

NELSON TOWNSHIP

KENT COUNTY, MICHIGAN

MASTER PLAN



ADOPTED , 2007

Williams & Works

NELSON TOWNSHIP MASTER PLAN

Adopted , 2007

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NELSON TOWNSHIP

A COMMUNITY MASTER PLAN

CHAPTER 1. INTRODUCTION

A Master Plan represents a foundation policy statement about what a community is, what its residents value and what those residents and businesses hope the community will become.

The fundamental purpose of a Master Plan is to enable a community to establish a direction for physical development, capital investment and growth. Therefore, a Master Plan represents a foundation policy statement about what a community is, what its residents value, and what those residents and businesses hope the community will become. The Township Planning Act specifically gives the Township Planning Commission and the Township Board the authority to prepare and adopt a plan. Once prepared, adopted and maintained, this Plan will serve as an advisory guide for the physical conservation of certain areas and for the development of other areas.

This Plan represents the culmination of more than one year of work by numerous local residents and local officials. It reflects the community's deep concern for the natural beauty of its surroundings and a strong commitment to retain and strengthen local quality of life. The plan outlines the preferred future for the community and a comprehensive plan to realize it. The Plan is appropriately general, recognizing that planning for the future is a delicate blend of art and science and that sufficient flexibility will be needed to respond to the challenges of the future.

The Nelson Township Community Profile is one of several phases in completing an update of the Township Master Plan. The data that is gathered in the initial phase of preparing a Master Plan is vital to support future community goals.

The key areas of focus for this Master Plan are:

- ◆ The Natural Environment (Chapter 2)
- ◆ Population (Chapter 3)
- ◆ Community Facilities and Services (Chapter 4)
- ◆ Economic Development (Chapter 5)
- ◆ Transportation & Public Facilities (Chapter 6)
- ◆ Land Use & Development Patterns (Chapters 7)

The community profile is the primary vehicle for collecting, organizing and analyzing the information necessary to understand what is happening from a land use perspective in a community. Producing a community profile requires a solid foundation of data from a variety of sources, national, state and local government, field observations and citizen input. Analysis of this data can confirm trends that may be obvious to members of the community, and may reveal conditions that may not be so obvious. The data that is gathered in the initial phase of preparing a Master Plan is vital to identify and understand these trends and for development of public policy appropriate to address the issues that these trends reveal.

The most recent Master Plan for Nelson Township was completed in 1997. The Michigan Township Planning Act requires a community to review and update, if necessary, its Master Plan at least every five years.

The 2007 Master Plan update is prepared based upon a twenty (20) year planning horizon; in other words, it looks twenty years into the future. With the state mandated review and/or update at five year intervals, over time the Master Plan becomes a living, flexible, and changeable document responsive to the needs of the community.

Planning for the long-term should be carried out at a general level that recognizes the potential for change and provides flexibility. This results in a Master Plan that can be useful well into the future instead of becoming obsolete if or when demographic and economic trends stray from those identified in the Community Profile.

The entire Master Planning process has involved the following elements:

- ◆ A Community Profile
- ◆ Goal Setting
- ◆ Developing a Vision for the Future
- ◆ The Comprehensive Plan

Each section includes an overview of its subject matter along with a brief discussion of the planning trends that are relevant along with implications for the future. Chapters 8, 9 & 10 express the Township's goals for its future, describe how the Township's vision may appear, and discuss strategies for implementing the Township's vision for the future.

CHAPTER 2. NATURAL FEATURES & THE ENVIRONMENT



Nelson Township is situated on the northern border of Kent County, with the City of Cedar Springs to the Southwest. Nelson shares its northern border with Montcalm County, its eastern border with Spencer Township, the western border with Solon Township, and the southern border is shared with Courtland Township. US 131 cuts through the north western portion of Nelson Township, offering an interchange at 22 Mile Road (Sand Lake Street), a half mile west of the Village of Sand Lake.

According to the Midwestern Regional Climate Center (MRCC)¹, an organization which has averaged annual climatic conditions between 1971 and 2001, temperatures in Nelson Township tend to range from an average low of 17.4°F to an average high of 30.2° in January. The average annual snowfall of 53.6 inches results in a highly conducive environment to many winter activities such as cross-country skiing, snowmobiling, and ice fishing on one of the Township's inland lakes.

The typical July temperature ranges from an average low of 58.8°F to an average high of 81.0°F. These summertime temperatures are conducive to bicycling, hiking, golfing, fishing, as well as a number of other outdoor activities. The average annual precipitation (from 1971 to 2000) for Nelson Township was 76.2 inches.

LAKES & STREAMS

Nelson Township is home to four small lakes, totaling approximately 117 acres of surface area within the Township. Sand Lake, in the northwestern corner of the Township is within the municipal boundaries of the Village of Sand Lake, and is shared with Montcalm County to the north. Ware Lake is located just east of the Village of Sand Lake, and Helena Lake is located south of Grovesner Road between Shaner and Myers Lake Roads. Pine Lake, just south of 17 Mile Road is the largest lake in the Township at approximately 60 acres (see **Map 1, Lakes, Streams & Watersheds**).

Due to the relatively small sizes, the Township's lakes do not significantly define the overall character of the Township; however, they are important features adding to the quality of life for many

¹ Midwestern Regional Climate Center Website and National Climate Data Center

local residents. In addition, significant residential development around Pine Lake produces public policy questions regarding environmental impact on Pine Lake and raises the potential need for sanitary sewer and water services.

Streams in Nelson Township are small tributaries to larger watersheds described in the following section of this report. These include Little Cedar Creek, Alder Creek, and Black Creek. In addition, the Kent County Drain Commissioner indicates there are 14 county drains located in Nelson Township. All of these streams and drains are part of the watersheds that eventually flow into the Grand River watershed.

WATERSHEDS

A watershed is a region of land that is drained by a particular river or river system. Typically these systems include many smaller tributaries such as creeks and streams that feed into a larger river and are influenced by elevation or the lay of the land. The Grand River is the longest river in Michigan and at over 5,500 square miles; its watershed area is among the largest in the state. All of Nelson Township lies within the Grand River regional watershed.

The portions of the Grand River watershed in Nelson Township include the following tributary watersheds (**Map 1, Lakes, Streams & Watersheds**):

- **Rogue River:** The Rogue River is a major tributary to the Grand River with its headwaters starting in southern Newaygo County. Part of this sub-watershed begins in Nelson Township along Cedar Creek and Duke Creek. These creeks are identified as part of the Natural Rivers area of the Rogue River watershed, and are regulated by the township's zoning ordinance as a Natural River Overlay zone. County drains in this watershed include the Lockwood Drain in Sections 8, 17, & 18, and the Wagar and Bayless drain in Section 29 of Nelson Township. This area includes the Bolthouse Farms property, an old muck farm located on either side of 17 Mile Road west of Shaner Road. This property was once intensively farmed and includes an extensive drainage system. The United States Department of Agriculture (USDA) is in the process of planning restoration of this area as a natural wetland.
- **Beaver Dam Creek:** This watershed area is almost entirely in Courtland Township to the south. The Beaver Dam Creek

The United States Department of Agriculture (USDA) is in the process of planning restoration of an old muck farm located on either side of 17 Mile Road west of Shaner Road as a natural wetland.

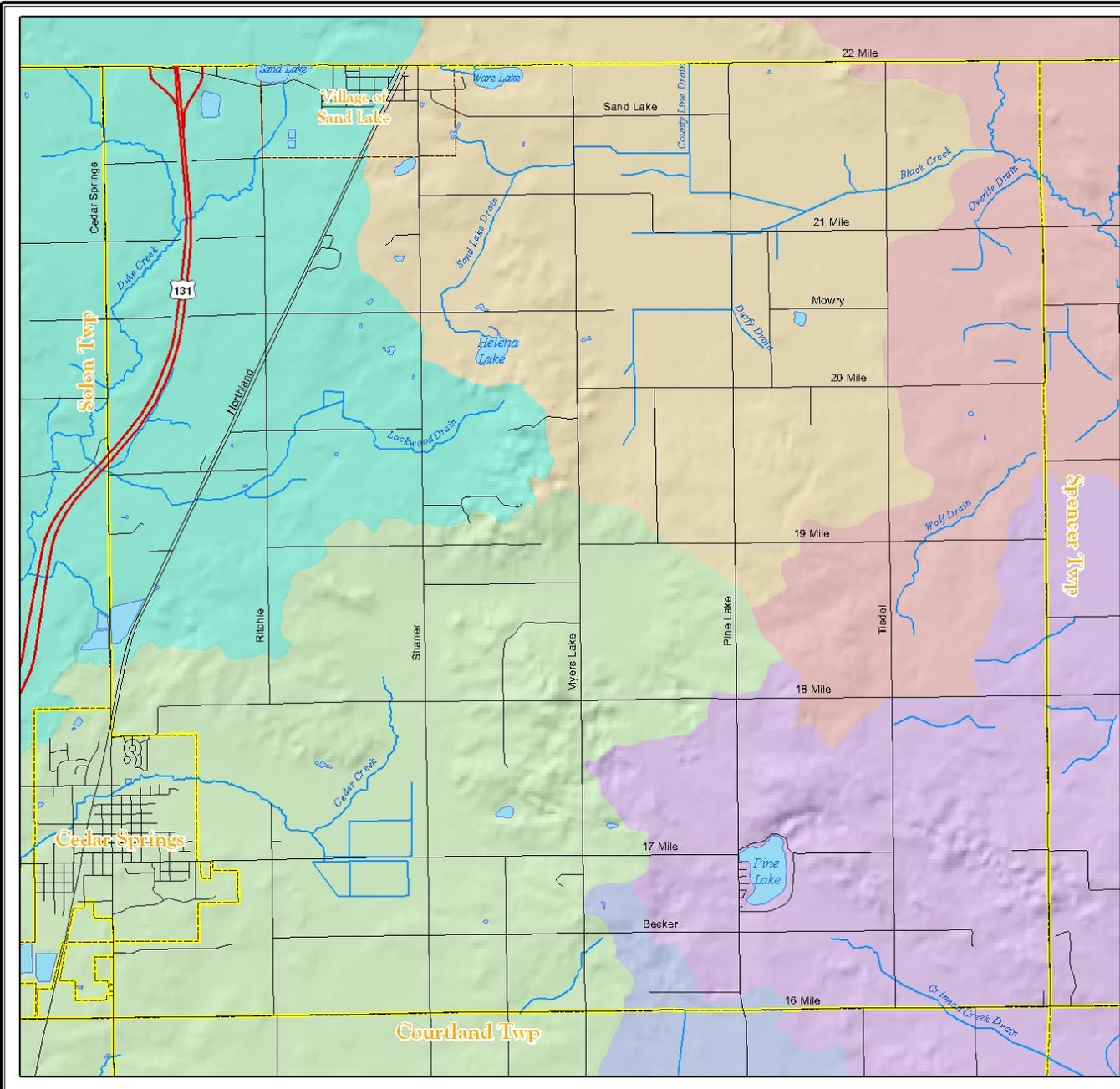
drains into Wabasis Lake, where other small tributaries drain southward into the Grand River.

- Coopers Creek: This watershed area drains from west to east, ultimately moving south through a number of other sub-watershed areas to the Grand River.
- Duke Creek: The Duke Creek watershed flows to the west, joining with the Rogue River before making its way to the Grand.
- Black Creek & Adler Creek: Both of these tributary watershed systems flow to the east, linking with other tributary systems in Spencer and Oakfield Townships before joining the Grand River.

Storm water runoff is the major source of stream pollution and stream bank erosion.

Water quality within a watershed is directly related to the land management practices within that watershed. For example, if new developments create a large amount of impervious surface (i.e. building roofs, streets, parking lots) and storm-water was not properly managed, it is possible that the flow of the runoff into the creek, stream, or river could be increased to a point that stream bank erosion occurs. Stream bank erosion has the potential of increasing the sediment load of the water, which effects stream chemistry. In addition, storm water runoff is the major source of stream pollution because it carries oil and other materials that wash off the surface of roadways and parking lots.

Watersheds, being areas where all of these water attributes are interconnected, should be looked at closely when assessing the impacts of new development within the Township.



Nelson Township

Kent County, Michigan

Map 1 Lakes, Streams & Watersheds

Legend

Municipal Boundary	Grand River Watershed
Village Boundary	Sub-watershed
Roads	Rogue River
Highways	Beaver Dam Creek
Highway Ramps	Coopers Creek
Streams	Black Creek
Open Water	Duke Creek
	Alder Creek Drain

1 inch equals 3,500 feet



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GROUNDWATER AND SURFACE WATER

As the population in Nelson Township continues to grow, natural resources will inevitably be impacted. The groundwater supplies in the Township, even though abundant, can be affected as more area becomes impervious and with greater demand placed on groundwater supplies.

Figure 2.1
Hydrologic Cycle

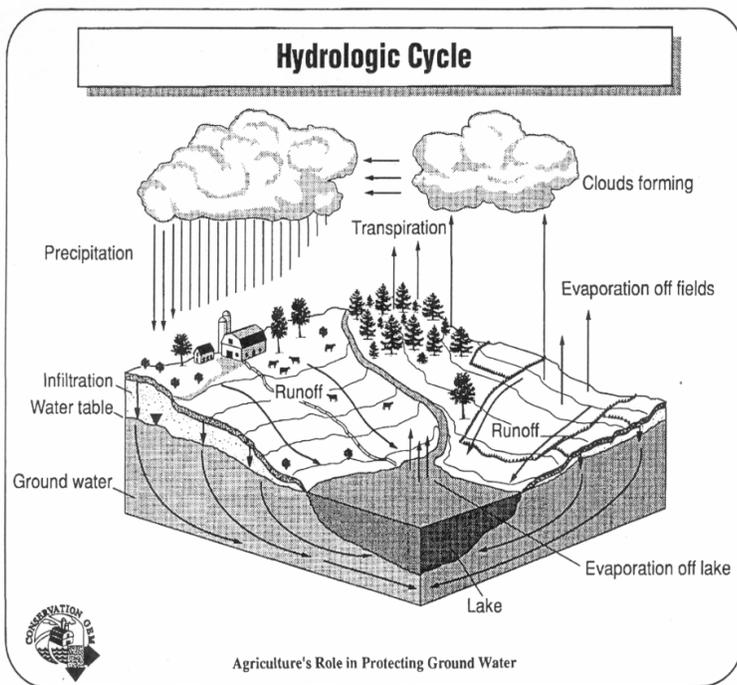


Figure 2.1, Hydrologic Cycle, illustrates the natural process of rainfall, runoff, and ground water recharge that are important to water quality in Michigan. According to Dr. Roberta Dow of the Michigan Groundwater Stewardship Program at the Michigan State University Extension in Traverse City, there are many different ways ground water can be polluted. Two primary contributors are application of fertilizer on crops and residential lawns and septic tank drain field effluent. Proper fertilizer application management and septic tank maintenance may help to significantly reduce nitrate levels. Abandoned wells may also be a threat to ground water quality if they have not been properly closed or "capped." Open wells may expose

groundwater supplies to surface contaminants.

Since all drinking water in Nelson Township is derived from groundwater sources – mostly from private wells - protecting this key resource is of vital interest to the Township.

SOILS

Soils impact community development and planning in several ways. The characteristics of soils that are important are their fertility, mineral texture, and drainage. These aspects of soils influence the location of productive agriculture and the suitability of areas for road and building construction.

Soils that are fine textured due to high clay content may not drain sufficiently to support either crop production or sanitary septic facilities. In addition, soils with high clay content are often

Identification of soil characteristics is important for determining appropriate land use policy.

unsuitable for building site development because they shrink and swell as moisture conditions change, causing unstable foundations.

Identification of soil characteristics is important for determining appropriate land use policy. According to the U.S. Department of Agriculture, Soil Conservation Service (USDA), *Soil Survey of Kent County, Michigan*, Nelson Township has 123 distinct soil classifications. Each distinct soil classification can have varying suitability for agriculture, urban development, and wildlife habitats.

For general land use planning purposes, we have used USDA's grouping of soil classifications into soil associations, or groups of soil types that are commonly found together. **Map 2, Soils**, and the following descriptions from USDA, illustrate the locations and describe the characteristics of these soil types:

1. Oakville-Thetford-Granby: Nearly level to gently rolling, well drained to poorly drained, sandy soils formed in sandy materials. This association is found in the southeast corner of the Township.
2. Plainfield-Oshtemo-Spinks: Nearly level to gently rolling, excessively drained and well drained, sandy and loamy soils formed in sandy and loamy materials.
3. Chelsea-Thetford-Selfridge: nearly level to gently rolling, somewhat excessively drained and somewhat poorly drained, sandy soils formed in sandy and loamy materials.
4. Spinks-Tekekink-Oshtemo: Nearly level to rolling, well drained, sandy and loamy soils formed in sandy and loamy materials and in loamy glacial till.
5. Ithaca-Rimer-Perrinton: Nearly level to gently rolling, well drained to somewhat poorly drained, loamy and sandy soils formed in loamy, sandy, silty, and clayey deposits.
6. Marlette-Chelsea-Boyer association: Gently rolling to very steep, somewhat excessively drained and well drained, sandy soils formed in sandy and loamy materials.
7. Metamora-Teasdale-Tekenink: Nearly level and undulating, well drained and somewhat poorly drained, loamy soils formed in loamy and sandy materials.
8. Kibbie-Dixboro-Thetford association: Nearly level and undulating, well drained to poorly drained, loamy soils formed in loamy and silty deposits.
9. Houghton- Cohoctah-Ceresco association: Nearly level, somewhat poorly drained to very poorly drained, mucky and

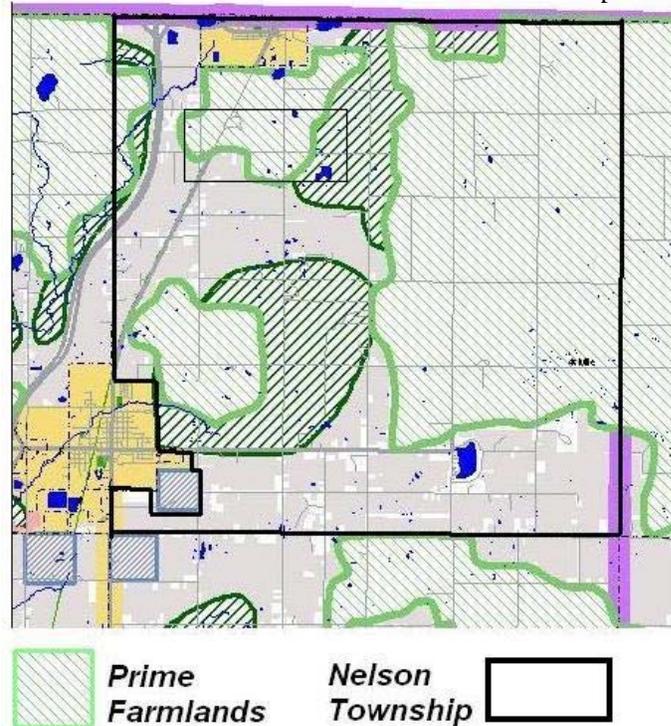
loamy soils formed in herbaceous organic material or loamy alluvial deposits.

It is important to note that USDA soil surveys typically only analyze soil conditions to a depth of about five feet. To test the soil composition beneath this depth requires more labor-intensive measures and professional evaluation. Although surface textures do agricultural viability, ground water drainage, suitability for sanitary facilities and development of urban improvements. When public policy requires site specific land use and development decisions, the relevant characteristics of soils should be determined through field inspection and materials testing by a professional.

The *Soil Survey* provides a list of specific soil classifications that are considered prime farmland. In addition, the Grand Valley Metro Council has mapped prime farmlands in Kent County and part of Ottawa County (**Figure 2.2, Prime Farmlands in Nelson Township**). The portion of this map relevant to Nelson Township is included below. These resources can provide only the most general information regarding the status of a specific site as prime farmland. Site-specific evaluations of should be done to determine the status of any property.

The USDA Soil Survey provides a list of specific soil classifications that are considered prime farmland

Figure 2.2
Prime Farmlands in Nelson Township



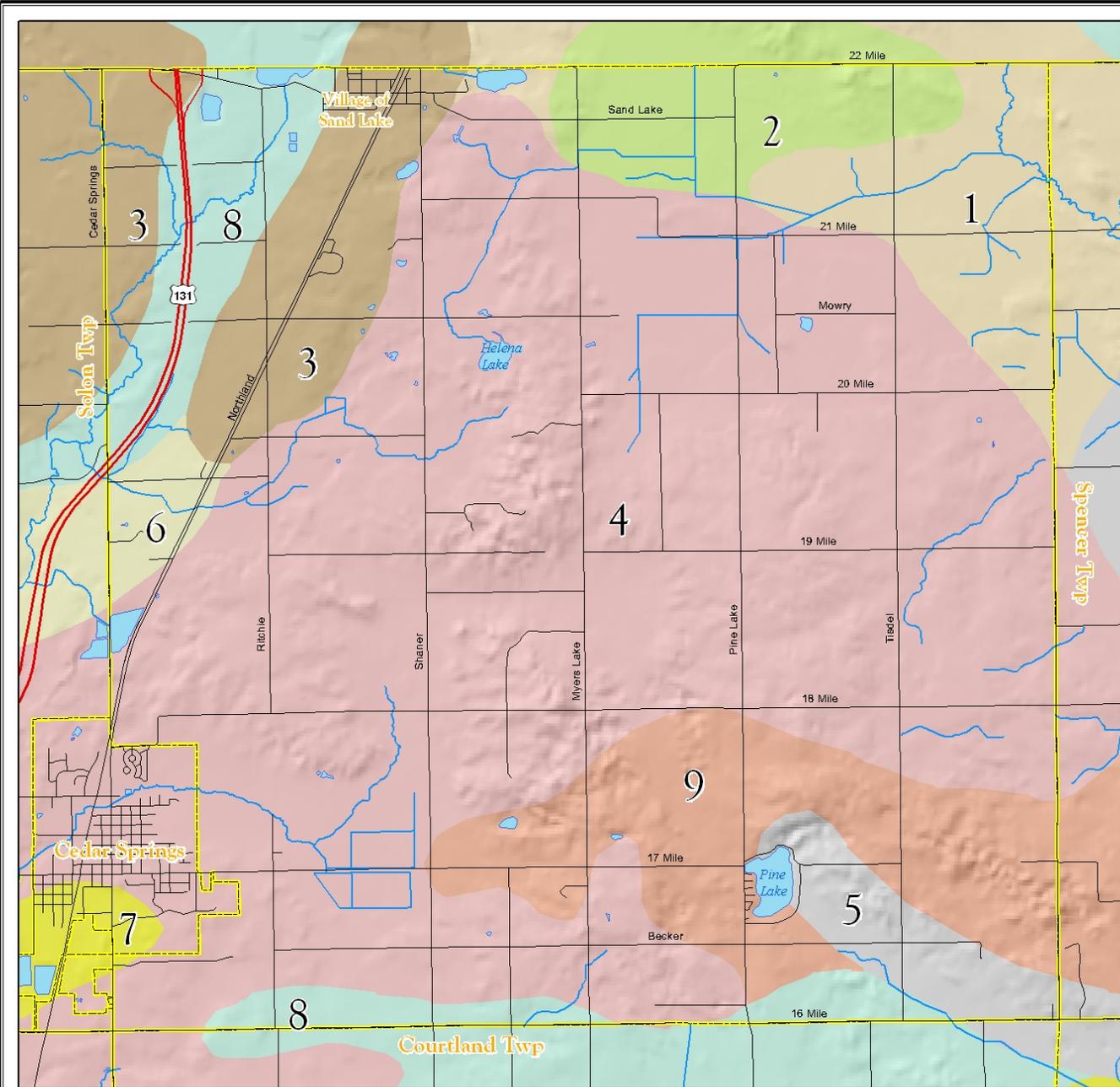
Source: Grand Valley Metro Council

Nelson Township

Kent County, Michigan

Map 2

Soils



Legend

- Municipal Boundary
- Roads
- Highways
- Highway Ramps
- Streams
- Open Water

STATSGO Soils

- 1. Boyer-Fox-Wasept (MI018)
- 2. Houghton-Carlisle-Adrian (MI022)
- 3. Ithaca-Ziegenfuss-Pewamo (MI040)
- 4. Marlette-Capac-Spinks (MI036)
- 5. Oakville-Tedrow-Granby (MI054)
- 6. Oshtemo-Kalamazoo-Houghton (MI045)
- 7. Plainfield-Spinks-Metea (MI037)
- 8. Remus-Spinks-Coloma (MI076)
- 9. Tekenink-Spinks-Arkport (MI038)

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WETLANDS

Wetlands store precipitation and surface water and then slowly release the water in associated water resources, ground water, and the atmosphere. They help maintain the level of the water table and may serve as filters for sediments and organic matter. They may also serve as a sink to catch water, or transform nutrients, organic compounds, metals, and components of organic matter. Wetlands have the ability to impact levels of nitrogen, phosphorous, carbon, sulfur, and various metals. Without them, water quality decreases, areas are prone to flash flooding and habitat for specialized plants and animals is reduced.



Wetlands play a vital role in keeping communities environmentally stable.

Wetlands in Nelson Township are found in stream valleys, in small pockets that have poor drainage, and on larger flat areas that have poor drainage and muck soils. The northeastern quarter of the Township is dominated by wetlands and forested areas, extending both north and east outside of the Township's boundaries. Another strong band of wetlands is also found within the Rogue River tributary watershed near Cedar Springs. A number of smaller groupings of wetlands are shown on **Map 3, Wetlands**, which was drawn from the REGIS geographic information system and the National Wetlands Inventory (NWI). Creation of this map involved a variety of federal government agencies, photographs, land cover maps, and soil maps. This map is intended to illustrate the general location of wetlands for general land use planning purposes. When public policy requires site specific land use and development decisions, the exact location of wetlands should be determined through a field inspection by a professional wetland scientist.

ENDANGERED, THREATENED, AND SPECIAL CONCERN SPECIES

The alteration and loss of wildlife habitat or an overall increase in human activity can threaten the plant and animal diversity of local ecosystems. According to the Michigan Natural Features Inventory, there are various animals and plant species considered endangered, threatened, or of special interest in Michigan. There are nearly a dozen species listed as threatened or of special interest in the region. In many cases, these animals are often called "indicator species," which is a plant or animal that is sensitive to changes in an ecosystem. Environmental changes may occur naturally within an area, however, changes are often due to human activity or development.



Goshawk

Those species that are found in Kent County include the Blanchard Cricket Frog, the Cooper’s Hawk, the Goshawk, the Prairie Warbler, and Karner Blue butterfly². While these species may or may not have habitat in Nelson Township, it is clear that patterns of growth in West Michigan may ultimately degrade their habitat, and a decline in the diversity of species in an area can bring about a broad range of ecological impacts.

The Karner Blue Butterfly has recently been found in Kent County. The rare, small butterfly is on the U.S. endangered species list, and is only associated with the wild blue lupine, as this seems to be the only plant that this butterfly’s larvae will eat. Development, agriculture, and fire suppression have gradually changed the areas where wild blue lupine will grow. Because these butterflies have a limited flight range, artificial cultivation of wild blue lupine often doesn’t help increase butterfly populations.

The Blanchard Cricket Frog is a very small (0.6 – 1.5 inches) species of tree frog. It is characterized by an acutely rounded snout and a dark triangular mark on the back of its head.



Karner Blue Butterfly

The Goshawk is a large forest bird with a long tail, which is rounded on the end. The upper body is brown-gray or slate-gray, and the head has a distinctive black cap and white eye-line.

The Prairie Warbler is of medium size with a bright yellow under belly. Its upper body is yellowish-green, and black streaks are prominent on the flanks and on the head.

The Cooper’s Hawk is a thin, “crow-sized” bird with short, rounded wings. Ranging in size from 39– 45 cm, the Cooper’s Hawk has a long, rounded, white-tipped tail.



Wild Blue Lupine

² Michigan Natural Features Inventory Website, January 2006. Typically, published information regarding threatened or endangered species is not available at the Township level

Nelson Township

Kent County, Michigan

Map 3

Wetlands

Legend

-  Municipal Boundary
-  Village Boundary
-  Roads
-  Highways
-  Highway Ramps
-  Streams
-  Open Water
-  Wetlands*

This Wetlands Inventory Map is intended to be used as one tool to assist in identifying wetlands and provide only potential and approximate locations of wetlands and wetland conditions.

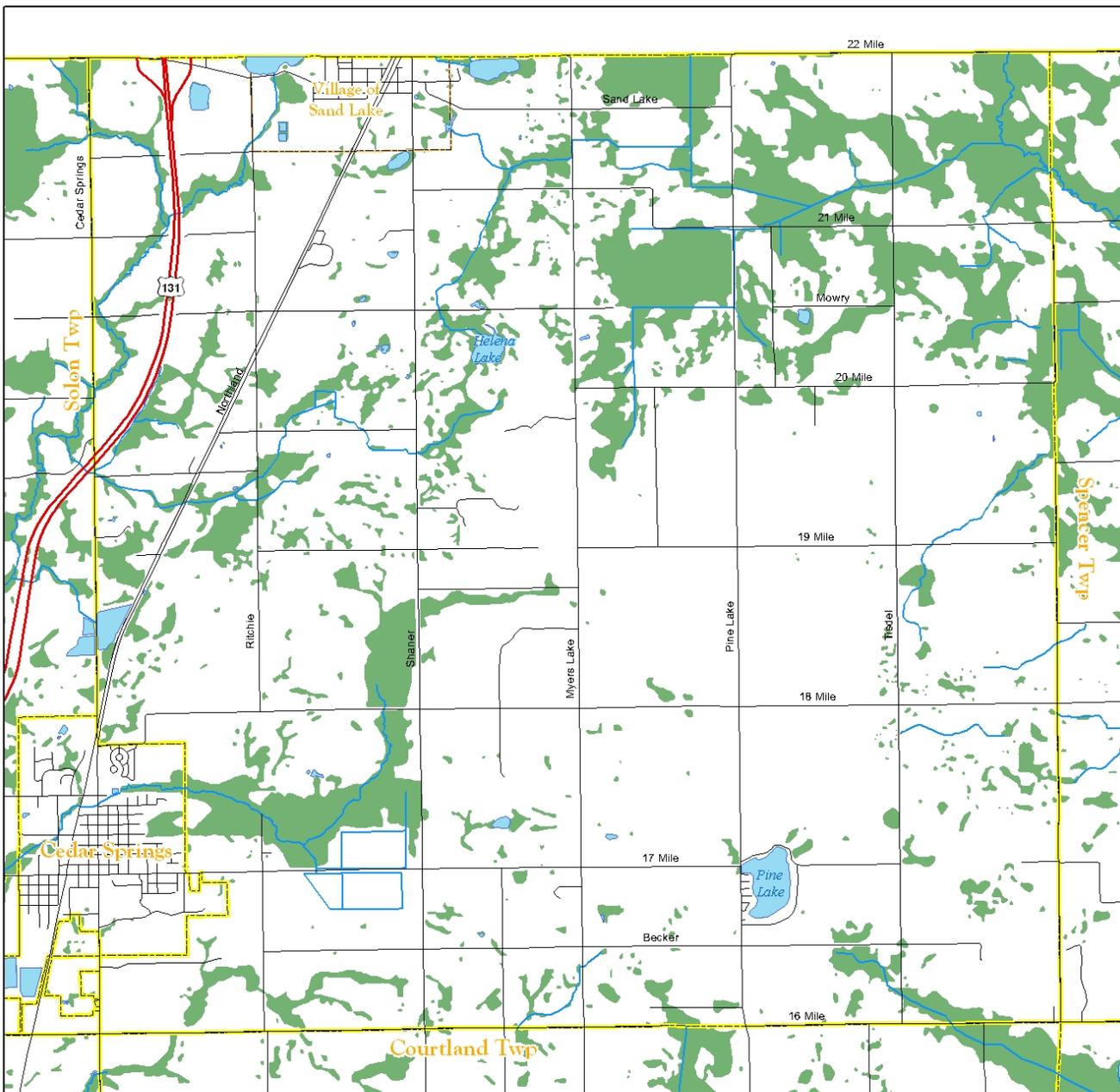
This map is not intended to be used to determine specific locations and jurisdictional boundaries of wetland areas subject to regulation under part 303 Wetlands Protection Act, 1994 PA 451, as amended. Only an on-site evaluation performed by MDEQ in accordance with Part 303 shall be used for jurisdictional determination. A permit is required from the MDEQ to conduct certain activities in jurisdictional wetlands.

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INVASIVE AND EXOTIC SPECIES

Invasive plant and animal species are classes of plants or animals that are introduced into a “foreign” environment, which often result in negative impacts on the native environment. In the northern region of Kent County, these species include the purple loosestrife and the zebra mussel. The purple loosestrife is an aquatic plant that has the capacity to quickly degrade natural wetlands and other open bodies of water. The loosestrife has a tendency to multiply rapidly and densely, by means of prolific root and seed production, which often crowds out native wetland plants and alters the chemical balance of the wetland or lake.³



Purple loosestrife

Methods to control the spreading of the loosestrife can often be unreasonable for large areas. For example, burning, digging, water level management, herbicides, and cutting are impractical for regions where the weed has dominated native species. Biological control, or the introduction of natural enemies into the new habitat, is a more viable, yet costly and rigorous, alternative.

The zebra mussel is an invasive clam-like aquatic species from Europe that has the propensity to impair public infrastructure and interfere with native processes. The zebra mussel was first discovered in 1988 in Lake St. Clair near Detroit, and colonized the Great Lakes region by 1990. By the mid 1990’s, the zebra mussel made its way to the inland lakes of Kent County. The mussels can spoil lakeside industry by clogging pipes, which can create pump and mechanical difficulties, and lessen food and oxygen for native mussels.⁴

Methods to control the spreading of this exotic species include thermal flushing, chlorination, mechanical filtration, anti-fouling paints, acoustics, and electrical shock. However, these solutions are generally only useful for spot control. After boating in waters likely contaminated, the following tasks are recommended to ensure that the mussels do not spread:⁵

- ◆ Do not transport bait used in infested waters, and wash bait pails with hot water.
- ◆ Leave boat out of water for at least 3-5 days in hot, dry conditions (zebra mussels can stay alive up to 5 days out of water).
- ◆ If boat trailer has water in it, drain immediately.

³U.S. Fish and Wildlife Service

⁴U.S. Geological Survey

⁵ Kildeer Countryside Wetlands Preserve Website, November 2003

PLANNING IMPLICATIONS

It is often the beautiful natural features of an area that create its initial appeal. As development occurs some roads are paved, while others are widened. More pavement and more rooftops begins to impact the rate and quality of storm water runoff, natural habitat is compromised and the man-made environment begins to replace the natural. Eventually, residential development becomes predominant within the community landscape. The natural beauty that attracted the initial residents can be quickly lost. While Nelson Township has not arrived at this point yet, neighboring communities are beginning to wrestle with this very issue. With careful management of growth and development, however, it is possible to mitigate the effects of that growth on the natural environment.

CHAPTER 3. POPULATION

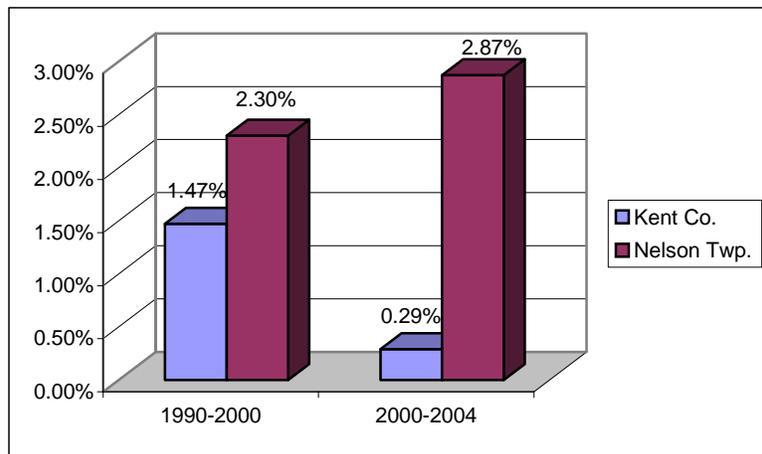
Population and demographic change are among the most important indices to measure growth and its likely impact on land uses in the community. Therefore, understanding the past and present populations of Nelson Township is helpful when preparing a realistic and meaningful Master Plan for the future. This chapter of the Master Plan describes Township population and demographic characteristics, and serves as part of the foundation for drawing conclusions about the Township’s likely future.

HISTORIC POPULATION GROWTH

It is important to first examine the overall growth the Township has experienced in the last thirty years. While Nelson has remained largely a rural township with a local economy focused largely on agriculture, it has also become more of a bedroom community.

Since 1990, the United States Census illustrates that the Township’s population increased from 3,406 to 4,192 in 2000, or by a total of 786, representing an average annual increase of 2.30%. **Figure 3.1 County Comparative Population Increase 1990 –2000** illustrates the difference in rate of growth between Kent County and Nelson Township.

Figure 3.1
County Comparative Population Increase 1990 -2000



The average annual population increase in Nelson Township between 2000 and 2004 shows a dramatically different trend from that of the county.

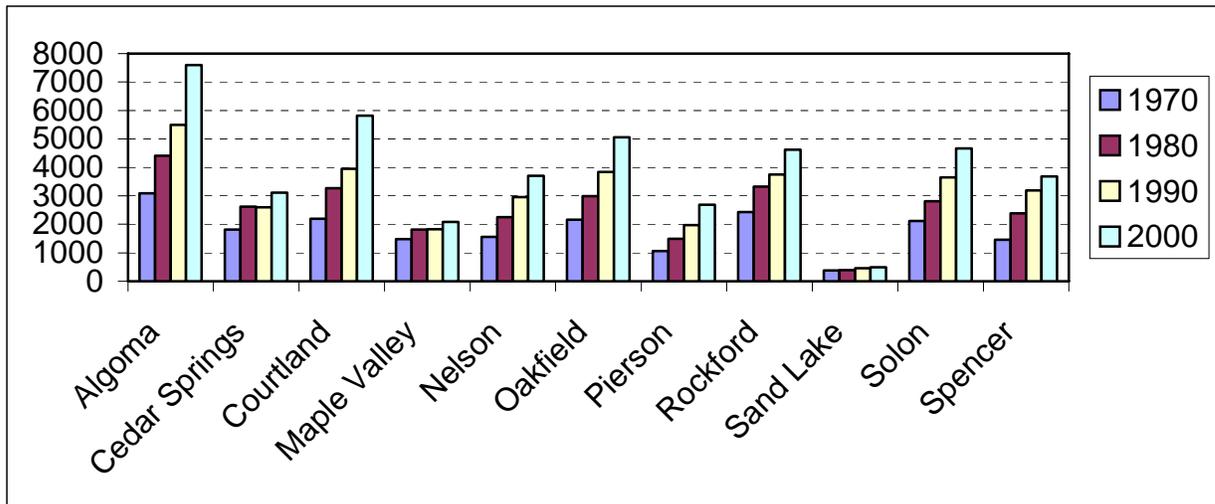
The average annual increase for all of Kent County was somewhat smaller during the same time period, averaging 1.47%. The average annual population increase between 2000 and 2004 shows a dramatically different trend from that of the county. While Kent

County’s population growth has been slowing for the first few years of the decade, the population growth of Nelson Township has increased. Nelson Township does not have a population that is large compared to other townships closer to the Grand Rapids metropolitan area; however, the rate of population increase is significant.

Recent development in the Township has been spread fairly evenly, however some newer housing subdivisions have been built near the border of the City of Cedar Springs. Future development will likely continue to be near the western border of the Township, allowing quicker access to the services available in Cedar Springs, as well as easy connection to the US-131 interchange and Northland Drive.

To put Nelson Township’s recent growth trend into clearer perspective, it is helpful to compare the Township with neighboring communities. **Figure 3.2 Township Comparative Population Increase 1970-2000** compares the 30-year population growth history of Nelson Township with that of ten other neighboring municipalities.

Figure 3.2
Township Comparative Population Increase, 1970-2000



Source: West Michigan Regional Planning Commission

Every surrounding jurisdiction has continued to see increasing growth, though some have seen greater increases than others. Much of the growth in outlying townships can be attributed to an overall pattern of out-migration from urban to suburban and rural areas, and significant economic growth in west Michigan. In addition, the general Grand Rapids metropolitan region is growing in population, and Nelson experiences a portion of that growth.

The following table illustrates growth from 1990 to 2000, according to information from the West Michigan Regional Planning Commission that was derived from the 1990 and 2000 Census.

Table 3.1
Comparative Rates of Population Growth

Municipality	1990 Population	2000 Population	2004 Population	Total Increase 1990-2004	% Change 1990-2004
Nelson Twp.	3,406	4,192	4,569	1,163	34.1
Cedar Springs	2,600	3,112	3,227	627	24.1
Sand Lake	456	492	510	54	11.8
Algoma Twp.	5,496	7,596	8,911	3,415	60.1
Courtland Twp.	3,950	5,817	6,775	2,825	71.5
Maple Valley Twp.	1,824	2,083	2,156	332	18.2
Oakfield Twp.	3,842	5,058	5,569	1,727	45.0
Pierson Twp.	1,970	2,681	3,118	1,148	58.2
Rockford	3,750	4,626	4,954	1,204	32.1
Spencer Twp.	3,184	3,681	3,833	649	20.4
Solon Twp.	3,648	4,662	5,479	1,831	50.2

Among Nelson's neighboring communities, Algoma and Courtland townships experienced the highest growth from 1990 to 2004 while the Village of Sand Lake and Maple Valley Township experienced the smallest growth rate. The average growth rate for the above communities was approximately 30.5%, the median growth rate was 34.1%. Nelson's growth rate was above the average growth rate of its neighbors and was the median value.

POPULATION PROJECTIONS

Four techniques were employed to forecast the Township's likely population growth to the year 2030. It is impossible to precisely determine what the Township's population will be in the future, but the following methods can give us a rational means of estimating a range of future population growth.

Population estimates have implications regarding requirements for future land use, the demand for public services and capital improvements, and can help to understand the future position of the Township in terms of growth and total population. The following describes the projection techniques and their results.

The Constant Proportion (or ratio) Method of projecting population assumes that Nelson Township will continue to represent the same percentage of Kent County’s projected population in the years 2010, 2020, and 2030 that it represents today. In 2004, Nelson Township comprised 0.786% of Kent County’s total population. Using the population projections for Kent County as estimated by Woods and Poole Economics,⁶ and extending those trends through 2030, the following illustrates the results of the constant proportion method for Nelson Township.

Constant Proportion Method

	2004 Population	2010 Population Projection	2020 Population Projection	2030 Population Projection
Kent County	581,034	694,570	780,960	909,428
Nelson Township	4,569	5,459	6,138	7,148

* Woods and Poole did not project county population through 2030; this figure results from an extrapolation of the rates of growth projected from 2000 through 2020 for another ten years.

The Growth Rate (or geometric) Method projects future population growth or decline based on the rate of growth in the Township in the past. Using the growth rate method, the following assumes that growth in the future will occur at the same average rate as has occurred annually since 1970.

Growth Rate Method

Nelson Twp. Average Annual Growth Rate, 1970-2004, = 2.45%

<u>2004</u>	<u>2010</u>	<u>2020</u>	<u>2030</u>
4,569	5,283	6,730	8,573

The Arithmetic Method is similar to the growth rate method in that population projections are based on growth that occurred in

⁶ Woods and Poole Economics data was gathered from the Right Place Program.

preceding decades. This method, however, bases population growth on the overall average increase in the number of persons per year, rather than on growth rates. The following projections are based on the average net increase of 3,011 persons between 1970 and 2004, in Nelson Township, based on U.S. Census figures.

Arithmetic Method

Average Annual Growth Rate, 1970-2004 = 2.45%

2004	4,569
2010	5,283
2020	6,730
2030	8,573

Multiplying the number of housing units with the average number of persons per household gives us the best available estimate of township population at the end of 2005

The Building Permit Method may be the most reliable technique for estimating current population since it depicts present growth trends based on the actual number of residential housing units built within the Township. Nelson Township issued building permits for 296 new homes between October of 1999 and December of 2005. (Because Census Day was April 1, 2000, we have included building permits for houses that likely would have become occupied after the census count occurred.) The Township’s average household size is 2.93 persons⁷. Multiplying the number of new housing units occupied since Census Day with the average number of persons per household gives us the best available estimate for the actual township population at the end of 2005 (**Building Permit Method for 2005**) This population estimation technique holds that Nelson Township has grown by 867 persons since the 2000 Census.

Projecting this rate of population growth into the future assumes that building permit activity will remain constant. **Building Permit Method for 2010 - 2030** projects this rate into the future. While this is the most accurate method for determining current population, projecting building permits and population growth into the future assumes a constant rate of new housing starts. Issues that may influence these projections include economic conditions, such as the local economy, mortgage interest rates, energy prices, and other factors that influence the decisions people make about where to live. In addition, social factors such as the family size, or the number of persons per dwelling unit, will affect the building permit method for estimating population growth.

⁷ Source: US Census Bureau

Building Permit Method For 2005

No. Permits	Persons per H/H	2005 Population
296	2.93	5,059

Building Permit Method For 2010 - 2030

Average No. Permits/yr	Ave. No. Persons/yr	<u>2010</u>	<u>2020</u>	<u>2030</u>
59	173	5,922	7,652	9,382

SUMMARY

It is reasonable to estimate that Nelson Township will grow to approximately 5,443 persons by the year 2010; roughly 6,630 by the year 2020; and to almost 8,000 by the year 2030.

Table 3.2, Population Projection Summary summarizes the preceding four methods of estimating population growth. By averaging the results of these methods, it is reasonable to predict that the population of Nelson Township will grow to approximately 5,443 persons by the year 2010; roughly 6,630 by the year 2020; and to 8,000 by the year 2030. The projections summarized here assume that past trends will continue into the future, and are limited in scope by such a supposition. Projections are based on population counts documented by the United States Census and building permit data from the Township.

**Table 3.2
Population Projection Summary**

Year:	2000	2010	2020	2030
Constant Proportion	4,192	5,459	6,138	7,148
Growth Rate	4,192	5,283	6,730	8,573
Arithmetic	4,192	5,103	5,993	6,883
Building Permits	4,192	5,926	7,660	9,394
Average		5,443	6,630	8,000

AGE, GENDER, AND ETHNICITY CHARACTERISTICS

Another valuable tool for illustrating demographic change involves comparing the age distribution of a community over time. This assists in determining the type of housing demands and recreational facilities that may be needed. For example, if a large portion of the population were younger, the Township may benefit from additional park and playground facilities. Similarly, the rate of increase in a senior population may have implication for more senior living opportunities.

In 2000, the median age Nelson Township residents was 33.5, only a year apart from that of Kent County as a whole (32.5), and slightly younger than the State and the U.S. (35.5 and 35.3 respectively). The median age represents the mid-point in the range of all ages within the Township; one-half of the population is younger and one-half of the population is older.

A substantial portion of the Township is in the 5 to 14 age group, suggesting a need for schools, parks, and other youth-related facilities.

Similar to national and statewide trends, the population of Kent County and the Township is aging. In 1990, the median age of the County was 30.8 years; and in 2000 it had risen to 32.5 years. The median age in Nelson Township in 1990 was 30.2, and had increased to 33.5 by 2000.⁸ Despite the aging of the “baby boomer” population, a substantial portion of the Township is in the 5 to 14 category, suggesting a need for schools, parks, and other youth-related facilities.

**Figure 3.3
Nelson Township Age and Sex Structure**

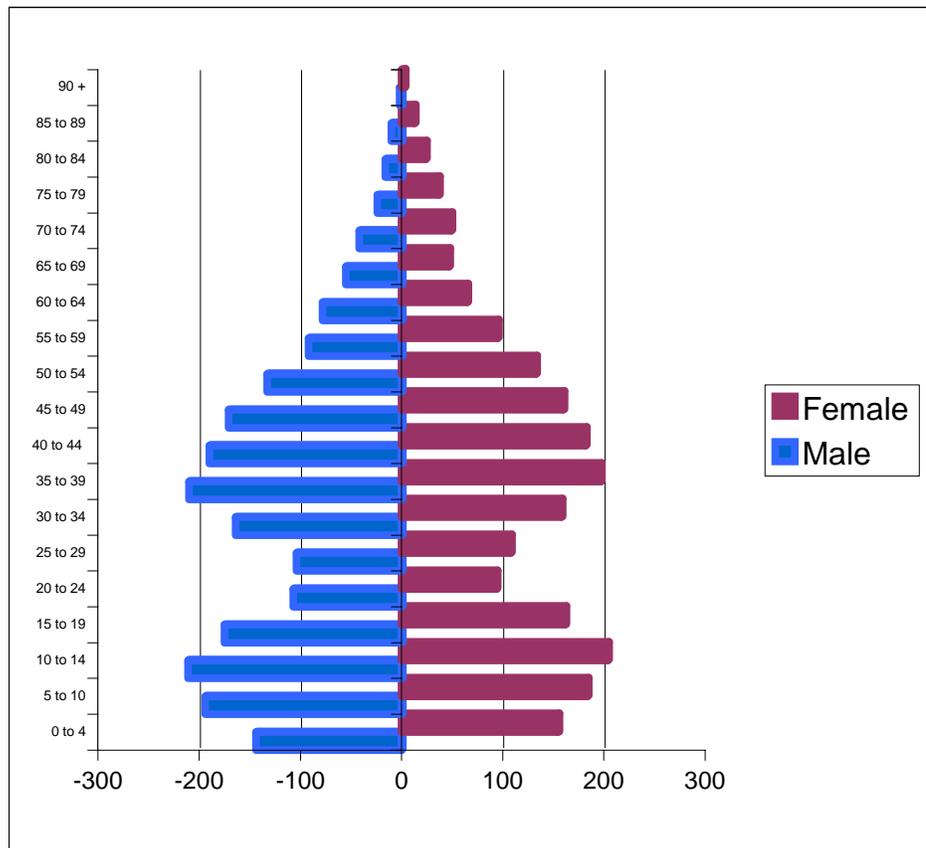


Figure 3.3 Nelson Township Age and Sex Structure shows the age and sex of township residents by 5 year “cohorts.” Review of this

⁸ United States Census Bureau, 1990 and 2000

information can reveal important issues about the township's residents. For example, the 20-24 and 25-30 cohorts are relatively smaller in proportion to both older and younger age groups. This may also indicate that there is not a large supply of housing available that is geared to this segment of the real estate market.

In addition, the larger proportion of middle-aged adults and school-aged children may indicate that a larger percentage of township residents are families with children. The smaller numbers of older residents may indicate the natural decline in these age groups, but may also indicate a short supply of senior citizen housing.

The percentage of population over the age of 69 (5.2%) is an important indicator of the potential need for goods and services required by this age group.

The age category of residents 30 to 49 years old comprises approximately 34% of the Township's total population, and is the main age division for family formations. A relatively large proportion of this age group within the general population typically signifies a greater demand for single-family housing, school and recreational facilities for children, and family oriented commercial services.

Another sixteen percent of the Township is age 50 to 69. This age division is generally comprised of empty nesters and aging baby boomers, and often implies disposable incomes as well as greater flexibility and mobility.

The percentage of population over the age of 69 (5.2%) is an important indicator of the potential need for goods and services required by this age group. Housing developments marketed to senior citizens, second homes, and medical care facilities are examples of the land use impacts of this segment of the population.

As far as ethnicity characteristics, the community is homogeneously white. The population of the Township who were classified as "white alone" at the 2000 Census represents 97.5% of the community. Black or African Americans represent 0.4% of the Township; American Indian and Alaska Natives represent 0.3%; Asians represent 0.3%; and other races comprise 1.5% of the Township. According to the 2000 Census, there are no Native Hawaiian and other Pacific Islanders in the Township. Note that 21.4% of Michigan's population is nonwhite, while Nelson is 2.5% nonwhite.

EDUCATIONAL ATTAINMENT

Educational attainment is often an indicator of the characteristics of the work force, the potential market for goods and services, and the need for public services such as adult education and career training.

(School district attributes are discussed further in Chapter 4, Community Facilities and Services).

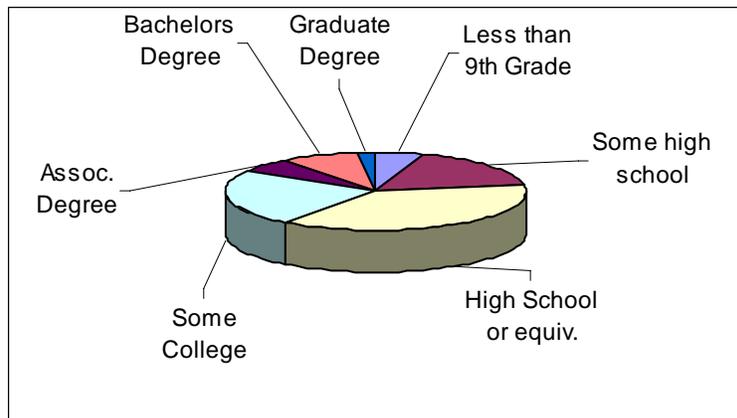
According to the 2000 census of population, 77.9% of the residents of Nelson Township over the age of 25 have the equivalent of a high school education or better, and a further 10.4% have a bachelor's degree or higher. In Kent County, roughly 84.6% of the population have the equivalent of a high school education, with 25.9% reporting a bachelor's degree or higher. Thus, educational attainment in Nelson Township is slightly lower than that of the County as a whole.

The 2000 Census reports that 83.4% of the population in Michigan has a high school education or similar equivalency, and 21.8% have at least a bachelor's degree. Nelson Township is close to being on par with the County and State in high school educational attainment, although trails slightly in college graduates behind the county and statewide percentages.

The increase in educational attainment between 1990 and 2000 tells a much better story about Nelson Township. In 1990, 68.2% of the Township were high school graduates, and 4.8% of the Township had earned a bachelors degree or higher. Over this ten year period, Nelson Township showed a thirteen percent increase in high school graduates and a nearly fifty-four percent increase in college graduates over the age of 25.

Nelson Township showed a thirteen percent increase in high school graduates and a nearly fifty-four percent increase in college graduates.

Figure 3.4
Educational Attainment in Nelson Township



PLANNING IMPLICATIONS

Housing Units

The 2000 population of Nelson Township lived in approximately 1,427 housing units, with an average of 2.93 residents per housing unit. A large majority (74.5%) of housing in the Township consisted of detached, single-family owner occupied homes in 2000. Of the total, the Census Bureau considers 97.4% of residents as residing in rural, non-farm residences, with the remaining 2.6% of the population residing in areas considered to be rural farmland.⁹

Future demand for housing units can be estimated using the population estimates developed earlier in this chapter. By dividing the population estimates by the average number of persons per housing unit (2.93) future needs for dwelling units can similarly be estimated:

Nelson Township should expect an additional 1,261 housing units by the year 2030

**Table 3.3
Dwelling Unit Projections**

	Year: 2000	2010	2020	2030
Constant Proportion	1,431	1,863	2,095	2,440
Growth Rate	1,431	1,789	2,227	2,773
Arithmetic	1,431	1,742	2,045	2,349
Building Permits	1,431	2,023	2,614	3,206
Average		1,854	2,245	2,692

Nelson Township should expect an additional 1,261 housing units by the year 2030. If 100% of those units are developed within current rural-residential zoning parameters of one dwelling for each two acres, 2,522 acres (or a little less than four square miles) of the Township will be consumed by this type of residential development. This figure does not include area for infrastructure and utilities to serve new development.

The above estimates are made with the assumption that the number of persons per housing unit will remain stable throughout the next ten, twenty, or thirty years. Nationally, the average number of persons per dwelling unit has been decreasing over the last thirty years. In addition, this figure will also vary by the type of dwelling unit (single family homes tend to have a greater number of occupants than apartments). However, because the population of

These estimates are based on the stable rate of 2.93 persons per dwelling unit.

⁹ Census 2000

Nelson Township is a stable single-family environment, these estimates are based on the stable rate of 2.93 persons per dwelling unit.

Car Trips

The national average of car trips per household is 9.57 per day

The national average of car trips per household is 9.57 trips per day.¹⁰ Nelson's occupied housing stock in 2000 (1,427) would suggest approximately 13,656 car trips per day. Considering that this national average has included many urban communities, where public transportation is commonly used by a large portion of the population, the number of expected car trips per day in Nelson Township is likely to exceed any predictions based on national averages.

Based upon the above dwelling unit projections, Nelson Township in 2010 would average 17,743 residential car trips per day, increasing to 25,762 car trips per day in 2030. (Chapter 7 discusses current transportation patterns and the carrying capacity of local roads in greater depth.).

Wastewater

The State of Michigan has estimated that a single household generates an average of 250-350 gallons of wastewater per day. Multiplied by the number of households in the Township, approximately 356,000-500,000 gallons of wastewater are currently generated within Nelson Township each day. By the year 2030 this figure is likely to range from 640,000 gallons to nearly 900,000 gallons per day. As indicated in Chapter 7, Transportation and Public Utilities, none of the households in Nelson are serviced by a public wastewater system. This results in an increasing burden on the natural environment to handle the wastewater and septic disposal of the community.

School Age Children

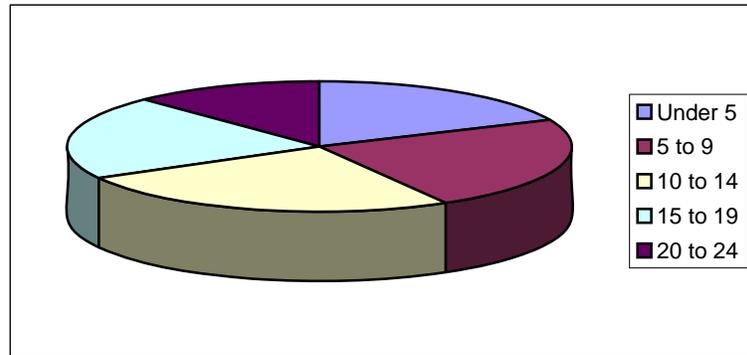
Twenty four percent of Nelson Township's population is of school age.

According to 2000 Census data, 24% of Nelson Township's population is of school age (3 yrs. +) and enrolled in school, and 90% of that population is enrolled in public schools. **Figure 3.5,**

¹⁰ Institute of Transportation Engineering, *Trip Generation*, 5th Edition. Note that each a time vehicle leaves a dwelling it is counted as two trips to account for the departing and returning trips.

School Age Distribution¹¹, illustrates the relative proportions of school-aged children in Nelson Township. This amounts to 1130 students enrolled in K–12 public school systems (ages 5-19). After excluding college and nursery school students, as well as those students attending private schools, we have projected these figures into the future (based on Chap. 3 assumptions), signaling a need to accommodate an additional 670 children in public schools by 2030.

Figure 3.5
School Age Distribution, 2000



As evident in Figure 4.1, U.S. census data from the year 2000 shows the largest portion of children and young adults under the age of twenty-four was in the category of 10 to 14 year olds. The numbers in the figure above show a greater need for middle and high school education capacity in the coming years than in elementary levels.

Chapter 4, Community Facilities and Services, contains further information regarding the public school systems in Nelson Township.

¹¹ Census 2000

CHAPTER 4. COMMUNITY FACILITIES & SERVICES

Community facilities play a fundamental role in augmenting civic engagement, sponsoring cultural events, and promoting community pride. High quality recreational opportunities are also often considered quality of life indicators. In addition, public schools provide local spaces for interaction, learning, and community building, and safety services provide a vital service to the community.

This chapter of the Community Profile Report begins with a discussion of education opportunities within the region and portrays local school enrollment and trends. In addition, parks and recreation areas are catalogued. Finally, the chapter discusses public safety facilities that service the Township.

EDUCATIONAL FACILITIES

Higher Learning Institutions

Regional opportunities for extended education are helpful tools in fostering economic sustainability and regional growth. While no institution of higher learning exists within the Township, several colleges and universities are located within a short driving distance. Schools located in and near Grand Rapids include: Grand Valley State University, Aquinas College, Calvin College, Cornerstone University, and smaller schools, such as Davenport University and Grand Rapids Community College. Michigan State University, in East Lansing, is the largest facility for higher education in the state, and is located about one hour's drive to the east of Nelson Township.

Libraries

Located on 88th Street, the Nelson Township/Sand Lake Library, a part of the Kent District Library system, serves Nelson Township. This library assists in conducting various children's, youth, and adult programs, as well as offering the amenities of public meeting space, access to the Internet, and a myriad of books, encyclopedias, almanacs, and other informational reading material.

Public schools

Public School Districts in Nelson Township include Cedar Springs Public Schools and Tri County Area Schools (see **Map 4, School Districts**).

A majority of Nelson Township is served by the Cedar Springs Public Schools. There are currently a total of eight school facilities associated with the Cedar Springs Schools district, including four elementary schools, a new middle school, the high school, and alternative and special education facilities. Each of the four elementary schools is devoted to a different age population of the district. Cedar Trails elementary is responsible for kindergarten and 1st grade as well as the readiness programs. Beach Elementary is a building dedicated to 2nd, 3rd, and 4th graders, and Red Hawk Elementary covers 5th and 6th grades. Most of these buildings are within short walking distance of one another, allowing siblings attending different schools to meet and ride the bus home together.

Tri County has one elementary school and its administrative offices in the Village of Sand Lake; all other facilities are in Montcalm and Newaygo Counties. The Sand Lake Elementary School also serves some residents in the northern portion of Nelson Township. Sand Lake Elementary has a total enrollment of 364 students and offers pre-kindergarten through 4th grade classrooms. The student-teacher ration is 17.5/1, with the most students currently enrolled in kindergarten.

Tri County Area Schools has provided student projections out to the year 2013 which indicate an increase of only about sixty students from their 2005-06 enrollment of 2,413.

Cedar Springs Public Schools has also provided enrollment projections through the year 2011. These projections indicate an increase from the 2005-06 enrollment of 3,340 to a possible enrollment of 3,562.

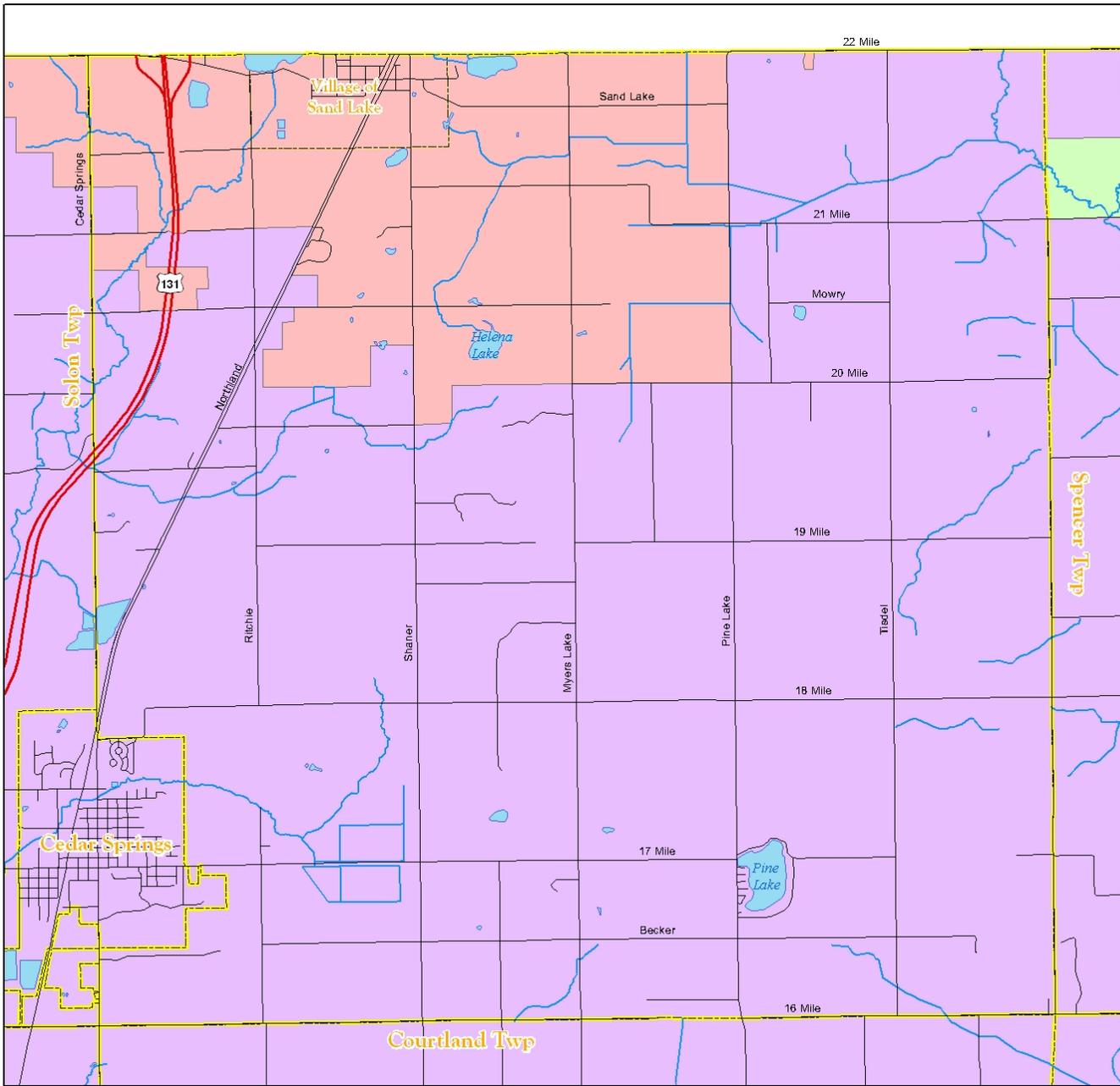
The school district's projections indicate similar trends in the number of school aged children as the population projections given in Chapter 3. However, it is not possible to directly compare Cedar Springs enrollment projections with population projections made for Nelson Township for several reasons: the school district does not cover all of Nelson Township; the school district covers significant portions of other townships (Algoma, Courtland, Solon, & Spencer); and the school district only carries their projections out to the 2010-11 school year. In lieu of developing projections with a longer horizon (or look into the future) the school district tends to have projections done more frequently.

**Public School Districts in
Nelson Township include
Cedar Springs Public
Schools and Tri County Area
Schools**

Nelson Township

Kent County, Michigan

Map 4 School Districts



Legend

- Municipal Boundary
- Village Boundary
- Roads
- Highways
- Highway Ramps
- Streams
- Open Water

School Districts

- Cedar Springs Public Schools
- Lakeview Community Schools (Montcalm)
- Tri County Area Schools

1 inch equals 3,500 feet



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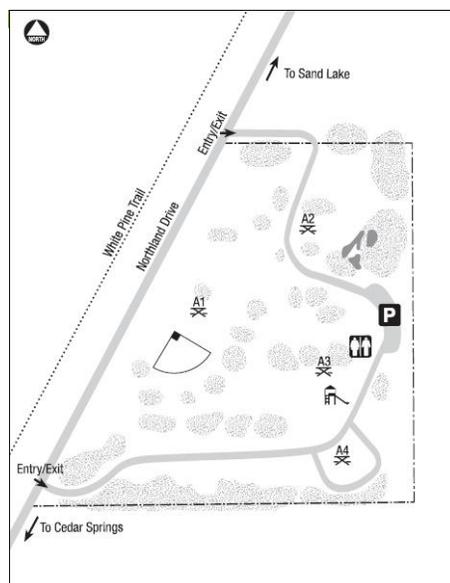
Cedar Springs has recently completed construction of a new school facility at their central campus in the City of Cedar Springs.

In addition to Tri County and Cedar Springs schools, there is a charter school (Creative Technologies Academy) and the Pilgrim Bible School, both located in the City of Cedar Springs. According to information provided by the Cedar Springs Schools, the Charter School has a capacity of over 155 students, and the Pilgrim Bible school 80 students.

Discussions with officials from the Cedar Springs Schools support the above assumption that the majority of students moving into the district are in the middle grades because their parents are often purchasing “move -up” homes in the area.

PARKS & RECREATION

Gordon Park is the oldest registered park in the Kent County parks system. Located along Northland Drive, Gordon Park includes a baseball diamond, picnic areas, and playground. A youth sports park is located along Ritchie Avenue, providing space for soccer fields and other outdoor recreation for Township residents and visitors.



Gordon Park
&
White Pine Trail

Source: Kent County Parks and Recreation

Nelson Township is home to one State Park, the White Pine Trail. This facility follows an old railroad right of way parallel to Northland Drive. It is an important pedestrian facility in the Township and is directly across Northland Drive from Gordon Park.

CHAPTER 5. ECONOMIC DEVELOPMENT & HOUSING

This chapter analyzes housing and economic development trends within the community. It is useful to compare housing trends with the population projections so that housing shortages or surpluses can be estimated. In addition, comparisons of housing and land values against the incomes of current residents can help reveal the relative affordability of the local housing stock for the residents of the community.

GROWTH OF EQUALIZED VALUE

One measure of the economic strength of a community is to examine the current property values and compare them to recent growth to surrounding communities. Property values reflect both investment in new development and the expected degree of growth in the value of those investments. Tax Assessors from each jurisdiction within a region report the total valuation of their respective jurisdiction annually. These reports are broken down by property classification and can often provide an important view of the character of a community.

The total state equalized value of real property within Nelson Township in 1994 was \$45,469,300, and five years later it had increased by over 67% (or 13.3% annually) to \$75,844,800. Since the year 2000, real property values have continued to climb in the Township, although the rate of growth has been modest. With significant increases in transportation costs the incentive for commuters to move into outlying townships of a large municipal area may decrease. However, consumer demand and automobile use has not dramatically ebbed, despite a greater than 72% increase in the average price of oil since early 2001.¹²

The total real property valuation for Nelson Township was \$99,755,705 in 2004, an 8.6% increase over the real property valuation of 2003.¹³

HOUSING QUALITY

In the 2000 census only seven (7) occupied housing units, out of a total of 1,499, were identified as lacking complete plumbing facilities, kitchen facilities, and telephone service. Nearly half of the current housing stock has aged less than 25 years and 285 new homes have been built since the year 2000.

¹² New York Mercantile Exchange (NYMEX). April, 2006

¹³ Kent County Assessment information.

Housing affordability is also of interest in the completion of this community profile. Affordability is a measure of the proportion of disposable income consumed by housing costs such as rent payments for rental properties and principal and interest expense for homeowners. Typically mortgage underwriters and housing specialists consider housing affordable if rent payments or principal and interest payments fall below 25% to 28% of gross income. Comparing median household incomes with median rents and median mortgage payments indicates that much of the housing in the Township would meet this standard.

In 2000, the median household incomes stood at \$50,529. Using the 25% standard, \$12,632.25 (avg.) would be available annually for housing costs in an affordable market. The census reported that median mortgage payments were \$907 per month, or \$10,884 annually. Median monthly rents were \$428, or \$5,136.



Typical Single Family Home

Table 5.1, Change in Total Real Property Equalized Values below compares the rates of overall SEV growth for Nelson Township with that of other northern Kent County communities experiencing significant growth. Collectively, the communities reflected in **Table 5.1** represent slightly more than one-quarter of the total value in the County. Through the latter half of the 1990s, all of the northern county communities except Sparta Township

experienced double digit annual rates of growth. Even though the regional and national economies had weakened by 2002, investment and growth in value in the urbanizing parts of the County were still evident.

The small growth percentage for each township in the county between 2002 and 2003 is highly apparent in **Table 5.1**. Contrasting this anomaly with the average growth rates over a ten-year period gives a clearer indication of the overall expansion occurring within the county.

Table 5.1
Change in Total Real Property Equalized Values (in million \$)

	1994	1999	2002	2003	2004
Algoma Township	\$ 100.5	\$ 185.5	\$ 298.4	\$ 301.2	\$ 316.3
Annualized rate of change	n/a	13.0%	17.2%	0.9%	5.0%
Cannon Township	\$ 203.4	\$ 367.6	\$ 533.8	\$ 525.4	\$ 560.9
Annualized rate of change	n/a	12.6%	13.2%	-1.6%	6.8%
Courtland Township	\$ 82.7	\$ 150.1	\$ 224.2	\$ 226.5	\$ 246.1
Annualized rate of change	n/a	16.3%	16.5%	1.0%	8.7%
Kent County	\$ 8,829.9	\$ 13,068.3	\$ 17,673.9	\$ 18,055.5	\$ 19,112.4
Annualized rate of change	n/a	8.2%	10.6%	2.2%	5.9%
Nelson Township	\$ 45.5	\$ 75.8	\$ 112.5	\$ 113.9	\$ 126.9
Annualized rate of change	n/a	13.3%	16.1%	1.2%	11.4%
Plainfield Township	\$ 466.8	\$ 704.6	\$ 893.6	\$ 962.1	\$ 1,016.6
Annualized rate of change	n/a	8.6%	7.6%	7.6%	5.7%
Solon Township	\$ 48.6	\$ 90.9	\$ 129.4	\$ 131.8	\$ 143.7
Annualized rate of change	n/a	17.4%	14.1%	1.8%	9.0%
Spencer Township	\$ 45.3	\$ 77.9	\$ 108.8	\$ 110.5	\$ 114.9
Annualized rate of change	n/a	14.4%	10.3%	1.7%	4.0%

Source: Kent County Bureau of Equalization, 2004 Equalization Report, April 22, 2004

The scale of residential/agricultural real property clearly dominates all property in Nelson Township. It is clear from an examination of land use that Nelson Township's tax base is heavily weighted toward residential development. As discussed in Chapter 6, residential property tends to demand a greater portion of services than can typically be provided by the residential tax base.

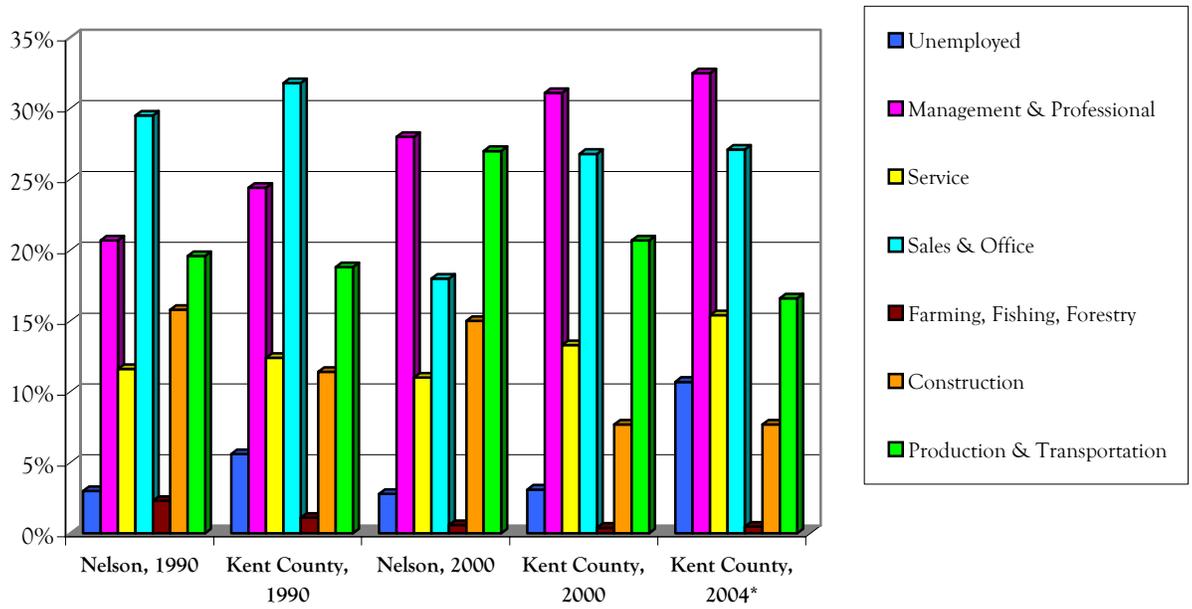
BUILDING PERMITS

Building permits are a good indication of investment in the community. An average of 59 building permits per year for new dwelling units have been approved since 2000, and according to Township records, most new homes have not been built in a concentrated area, but scattered throughout the Township. It is likely that newer construction will occur closer to arterial transportation routes and commercial services. Accessibility to shopping needs, and highway access are often prime indicators for the desirability of land.

EMPLOYMENT

The turn of the century has marked a shift in employment patterns. While employment trends do not show drastic changes, it is apparent that both Kent County and Nelson Township (see **Figure 5.1, Employment Trends**) are following national trends away from manufacturing and agriculture and toward professional or management careers. Especially significant to Nelson, careers related to farming have dropped dramatically (2.3% in 1990, and .60% in 2000)¹⁴. While the share of agricultural careers among the total workforce has not been significant for decades, this is yet another indicator of the changing nature of agriculture to economies of scale.

Figure 5.1
Employment Trends



* State demographer estimate

¹⁴ US Census Bureau, 1990 & 2000

INCOMES

Median household income in Nelson Township reported in the 2000 U.S. Census was \$50,521. This may be compared to \$44,667 in Kent County and \$41,994 for the State of Michigan. Thus, Nelson Township residents enjoy a significantly higher standard of living than their neighbors in other areas of the county or the state. This simple measure of prosperity suggests a bright and growing future for the community.

PLANNING IMPLICATIONS

The decline in farming as an occupation may either be indicative of decline of farming as a land use, or of the consolidation of agricultural activity into fewer but larger operations. Office professionals may soon impose a greater demand for residential uses than farmers can impose for agriculture. As property development gives way to market demands, this will be another challenge to preserving the rural character of Nelson Township. Higher income households typically demand (and can pay for) higher levels of service from their local government and from their schools. As rural communities change, it is not uncommon for this dynamic to generate tensions within the community between the “old” residents and the new arrivals.

Construction of new housing along arterial roadways in areas that are currently considered rural may impact the ability of those roadways to serve their intended function in the future.

The strong reliance on a residential tax base in the Township may also play a role in this change. Diversification of land uses to promote tax base has implications for the character of the community. There may be conflicting demands between development of tax base and preservation of rural or residential community character.

CHAPTER 6. TRANSPORTATION & PUBLIC FACILITIES

This chapter discusses transportation, public water and sewer services, and other publicly owned facilities that are an important part of the Nelson Township community.

A transportation network links activities within a community to those in surrounding municipalities, and the larger region as a whole. Transportation plays a critical role in determining the nature and intensities of land uses that occur throughout a community. Nelson Township has a wide variety of transportation corridors.

Similarly, public facilities, such as water and sewer service, can play an important role in affecting the character of a community. Without these facilities, a community's future development is limited.

In addition, major contributors to any community are its public institutions, libraries, schools, parks, and religious institutions. These facilities within the township are outlined in light of their public policy implications.

TRANSPORTATION

Major transportation elements in Nelson Township include interstate highways, County primary roads, County local roads, municipal roads, and private roads. **Map 5, Roadway Classification and Traffic**



Pine Lake Ave., 21 Mile Rd., 18 Mile Rd., 17 Mile Rd., and Sand Lake Rd function as County Primary Roads

Volumes, indicates how roadways are classified according to their function within the roadway system. Primary, or arterial roads, serve to move high volumes of traffic through an area at relatively high speeds. Local, municipal, and private roads serve to provide access directly to property. Sometimes, roads are classified as collector roads, which serve an intermediate function of connecting primary and local roadways. Sidewalks, safety and bicycle paths, and other pedestrian oriented forms of transport have less of an influence on land use and social interaction in Nelson Township due to its current rural characteristics.

Of greatest significance within the Township is US Highway 131, which cuts through the northwest corner of the Township, and offers an interchanges at the outskirts of Cedar Springs and Sand Lake. US 131 offers a direct route to Grand Rapids and Kalamazoo to the south, as well as a connection to I-96 running east and west through the middle of the state and I-94 at the south end of the state. Highway 131 also offers direct routes through Big Rapids and Cadillac to the north.

The Kent County Road Commission maintains 1,959 miles

of roadways.¹⁵ Of the County primary roads within the Township, Northland Drive carries the greatest amount of traffic. Northland serves not only as a local connector, but also as a direct thoroughfare to M-57 and through the City of Rockford to the South and ultimately becomes Michigan Highway 44 in Plainfield Township.

Pine Lake Ave., 21 Mile Rd., 18 Mile Rd., 17 Mile Rd., and Sand Lake Rd also function as County Primary Roads. These serve as arterial connectors to County Local Roads and private roads, and often carry more traffic.

Road Improvements

According to the Kent County Road Commission, there are plans to reconstruct and widen Northland Drive south of Nelson Township, between 12 Mile Road and M-57. Phase 1 of this plan is set to take place in 2007 when Northland Dr. will be widened to five lanes between 12 Mile and 13 Mile Rd. Phase two is currently planned for 2008, when the road will be widened to five lanes up to 14 Mile Rd (M-57). Eventually, the Road Commission plans to extend the reconstruction to the City of Cedar Springs, most likely widening the road to three lanes.

Traffic Volume

Increased traffic congestion is usually a direct result of a growing population. The Michigan Department of Transportation performs traffic counts for all the state highways throughout Michigan (see Map 7). This is helpful data when assessing future roadway capacity, and when determining when certain roadway enhancements need to be done. **Table 6.1** and **Map 5** illustrate traffic counts on M-57, Northland Dr., and 10 Mile Rd. between 1998 and 2004. Counts include traffic traveling both ways.

¹⁵ Kent County Road Commission website

Table 6.1
County & State Road Traffic Counts

Roadway	Segment		Count
	From	To	
Northland	18 Mile	19 Mile	5,250
Northland	19 Mile	21 Mile	4,867
Pine Lake	17 Mile	18 Mile	1,778
Myers Lake	16 Mile	17 Mile	1,670
US 131	22 Mile	17 Mile	29,278

The average two-lane road, built to current standards, has the capacity to carry up to about 20,000 vehicles per day, under ideal conditions and if designed properly. Much of Northland Dr., however, was designed to carry only 13,600.¹⁶ **Table 6.1** reflects all road segments as falling below nominal capacity maximums. However, it should be understood that these counts are daily levels and do not account for peak-hour demand which may result in very short-term, localized areas of congestion. As growth continues throughout the Township and Kent County, there will be a greater demand placed on roadways due to increases in the number of commuters, and increased commercial development in neighboring townships.

WATER & SEWER SERVICES

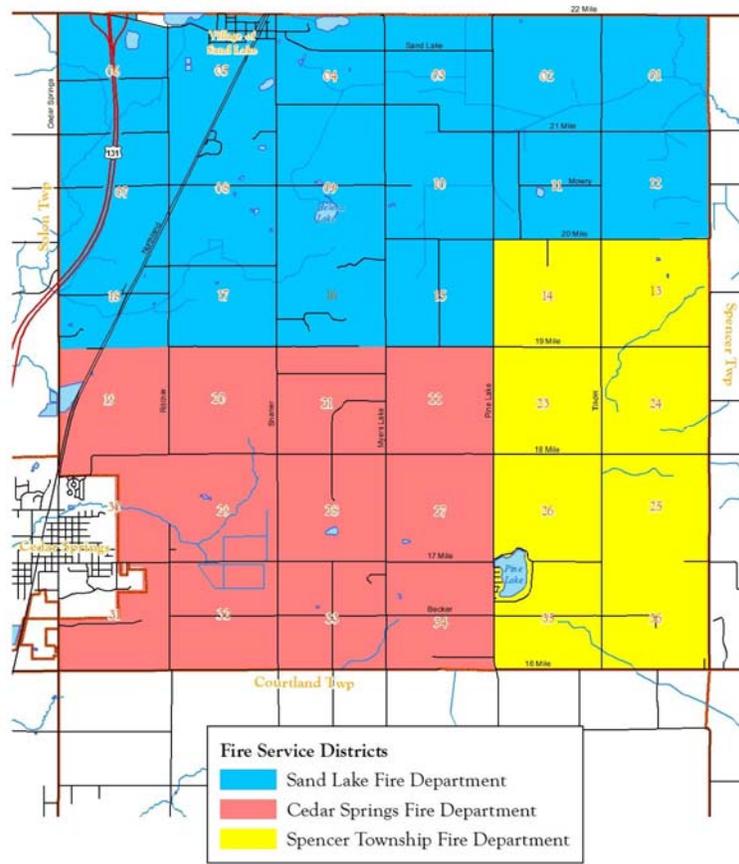
Nelson Township has no public water and sewer facilities; however, the Village of Sand Lake and the City of Cedar Springs each have their own systems. The Village indicates that it may be willing to extend services into nearby parts of the township within its current capacity. The City of Cedar Springs also has the potential to extend services into adjacent areas of Nelson Township, but has established a public policy that any extensions need to be accompanied by formal municipal agreements, such as under State Act 425 or annexation.

POLICE & FIRE SERVICE

The Kent County Sheriff's Department provides police services to Nelson Township. Fire services are provided through service agreements with the Sand Lake, Cedar Springs, and Spencer Township fire departments. See Figure 6.1, Fire Service Districts.

¹⁶ GVMC Regis system

Figure 6.1
Fire Service Districts

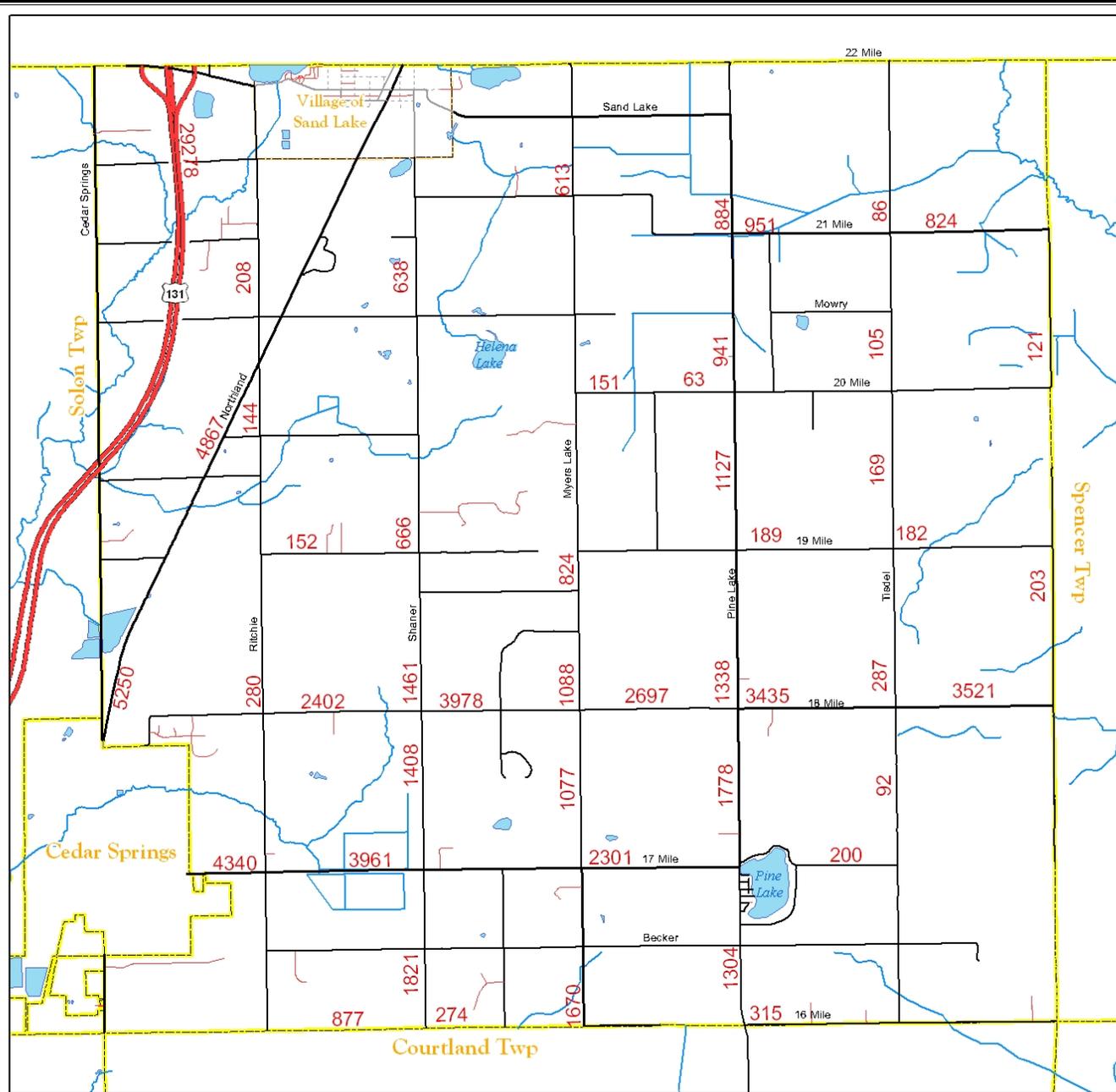


Source: Nelson Township Website (nelsontownship.org)

Nelson Township

Kent County, Michigan

Map 5 Roadway Classification & Traffic Volumes



Legend

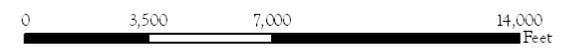
- Municipal Boundary
- Village Boundary
- Streams
- Open Water

Roads

- State Trunkline
- County Primary
- County Local
- City Major
- City Minor
- Private

Traffic Count Data provided by the Grand Valley Metro Council. Counts were taken between 1998 and 2004.

1 inch equals 3,500 feet



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PLANNING IMPLICATIONS

Development within the Township may not increase dramatically in the near future, but new home construction may remain at the steady pace of the last decade. Therefore, it will be necessary to improve the quality of some roads as traffic volumes increase and as they continue to age. Careful planning requires acknowledging the cycle often perpetuated by road improvements. In most communities, when roads are widened to allow for greater traffic flow, ease of travel becomes an incentive for further development. As development increases, road capacity will again be tested, requiring further improvements. Without careful planning this cycle can seem to continue in perpetuity.

Transportation needs are frequently viewed as an impediment to effective land use planning. Until residential densities reach upwards of eight dwelling units per acre, typical mass transit systems are not economical. Furthermore, as a “bedroom” community, commuting patterns in Nelson Township would normally not lend themselves to any form of mass transportation model, as residents are likely to need transport to a broad range of locales. Therefore, effective integration of land use and transportation decisions will be necessary to manage the growth anticipated in the township.

The availability, or lack thereof, of water and sewer service will have a significant impact on the future development of Nelson Township. Without these services, development of apartment buildings, suburban density subdivisions, commercial and industrial land uses will be severely limited.

CHAPTER 7. LAND USE & DEVELOPMENT PATTERNS

LAND COVER

A majority of the Township has remained either agricultural land or open woodland areas and fallow fields. However, over the past 10-15 years, there has been an increase in residential development. The few existing concentrations of residential and commercial development in the Township are found along the Northland Drive Corridor or near the Village of Sand Lake and the City of Cedar Springs. The remainder of the Township has retained a very rural character, signified by numerous scattered residential lots along county roads, backed by active farmland or open fields and woodlands.

Map 6, 1978 Land Use and Cover, and **Map 7, Current Land Use** best illustrate this comparison. The area north of 18 Mile Road and west of Myers Lake Drive is characterized by heavily forested land.



Agriculture continues to play an important role in Nelson Township

The southeastern and northeastern most sections of the Township are dominated by deciduous forest and wooded wetland with the remainder of the Township largely occupied by row crops and pastureland. Much of the northwestern quarter of the Township is dominated by fallow fields and row crops, although, there is a substantial belt of wetland and forest along Duke Creek, just north of 20 Mile Road.

Areas surrounding Pine Lake have the greatest population density outside of the Village limits. Recent trends toward residential redevelopment in this area have begun to change the character of the

one-time cottage community toward larger single-family homes. Both large and small bodies of water typically provide recreation and quality of life amenities, and therefore act as magnets for residential growth. Further increase in development in this area could cause future problems due to density of septic systems and drainfields (see **Chapter 2, Natural Features**). Management of new growth, conversion of seasonal residences to year-round occupancy, views and access to the lake are all important issues to consider regarding this area. Provision of central water and sewer service to this area should be among the options considered.

LAND USE



Difficulties may arise as residential development intrudes upon agricultural land.

Map 7, Current Land Use reflects current land use and has been developed from Township information with recent updates by Williams & Works based on an informal windshield survey. Land use in the Township is dominated by agriculture and rural single-family development patterns. As shown in **Map 7**, the Township is nearly equally weighted between residential development and agricultural, open or forested land. It is important to note, however, if growth continues to follow 2 to 5 acre residential lot sizes characteristic of rural zoning the remaining farmland may not survive at a scale necessary to be economically viable as agricultural land. Very low-density residential development may appear to be “rural” by design, but this type of public policy absorbs farmland quickly, and spreads development out further from areas that contain urban services necessary to support higher density neighborhoods.

Land use around the City of Cedar Springs is at a higher density than in other areas of the Township. Development has occurred in a fairly compact manner within the municipal boundaries, with only moderate suburban-style development carrying over into the Township near the middle school.

ZONING

There are currently eight zoning categories specified in Nelson Township *Zoning Ordinance*. The Village of Sand Lake has a separate *Zoning Ordinance*. The practice of zoning is intended to separate land uses in order to protect land uses from the effects of differing land uses. Generally, zoning will guide specific types of development, such as residential or commercial, toward specific areas and away from others.

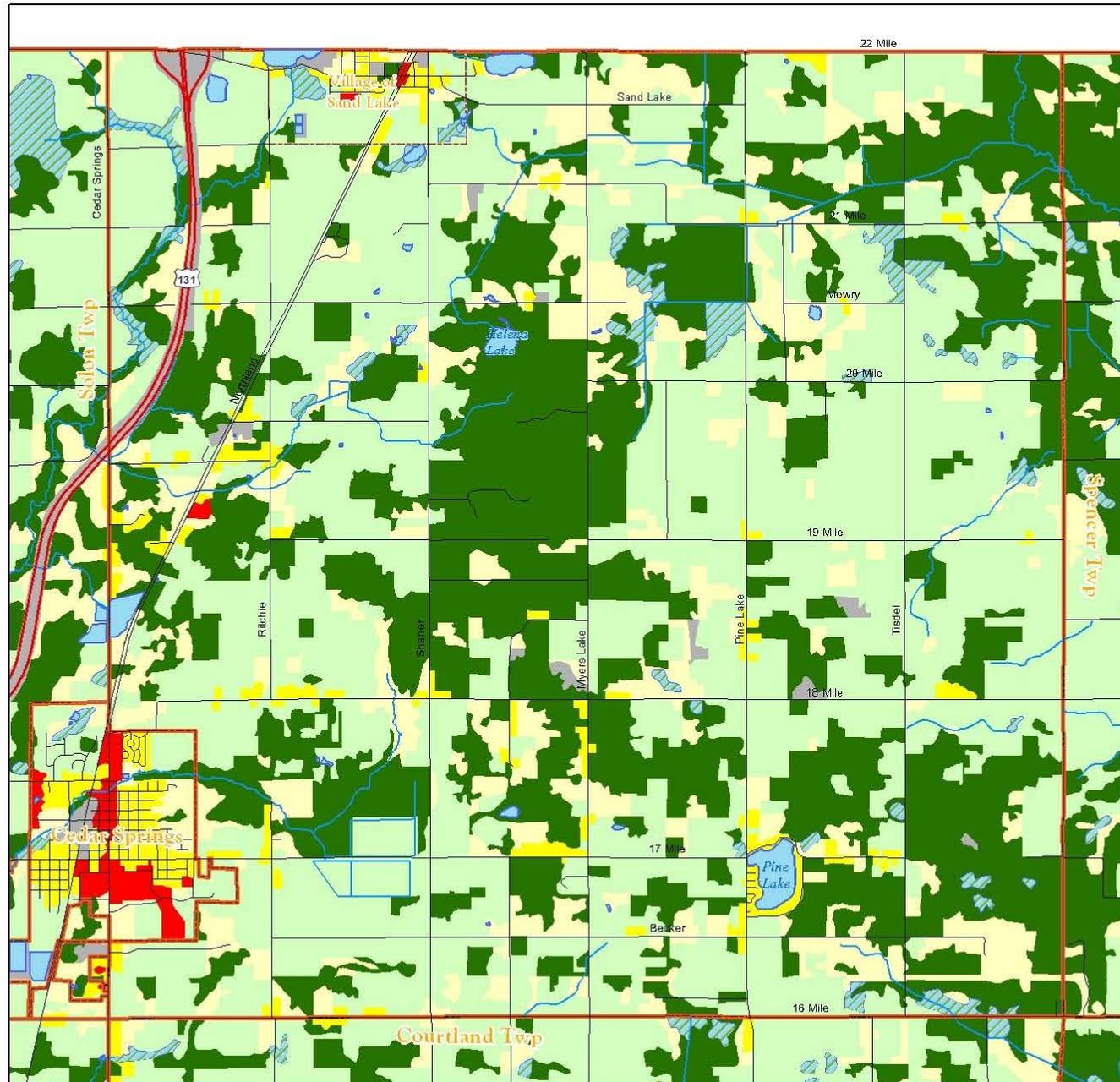
The primary zoning category in the Township is Agricultural/Rural Estate Residential, where the minimum lot area is 2 acres for a home and 5 acres for farming or other uses. The Zoning Ordinance describes this district “is intended primarily for agricultural uses and one family residences without public water and sewer services. **Table 7.1, Zoning Districts** outlines the zoning districts in Nelson Township.

Nelson Township

Kent County, Michigan

Map 6

1978 Land Use & Cover



Legend

- Municipal Boundary
- Village Boundary
- Roads
- Highways
- Highway Ramps
- Streams
- Open Water
- Residential
- Commercial
- Industrial/Transportation/Extractive
- Agriculture
- Rangeland
- Forest
- Open Water
- Wetlands

1 inch equals 3,500 feet



Williams & Works

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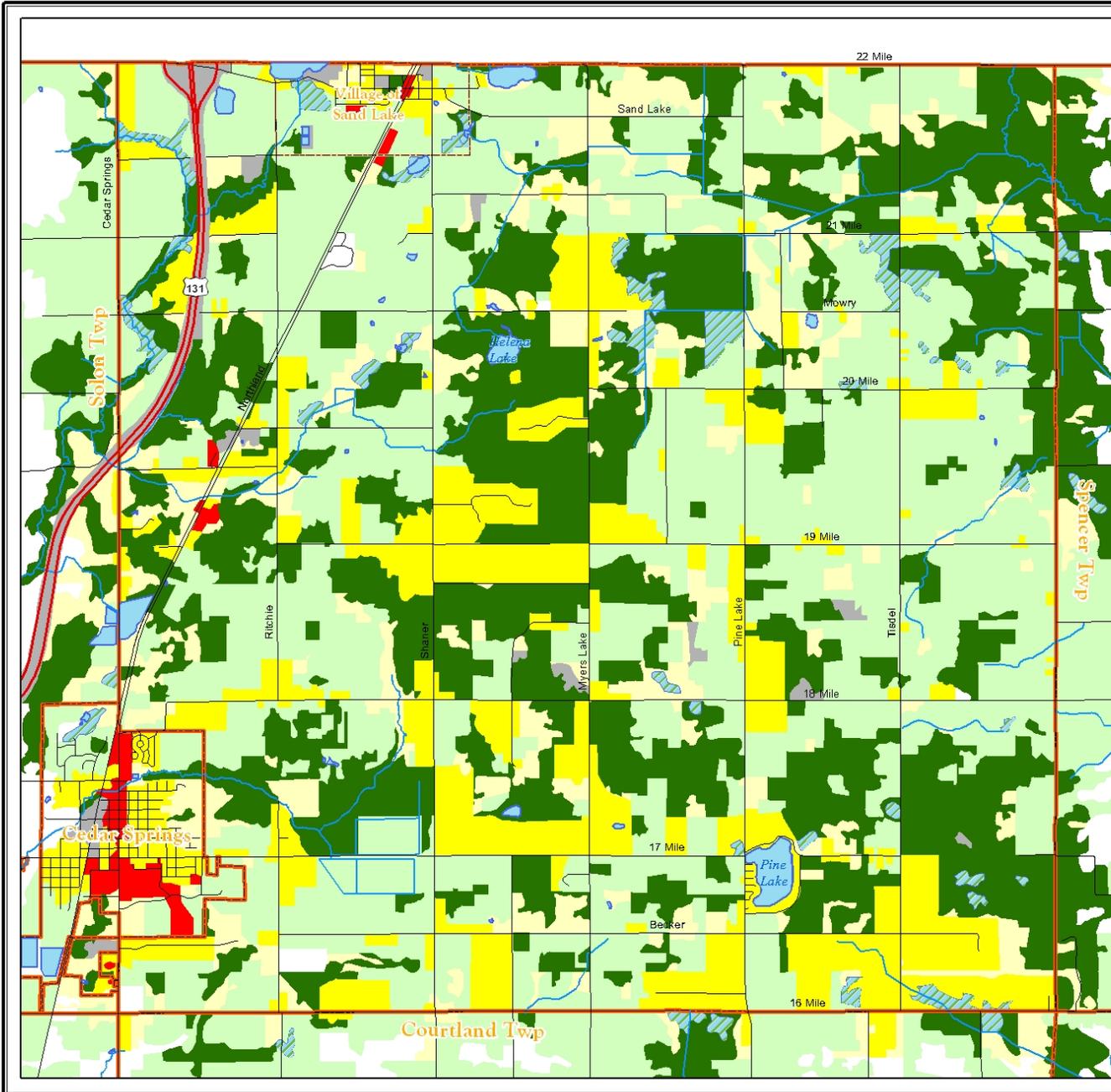


Nelson Township

Kent County, Michigan

Map 7

Current Land Use



Legend

- Municipal Boundary
- Village Boundary
- Roads
- Highways
- Highway Ramps
- Streams
- Open Water
- Residential
- Commercial
- Industrial/Transportation/Extractive
- Agriculture
- Rangeland
- Forest
- Open Water
- Wetlands

1 inch equals 3,500 feet



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Table 7.1
Zoning Districts

Abbreviation	Description	Minimum Lot Size
AG	Agricultural/Rural Estate Residential	2 acres
SFR-L	Single Family Residential-Low Density	2 acres
R-M	Single Family Residential-Medium Density	1 acre
MHP	Mobile Home Park District	n/a
C	Commercial	n/a
I	Industrial	1 acre
NR	Natural Rivers Overlay	Applies within 300 feet of Duke and Cedar Creeks
OS-PUD	Open Space-Planned Unit Development	5 acre minimum zone size
PUD	Planned Unit Development	2 acre minimum zone size
CR	Conservation Reserve	n/a

Growth and development along the Northland Drive corridor may be of specific concern over the next 10 to 20 years. As highlighted in **Chapter 6, Transportation and Public Facilities**, the portion of Northland Drive south of Nelson Township is slated for improvements within five years. Much of this section of the corridor will be widened to three lanes before 2010. A typical cycle of growth and development occurs when roads are widened due to the increased capacity provided by extra lanes. While increased traffic capacity is only one of many factors involved in the increased use and development along a transportation corridor, planning for the management of increased future demand is important.

Of major concern is managing commercial land uses in a predominantly rural area. Large parking lots, signs, transitions between differing land uses, and preserving roadway capacity through access management are all issues the township should be prepared to address. Careful planning and zoning with strict guidelines to implement the plan can allow for controlled development patterns that both protect community character and allow development of goods and services needed by township residents.

AGRICULTURAL PRESERVATION

Soils in parts of Nelson Township are highly conducive to farming.

Another future difficulty may arise as residential development uses up prime agricultural land. Soils in parts of Nelson Township are highly conducive to farming. There are currently a number of different strategies for preserving farmland in Michigan. One effort is a purchase of development rights (PDR) program being promoted by Kent County. The County's PDR program provides a means for township governments to qualify for financial assistance from the State to purchase the development rights from farmland owners who wish to participate. In order to qualify, a township must have a farmland preservation policy and identify farmlands suitable for preservation.

Purchase of Development Rights (PDR) provides a means for township governments to purchase the development rights from farmland owners who wish to participate.

According to township assessor's records, there are over 2,000 parcels of real property in Nelson Township. Of these parcels, 165 are greater than 40 acres in size. Without accounting for the characteristics of individual parcels, this data implies that there is likely sufficient land in the township that is suitable for agricultural preservation efforts.

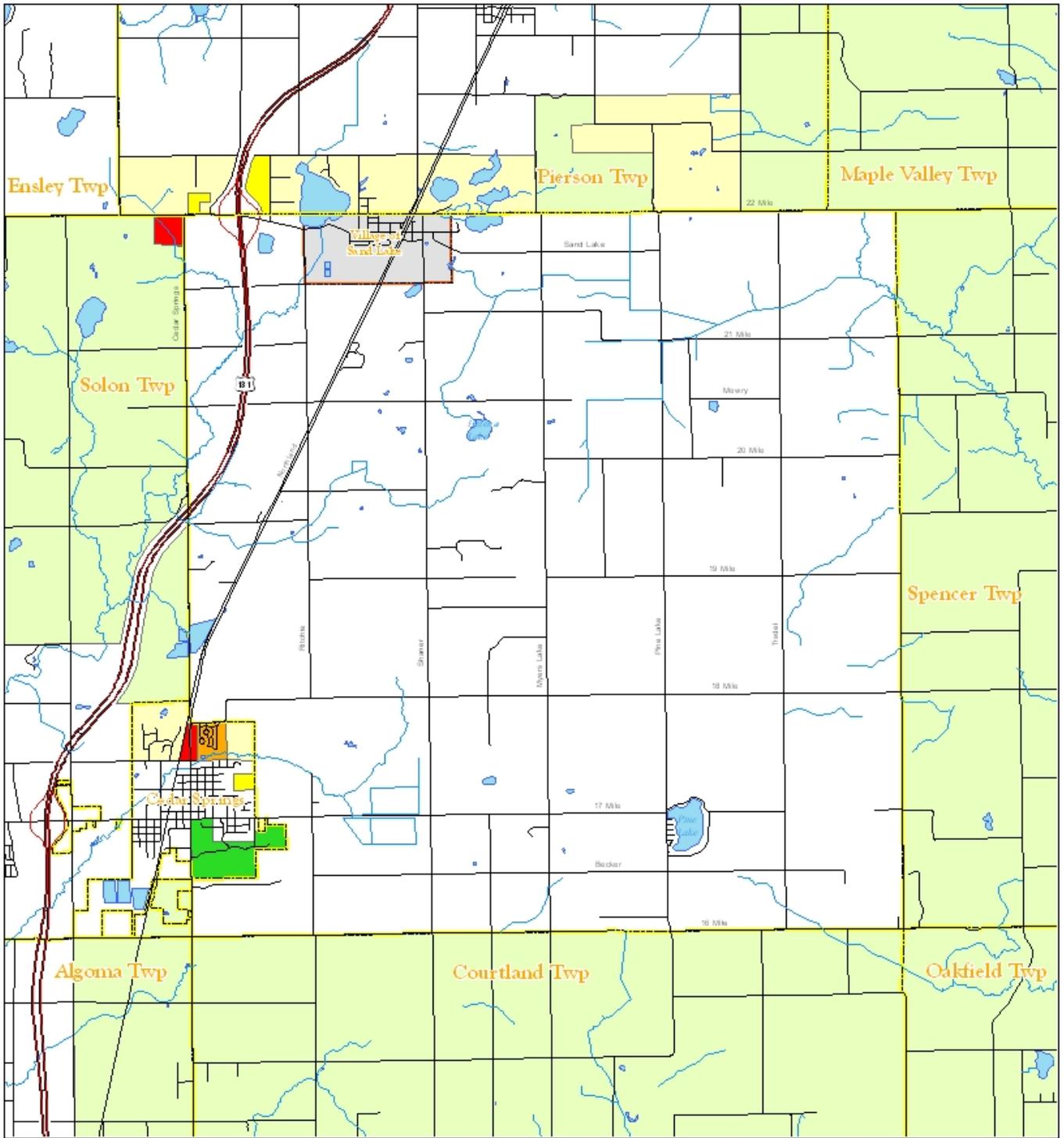
Acres	Number of Parcels
100 +	16
80-99	21
40-79	128
10-39	454
5-9	268
1-4	864
<1	287

REGIONAL PERSPECTIVE

Nelson Township is bordered by Spencer Township to the east, Solon Township to the west, Maple Valley and Pierson Townships (Montcalm County) to the north, and Courtland Township to the south. Positioned approximately twelve miles north of the City of Grand Rapids, Nelson Township is currently near the fringe of the metropolitan area.

Review of future land use and zoning maps for these areas indicate mostly agricultural and low density residential development are planned along their common border with Nelson Township (see Map 8, Future Land Use, Adjacent Communities). Solon Township

does have a small area planned for neighborhood scale commercial development near the US-131 exit at Sand Lake.



Nelson Township

Kent County, Michigan

Map 8 Future Land Use Adjacent Communities

Legend	
	Municipal Boundary Surrounding Future Land Use
	Village Boundary
	Roads
	Streams
	Open Water
Land Use	
	Agriculture / Rural - 1 unit or less per acre
	Public
	Low Density Residential - (1-2 units per acre)
	Medium Density Residential (3-7 units per acre)
	High Density Residential (8+ units per acre)
	Commercial

Nelson Township is part of the Grand Valley Metro Council and the West Michigan Regional Planning Commission, whose roles are to plan for transportation improvements programming and to assist local governments with land use planning information.

National trends have shown a recent increase in exurban development, where typical suburban patterns are appearing in areas traditionally considered too far for commuting. Relatively inexpensive costs of transportation, combined with highly competitive land values create appeal for some urban workers to escape from their urban environment.

Regional and economic growth has undoubtedly sprawled at least as far north as Courtland Township already. It is typical that central cities in the Midwest gain little if any population during growth periods, and due to transportation patterns and economic and social stimuli, most population growth occurs in the surrounding townships and villages. Areas at the southern and eastern edges of metropolitan Grand Rapids seem to be absorbing a substantial portion of regional growth; however, Courtland Township has experienced a 47% population increase between 1990 and 2000. As Plainfield Township has grown to more than 31,000 residents, Nelson should expect area suburbs to continue steady migration into at least the southern portions of the area near the City of Cedar Springs.



Land in Michigan is developed 8 times faster on average than the rates of population growth.

It is important to note that in Michigan, the Land Use Leadership Council has determined land in Michigan is developed 8 times faster on average than the rates of population growth.¹⁷ This is often termed “sprawl.”

“If land is being consumed at a faster rate than population growth, then a metropolitan area can be characterized as ‘sprawling.’ If population is growing more rapidly than land is being consumed for urbanization, then a metropolitan area can be characterized as ‘densifying.’”¹⁸

The Brookings Institute Study revealed that most metropolitan areas in the United States are adding urbanized land at a much faster rate than they are adding population. Between 1982 and 1997, the amount of urbanized land in the United States increased by 49%, from approximately 51 million acres in 1982 to approximately 76 million acres in 1997. During this same period, the nation’s population grew by only 17%. This is a rate of land consumption that is about 2.75 times the rate of population growth.

¹⁷ Michigan Land Use Leadership Council, *Michigan’s Land, Michigan’s Future*, 2003

¹⁸ Brookings Institute Center on Urban and Metropolitan Policy, *Who Sprawls Most? How Patterns Differ Across the U.S.*, July 2001.

Consider Nelson's population has been growing at an average rate of 29% per decade, 1.7 times the national rate. Therefore, the effect of sprawl in Nelson is expected to be slightly greater than that of the United States in general. These patterns of development are known to greatly contribute to local traffic congestion, increased auto related CO₂ emissions, and declining air and environmental quality.

However, it is also important to examine current economic trends in the metropolitan region. While national unemployment rates have fallen off in the past two or three year encouraging development in other areas, the Michigan economy continues to struggle. The decline of the state's long-time manufacturing base has become a difficult hurdle for many communities to overcome.

PLANNING IMPLICATIONS

If current trends in population growth and land consumption continue, Nelson will experience excessive rates of sprawl.

Although Nelson has successfully retained its rural character to this point, demand for housing may begin to outpace the demand for agricultural land, and rural preservation will grow increasingly difficult. Most importantly, Nelson should consider small pockets of greater density to satisfy the commercial and housing needs of local residents. Congregating many uses in one area will leave the remainder of the Township with the freedom to preserve its agricultural heritage and natural features while satisfying demand for large-lot residential growth.

Related to this is the impact that additional residential growth can have on the active farmlands. Agriculture is a difficult and economically challenging activity under the best of circumstances. However, as more residential development encroaches on areas of active agriculture, conflicts are inevitable. It is true that the Right to Farm Act protects farmers from being treated as nuisances for the routine activities associated with farming (i.e., dust, noise, sprays, odors, etc.). However, the logistical challenges of farming become even more difficult when farmers must move field equipment along county roads that are increasingly used by commuters. In addition, as the number of active farming operations diminishes, the various support services they need dwindle, as well. These services can cover a broad range of activities, from farm equipment dealers, seed, feed and fertilizer, large animal veterinarians, etc.

CHAPTER 8. GOALS & OBJECTIVES

If a goal is thought of as a desired destination or value statement, objectives may be thought of as key milestones along the way...

The goals statements are the policy foundation for this Master Plan and they define the values and visions the Plan must support and achieve. In order to direct the future growth and development of Nelson Township in a logical and orderly fashion, a series of broad goal statements, each supported by more specific objectives, are laid out below. This plan is founded on the policies outlined in the following statements. They are intentionally general but all are felt to be attainable through concerted effort.

Objectives support goals. If a goal is thought of as a desired destination or value statement, objectives may be thought of as key milestones along the way to reaching the destination or to realizing a valued outcome. They are essentially the key tasks and accomplishments that must be achieved to reach the goal.

GOALS: AGRICULTURE AND OPEN SPACE

Minimize the encroachment of residential, commercial and industrial uses into prime farming areas.

Preserve agricultural land.

Maintain the Township's rural character and open space.

OBJECTIVES

1. Through proper planning and transitional zoning techniques discourage spot zoning and the encroachment of non-farm development into prime farm areas. This includes reviewing model ordinances, etc. for open and agricultural areas developed through the efforts of the North Kent Townships Association and the Water Resources Institute (GVSU).
2. Encourage the use of P.A. 116 of 1974 preservation agreements by area farmers that are consistent with the overall land development needs of the area.
3. Identify areas that are presently zoned for agricultural use which, due to their location and the encroachment of non-farm development, should be planned and zoned for an alternative long range use.

4. Provide in the Nelson Township Zoning Ordinance for a development rights ordinance to allow willing landowners to participate in agricultural preservation programs, such as purchase of development rights.
5. Amend the Zoning District Standards in the Agricultural Zone to discourage non-agricultural development while still permitting development of agricultural related housing and services.
6. Amend the Zoning Ordinance of Nelson Township to create separate zoning districts for agricultural uses and rural estate uses in order to better achieve the Township's goals for agricultural preservation.

GOALS: NATURAL FEATURES AND THE ENVIRONMENT

Conserve Nelson Township's natural resources such as lakes, groundwater, wetlands, the natural drainage network, woodlands, and wildlife habitat.

OBJECTIVES

1. Institute land use plans, policies and regulations intended to avoid air and water quality problems that threaten the health or safety of the community through site plan reviews.
2. Implement zoning related development review tools that encourage land developers to take natural features such as soils, topography, hydrology, and natural vegetation into account in the process of site design.
3. Promote soil conservation and wise use of fertilizers and pesticides.
4. Establish landscape guidelines for new commercial, industrial, and residential developments which will offset the loss of natural vegetation caused by development.
5. Promote recycling programs/centers through public awareness opportunities.
6. Require new developments to add natural amenities like trees.
7. Require evaluation of each potential development site for suitability for wastewater disposal prior to approval of land divisions and other development plans.

8. Identify important natural features in the township and develop a strategy for protecting them.
9. Promote and encourage use of conservation easements as a tool that area landowners can voluntarily use to preserve important natural areas.
10. Identify potential and existing environmental problems in the Township and develop a strategy to address them such as providing sanitary sewer treatment for homes around Pine Lake.
11. Explore additional regulation of sewage, drainage, and transportation issues over and above the requirements of the Health Department, Drain Commissioner, and Road Commission.

GOALS: RESIDENTIAL LAND USE AND HOUSING

Strengthen the stability of existing residential areas and accommodate a variety of housing opportunities to maintain affordability for a wide range of income levels.

OBJECTIVES

1. Encourage the maintenance and preservation of the existing houses through proper zoning, housing code enforcement, and grant applications.
2. Maintain efficient police, fire, and ambulance service throughout the Township.
3. Protect residential areas from commercial and industrial land uses by requiring, open space, landscaping, and buffered thoroughfares and encouraging transitional land uses.
4. New subdivisions should include amenities such as open space, street lighting, sidewalks, bike and foot paths, linkages to commercial centers and parks.
5. Develop policies that encourage variety in housing unit design and appearance, and discourage subdivisions with structures that all look alike.
6. Gateways into new housing developments should maintain the rural character of the community as viewed from the County road system.

7. Provide reasonable opportunity for home-based businesses that do not conflict with single-family residential neighborhoods.
8. Explore specific locations for housing for seniors.
9. Control clustering of housing to preserve the rural appearance of the Township by defining where open spaces should be located
10. Alternatives to single family housing, such as apartments and manufactured housing parks, should be located where utilities can be extended from existing sources.

GOALS: COMMERCIAL DEVELOPMENT

Provide for basic service and shopping needs in a manner that limits commercial strip development to Northland Drive and prevents public road congestion and land use conflicts.

OBJECTIVES

1. Implement regulations that encourage the shared use of commercial driveways and control the number and spacing of driveways, especially along Northland Drive.
2. Implement policies and regulations that promote family oriented neighborhood convenience centers to service future residential development.
3. Work with the local business community to encourage and maintain a desired mix of commercial and service opportunities available to Township residents along Northland Drive.
4. Develop landscaping, sign, and building appearance guidelines or ordinances to promote aesthetics and the vitality of the commercial districts.
5. Develop policies to promote commercial districts along Northland Drive and the U.S. 131 interchange district near the Village of Sand Lake.

GOALS: INDUSTRIAL DEVELOPMENT

Provide for industrial development in industrial park settings.

OBJECTIVES

1. Preserve land for future industrial purposes in areas which provide easy access to major transportation arteries and utility infrastructure such as Northland Drive or US-131.
2. Utilize tax incentives to attract small to medium sized corporations to locate within the Township.
3. Promote high quality industrial development through the use of local site plan review regulations.
4. Develop zoning regulations that separate residential and agricultural areas from industrial areas with appropriate buffer strips, open space or other transitional land uses.
5. Use zoning to discourage incompatible uses from intruding into industrial areas.

GOALS: TRANSPORTATION

Provide for adequate roads that will compliment balanced, orderly growth and ensure convenience and safety for residents and workers.

OBJECTIVES

1. Give priority to improving roads in areas intended to support the highest concentrations of development.
2. Continue to work with Kent County Road Commission to improve and maintain existing roadways and to address traffic controls, speed limits, weight limits, sight restrictions, drainage and ditching.
3. Maintain solid communication with Kent County Road Commission personnel to promote road improvement policies consistent with goals of the Township.
4. Provide for improved pedestrian and bicycle safety along County Roads, particularly between population centers and recreational facilities.

5. Review the private road ordinance for fairness to property owners without deferring costs and responsibilities to the Township and the Taxpayers.
6. Review the Township for suitability of alternate modes of transportation.
7. Explore the designation of truck routes in Nelson Township.

GOALS: COMMUNITY FACILITIES

Achieve a high level of public safety and public services.

OBJECTIVES

1. Expand community facilities to match a standard ratio relating to the size of the Township's population as needed.
2. Provide street lighting in identified residential areas and at key street intersections where necessary.
3. Provide public water and sewer services through cooperative efforts with Cedar Springs and Sand Lake to areas suitable for development of land uses that require these services.
4. Explore provision of a community wastewater treatment system around Pine Lake and requiring similar systems for new development around other lakes in the Township.
5. Continue cooperative relationships with Kent County and adjacent communities to plan for and provide needed community facilities.
6. Explore the advantages of providing community garbage collection and curbside recycling.

GOALS: PARKS AND RECREATION

To coordinate/provide recreation facilities and activities to meet the needs of existing and future residents in a cooperative effort with neighboring municipalities, public schools and other government service providers.

OBJECTIVES

1. Acquire land areas for development of future parks - including open spaces for active play and preserves along the lakes for recreation.
2. Promote consistency with the goals and objectives established by the Cedar Springs Area Parks and Recreation Board.
3. Develop neighborhood park facilities to provide economical and convenient recreation opportunities.
4. Work with developers to set aside land for parks and obtain easements for pedestrian/bicycle paths.
5. Work with Kent County to assist in the development of staging areas for, and paving and maintenance of, the White Pine Trail and similar trails that may pass through the Township in the future.
6. Investigate community needs for recreational and pedestrian amenities that take advantage of existing facilities or meet directly identifiable community needs.
7. Investigate the feasibility of providing a pedestrian connection between the White Pine Trail and the Heartland Trail in nearby Greenville.
8. Continue cooperative relationships with Kent County and adjacent communities to plan for and provide needed community facilities.

GOALS: COOPERATIVE PLANNING WITH THE VILLAGE, CITY AND ADJACENT COMMUNITIES

Develop and maintain cooperative relationships with the City, Village, County, adjacent Townships, and other government service providers.

OBJECTIVES

1. Create a consistent means of communicating with the Village of Sand Lake and the City of Cedar Springs Council and their Planning Commissions.
2. Coordinate consistent and compatible land use decisions along the Village/City/Township borders

CHAPTER 9. FUTURE LAND USE PLAN

The Master Plan is a compilation of descriptions and justification for land use in Nelson Township.

Nelson Township Master Plan establishes general patterns of land use to guide growth and development for the next twenty to twenty-five years. The over-arching intent is to foster efficient patterns of development that preserve the community's important natural features and rural character while accommodating growth anticipated to reach about 1,261 additional housing units by the year 2030. To this end, this Plan attempts to concentrate growth in a target area of the Township. This Land Use Plan seeks to promote efficient and aesthetic growth within this area while promoting the preservation of open lands, farmlands and the rural character of the community outside of this area.

The Land Use Plan is a compilation of descriptions and justification for future land use in Nelson Township. It serves as an overall framework for the management and regulation of future development and also serves as the basis for evaluating requests for rezoning and subdivision of land. Because of the constant change in our social and economic structure and activities, the Plan must be maintained through periodic review and revision so that it continues to reflect contemporary trends while maintaining long-range goals.

The Land Use Plan is general in scope by design. It is not, in most cases, intended to establish precise boundaries of land use or exact locations of future uses. It is also important to note that there is no schedule to implement the recommendations contained here. The timing of a particular land use is dependent upon a number of factors such as availability of public utilities, provisions for adequate roadways and pedestrian ways, effect on public services and the demand for a particular land use versus the lands available and zoned use. Those and other factors must be considered when reviewing a request for rezoning a particular parcel of land.

By encouraging development within the growth area, it should be possible for the Township to continue to protect and preserve significant tracts of important natural features and to promote high quality residential development in a form that complements those features. The following describes each of the future land use designations as illustrated on attached Future Land Use Map.

PLAN ASSUMPTIONS

The analysis of the Township's physical, social and economic makeup (the Community Profile) and the Goals and Objectives outlined in Chapter 8 have allowed the formulation of broad assumptions that can be used in the development of the Future Land Use Plan. These include:

1. The majority of the Township has a rural flavor as it is identified with scattered homes on large parcels with a balance of larger tracts of farmlands, fields, and open areas.
2. The Township is characterized as a bedroom community where most residents travel outside of its boundaries to reach an employment sector.
3. Major access to the Township is via Northland Drive or US-131 into either the Village of Sand Lake or the City of Cedar Springs, with 18 Mile Road being the major east-west thoroughfare in Nelson Township.
4. Nelson Township is located in a highly desirable country setting and within reasonable commuting distances to major employment centers. It is expected that the Township will continue to witness residential development pressure.
5. The area around Pine Lake is a prime residential spot in Nelson Township, but this leads to the need for better treatment of household wastewater for homes near the Lake.
6. The topographic variation in the Township contributes visual interest and privacy and by itself is an important natural feature.
7. While active farmlands exist throughout the Township, the largest acreage concentration of agriculture is present in the northeast portion of the Township (east of Myers Lake Road and north of 17 Mile Road). According to the Kent County Soil Survey, several areas are considered to have "prime farmland soils" in the Township. (It is important to note that these prime farmland soils relate only to local conditions).
8. Soils. According to the Kent County Soils Survey, in general, a majority of the soils in Nelson Township present development challenges with regard to septic systems but each site needs to be evaluated on its own merit since there are many examples of approved on-site systems in the Township.
9. Balanced Character. In Nelson Township, a major challenge is to find balance and harmony in protecting the farmer who still wants to farm and directing growth in appropriate areas while still

The largest acreage concentration of agriculture is present in the northeast portion of the Township

As the Township continues to grow, a network of pedestrian corridors may be considered.

maintaining the rural character of the Township. Non-farm development should be discouraged from infringing on those portions of the Township characterized by productive farmlands.

10. Land Uses. Residential development is the predominate land use in the Township, comprising 85% of total property value and 53% of assessed/classified acreage. A disproportionate reliance on residential land uses may ultimately result in a need for a greater local tax effort to meet service demands.
11. The population is expected to increase over the next two decades by over fifty percent of the current population size.
12. Self-sufficiency is a value very important to the residents of Nelson Township. Every effort should be made to allow home-based businesses in locations appropriate to the character of the individual use and that respect the rights of neighbors.
13. As the Township continues to grow, a network of pedestrian corridors may be considered.
14. Ground and surface water is a valuable Township resource and provides the majority of residents with their drinking water source. These resources need to be protected.

CONSERVATION RESERVE (CR)

A primary purpose of the Conservation Reserve district is to designate areas of the township that have been identified as very important to defining its natural and rural character

The Conservation Reserve land use category is hereby established to help identify important natural features in the Township, such as lakes and streams, encompass large tracts of wetland areas, recognize the existence of areas that have been dedicated to conservation uses, or are areas preserved by virtue of their use as permanent open space. As depicted on the Future Land Use Map, the implementation of this designation should occur through the adoption of an overlay district on the Township Zoning Map. In a zoning overlay district, the provisions of the underlying zoning district are supplemented by the provisions of the overlay intended to meet certain public objectives. In this instance, the purpose of this overlay district would be to protect lakes, streams, wetlands and other natural features that are critical to the environmental health and rural character of the Township.

This category identifies natural features that should be protected, such as lake and stream banks. It also reflects areas that have environmental constraints, such as wetlands, muck soils, and steep slopes. In addition, land currently preserved as open spaces for various reasons is identified by this designation.

A primary purpose of this category is to designate areas of the township that have been identified as very important to defining its natural and rural character. Included in these areas are lands adjacent to Cedar and Duke Creeks, as identified in the *Rogue River Natural River Plan* (revised 2002), which prescribes special zoning standards for land within 300 feet of the stream bank. These standards are presently encoded in the Township Zoning Ordinance as the Natural River Overlay zoning district. In addition, lands adjacent to other natural bodies of water in the Township have been identified through the master planning process as areas that may be suitable for similar zoning standards.

The Conservation Reserve category is also used to identify areas considered to have extreme environmental limitations as identified by the United States Department of Agriculture (USDA) Soil Survey of Kent County. These areas exhibit severe limitations on development due to periodic flooding, ponding, slopes in excess of 15 percent, and/or poor load bearing properties of soils. It is intended that development be regulated through permitted uses as defined in the zoning ordinance and site plan review standards specifically for this district.

A large portion of the northeast area of the township is included in this category because of the high occurrence of wetlands and poorly drained soils as identified by the Soil Survey of Kent County.

Over time, as public utilities become available, some low impact development such as single family residential may be permitted in these areas contingent upon the ability to connect to public water and sewer or other engineered sewage systems.

There should be no set residential density for this district. Rather, density should be determined on a case-by-case basis that excludes development of wetlands, important woodlands, and sensitive soils, such as steep slopes, or areas that cannot accommodate suitable wastewater treatment systems.

The overall goal of this land use designation is to protect sensitive natural resources which contribute significantly to the Township's natural and rural character, such as water bodies, vulnerable soils, and to preserve woodlands and wetlands which are essential for water retention, water purification and ground water recharge and which have important wildlife habitat, aesthetic and scenic value.

AGRICULTURAL DISTRICT (AG)

Maintaining the tradition of agriculture is of high priority, and preserving large and contiguous tracts of productive land is essential to that goal.

This land use category is intended to accommodate farming and agricultural support services and also recognize the desire by homeowners for a rural environment relatively close to urban amenities. Overall residential densities should remain low, but minimum lot sizes, as implemented through the Zoning Ordinance, should remain relatively small (currently two acres) so large tracts are not taken out of agricultural production just to meet the lot size requirements of the Zoning Ordinance. The minimum recommended lot sizes will provide adequate area for septic system placement. Agricultural activities are encouraged as the primary land use. Maintaining the tradition of agriculture is of high priority, and preserving large and contiguous tracts of productive land is essential to that goal.

The most important factors informing the decision to designate particular parcels of land as Agriculture are (1) the classification as agricultural preservation areas in the Grand Valley Metropolitan Council (GVMC) Metropolitan Framework Plan. These areas were identified using both local knowledge and information related to the quality of the soils. (2) The Agricultural District is characterized by large contiguous tracts of land and this creates the opportunity for greater economies of scale in agricultural production, as well as for the suppliers of agricultural goods and services.

One very important step toward the preservation of this land use designation as an agricultural area is for the Township to participate in the County Purchase of Development Rights program to receive State and Federal funding. This will allow the purchase of the development rights of private property owners via funds collected through grants, donations, bonds, special assessments, or general appropriations. Likewise, landowners will have the option to sell their development rights (calculated as the difference between the agricultural value of the land and the fair market value) to a public entity. Under part 362 of PA 451 (1994), this ensures the land will be preserved for agricultural use and open space, while, in exchange, landowners may continue to farm their own land, rent the land to another farmer, or sell the land for the remaining agricultural value.

A small area of land on the southern end of the Township is also categorized as Agriculture. While this area is not part of the larger contiguous agricultural category in this plan, property owners in the area have expressed a desire to preserving farming activities in the area. Furthermore, there remains a significant portion of

agriculture use to the south in Courtland Township which may help to sustain agricultural use in this area of Nelson Township.

The AG district provides the opportunity for voluntary participation of farmland owners in state and local agricultural preservation programs, such as purchase of development rights.

This land use category also is intended to encourage the preservation of wetlands, woodlands, and open spaces which are useful as water retention and ground water recharge areas, provide valuable habitat for wildlife, and have important aesthetic and scenic values.

Other methods to help achieve the goals of farmland and natural areas preservation will apply to land in this district. Township policies will be considered that discourage the conversion of prime farmland into non-agricultural uses. To promote a very low density development pattern, cluster development forms will be discouraged, PUDs will be prohibited and new roads shall be County-maintained.

A secondary function of this category is to serve as a long range holding area for lands that might ultimately be considered for more intensive development when other areas become fully developed.

The characteristics utilized in establishing the general boundaries and extent of the Agricultural district include relatively long distances from existing utilities and urban amenities, areas with soils that are generally unsuitable to support intensive development due to severe topography or septic system limitation, and areas considered suitable for long term investment for farming due to little land fragmentation.

In summary, the primary objectives of this land use classification are:

- ◆ To permit the owners of valuable farm land to qualify for programs designed to preserve farmland as the predominant use in this part of Nelson Township.
- ◆ To accommodate a wide variety of non-farm uses that require large land areas.
- ◆ To accommodate rural estate types of residential development at a density that will not interfere with agricultural operations, maintain the overall rural character of the Township, and not over-extend the capabilities of the natural soil conditions and rural roadways.
- ◆ To preserve woodlands and wetlands which are essential as water retention, water purification and ground water recharge

and which have important wildlife habitat, aesthetic and scenic value.

- ◆ To provide a "land bank" for areas of land that could be allowed to develop more intensively when the Township determines that more intensive structural development is appropriate and when the necessary public facilities and infrastructure is in place to support it.

SINGLE FAMILY RESIDENTIAL - LOW DENSITY (SFR-L)

This land use category recognizes existing single-family platted subdivisions and makes provisions for new residential lot sizes greater than two acres. This land use category is intended to preserve and promote single-family dwellings as the predominant land use. Single Family Residential-Low Density neighborhoods should be located close to schools, parks, places of worship, and recreational uses.

To promote a very low density development pattern, cluster development forms will be discouraged, PUDs will be prohibited and new roads shall be County-maintained.

RESIDENTIAL - MEDIUM DENSITY (R-M)

This land use category recognizes existing single family platted subdivisions and makes provisions for new multi-family residential development with lot sizes less than two acres. This category represents the areas in which a higher density of residential exists, as areas within close proximity to existing residential development at similar densities, and areas where transition of land uses are identified as desirable by the Master Plan.

The R-M category is located in areas that may eventually accommodate higher density housing alternatives for which a need has been identified in the township, such as duplexes, apartment buildings, PUDs, adult foster homes and senior housing.

It is recommended that the rezoning of lands identified on the Land Use Plan for R-M only be allowed when public utilities can be extended from Cedar Springs or Sand Lake. Provision of on-site water and sewer facilities should be considered the option of last resort, and then only after careful evaluation of specific soil conditions shows that soils are capable of supporting the proposed development.

Therefore, the boundaries of the SFR-L and R-M residential districts are intended to represent the ultimate extent of the land use category within the planning period. To avoid leapfrog development, it is recommended that the rezoning of additional land to the low or medium density designations be done incrementally within the planning period based upon the need and availability of land within this category. It is envisioned that some of the land in these categories will therefore be designated Rural Estate or Agricultural for an indefinite period of time, until such time that it is desirable to create additional Low or Medium Density Residential lands.

COMMERCIAL SERVICE (C)

The R-M category is located in areas that may eventually accommodate higher density housing alternatives for which a need has been identified in the township.

The Plan proposes commercial development within this category to serve the neighborhood shopping needs of Township residents, the general employment and service needs of the community, and to a lesser extent, the needs of through vehicular traffic. This district should accommodate a wide variety of services at a scale to serve the community and not regional markets. Examples of these uses could include grocery stores, service-oriented businesses, medical offices, restaurants and may also include mixed-use commercial/residential structures.

This district could also provide a location for combined office and warehouse space for contractor's showrooms and equipment, packaging, light industrial, manufacturing and may serve as an alternative for smaller contractors that have successfully outgrown the classification of a home based business.

The scale and site design characteristics of individual uses in this district should be carefully considered when developing zoning and other development regulations that will apply to this corridor.

The primary area suggested for this community oriented commercial is located along Northland Drive when and where proper utilities can be provided.

Where proper utilities become available, the commercial district should provide for transition of land uses, such as office or medium density residential, in order to separate its impact from rural estate and agricultural land uses.

Because this corridor is adjacent the Fred Meijer White Pine Trail (a State Park), consideration of this important community facility should be given in the design of any commercial activity along Northland Drive.

INTERCHANGE/MIXED USE

The intent of Interchange/Freeway Mixed Use District is to provide areas for those high density residential, commercial businesses and services, and industrial services as well as other types of businesses that are not generally compatible with neighborhood scale retail shopping and service establishments. These facilities typically have large land and accessibility needs. Uses such as car and R.V. dealers, apartment buildings, office parks, auto repair shops, lumber yards and similar uses are included in this category. Buffer zones and greenspace areas typically accompany these types of uses.

The primary areas suggested for this mixed use district includes area adjacent to the US-131 freeway interchange.

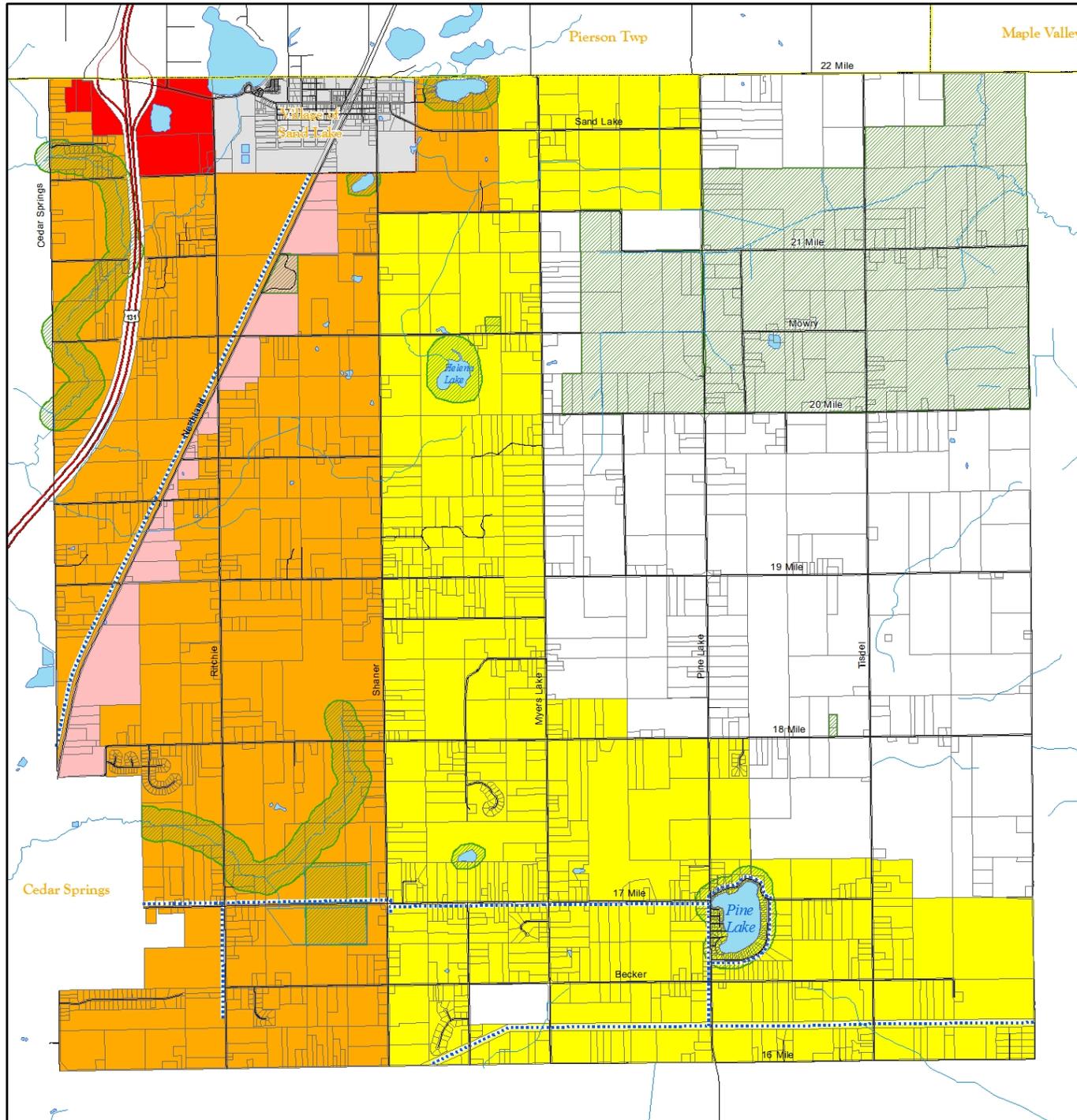
The primary areas suggested for this mixed-use district includes area adjacent to the US-131 freeway interchange

For all new high intensity development within the Township, specific site criteria are needed to assure that sufficient setback, landscaping, parking, drainage, driveway location, lighting, buffer, and sign controls are provided. Unless careful site planning and access controls are instituted, even a limited number of additional commercial establishments at a specific location within the Township could lead to traffic problems along adjoining roads. It is therefore recommended that together with stringent site plan and access standards, the rezoning of land for commercial purposes be done incrementally to help assure that development is not done prematurely or haphazardly.

Nelson Township

Kent County, Michigan

Map 9 Future Land Use



Legend

- Streams
- Village Boundary
- Trails - Recommended Option
- Future Land Use**
- Conservation Reserve
- Agriculture
- Single Family - Low Density
- Residential - Medium Density
- Commercial
- Interchange

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CHAPTER 10. IMPLEMENTATION STRATEGIES

The following strategies are established to implement the goals and objectives and land use recommendations of this Plan. It is recognized that many strategies will be long-term in nature and that many entities in addition to Nelson Township will need to cooperate in order to fully implement this Plan. In many instances, the Township's role is that of facilitator for some of the strategies listed in this Chapter. In addition, the implementation of these strategies will be subject to the on-going operational priorities of the Township and must, therefore, compete for fiscal resources with the other important functions of the community. Thus, implementation of these strategies will proceed as resources are made available.

This Chapter presents the action strategies for the Master Plan. Each strategy is numbered sequentially and in a generalized order of priority. The relevant Goals and Objectives statements are identified by their outline designation from Chapter 8. In many instances, a strategy will relate directly to more than one objective statement. A general description of each strategy is provided along with a suggestion of the roles and responsibilities of one or more agencies in carrying it out.

1. **ENABLE LOCAL FARMERS TO QUALIFY FOR PARTICIPATION IN PURCHASE OF DEVELOPMENT RIGHTS (PDR) PROGRAMS.**

Description. Under Acts 569, 570, and 571, the State of Michigan has now established a Purchase of Development Rights (PDR) program that enables farmers to realize the value of their lands for development purposes without taking that land out of production. However, in order to qualify for participation in these programs, farmers need to be located in a community that provides the proper support policies, including planning for the preservation of farmland in large tracts suitable to qualify for these programs. In addition, it is possible for the local units of government to expand the program by supplementing the appropriation for local PDR applications. A program for screening applications for the PDR program must be developed and keyed to the identification of farmlands for preservation. Development rights should be valued based on the current development potential of the lands.

Responsibilities. Nelson Township can take steps to develop its own development rights ordinance, and seek sources of funding to

implement it. Since funding is likely to be limited, a predictable and systematic approach for processing PDR applications should be developed. This may be done in-house or through the services of private consultants.

Related Goals and Objectives. This strategy supports this Plan's Goals for Agriculture and Open Space, Objectives Four and Five.

2. **AMEND TOWNSHIP DEVELOPMENT ORDINANCES TO ENCOURAGE PRESERVATION OF PRIME AGRICULTURAL LAND.**

Description. By reviewing the zoning, land division, and subdivision ordinances, Nelson Township can develop implementation policies that preserve prime agricultural land. These amendments may include larger lot width requirements for land fronting primary roadways, changing the qualifying conditions and standards for use of open space planned unit development options, and revising standards for construction of roads in prime agricultural areas.

This strategy may also include development and adoption of a Development Rights Ordinance that specifically enables Nelson Township to adopt and implement a Purchase of Development Rights program.

Responsibilities. The Planning Commission will develop recommendations for changes to the current zoning standards for lot frontages on primary roads, land division policies in the agricultural/rural estate district, and standards for planned developments and roads that differ from other future land use categories for consideration by the Township Board. The Planning Commission will also further investigate, and make recommendations to the Board, regarding development of a purchase of development rights program.

Related Goals and Objectives. This strategy supports this Plan's Goals for Agriculture and Open Space, Objectives Six and Seven.

3. **IDENTIFY IMPORTANT NATURAL FEATURES THAT CAN BE PRESERVED THROUGH ZONING AND DEVELOPMENT POLICIES.**

Description. Develop an inventory of important natural features in Nelson Township. This Natural Features Inventory could take several levels of detail, depending on the Township's commitment to

funding. One method is to use sources of existing information similar to those found in the Community Profile of this Master Plan. Another, and more supportable method, is development of a detailed natural features inventory with the assistance of a natural sciences consultant. This inventory could also be used to more clearly define areas of the township suitable for the Conservation Overlay shown on the Future Land Use Map.

Responsibilities. The Planning Commission should seek financial support from community groups and the Township Board to fund a natural feature inventory.

Related Goals and Objectives. This strategy supports this Plan's Goal for Natural Features and the Environment, Objectives One, Two, and Eight.

4. **AMEND THE ZONING ORDINANCE TO PRESERVE IMPORTANT FEATURES OF THE NATURAL ENVIRONMENT.**

The Planning Commission should develop recommendations for new zoning, land division, and subdivision tools.

Description. With or without completion of a natural features inventory, develop zoning, land division, and subdivision tools to preserve important natural features on a case-by-case basis. These policies include requiring evaluation of each development proposal for important natural features and providing incentives for preservation of identifiable natural features.

Responsibilities. The Planning Commission should develop recommendations for new zoning, land division, and subdivision tools for consideration by the Township Board.

Related Goals and Objectives. This strategy supports the Plan's Goal for Natural Features and the Environment, Objectives One, Two, and Eleven.

5. **DEVELOP A PLAN FOR PROVIDING CENTRALIZED WASTEWATER COLLECTION AND TREATMENT FOR HOMES AROUND PINE LAKE.**

Description. Existing residential development around Pine Lake impacts the quality of the water in the lake, especially as these homes are converted from seasonal to year-round use. Development of a plan for providing an alternative to individual septic systems for these homes has been identified by the community as important for preserving the water quality of Pine Lake. Methods that may be considered include public funding through a special assessment

process for construction of collection and treatment infrastructure, and seeking of state or federal funding, or a combination of these two strategies.

Responsibilities. Through development of public support for such an effort, the Planning Commission and Community Groups can encourage the Township Board to investigate these alternatives and develop a timetable for implementation of a collective sewage collection and treatment system.

Related Goals and Objectives. This strategy supports this Plan's Goals for Natural Features and the Environment, Objective One, Ten, and Eleven. In addition, it supports the Plan's Goals for Community Facilities, Objective Four.

6. PRESERVE NELSON TOWNSHIP'S RURAL CHARACTER THROUGH DEVELOPMENT POLICIES.

An important element of the quality of life in Nelson Township is the rural character...

Description. An important element of the quality of life in Nelson Township is the rural character of the outlying areas. This rural character includes rural estate living and viewsheds that include rolling hillsides, woodlands, wetlands, and agriculture. This strategy will include development of zoning, land division, and subdivision standards that set back development from rural roadways, preserve large tracts of important natural features, and encourage the viability (and thus preservation) of agricultural operations.

Responsibilities. The Planning Commission will refine existing development standards in the Township's Zoning and Land Division ordinances, and develop a subdivision ordinance that also encourages these values for consideration and adoption by the Township Board. These standards will address issues such as landscaping guidelines for new development, clustering of housing units, setbacks from rural roadways, and development of standards over and above the requirements of the Health Department, Drain Commissioner, and Road Commission.

Related Goals and Objectives. This strategy supports this Plan's Goals for Agriculture and Open Space, Natural Features and the Environment, and Residential Land Use and Housing.

7. DEVELOP NON-MOTORIZED CONNECTIONS

Description. The public participation process used to develop this master plan has identified several needs in the Township for non-motorized transportation. These include taking advantage of the

Fred Meijer White Pine Trail, providing safe pedestrian access for children to public parks east of Cedar Springs, the ability to walk to and from the Pine Lake area, the potential for horseback riding in agricultural areas, and the potential for trail connections to future facilities in adjacent communities. General locations for some of these facilities are identified on the Future Land Use Map. All will require further study, development of public input and interagency cooperation, and prioritization before a definite implementation plan for each can be developed.

Responsibilities. The Planning Commission, with the support of interested community organizations and the Township Board, should develop policies that encourage the development of these non-motorized facilities. The Township Board should develop relationships with the Road Commission to allow implementation of these facilities as the opportunity arises in the future. In addition, the Township staff will seek cooperative relationships with state agencies to become aware when opportunities to be included in projects initiated by other government agencies arise.

Related Goals and Objectives. This strategy supports this Plan's Goals for Transportation and Parks and Recreation.

8. **DEVELOP A TRANSPORTATION THOROUGHFARE PLAN THAT INCLUDES MANAGEMENT OF ACCESS TO PRIMARY ROADWAYS**

Description. The generalized transportation pattern in the Township has been established. However, as time passes, some roadways originally designed for a particular use may evolve into another. To address this issue, the Township should develop a transportation thoroughfare plan that is consistent with this Master Plan and reinforces its goals and objectives. The Thoroughfare Plan should include a road hierarchy, recommended right-of-way widths, truck routes, access controls, increased setbacks along primary roadways, clear vision and sight distance standards, the non-motorized transportation system and consideration of a capital improvements plan for improving roads.

Responsibilities. This strategy must be implemented cooperatively by the Township and the County Road Commission. It will be necessary to strengthen mutual understanding between the two and to develop a plan that addresses the objectives of both. A sub-committee of the Planning Commission, working with Township Staff and the Road Commission should develop the Thoroughfare Plan.

The Thoroughfare Plan should include access controls and increased setbacks along primary roadways....

Related Goals and Objectives. This strategy supports Nelson Township's Goals for Transportation.

9. **DEVELOP A POLICY FOR COORDINATION OF PUBLIC UTILITIES, INFRASTRUCTURE, AND ZONING TO ADDRESS NEEDS FOR DEVELOPMENT OF COMMERCIAL, INDUSTRIAL, HIGHWAY SERVICE, AND MEDIUM DENSITY RESIDENTIAL DISTRICTS**

Development of clear policies for construction and/or extension of public utilities is important.

Description. Ultimately, development of the US-131 interchange, much of Northland Drive, and areas that may become medium density residential, will depend on provision of water, sewer, drainage, and transportation infrastructure. Nelson Township currently does not provide water or sewer services, and does very little to manage roadway access. Provision of these services in the future will likely be provided by a hodge-podge of individual development projects or dependant on cooperation with neighboring local governments that provide these services. Development of clear policies for construction and/or extension of public utilities is an important tool for the township to control its own growth and development.

Responsibilities. The Planning Commission should work in cooperation with the Township Board to develop policies for extension of utilities from adjacent communities.

Related Goals and Objectives. This strategy is supported by goals for residential land use and housing, commercial and industrial development, and development of cooperative planning with the Village, City, and adjacent communities.

10. **CONTINUE TO COMMIT LOCAL RESOURCES FOR IMPLEMENTATION OF THE MASTER PLAN, DEVELOPMENT, AND ENFORCEMENT OF TOWNSHIP ORDINANCES**

Description. Currently, Nelson Township commits significant resources to develop and implement its current Master Plan and Zoning Ordinance. These resources include development of this very document, provision for a Planning Commission and Zoning Board of Appeals, employment of a Zoning Enforcement Officer, and retention of planning and legal professionals on an as needed basis.

These are all important elements of implementing a Master Plan, and continued support for these efforts is essential. In addition, as

Nelson Township grows and is sought out by new and more sophisticated land development interests, the need for resources to effectively conduct these functions will increase.

Responsibilities. The Planning Commission should seek input with the Township Board in the annual budget development process in order to request the resources it believes are necessary to implement the Township's Master Plan. As part of this input, the Planning Commission should prioritize these implementation strategies and request funding, if necessary, to complete the highest priority strategies. The Planning Commission should request funding of lower priority strategies in subsequent budget cycles.

Related Goals and Objectives. This strategy is supported by all of the goals and objectives of this Master Plan.

11. BROADEN COOPERATIVE RELATIONSHIPS WITH OTHER UNITS OF GOVERNMENT

Description. In addition to developing relationships with the Village of Sand Lake and the City of Cedar Springs, the implementation of the Master Plan is dependent upon good working relationships with Special Purpose, County and State agencies. These include, but are not limited to, the Cedar Springs and Tri-County Schools, the Kent County Health Department, Drain Commissioner, and Road Commission, and the Michigan Departments of Environmental Quality, Natural Resources, and Transportation. All of these organizations make decisions that impact the growth and development of Nelson Township.

All of these organizations make decisions that impact the growth and development of Nelson Township

Specific examples include development of a stormwater management plan with the Drain Commissioner (a work in progress); cooperation with the Kent County Parks district on development and maintenance of park facilities; working with MDNR, MDOT and the Kent County Road Commission for development of non-motorized facilities like walking paths, horse trails, and sidewalks; and cooperation with the Kent County Health Department for development of township level restrictions on the location of engineered wastewater treatment and disposal facilities.

Responsibilities. Township administrative staff will maintain a list of contacts with each agency, a task that requires constant effort, as personnel in these agencies can frequently change. The advantages of maintaining good communication with these agencies is important to keep the Township informed of opportunities for funding, coordination so the Township can take advantage of opportunities for input into projects implemented by these agencies,

and so these agencies do not develop plans that are contrary to Township development policies.

In addition, as the Planning Commission and Board address these implementation strategies, cooperation with the appropriate government agencies is imperative for development of effective implementation tools.

Related Goals and Objectives. This strategy supports all of this Plan's Goals.

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