Township does not presently offer solid waste management or municipal waste disposal service. Residents and business owners rely on private waste haulers, who must dispose of the rubbish in a licensed landfill. The primary private waste haulers that pick up solid waste in the Township are Waste Management, Inc., PAC Sanitation, and American Waste. Solid waste collected in the Township is hauled to the licensed Waste Management landfill facility, located in northern Crawford County. The Township also sponsors an annual household clean-up day held in June each year, allowing residents to dispose of large items at no charge.

Northeast Michigan Council of Governments (NEMCOG) is the designated solid waste management planning agency for Otsego County. Operating in this role, NEMCOG prepared the *County's Solid Waste Management Plan* as required by P.A. 641 of the State of Michigan.

Public Safety

A critical function of a local government is the protection of health, safety, and welfare of its citizens. The majority of townships in Michigan, especially the more rural townships, are unable to provide their own police and fire protection. Rather, it is somewhat standard for townships to contract with their respective counties to obtain police and join a coalition of townships for volunteer fire protection. Such is the case for Livingston Township.

Law Enforcement

The Otsego County Sheriff Department patrols Livingston Township as well as all other unincorporated sections of the County. The County office and jail are located at 124 South Court Street in Gaylord and have a complement of one sheriff, one undersheriff, six deputies, five dispatchers, six correction officers (part-time and full-time) and a Marine Officer in June, July and August. As the County increases in population, it can be expected that personnel, facilities, and equipment will have to be expanded to provide quality public safety programs.

The City of Gaylord has its own police department which patrols the incorporated portions of the City. Since nearly 20 percent of the County's population resides in Gaylord, the existence of the Gaylord Police Department substantially aids the Sheriff Department in providing services that concentrate on the remainder of the County. In addition, the Michigan State Police maintain a post in Gaylord. This operation also contributes to the quality and quantity of police protection available to the County.

Fire Protection

Livingston Township is located in the Otsego County Fire Department Fire District. This district encompasses the following communities: City of Gaylord, Livingston Township, Bagley Township, Dover Township, Hayes Township, and West ½ of Chester Township.

The fire station is located in the City of Gaylord. The department is administered by a fire board, comprised of two members from each government unit it serves. There are forty members on the fire department who respond to calls 24 hours a day. Fires calls are dispatched through Otsego County 911, with each member receiving the call by pager.

In April 2009 ISO rated the Otsego County Fire Department:

City of Gaylord, Class 5
 Livingston Twp., Class 5/8B
 Dover Twp., Class 6/8B
 Bagley Twp., Class 5/8B
 Hayes Twp., Class 8B/10
 Chester Twp., Class 8B/10

Otsego County Fire Department has the following equipment:

1988 1,000GPM Pump Engine
 1995 1,250 GPM Pump Engine
 1995 1,250 GPM Pump Engine
 2006 2000 gallon Tanker with 500 GPM pump
 2007 2000 gallon Tanker with 750GPM pump
 2008 2000 gallon Tanker with 350GPM pump
 2004 102 foot Aerial with 2,000GPM pump
 1997 Utility Equipment Van
 2 Portable lighting trailers

All units are equipped with 2 way high band radios and some have a 800 MHZ radio.
 Each fire fighter on a emergency scene has a hand held high band radio for communications.

Otsego County Fire Department has a mutual aid contract with the other four fire department in Otsego County, as well as departments in Antrim, Montmorency and Crawford County.

As the District continues to increase in population, the number of fire calls per year can be expected to increase. As expanding population puts more pressure on existing personnel and facilities, it can be expected that additional facilities and staff will be required. Through maintaining membership in this fire district, Livingston Township can contribute to the operation and expansion of adequate fire protection, at a reasonable cost.

Ambulance Service

The Otsego County Emergency Medical Service provides emergency service to all sections of the County. The organization is staffed with full time paramedics, EMT's, and EMT specialists. Ambulance service available to the area includes a mobile intensive care unit with air ambulance provided by North Flight. The organization is incorporated as a non-profit corporation, and the service provided to the community is highly regarded. The service is fully supported by user fees, which is used to purchase new equipment as needed. Once equipment is purchased, ownership of the equipment is turned over to the County.

Health Services

Health care services are an important element of the community facilities available to County residents. Otsego Memorial Hospital provides a wide range of medical services including emergency and extended care facilities, surgery, intensive care units, medical laboratory services, and a walk-in clinic. Additional health related services are provided by Northwest

Community Health, Otsego County Department of Human Services, Northern Michigan Substance Abuse Services, and several other health related agencies.

Community Facilities and Organizations

Because of its close proximity to Gaylord, Livingston Township residents can easily avail themselves to the numerous facilities and activities located in and around the City of Gaylord. The following organizations are active in the area: American Red Cross, American Association of University Women, Boy Scouts of America, Eagles Club, Elks Club, Gaylord Area Resource Center, Gaylord Little League Inc., Northern Michigan Computer Commodore Club, Gaylord Masonic Lodge, Girl Scouts of America, Jaycees, Kiwanis Club, Knights of Columbus, Lions Club, Optimists Club, Otsego County Fair Association, Otsego County Ministerial Association, The Shrine Club, Rotary, Senior Citizens (Otsego County Council on Aging), Otsego Memorial Hospital Auxiliary, Retired Senior Volunteer Program, Royal Arch Masons, Sportsman Club, Otsego County Hockey Association, Vanderbilt Masonic Lodge, Zonta Club, and the American Cancer Society. Note, other organizations may exist.

Local churches (there are several Protestant, one Roman Catholic, and one Conservative Catholic located in Livingston Township on Murner Road at Parmater Road) and the Community Center located in Gaylord have facilities available for meetings. Several private clubs have facilities available for meetings, although not all are open to the general public. The Livingston Township Hall, located on Old 27 North, has facilities available for public and private functions.

Educational Facilities and Programs

The quality of the present and future of Livingston Township is affected by the type and number of educational facilities available to its residents. The teaching of employable skills as well as more formal secondary education adds to the capabilities of the local labor force.

Livingston Township is within two separate public school districts - Gaylord Community School District and Vanderbilt School District. The northeastern five sections of the Township (Sections 1, 2, 3, 11, and 12) are in the Vanderbilt School District, and the remainder is in the Gaylord Community Schools. Several private schools also serve the area.

The University Center Gaylord is a higher education collaborative, non-profit corporation designed to facilitate and deliver a complete range of higher education services and training to the citizens of rural, northern Michigan. The University Center is a "communiversity" partnership of accredited colleges and universities, industry, public schools, and citizens where no two or four year entity exists. It is viewed as the major catalyst in driving positive economic development and quality of life in our region through higher education and training for high-skilled wage and salaried positions, and for lifelong learning. University partners at the center include, Davenport University, Eastern Michigan University, Kirtland Community College M-TEC, Lake Superior State University, Madonna University, Michigan State University, North Central Michigan College, and Spring Arbor University.

The M-TEC at Kirtland-Gaylord is a state-of-the art facility offering technical education in a unique, flexible, student-friendly environment. The M-TEC site is the home of Kirtland's construction and industrial trades programs, as well as cardiac sonography and practical nursing.

CHAPTER 6 – COMMUNITY INPUT

The purpose of this chapter is to establish the goals and objectives that will guide future growth and development in a manner that will reflect the natural characteristics of the land and the planned provision of public utilities and services; strive to preserve scenic beauty; encourage the stewardship of natural resources; protect environmentally sensitive areas; conserve productive farm and forest lands; and enhance the rural, scenic character of the Township. In developing community goals and objectives, it is important to analyze existing community characteristics such as social and economic conditions, services and facilities, environmental conditions, and existing land use. Preceding chapters of this Master Plan have documented the above characteristics.

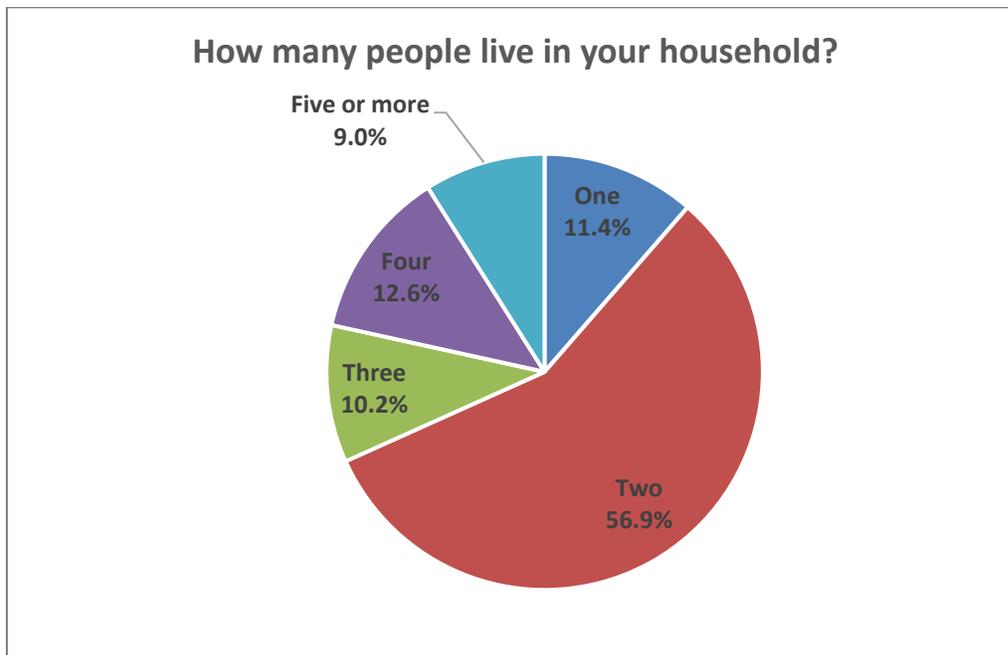
The next step in the planning process is to gather community input. Livingston Township chose to conduct a web-based survey.

Web Survey

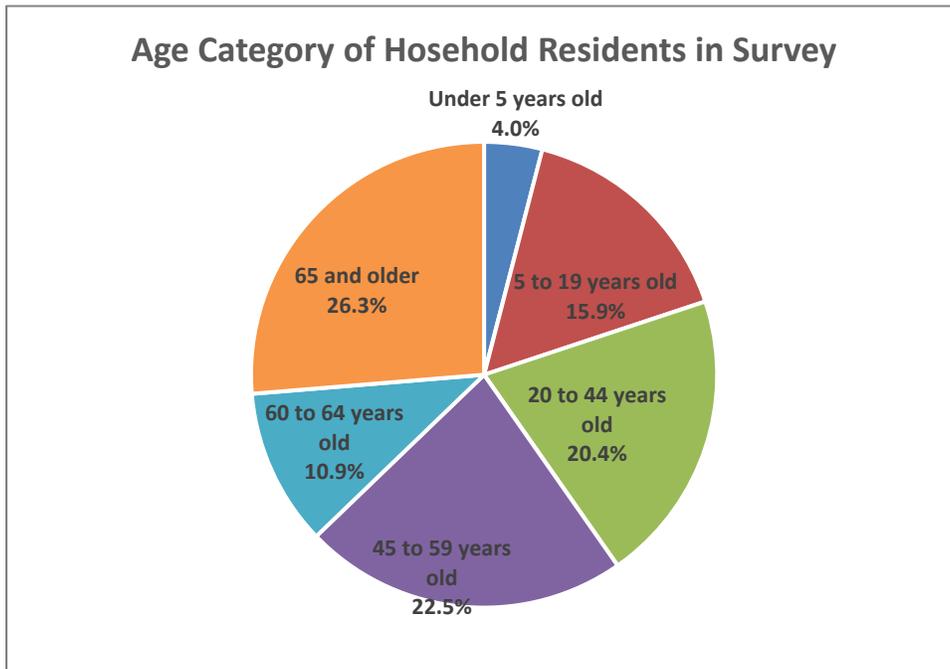
The planning commission developed a set of questions and posted the survey instrument on a web service called, "Survey Monkey." A note announcing the web survey was inserted in the winter tax notice. In addition, a link was placed on the Township's web site, the NEMCOG website, and printed copies of the survey were made available at the Otsego County Library. To promote the survey, an article was printed in the Gaylord Herald Times.

There were 171 surveys completed, which included both on-line and mailed-in surveys.

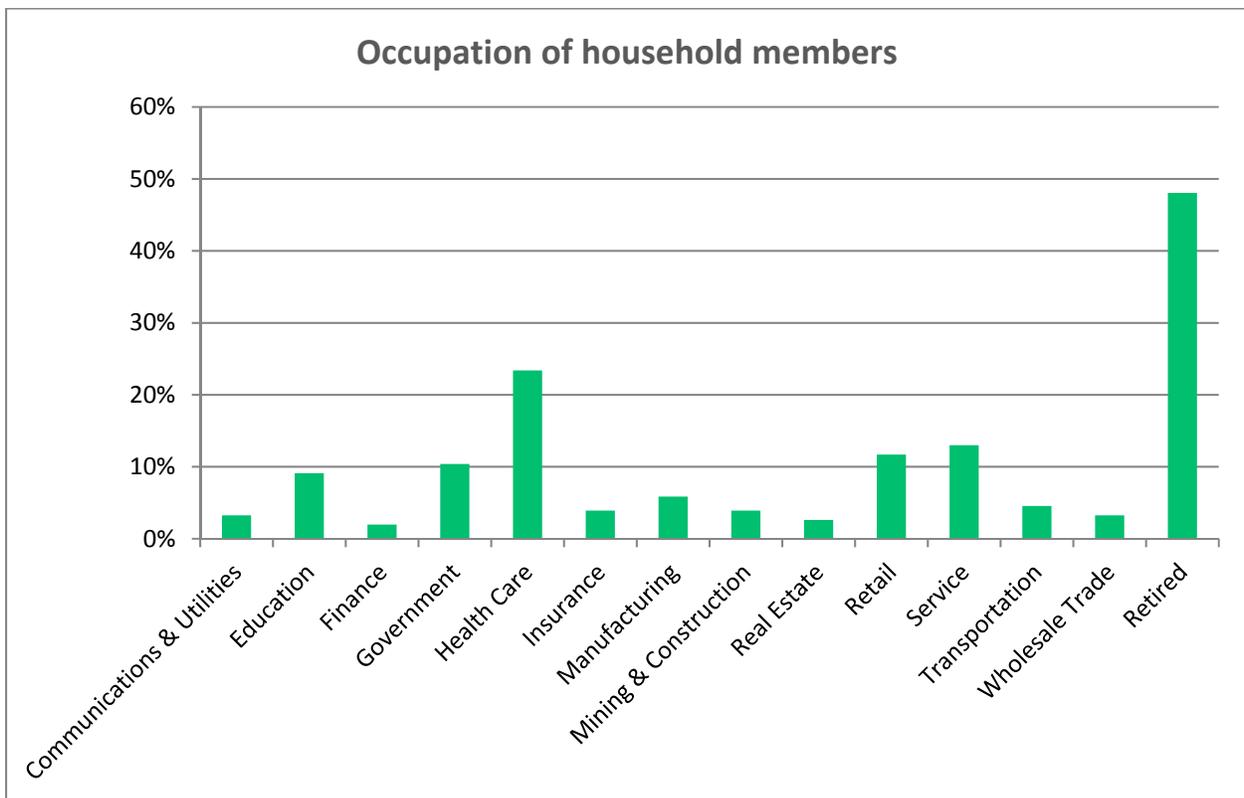
1. How many people live in your household?
Eighty-nine percent (89%) of the respondents were from households with two or more people.



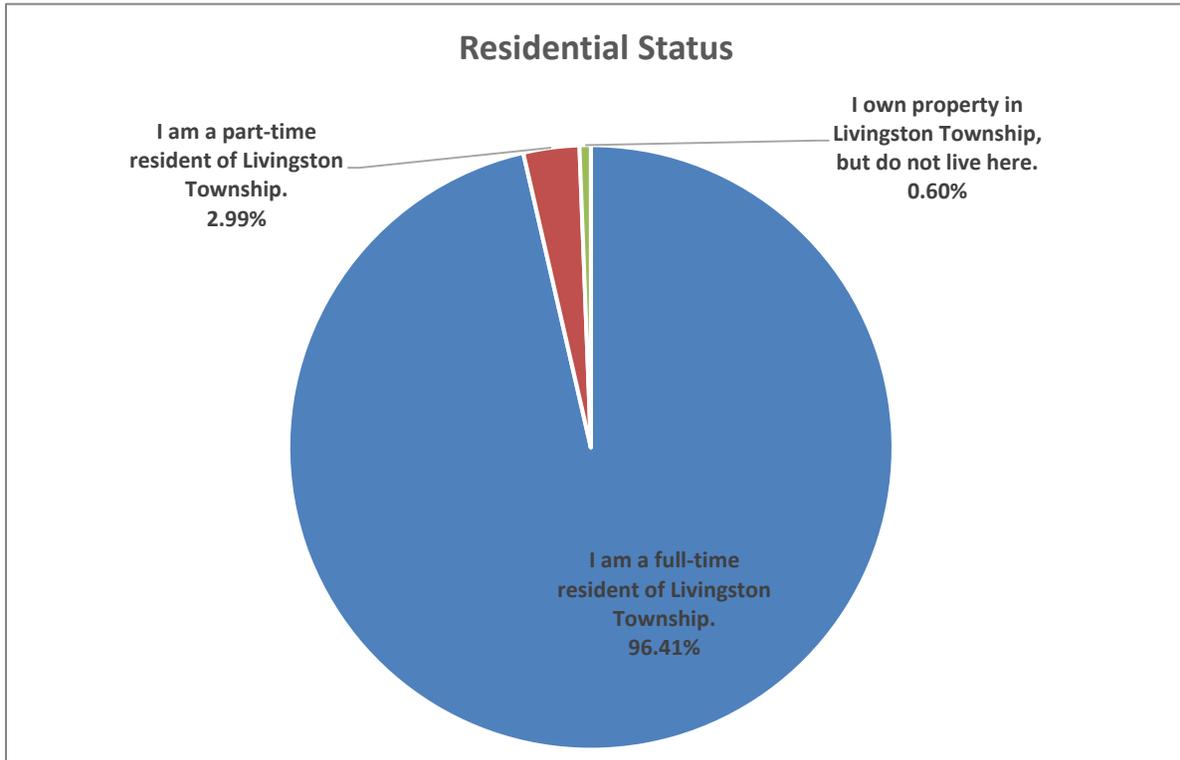
2. Enter the number of people in your household under each age category.



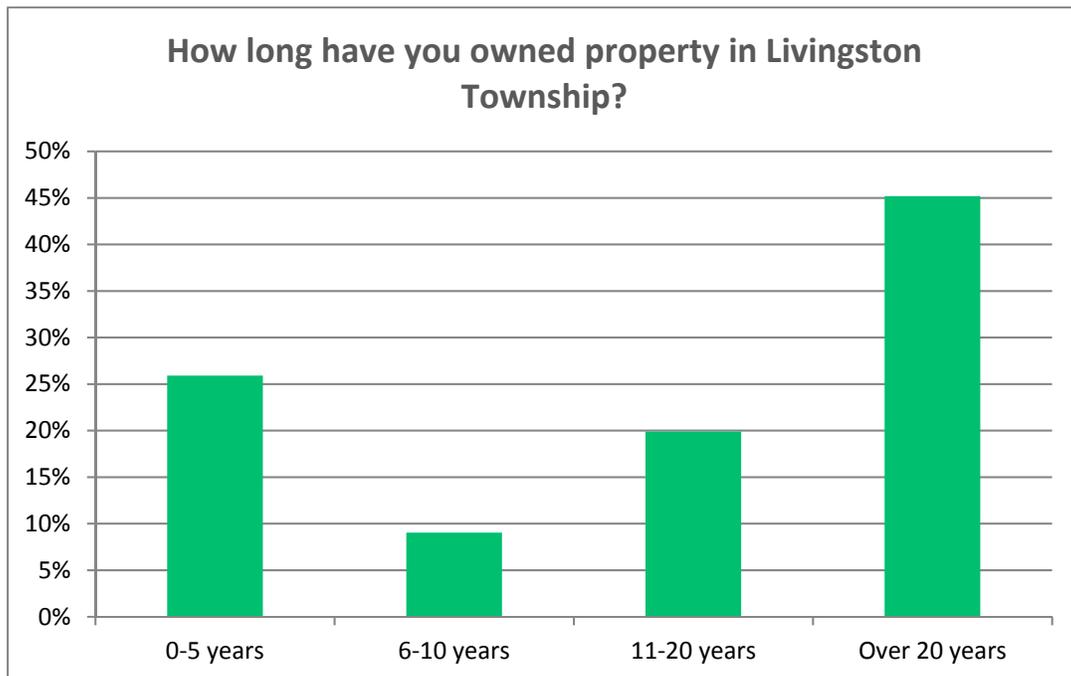
3. Occupation of household members.



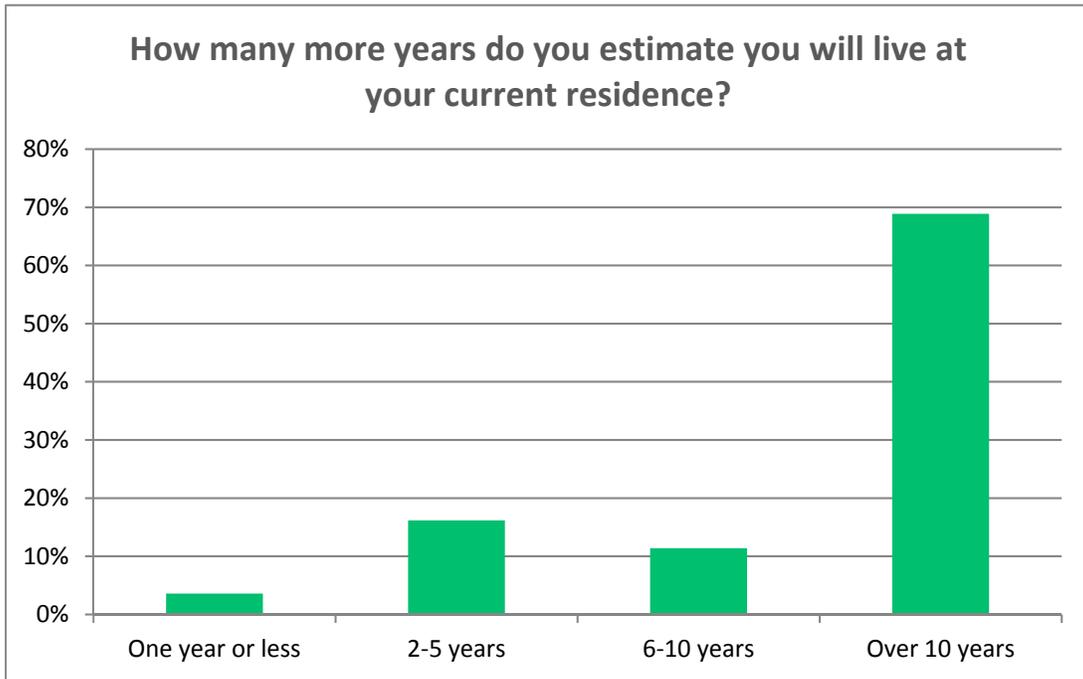
4. Please check one answer below which describes your current resident status:



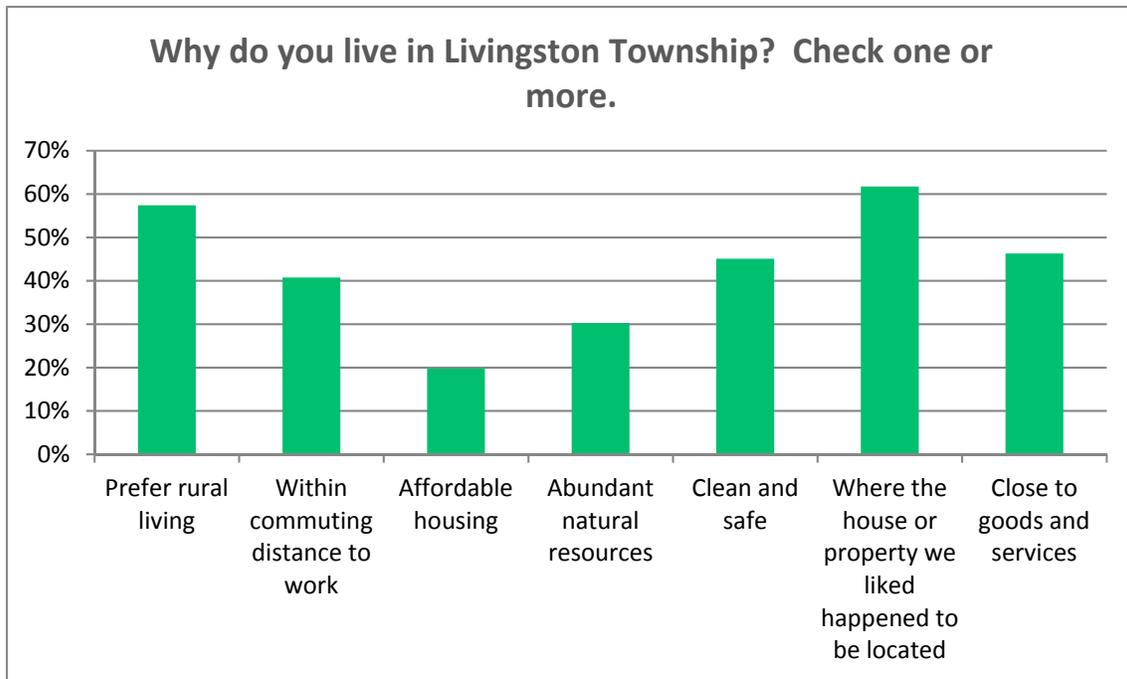
5. How long have you owned property in Livingston Township?



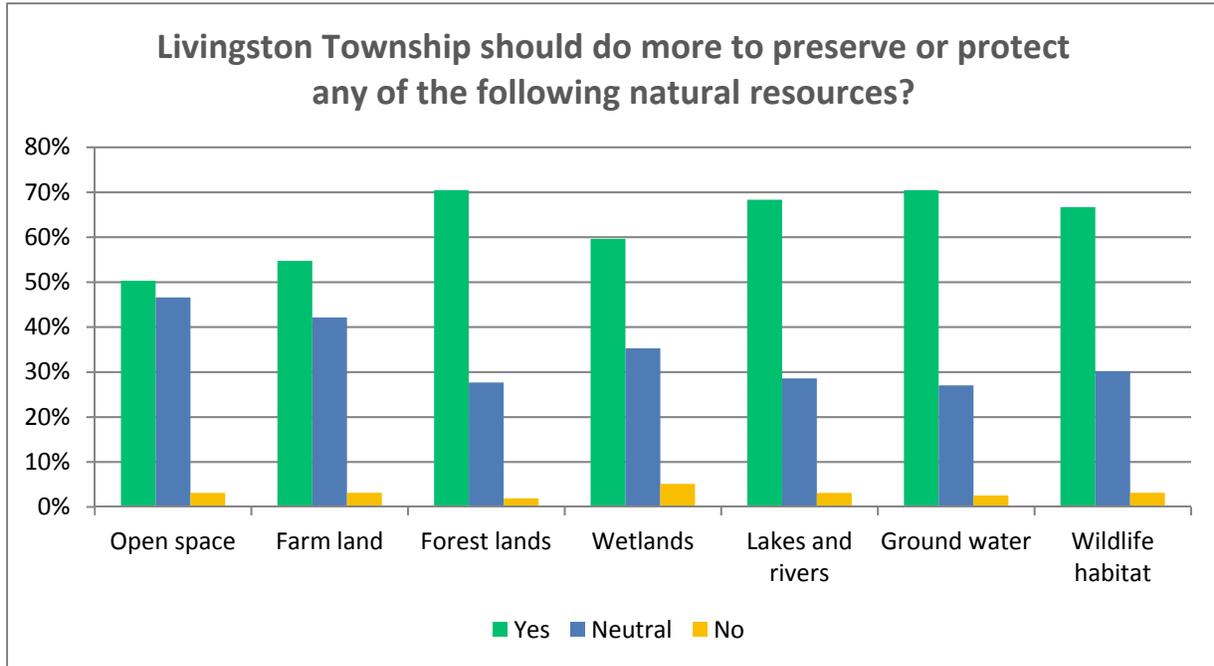
6. How many more years do you estimate you will live at your current residence?



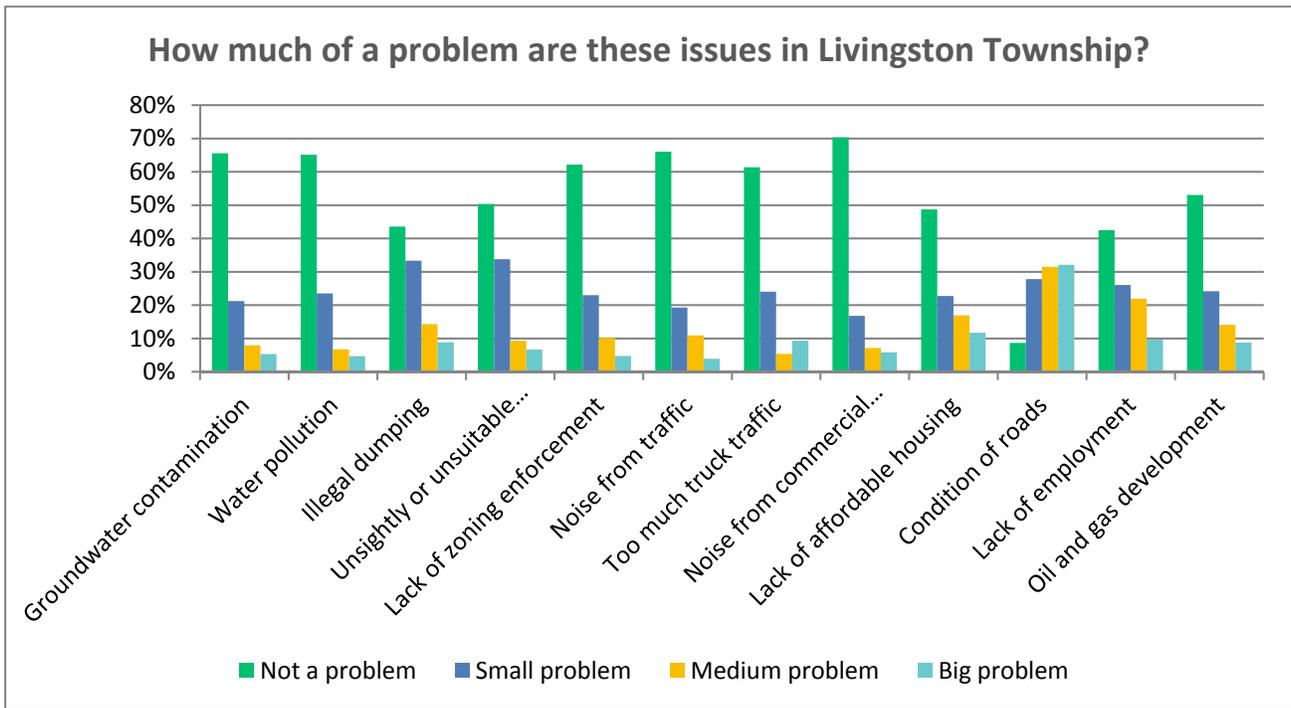
7. Why do you live in Livingston Township? Check one or more.



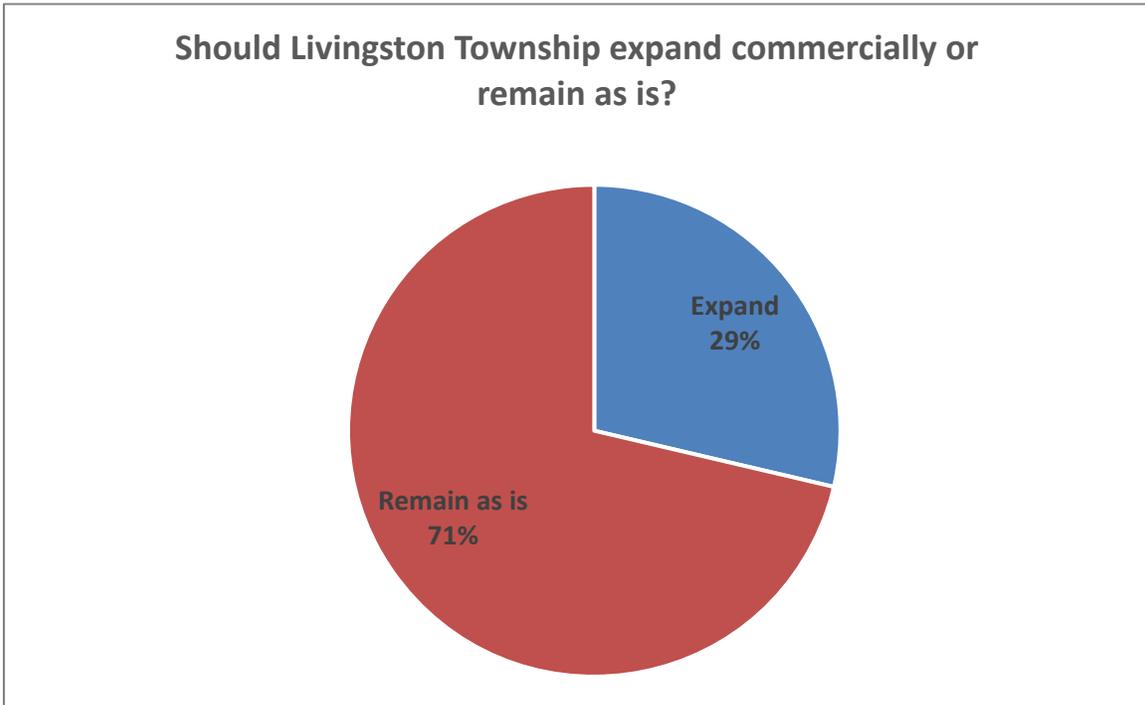
8. Do you feel that Livingston Township should do more to preserve or protect any of the following natural resources?



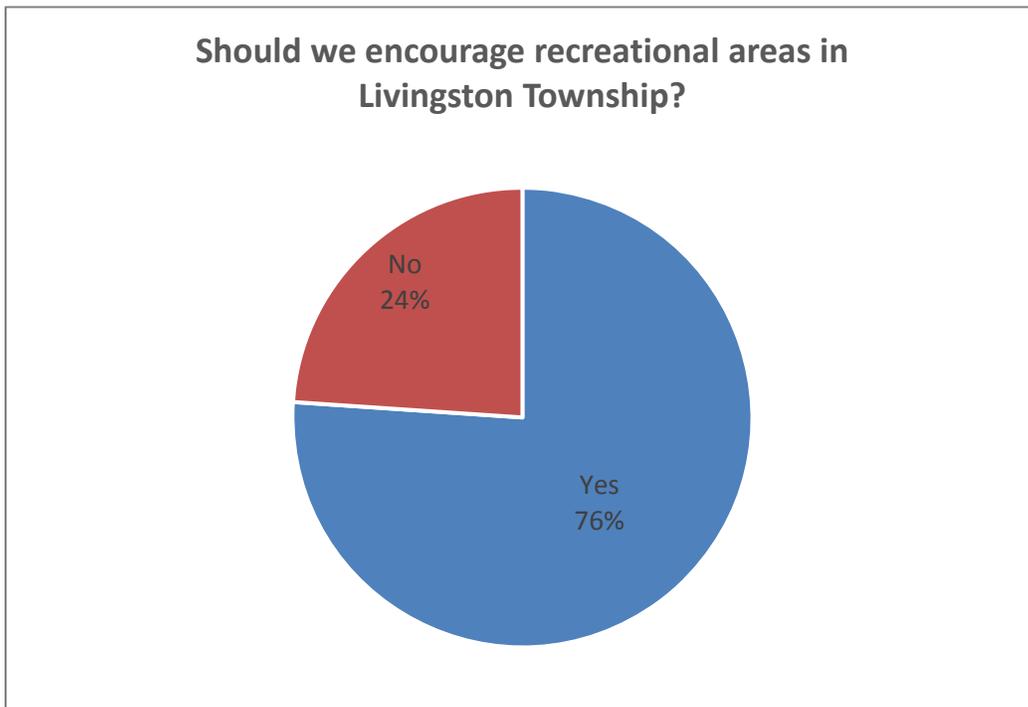
9. How much of a problem are these issues in Livingston Township? Check one choice for each item.



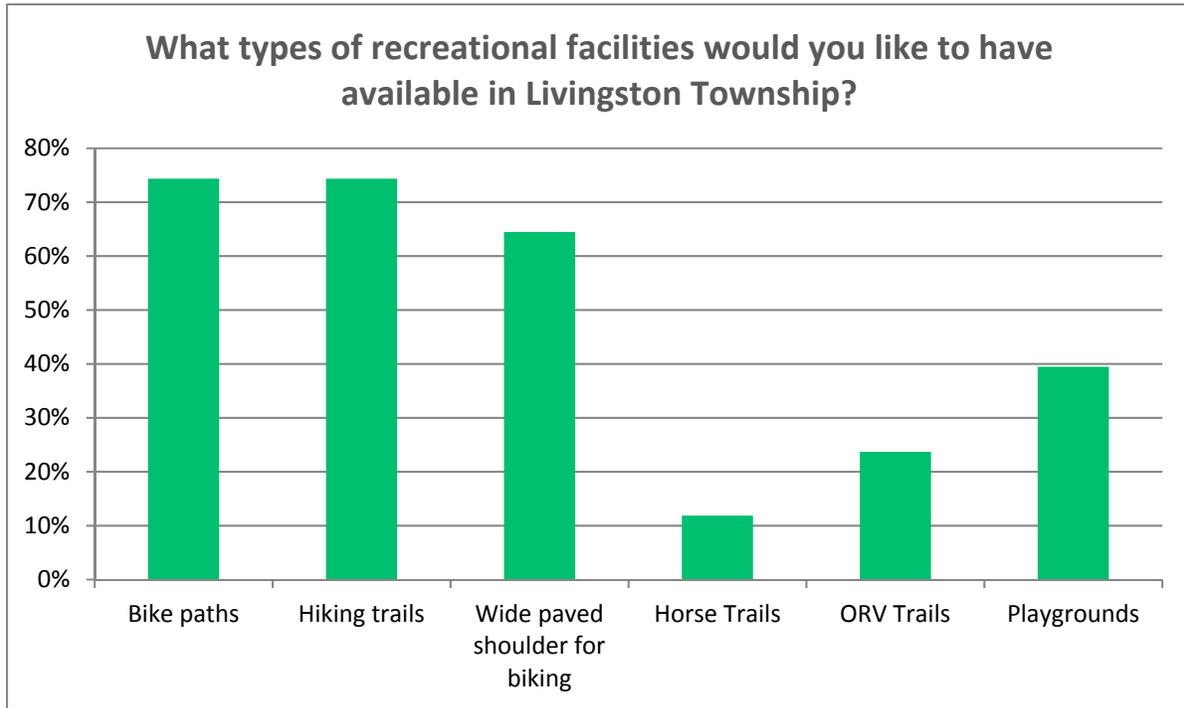
10. Should Livingston Township expand **commercially** or remain as is?



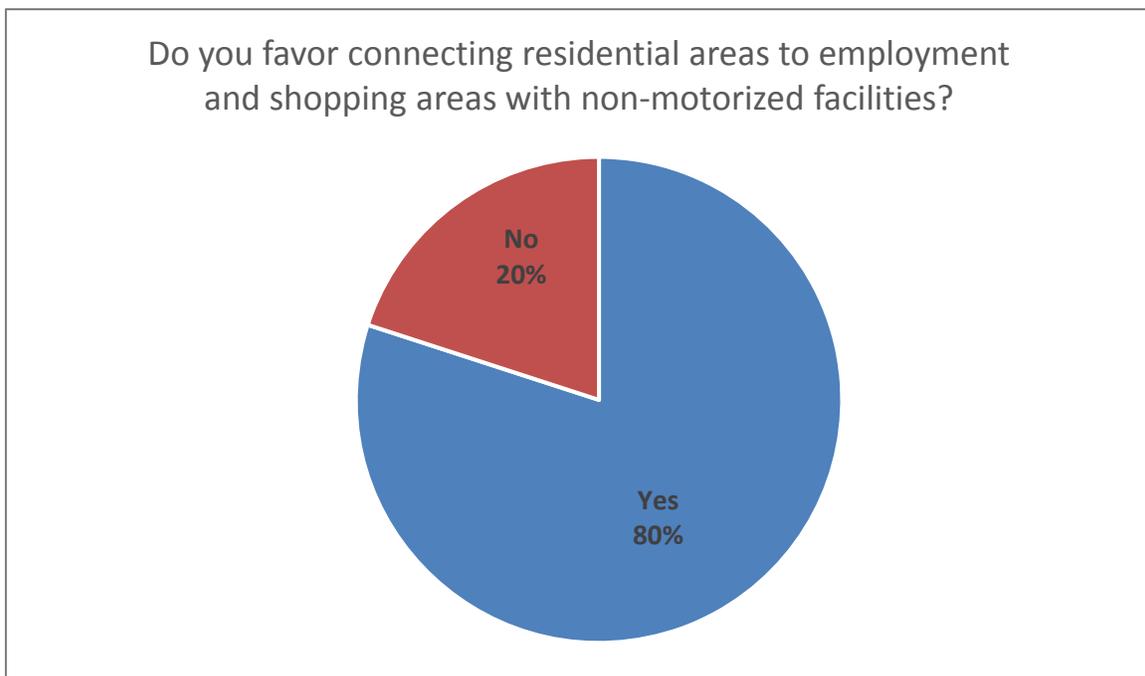
11. Should we encourage recreational areas in Livingston Township?



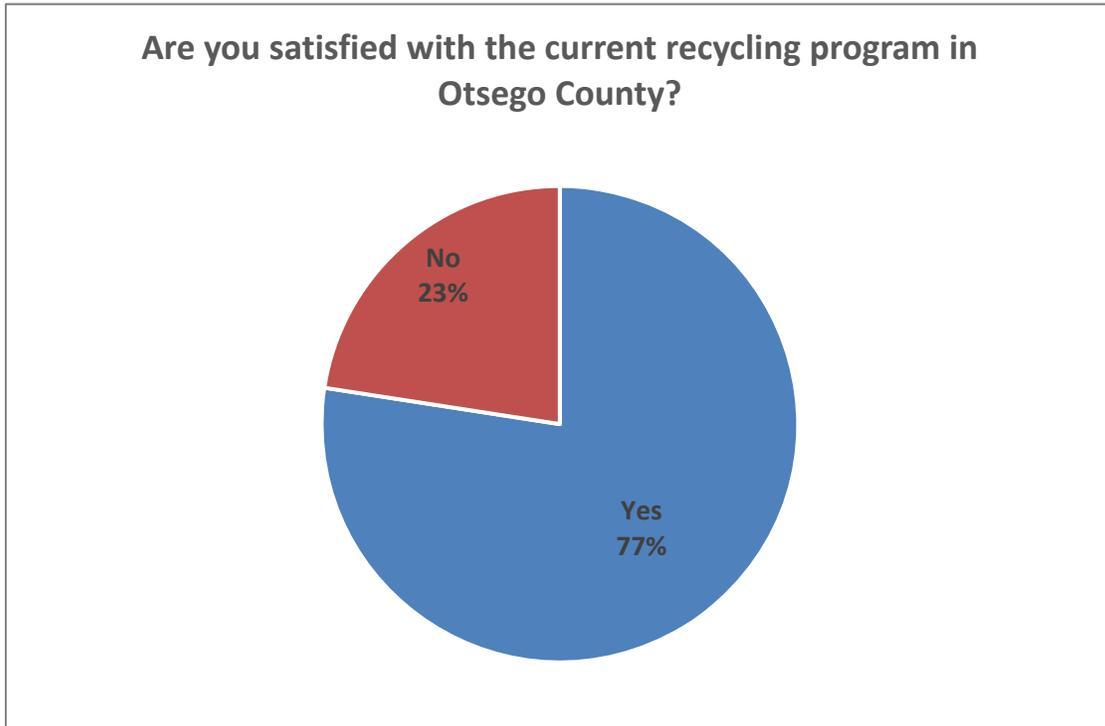
12. What types of recreational facilities would you like to have available in Livingston Township? (Respondents could select up to three).



13. Do you favor connecting residential areas of the township to employment and shopping areas with bike paths, sidewalks or other non-motorized transportation facilities, such as wide paved shoulders?



14. Are you satisfied with the current recycling program in Otsego County?



Other Public Comment

CHAPTER 7 – GOALS, OBJECTIVES, AND POLICIES

Analysis has been made of the important features of the Township which give the community its identity. The proximity of Livingston Township to the City of Gaylord and neighboring townships offers opportunities for intergovernmental cooperation and coordination. The full realization of community identity and intergovernmental cooperation are the primary concepts that will guide future development goals for Livingston Township.

Both shortcomings as well as positive community features have already been identified. The following sections will utilize these characteristics in setting goals, objectives, and policies.

Goals are very broad descriptions of the overall desirable characteristics the people of Livingston Township wish to attain within the planned period. Goals indicate the general direction the Township wishes to take in its development.

Objectives are definitive statements that reflect and delineate the adopted goals. They point out programs that will assist in making the more generalized goals a reality. **Policies** are guidelines for action. While all policies may not always be consistently applied, the decision-makers and residents of Livingston Township should promote active use of as many of these policy statements as possible. This can best be accomplished if knowledge, creativity, and most importantly, community involvement and interest are applied to promoting the optimum future for the Township.

The following is the overriding concept upon which Livingston Township intends to base its future: **Livingston Township desires to preserve its rural character, enhance its identity, and work with its neighboring communities to provide a satisfying quality of life for all its residents.** This has implications for physical, economic, and social development, all of which will be detailed in the following Goals, Objectives, and Policies statement. (Note: the numbers below **are** intended to reflect relative priorities.)

Goals

1. Maintain the general rural character of the Township.
2. Protect, as much as possible, the existing natural environment, existing farmlands, forests, and scenic beauty.
3. Promote a desirable distribution and an orderly growth in population.
4. Promote programs and policies designed to develop and strengthen a sense or “community” within the Township.
5. Attain efficiency, strength, and autonomy in local government, while retaining constructive liaison with other units of government.
6. Allocate land uses in a manner which will insure an independent identity for Livingston Township.
7. Maintain a viable local economy.

Local Government

Objective:

Livingston Township should attempt to provide local government services that will maximize the opportunities of its residents while minimizing, as far as possible, the cost of these services.

Policies:

1. Recommend revisions of the *Otsego County Zoning Ordinance* when and where needed to conform to the land-use element of this plan for Livingston Township.
2. Promote communication between the Township and its residents which will increase citizen interest and involvement in local public affairs.
3. Promote water and sewer systems to be provided by developers, in specifically designated and limited locations within the Township where the District Health Department deems those systems necessary and where such infrastructure contributes to Township goals.
4. Provide levels of service in specifically designated and limited locations that will serve the residents and insure the viability and autonomy of the Township.
5. Implement and enforce standards for residential and commercial development which will result in economical provision of public services.
6. Create local, health, welfare, and service programs, either independently, or in conjunction with other units of local government that will fulfill those needs not satisfied by County, State, or Federal Government, or by the private sector.

Transportation

Objective 1:

The primary goal of an adequate transportation system is to provide accessibility. Therefore, it is an objective of the Township to provide roads and major thoroughfares that will serve the needs of local as well as through traffic.

Policies:

1. Provide road systems able to accommodate existing and future traffic needs.
2. Efficiently limit the amount of street area required by residential developments to optimize the quantity of land available for residential, forestry, agricultural, and recreational uses.
3. Coordinate the timing and location of commercial land use with existing and proposed streets to minimize construction cost, traffic congestion, and land use conflicts.
4. Design adequate and efficient off-street parking and circulation systems in commercial areas.
5. Incorporate the goals and objectives of the *M-32 & Old-27/I-75 Business Loop Corridor Study* that pertain to Livingston Township into the planning goals of this master plan. Chapter 7 of the study is attached as Appendix B.

6. Incorporate the goals and objectives of the *I-75 Scenic Corridor Plan* that pertain to Livingston Township into the planning goals of this master plan. Chapter 4 of the plan is attached as Appendix C.

Objective 2:

A complete transportation system includes trails for recreational uses as well as standard automobile oriented circulation systems. However, no Township owned properties are available at present for this purpose.

Policies:

1. Cooperate with State and local efforts to designate recreational vehicle trails in nearby areas accessible to Township residents.
2. Within the Township, encourage private entities to provide hiking and cross-country ski trails.
3. Consider the use of funds from the Livingston Township Improvement Fund for the development of non-motorized recreational trails in the Township.

Public Facilities

Objective:

The ability to achieve an identity is determined not only by commercial and industrial activities, but also by the placement of public facilities within the Township. Livingston Township's objective is to provide public facilities required to meet the needs of its residents.

Policies:

1. Develop public facilities and utilities within limited geographic areas to keep costs down.
2. Work in conjunction with other units of government to ensure the placement of facilities which are beyond the capacity of the Township alone to provide.

Health and Welfare

Objective:

A community is composed of individuals with a variety of backgrounds and needs. It is, therefore, an objective of Livingston Township to provide those services which will fulfill, as far as possible, the needs of the individual.

Policies:

1. Work in close association with Otsego County Sheriff, fire, and health agencies to ensure the best possible health and welfare programs for the Township.
2. Utilize the Township's public facilities to administer citizen education programs dealing with public health and safety.

Utilities

Objective:

The placement of water, sewer, electric, and gas utilities not only affects the quality and quantity of services available to the Township, but also defines the pattern of commercial and residential development in the area. It is an objective of the Township to minimize reliance on public sewer and water infrastructure in the Township and move to require developers to provide and maintain those facilities. The Township will continue to provide oversight and franchises to electric and gas utilities.

Policies:

1. Analyze the social, economic, and physical effects of the placement of proposed facilities.
2. Require residential developers to provide utilities that adequately serve the future needs of the residents of the development without promoting over development or leapfrog development.
3. Require commercial activities to fund utilities that adequately meet on-site needs without promoting uncontrolled growth.
4. Support innovative land use control techniques to promote sequential and timed development according to the capacity and desire of the Township to provide required public utilities.

Residential

Objective:

Support efforts to provide a range of housing types for all residents in the Township.

Policies:

1. Residential development should be designed in accordance with the capacities and limitations of the natural environment.
2. Base residential development on the physical and environmental constraints identified in the plan, while maintaining the overall rural character of the Township.
3. Leapfrog residential development wholly detached from the Gaylord urban core should be discouraged.

Commercial

Objective:

Limit future commercial growth to areas currently identified in the *Master Plan* for commercial development in conformance with the wishes of the residents of Livingston Township. Resist any efforts to further convert existing agricultural, forestry, and residentially zoned properties to commercial zoning.

Policies:

1. Severely limit the conversion of agricultural, forests, and residentially zoned properties to commercial property to those areas identified in this plan.
2. Concentrate large scale commercial activities in areas of the Township adjacent to the Gaylord urban core.
3. Carefully develop commercial activities that will reinforce Livingston Township's high quality rural atmosphere.

Industrial

Objective:

Industrial activities are one element of a diverse and viable community. However, it is important to retain the Township's character and environment through limiting potential pollution problems. Therefore, it is an objective of Livingston Township to promote the establishment of clean, non-polluting industries in Otsego County by supporting the use of the available properties in the Gaylord Air Industrial Park and areas zoned industrial under the Otsego County Zoning Ordinance.

Policies:

1. Direct any potential industrial development wishing to locate in Livingston Township to the existing industrial park and areas zoned industrial in the County Zoning Ordinance.
2. Work with the County to develop reasonable procedures and standards for mineral extraction within the Township.

Recreation-Open Space

Objective:

Recreation and tourism are important to the economy of Northern Michigan. The abundance of vegetation, wildlife, lakes, streams, and availability of recreation facilities such as golf and skiing are the primary attractions for visitors from Southern Michigan and other states. Those who migrate to this portion of the State and those currently living in Otsego County value the rural atmosphere. It is an objective of Livingston Township to maintain, as much as possible, the rural nature of the community.

Policies:

1. Determine through analysis of environmental factors, the optimum distribution of open space areas.
2. Support State and County land use control mechanisms to insure open space preservation.
3. Promote the incorporation of open space and recreational uses for residential developments within the Township.
4. Discourage any residential developments which do not incorporate open space and recreation areas.

Objective:

The "quality of life" of a community can be measured by a variety of standards. One of the most important is the adequate distribution of recreation facilities. One of Livingston Township's objectives, therefore, is to provide an adequate quantity and quality of recreation facilities.

Policies:

1. Utilize available funding sources to fund recreation oriented projects as identified in the Livingston Township Recreation Plan.
2. Consider the practicality of maintaining a Township park or other recreational facilities.
3. Promote recreation areas and facilities in planned residential development.
4. Initiate community oriented activities such as arts and crafts programs for residents of all ages.

AgricultureObjective:

Agricultural land has become an increasingly scarce and consequently a valuable commodity in our society. Although some soils in the Township are of lower quality than in other areas of Northern Michigan, they are capable of producing a variety of crops. In several cases, full-time farming activities occur in the Township. Agriculture helps maintain the general rural nature of the Township as it promotes ample distribution of open space lands. In Livingston Township, the agricultural landscape is an important part of the area's scenic beauty. An objective of the Township is to maintain those sections of the community currently utilized for agriculture production.

Policies:

1. Conserve those areas currently used for agriculture as well as those with potential for agricultural use.
2. Promote the preservation of farmland through application of State legislation such as P.A. 116 and appropriate local land use controls.
3. Support local education programs that stress the importance of agriculture.

Environmental Preservation / ForestlandsObjective:

The attractiveness of the Township is dependent primarily upon the natural amenities available to the residents and visitors to the area. Consequently, it is an objective of the Township to coordinate physical development in a way that preserves as much of the existing natural environment as possible.

Policies:

1. Provide input to the County through modifications to the *Otsego County Zoning Ordinance* and *Otsego County Master Plan* to provide for the preservation of scenic areas and

corridors, agricultural lands, and forests.

2. Direct development with the intent to preserve the natural amenities of the Township.
3. Promote the preservation of open space and forest land through application of State legislation such as the Farmland and Open Space Preservation Act (Public Act 116).
4. Promote the preservation of open space and forest land through application of State legislation such as the Commercial Forest Act and Qualified Forest Act.
5. Pursue the use of purchase of development rights by the Township or County or encourage agencies, such as land conservancies, to purchase development rights in important Agricultural, Forestlands, and Environmental Preservation areas.
6. Manage the Township-owned 40-acres west of Murner Road for timber production and undeveloped outdoor recreation.

CHAPTER 8 – FUTURE LAND USE PLAN

The Planning Commission conducted a review of the Township's 2012 future land use recommendations. The review entailed an analysis of several factors including: existing land use patterns, social and economic characteristics, environmental conditions, available community services and facilities, existing land division patterns, property ownership, existing zoning, and community goals and objectives. The planning commission reached out to the community by conducting an on-line survey. Further guidance was obtained from the Township Board and NEMCOG.

The recommended future land use plan identifies locations for eight different land use categories: environmental conservation, forestlands, agricultural, residential, commercial, resort, institutional/governmental, and industrial/extractive. These land use categories were designated as a method of implementing the land use objectives and policies of Chapter 7. **Figure 8.1**, Future Land Use Map, illustrates the intended future land uses by category. It is the intention that Livingston Township be guided by this map as it undertakes its duty to recommend future land use to Otsego County. Each land use category is described below as well as activities anticipated within each of the categories.

Environmental Conservation

A large area with fragile environmental characteristics was identified during the planning process. The area, shown as dark green on **Figure 8.1**, is located in the eastern portion of the Township where wetlands are adjacent to Mossback Creek and Sturgeon River. The National Wetlands Inventory classifies the area as lowland forests. This area should be protected from the potential of dense development by adequate restrictions. This future land use plan does not restrict privately-owned parcels from all development. Rather, the intent is to restrict the density of development, because hydric soils are not always suitable for the construction of building foundations and septic systems.

Hunting, fishing, and similar recreational uses are suggested in this area. Forestry harvesting should be limited to winter months when the ground is frozen to protect the soil, and appropriate measures should be taken to prevent erosion into adjacent waterways.

Forestlands

Forestlands is the land use category which is the next most restrictive after Environmental Conservation. Forestlands are primarily wooded or forested. They can also be non-forested but with a strong land use influence from nearby forested land. Certain areas of the Township have soils which are capable of producing timber at a rate meeting the National Standards for Prime Timberlands. Much of these identified lands are included in the Forestlands category.

Forested land is a significant cover type in the Township. **Figure 4.1**, Existing Land Use Map, depicts upland and lowland forests and associated non-forest uplands. The overriding concept for this *Master Plan* includes the desire "to preserve its rural character". Furthermore, the top two Goals of the Township are to "1. Maintain the general rural character of the Township" and "2. Protect, as much as possible, the existing natural environment, existing farmlands, forests, and scenic beauty". The future land use plan, therefore, recommends the preservation of the

character of these areas as much as possible. This category covers a number of large areas scattered throughout the Township. They are shown as light green on **Figure 8.1**.

The forestland category includes areas to be used primarily for timber harvesting, wildlife habitat, hunting, and certain forest-related outdoor recreational activities. Intensive recreational uses such as shooting ranges, driving ranges, campgrounds, recreational resorts, and commercial hunting or game reserves may be allowed where compatible with adjacent land uses. Veterinary clinics, kennels, and animal grooming facilities may also be permitted where compatible with adjacent land uses. Residential development is to be limited in density in a way that does not impinge on the overall rural character of the category or destroy significant portions of the forestland. The protection of forested land, wetlands, and non-forested open space is critical to preserving the rural character of the Township. The fragmentation of large parcels is discouraged; clustering of development is preferred to maintain open space.

Agricultural

The primary use within the agricultural category is farming of various types and direct farm-related businesses. The category includes active and fallow farm land. Livingston Township has productive agricultural areas located on good farm soils. The future land use plan recommends keeping these areas in farm use where soils are suitable. Prime agricultural soils are mapped in Chapter 3. Agricultural lands are also important for their aesthetic values, and the preservation of open space is a major goal of this plan. As in the previous categories, the overriding concept for the *Livingston Township Master Plan* includes the desire “to preserve its rural character”. Furthermore, the top two Goals of the Township are to “1. Maintain the general rural character of the Township” and “2. Protect, as much as possible, the existing natural environment, existing farmlands, forests, and scenic beauty”.

Agriculture includes crop and livestock production, plant nurseries, orchards, vineyards, Christmas tree production, and other land-based growing activities. The category also includes buildings necessary to conduct agricultural activities. Most related activities, such as processing facilities, are considered compatible in this land use category. Veterinary clinics, kennels, and animal grooming facilities may be permitted where compatible with adjacent land uses. Residential development within this category should be limited in density to preserve the overall rural character and prevent the fragmentation of farmland. The Future Land Use Map, **Figure 8.1**, shows the agricultural category as light yellow in color.

Intensive agricultural uses, such as animal feed lots and forest processing operations, should be allowed only after special consideration. The mining of gravel or sand should be allowed where the resource exists; however, reclamation of these areas is vital when production ceases.

Residential

The two most important policy statements for residential development identified in Chapter 7 include the following: 1) Residential development should be designed in accordance with the capacities and limitations of the natural environment, and 2) Base residential development on the physical and environmental constraints identified in the plan, while maintaining the overall rural character of the Township. The residential land use category, primarily designed to accommodate single-family dwellings on a range of lot sizes, is shown as light gold on the Future Land Use Map.

The residential category is intended to preserve existing residential development where land has already been subdivided into smaller lots and to expand specific areas for future residential growth. In addition to areas identified for residential development on the Future Land Use Map, this document recognizes that rural residential development has occurred, and will continue to occur, in certain locations within the forestlands and agricultural categories of the Township. However, this plan recommends that residential development in the forestlands and agricultural areas should be kept at a very low density.

The clustering of residential development and the provision of common open space is encouraged where soil conditions are suitable for building foundations and septic systems. Community, institutional, or recreational uses are permitted in these areas if designed to be compatible with the residential setting. Home-operated businesses are also permitted in these areas provided the residential character of the neighborhood is preserved.

Where residential areas are adjacent to lakes or streams, special waterfront protection requirements are encouraged. Less dense development, waterfront setbacks, preservation of natural vegetation, erosion prevention, and limitation on water access by back lot owners are suggested methods of protecting the community's water resources from degradation.

Because of the comparatively dramatic relief of the Township's topography, there is, and will be in the future, a tendency to construct homes on hillsides. The reason for doing so is the extra value of a home with a view. It is recommended that homes proposed for construction in comparatively steeply sloped areas, especially locations where the slope is ten percent or more, be closely monitored and stipulations made to safeguard any erosion or runoff from such activities. Steeply sloped areas are mapped on **Figure 3.1** in Chapter 3.

Commercial

The primary commercial objectives of Chapter 7 are to limit future commercial growth in conformance with the wishes of Township residents and to resist any efforts to further convert existing agricultural, forestry, and residential properties to commercial uses. Areas designated for commercial development are partially developed for commercial purposes at the present time. These areas are shown in red on the Future Land Use Map and include: properties adjacent to Old-27 in Section 33 and 34, the south $\frac{1}{2}$ of Section 28 between Old-27 and the railroad except for an industrial property, the portion of Section 33 west of I-75, the south $\frac{1}{2}$ of the southeast $\frac{1}{4}$ of Section 32 except for an industrial property, the northeast $\frac{1}{4}$ of the southeast $\frac{1}{4}$ of Section 32, portion of the south $\frac{1}{4}$ of Section 31, and small area in the south portion of Section 3.

Recommended uses for commercial category on the Future Land Use Map include: retail stores, business and personal services, professional offices, food service, lodging facilities, and similar uses. For the area in Section 33 west of I-75, light manufacturing or warehousing uses are recommended. Any commercial uses adjacent to residential areas should provide a landscape buffer to protect the integrity of the residential neighborhood.

Resort

Resort is a category of land use established to provide for the unique economic opportunities of commercial endeavors like golf courses and ski areas. Land within this category may be developed for recreational activities needing considerable acreage and which are outdoor-

based. In addition to the recreation facilities themselves, related development, such as housing, dining, and retailing are consistent with the intent of this category.

Chapter 7, Recreation-Open Space, mentions “recreation facilities such as golf and skiing” as “primary attractions for visitors from Southern Michigan and other states”.

Institutional/Governmental

Although institutional and governmental uses are recommended in several other land use categories, the Future Land Use Map identifies certain larger sites. Livingston Township recognizes that these facilities provide a wealth of services to its residents. Therefore, this plan supports the continuation and expansion of these facilities if needed. Shown as rust color on **Figure 8.1**, they are Otsego County Fairgrounds on the west side of Old-27 in Section 33, Gaylord High School and Alpine Center on the east side of Old-27 in Section 27, DNR and DEQ buildings on the north side of M-32 in the southwest corner of Section 32, and the 40-acre Township-owned parcel in Section 32. Livingston Township Hall, located in Section 16 along Old-27, is also included in this category.

Industrial/Extractive

Industrial areas are those where wholesale activities, warehouses, manufacturing, mechanical repair shops, other medium to heavy commercial activities are permitted. Extractive activities are sand and gravel surface mining.

Under the industrial objectives in Chapter 7, industrial activities are to be directed to the Gaylord Industrial Park. Other than several existing industrial sites, no further industrial locations are recommended in the Township. Extraction activities often need to occur in other land use categories where the resource exists. However, the overriding theme of preservation of rural character, the promotion of a satisfying quality of life, and the maintenance of a viable local economy need to direct extractive activities. Existing industrial and extractive sites are shown in purple on **Figure 8.1**.

Figure 8.1

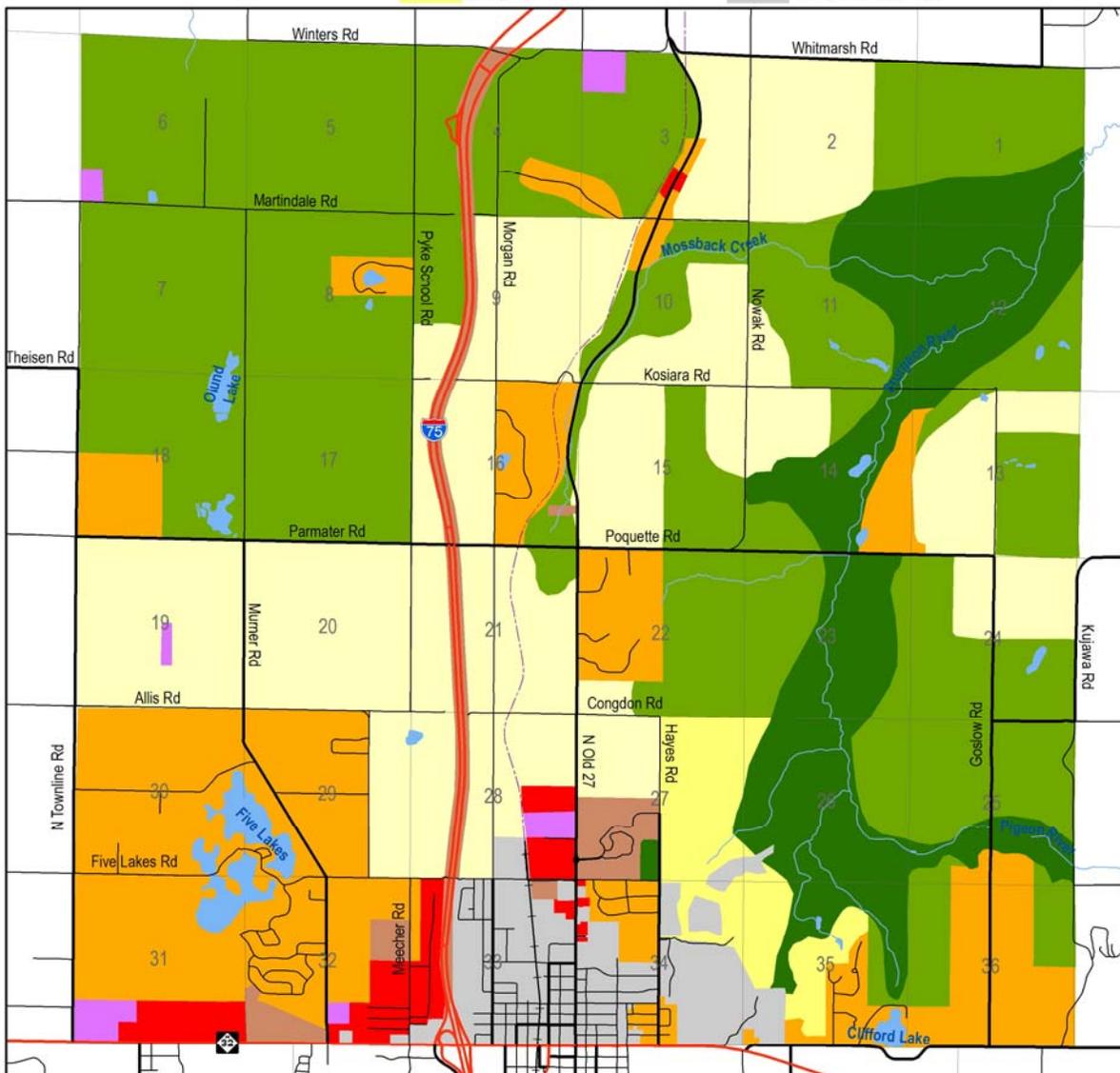
Livingston Township
Future Land Use Map

Map Legend

-  State Highway
-  Primary Road
-  Local Road
-  Rivers
-  Lakes
-  Sections

Future Land Use

-  Residential
-  Commercial
-  Industrial-Extractive
-  Institutional-Governmental
-  Resort
-  Agricultural
-  Forestlands
-  Environmental Conservation
-  Water
-  City of Gaylord



CHAPTER 10 –Adoption and implementation

Plan Coordination and Review

As required by the Michigan Planning Enabling Act (P.A. 33 of 2008, as amended) notification of intent to update the Livingston Township Master Plan was sent to all communities and other entities to request cooperation and comment. A copy of the notice letter and entities notified can be found at the end of this chapter.

After the draft plan was completed by the Livingston Township Planning Commission, a draft was transmitted to the Township Board for approval to distribute the plan for review and comment. The draft plan was transmitted to entities notified at the initiation of the plan update. After the required comment period, public hearing and plan adoption the final plan was transmitted to all required entities. A copy of all relevant information can be found at the end of this chapter.

Public Hearing

A public hearing on the proposed Master Plan for Livingston Township was held on Month X, 2018. A notice of the public hearing was published in a local newspaper on Month X, 2018. A copy of the public hearing notice is reproduced at the end of this chapter.

The purpose of the public hearing was to present the proposed master plan and to accept comments from the public. The public hearing began with a brief explanation of the planning process and plan development by NEMCOG planning staff. During the hearing, maps of existing land use, resource maps and proposed future land use recommendations were presented.

Plan Adoption

The Livingston Township Planning Commission formally adopted the master plan on Month X, 2018. The Livingston Township Board passed a resolution of concurrence for the master plan on Month X, 2018.

Plan Implementation

The Master Plan was developed to provide a vision of the community's' future. It will serve as a tool for decision making on future development proposals. The plan will also act as a guide for future public investment and service decisions, such as the local budget, grant applications, road maintenance and development, community group activities, tax incentive decisions, and administration of utilities and services.

According to the Michigan Zoning Enabling Act, master planning is the legal foundation of a zoning ordinance. Section 203 of the Act states: " The zoning ordinance shall 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, to limit the improper use of land, to conserve natural resources and energy, to meet the needs of the state's residents for food,

fiber, and other natural resources, places of residence, recreation, industry, trade, service, and other uses of land, to insure that uses of the land shall be situated in appropriate locations and relationships, to avoid the overcrowding of population, to provide adequate light and air, to lessen congestion on the public roads and streets, to reduce hazards to life and property, to facilitate adequate provision for a system of transportation, sewage disposal, safe and adequate water supply, education, recreation, and other public requirements, and to conserve the expenditure of funds for public improvements and services to conform with the most advantageous uses of land, resources, and properties. The zoning ordinance shall be made with reasonable consideration to the character of each district, its peculiar suitability for particular uses, the conservation of property values and natural resources, and the general and appropriate trend and character of land, building, and population development."

Grants and Capital Improvement Plan

The Master Plan can also be used as a guide for future public investment and service decisions, such as the local budget, grant applications and administration of utilities and services. Many communities prioritize and budget for capital improvement projects, (such as infrastructure improvements, park improvements, and roads). A Capital Improvements Program (CIP) typically looks five years into the future to establish a schedule for all anticipated capital improvement projects in the community. A CIP includes cost estimates and sources for financing for each project. It can therefore serve as both a budgetary and policy document to aid in the implementation of a community's master plan.

Zoning

The Michigan Planning Enabling Act (P.A. 33 of 2008, as amended) requires that a master plan serve as the basis for the zoning plan. The zoning plan identifies the current zoning districts and their purposes as well as recommendations for changes or consolidation of districts and some general provision changes to these districts. These matters are regulated by the specific terms in a zoning ordinance.

The zoning ordinance is the primary tool for implementing the Livingston Township Master Plan. This plan recommends the County zoning ordinance be reviewed to ensure the ordinances are consistent with the goals and the future land use plan. At that same time the zoning ordinance should be reviewed to assure it conforms to current State regulations. Amendments will include redefining zoning districts and district boundaries, changing minimum lot sizes and considering permitted uses and special uses in zoning districts. Amendments to zoning ordinances' general provisions section should consider, but not be limited to: waterfront greenbelts, waterfront setbacks, private roads and driveways, landscaping and screening, parking and loading standards, stormwater management, access management, home-based businesses, groundwater protection, outdoor lighting, and signs and billboards. The Township should consider adding Articles for site plan review, uses subject to special approval (conditional uses), supplemental site development standards, administration and enforcement and zoning board of appeals. Amendments to supplemental site development standards provisions should consider, but not be limited to: bed and breakfast facilities, gasoline-service stations, motel, hotels, Planned Unit Development, open space developments, sexually orientated businesses, telecommunications towers, wind turbine generators, car wash facilities, nursing homes-assisted care facilities, and storage facilities.