

# KINROSS CHARTER TOWNSHIP

## COMPREHENSIVE PLAN

Adopted July 24, 1997

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Appendix A

# ENVIRONMENTAL FEATURES

## GEOLOGY & TOPOGRAPHY

During the Paleozoic era of geological history, Chippewa County and the state as a whole was invaded by successive warm, shallow seas during which times large amounts of sediment were deposited. These deposits were subsequently lithified to form bedrock. Kinross

Charter Township sits upon bedrock formed during the Ordovician period of geological history in Michigan. The bedrock is composed of black and gray shales, gray and brown dolomite, and limestone varying in color from grays and browns to blues and whites. There are no bedrock outcroppings within the Township. The Ice Age brought four successive continental glaciers across the Great Lakes area. As these ice sheets moved southward from Canada, they scoured and abraded the surface of the land leaving behind deeper valleys and more rounded hilltops. The advancing glaciers carried large quantities of rock materials scraped and gorged from the land's surface. These materials were then deposited during the melting of the ice to form the drift materials covering the bedrock below. Depth of the drift to the bedrock below typically approaches 200 feet or more throughout the Township.

The Township's surface elevations vary and generally fall as one moves eastward. The far western third of the Township includes the highest elevations in the Township typically ranging from approximately 720 feet above sea level to 907 feet above sea level. The central area of the Township reflects less topographic relief, typically ranging from 695 feet to 805 feet above sea level. The Township's eastern third ranges in elevation from approximately 652 feet above sea level to 805 feet above sea level. The lowest areas of the Township are generally situated around Eagle Lake, Waiska River, and Hutton Creek, in the Township's north central area, where elevations approach 650 feet above sea level. The highest elevations in the Township are generally situated in the Township's northwestern area, north of Arbutus Lake, where elevations approach 910 feet above sea level.

Though there is as much as 250 feet in total topographic relief between the Township's highest and lowest points, the Township as a whole is nearly level. The vast majority of the Township reflects grades of less than 2% and many portions of the Township could be described as flat. The abundance of wetlands in the Township's central and western portions reflects this topographic condition. The Township's eastern third reflects a heightened degree of varying grades although it can still be generally described as primarily level. However, there do exist portions of the urbanized Kinross area which exhibit grades approaching 5% or more, including the elevation drop east of the Chippewa County Industrial Park and M-80, extending to Kinross Lake, and areas to the north and west of the Woodside housing area. Those areas which present grades approaching 10% or more are very limited in number, area and elevation difference, and are often associated with water courses and plateau areas.

Grades approaching 10% or more can present particular challenges for larger scale developments. Development upon sloped areas can lead to excessive soil erosion, sedimentation of water courses and heightened construction costs, and often result in heightened alteration of the natural landscape. It is generally recommended that development be strongly discouraged where grades approach 15% or more (Figures A-1 and A-2).

## **DRAINAGE & WATER COURSES**

Nearly the entire eastern half of the Kinross Charter Township drains into the Waiska River which flows northward and eventually empties into Waiska Bay, west of Sault Ste. Marie at Brimley. The south and west branches of the Waiska River originate in the north central regions of the Township. A small portion of the Township's eastern half, including parts of Kinross and lands generally lying south of Thompson and M-80s, drain into the Munuscong River which empties into Munuscong Lake, several miles south of Barbeau in the St. Mary's

River between Lake Huron and Lake Superior. The Munuscong River originates in Kinross Charter Township in the area where I-75 enters the Township along its southern boundary, and travels two miles south before entering Rudyard Township.

Most of the western half of the Township drains into Pine River which eventually drains into Lake Huron at St. Martin Bay. The north branch of the Pine River originates in the Township's western third and travels approximately seven miles in a southeastern direction before entering Rudyard Township. Portions of the Township's far western end drain into the east branch of the Tahquamenon River which connects with the principal channel of the Tahquamenon River and empties into Whitefish Bay six miles south of Paradise. The east branch of the Tahquamenon River originates in the far northwest corner of the Township.

There are numerous creeks and other tributaries which collect runoff and feed into the Township's primary drainage courses noted above.

There are also numerous water bodies throughout the Township. The Township includes nine lakes in excess of 10 acres in size, the largest being the west portion of Betchler Lake (approximately 40 acres) in the far west portion of the Township near Dick Road. All of the Township's natural lakes are generally situated in the Township's eastern third and far western limits. Due to their proximity to Kinross, the most familiar of the lakes to the residents of the Township are Kinross Lake (approximately 33 acres) and Dukes Lake (approximately 9 acres). In addition to these natural lakes, the Township is characterized by approximately 15 unnamed and artificially created water bodies established through impoundments. The largest, approximately 6,000 feet in length and covering more than 125 acres, is situated along Sylvester Creek in the heart of the Township. The vast majority of the Township's large and small water bodies are contained within the Hiawatha National Forest and Lake Superior State Forest and as such, access to these resources is limited.

Kinross Charter Township is characterized by extensive wetland areas which play a key role in facilitating runoff drainage, in addition to their critical roles in ground water recharge and wildlife habitats. The largest single wetland area in the Township covers approximately eight square miles and is centrally located within the Township.

Lands abutting or in close proximity to drainage courses, including streams, ponds, and lakes, are subject to flood conditions where the drainage courses do not have the capacity to accommodate the rate of runoff from a single rainfall or numerous rainfalls over a relatively short period of time. Historically, flooding of any large scale significance has not occurred in Kinross Charter Township. This is due in large part to the comparatively limited development within the Township, storm water management facilities in the former KAFB area, and the existence of the township-wide network of drainage courses and wetlands to carry store runoff, and the fact that many of the water courses originate in the Township, making it a headwaters area (initial waters collection point for area drainage courses) where comparatively limited amounts of runoff need to be accommodated as opposed to larger drainage areas further downstream. The lakes and water courses of Kinross Charter Township are particularly vital to limiting flood conditions due to the high water tables throughout much of the Township and the resulting obstacles toward absorption of falling rain and melting snow.

No studies have been done at this time to identify areas of the Township which may be susceptible to flooding brought on by particularly intense rainfalls. It should be noted that though Kinross Charter Township may be relatively free of threats of flooding, improperly

managed land development practices within the Township, as within any community, can impact flood conditions both in the Township and in communities downstream.

## GROUND WATER

As runoff flows across land surfaces and travels through drainage courses, a portion of the runoff seeps into the ground and collects in great quantities within the underlying soils and deeper bedrock. These reservoirs of water are referred to as aquifers and serve as the source of drinking water for all residents of Kinross Charter Township. Aquifers can be “*confined*” or “*unconfined*” systems. Confined systems have an impermeable soil layer (typically clay) above them which acts to confine the aquifer and protect the aquifer from contaminants seeping into the soil from above the confining soil layer, including petroleum products, fertilizers, and household liquids improperly disposed of. Unconfined systems do not have this protective confining layer and, as such, are much more prone to contamination. Ground water in Kinross Charter Township is generally considered to be of very good quality although there does exist certain contamination problems in limited areas of the Township previously associated with the KAFB. Ground water capacity is generally plentiful in the Township. Though the quality of groundwater in the Township is generally considered to be good, the Township’s groundwater resources are particularly vulnerable to contamination since: 1) the groundwater is largely found in unconfined systems, thereby lacking a protective clay cover; 2) groundwater levels are comparatively close to the surface of the ground throughout much of the Township, thereby decreasing the proximity to above ground and subsurface contaminants; and 3) the coarser soil character throughout much of the Township is highly permeable, facilitating the movement of contaminants to subsurface areas.

To better assure reliable sources of potable water, the Chippewa County Health Department generally requires that all wells extend beyond the first confining clay layer where such a layer exists. Recent well studies by the Department show that of the 171 wells checked, the average well depth was 99 feet. The State of Michigan requires all wells to be at least 35 feet deep.

Only approximately one third of the Township is characterized by ground water levels which are typically greater than 1.5 feet from the ground surface (Figure A-3). The more expansive areas characterized by these “dryer” conditions are principally located in the far western third of the Township and east of I-75 in the urbanized Kinross area (Figure A-4). Those areas characterized by high water tables place extreme limitations on the construction of buildings and proper functioning of septic fields.

## VEGETATION

Vegetative cover in Kinross Charter Township can be generally classified into four categories; wetland vegetation, woodlands and open fields, farmland, and residential lawn areas. The vast majority of the Township is comprised of woodlands and wetlands (Figures A-5, A-6, A-7, A-8). Together, these areas cover nearly 85% of the Township, with woodlands and fields accounting for approximately half of the total Township area. Woodlands generally predominate throughout the far eastern and western thirds of the Township, while wetlands are most prominent in the central third of the Township. The balance of the Township’s

vegetative cover is comprised of agricultural fields, scrub and field areas, and residential lawn areas.

Woodlands in upland areas consist primarily of northern hardwoods such as sugar maple, red maple, beech, yellow birch, and aspen. Upland sandy areas find a greater incidence of jack pine, red pine and white pine. The wetter areas of the Township, including its wooded wetlands, are characterized predominantly by white spruce, black spruce, northern white cedar, balsam fir, red maple, balsam poplar, aspen, and tamarack.

## SOILS

The U.S. Department of Agriculture, Natural Resources Conservation Service, has divided Chippewa County into fifteen general soil types or soil associations. The soils of Kinross Charter Township can generally be described as predominantly sandy and mucky. Except for the far northwest regions of the Township which are predominantly sandy in soil character, nearly the entire western half of the Township is composed of sandy and mucky soils in a generally marbled pattern. The eastern half of the Township is of a similar character except that areas dominated by loamy soils are present as well. Still, the eastern half is similarly composed primarily of sand and sandy-mucky soils. The sandy soils cover the majority of the urbanized Kinross area and extend westward through the central portions of the Township in a narrow band

The soil associations identified by the Natural Resources Conservation Service are very general and it is important to identify with more specificity those soils which appear to present particular opportunities and constraints upon future land use and development in the Township. The character of soils can have a profound impact upon the suitability of future uses of land in regard to groundwater contamination, buckling and shifting of foundations and roads, erosion, on-site sewage disposal, and agricultural productivity. The Natural Resources Conservation Service has identified more specific individual soil units throughout the County based upon the characteristics of the upper soil layers (approximately five feet) and this provides a more reliable basis for Township planning purposes.

According to the Natural Resources Conservation Service, the soils of Kinross Charter Township generally present severe limitations for septic systems due primarily to high water tables, poor soil filter characteristics, limited permeability or excessively high permeability (Figure A-9 and A-10), ponding, and/or soil wetness. These severe limitations apply to the urbanized Kinross area as well.

Soils which present limitations to septic systems can often be accommodated with specially engineered septic systems at additional costs. The Chippewa County Health Department is responsible for issuing permits for on-site sewage disposal and will not do so unless all requirements for the septic system have been met. A primary concern is the soil's ability to absorb and break-down the leachate from the septic drain fields before it reaches underground water supplies. This can be particularly troublesome where soils are characterized by high water tables and/or high percolation rates, as is the case with much of the Township area. Under typical conditions, sites approaching three quarters to one acre in size generally provide adequate opportunities for effective septic systems. However where development is being proposed of greater density, or where the soils present severe limitations, a public sewer system may be necessary.

Soil limitations toward building construction in the Township are not as severe, on a wide-spread basis, as they are for septic systems and present varying conditions ranging from slight limitations to severe limitations (Figures A-11 and A-12). Limitations typically arise due to severe wetness, shrink-swell potential, and low strength, and can threaten the structural stability of buildings and substantially increase the cost of construction.

It should be noted that while a site may be classified by the Natural Resources Conservation Service as presenting a certain level of limitation to septic systems and building construction, on-site investigation may show the map to be less than fully accurate and/or show that the subsurface soils (more than five feet deep) present differing characteristics than the upper layer soils and thus, differing limitations. On-site investigations should be carried on before specific land development projects are initiated.

The Natural Resources Conservation Service has also classified certain soils in Chippewa County as being "*prime farmland*" soils in that they are, under proper management, particularly well suited to food, feed, forage, fiber, and oilseed crops. The vast majority of farming operations in the Township today are not occurring on soils classified as "*prime farmland*."

## **SPECIAL ENVIRONMENTAL FEATURES**

### **Hiawatha National Forest & Lake Superior State Forest**

Approximately 245,000 acres of federally designated forests can be found in Chippewa County in addition to 186,000 acres of state designated forests. In fact, approximately 40% of the entire County area is under public ownership due to the extensive federal and state forest lands, recreation areas, wildlife refuges, and the like. Chippewa County ranks second among all Michigan counties for the total acreage devoted to federal and state recreation land and ranks third for total acreage devoted to national forests. The State and nation's interest in resource conservation is evident in Kinross Charter Township as it contains thousands of acres of both Hiawatha National Forest land and Lake Superior State Forest land. The Hiawatha National Forest occupies a total of approximately 880,000 acres throughout the eastern Upper Peninsula, approximately 40,000 acres of which are located in the western half of Kinross Charter Township. The Lake Superior State Forest occupies a total of approximately 1,040,000 acres throughout the eastern Upper Peninsula, approximately 13,000 acres of which are located in the eastern half of Kinross Charter Township and, in large part, define the east, west, and north boundaries of Kinross. The Lake Superior State Forest was formerly called the Munuscong State Forest before its name was formally changed by the Forestry Division of the Michigan Department of Natural Resources, although local residents still generally refer to these public lands as the Munuscong State Forest.

Both of these public forest lands include vast areas of upland and lowland woodlands and wetlands. The extensive wetlands and woodlands within the Township play a vital role including flood control, runoff purification, groundwater recharge, wildlife habitats, recreation opportunities and their economic spin offs, and their contributions to the rural character of the Township. The general purpose of the federal and state forest lands is to protect, conserve, and utilize these woodland resources for recreation, wildlife habitat, and timber production, while similarly assuring the continued integrity of all natural resources and ecosystems within these designated areas.

### **Environmentally Impacted Sites**

Groundwater contamination has been discovered in some areas previously associated with the KAFB. The contamination largely consists of hydro carbons and chlorinated hydrocarbons and have been linked to previous activities of the KAFB facility. Chlorinated hydrocarbons are byproducts of solvents such as those used for deicing planes. Hydro carbons are byproducts of fuel products and are often uncovered near leaking underground fuel storage tanks.

The KAFB is listed as a 307 site. The Michigan Environmental Response Act (MERA), P.A. 307 of 1982, provides for the identification of and clean-up of environmental contamination sites. Act 307 sites are characterized by the *“release of a hazardous substance, or the potential release of a discarded hazardous substance, in a quantity, which is or may become injurious to the environment, or to the public health, safety, or welfare”*. At the time this Plan was prepared, remedial action programs were underway and approaching completion.

## **CLIMATE**

The climate of Kinross Charter Township is similar to that of the eastern Upper Peninsula as a whole. Between 80 and 119 inches of snow typically fall during a year and only four months of the year (late May to mid-September) are typically absent of freezing temperatures. The closest location to Kinross Charter Township where regular weather readings have been recorded by the National Oceanic and Atmospheric Administration is the City of Sault Ste. Marie, approximately twenty miles north of the Township. Based upon the Administration's data collected between 1951 and 1980 by the Michigan Department of Agriculture, the following provides an overview of the climatic conditions of Kinross Charter Township and surrounding areas:

## **TEMPERATURES**

Winter Average:  
15.7 degrees F.  
Winter Average Daily Minimum:  
7.8 degrees F  
Lowest Rec. Winter Temperature:  
-37.0 degrees F.  
Summer Average:  
61.6 degrees F.  
Summer Average Daily Maximum:  
72.9 degrees F.

## **PRECIPITATION**

Total Average Annual Rain:  
33.48 inches.  
Wettest Month:  
September (average 4.09 inches)  
Driest Month:  
February (average 1.39 inches)  
Average Seasonal Snowfall:  
114.7 inches.  
Heaviest Snowfall Month  
January (average 28.9 inches)

## **Figures**

Figures A-1 through A-12, as referenced in Appendix A, are available for viewing at the Kinross Charter Township Hall.

- [FIGURE A-1](#): Slope (entire Township)
- [FIGURE A-2](#): Slope (general Kinross area)
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## Appendix B

# CULTURAL FEATURES

### GEOGRAPHY

Kinross Charter Township is centrally located in Chippewa County in Michigan's Upper Peninsula. The Township is comprised of approximately 121 square miles in an unusually linear shape. The Township stretches nearly 30 miles in an east-west direction and is only 4 miles wide throughout its length except for the urbanized Kinross area. The town of Kinross is an unincorporated community which initially evolved during the land rush to the Great Lakes and grew with the establishment of the Kincheloe Air Force Base (KAFB) and, subsequently, state correctional facilities. The closest incorporated municipalities to the Township are Sault Ste. Marie and St. Ignace. Sault Ste. Marie is a community of approximately 15,000 persons located twenty miles to the north along the St. Mary's River across from Canada. St. Ignace, a community of approximately 2,600 persons in Mackinac County, is located approximately thirty miles to the south on Lake Huron.

### EARLY PERSPECTIVE

Sault Ste. Marie in Chippewa County was founded by the French explorer Father Jacques Marquette in 1668. Prior to the coming of the French, the Upper Peninsula was populated by Indian tribes, most notably the Chippewa Indians. The French subsequently laid claim to the area and built a military installation in 1751 at Sault Saint Marie.

The area fell under the control of the English in 1766 and, in 1783, the land became part of the United States through the provisions of the Treaty of Paris which ended the American Revolution. While the U.S. built a military installation in the Sault in 1822, the land rush to the Great Lakes region began. The land rush brought on the demand for continuous supplies of lumber and it was this demand which led to the early settlement of the area now known as Kinross. The lumbering industry reached the Upper Peninsula by the 1850's and by 1895, numerous lumbering camps had established operations in the Kinross area. In addition to the lumber industry employees contributing to the settlement of the Kinross area, the Homestead Act of 1862 also provided stimulus. The Act generally provided that families could obtain title to 160 acres of land when the family lived on the land for five years (or paid \$1.25 per acre instead of residency) and made improvements to the land. The Homestead Act encouraged the introduction of farming in what is now

known as Kinross Charter Township although the farms were comparatively few in number. Many of the farmers involved themselves in the lumber industry as well.

The State Legislature created the governmental entity of Kinross Township in 1899. The Township was created through the detachment of territories from the townships of Dafter, Rudyard, and Pickford. By 1901, Kinross was a busy little lumbering town and a railroad center for shipping wood and wood products. By 1940, the Township had grown to 278 persons. The Kinross Auxiliary Air Field was established in 1941 as a refueling stop for military aircraft on their route to Alaska. With the end of World War II, the air field was leased to the City of Sault Ste. Marie as a civilian airport. During the following eight years however, the air field was transformed into the Kincheloe Air Force Base (KAFB) and served as a key component in the country's air defense network. The KAFB expanded its operations during the ensuing years including the incorporation of the Strategic Air Command program and jet bombers and tankers. The Township's population quickly swelled to 6,000 and 8,000 persons during periods of the 1970's although the civilian population accounted for less than 20% of the people in the Township during much of this period.

The United States decided to close the KAFB in 1977 in the face of environmental and economic considerations. At the time of the closure, the KAFB included more than 4,000 acres of land and approximately \$700 million dollars in improvements including approximately 175 non-residential buildings, 1,400 housing units, 29 miles of paved roadway, and fully operational storm and sanitary sewer systems and a community water system. A Base Conversion Authority was established in 1978 for the purpose of administering the transference of federal military property to civilian use. Ownership of much of the former military base land and buildings was transferred to Kinross Charter Township and, in the case of the air fields and hangar buildings, to the Chippewa County Economic Development Corporation for use as an industrial park. A significant portion of the federal land associated with the KAFB was transformed into five correction facilities owned and operated by the Michigan Department of Corrections. These facilities are discussed further in this Appendix under "*Land Use and Development.*"

## **TRANSPORTATION NETWORK**

### **Regional Access**

Regional access to Kinross Charter Township is provided primarily by Interstate 75 (I-75) which travels through the Township in a northeasterly direction near Kinross as it links the Detroit metropolitan area and lower peninsula with the City of Sault Ste. Marie. The Mackinac Trail runs along side I-75 and provides additional regional access into the Township as it links the St. Ignace area with Sault Ste. Marie. In addition, the newly established M-80 (formerly Tone Road) extends from the I-75 interchange eastward across the Township. Several state highways provide additional access to the greater Kinross Charter Township area. M-129 lies one mile east of the Township and parallels the Township's eastern border linking Cedarville on Lake Huron with Sault Ste. Marie, and serves as the eastern terminus of M-80. M-28 travels one to three miles north of the Township's northern border for the full length of the Township linking the central and western portions of the Upper Peninsula with M-129 and I-75 near Dafter. M-123 travels one mile west of the Township's western border linking the St. Ignace area with Whitefish bay and intersecting with M-28 two miles west of the Township's northwest corner. The Township's setting

within this highway network would suggest high accessibility for the Township but comparatively limited number of linkages exist between these state and federal highways.

Kinross Charter Township is the home of the Chippewa County International Airport, located at the former KAFB. Sault Ste. Marie Municipal Airport in Sault Ste. Marie is located approximately twenty miles from the Township. The Wisconsin Railroad Company operates a freight line which travels through Kinross and the Township generally paralleling I-75. Movement on the rail line typically occurs on a daily basis.

### **Local Roadway Network Pattern**

Except for the urbanized Kinross area, the Township's roadway network is limited due to the considerable acreage in public ownership (state and national forests) where access is not a priority and development is largely nonexistent. In fact, due to the Township's linear shape and limited roadway network, access between the far eastern and western portions of the Township requires entry into neighboring municipalities to the north and south.

The backbone of the Township's local roadway network is the Kinross area loop formed by Mackinac Trail running parallel to I-75, Gaines Highway and M-80. Both the Mackinac Trail and I-75 provide a north and south access point to this loop. Thompson, Bound, and Kinross Roads on the west side of I-75 near Kinross provide additional support to this principal network. The western two thirds of the Township, which covers approximately 68 square miles and is characterized by extensive public holdings, has less than 30 road miles (Figure B-1 and B-2).

In compliance with the requirements of Michigan Act 51 of 1951, the Chippewa County Road Commission (CCRC) classifies all roads under its jurisdiction as either primary roads or local roads. Primary roads are considered the most critical in providing circulation throughout the County and more regional areas.

Roads within the Township which are classified as "primary" include:

- Gaines Highway
- M-80
- Mackinac Trail
- Kinross Road (limited to that segment extending two miles north from Mackinac Trail)
- Bound Road
- Thompson Road (limited to that segment extending from Kinross Road to Centerline Road)
- Tilson Road (limited to that segment extending two miles north from the Township's southern boundary)
- Strongs Road

All other roads in the Township are classified by the CCRC as "local."

The Michigan Department of Transportation classifies roads in rural areas as either principal arteries, minor arteries, collector roads, or local roads. These classifications, and their application to the roads of Kinross Charter Township, can generally be described as follows:

- **Principal arteries** accommodate major traffic movements for trips typically over long local or regional distances. I-75 is the only corridor in the Township classified as a principal arterial.
- **Minor arteries** interconnect with and provide access to principal arteries, accommodating more modest trip lengths and placing a higher emphasis upon access to land uses. M-80 is the only road segment that is in this classification.
- **Major collector roads** emphasize access to abutting land areas and the collection of traffic for distribution to the larger arterial systems which may exist within the municipality or in neighboring municipalities. Within the Township, this classification applies to:
  - Kinross Road;
  - Bound Road;
  - Tilson Road;
  - Kallio Road;
  - Mackinac Trail;
  - Ploegstra Road; and
  - Strongs Road.
- **Minor collector roads** emphasize access to abutting land areas and the collection of traffic for distribution to the larger arterial systems but to a slightly lesser degree than major collector roads. No roads in the Township fall within this classification.
- **Local roads** emphasize access to abutting properties and the collection of traffic for distribution to collector and arterial corridors. This classification applies to the balance of the roads in the Township.

Roads federally designated as collector roads and local roads are not eligible for federal funding.

### **Local Roadway Network Conditions & Improvements**

The eastern third of the Township, including the Kinross area, is characterized by a predominantly paved roadway network. The balance of the Township is comprised almost entirely of unpaved roads except for the two mile portion of Strongs Road which cuts through the Township's northwest corner.

It has been ten years since traffic counts were recorded in the Township by the CCRC, prior to the time the more recent correctional facilities had been constructed. Generally, M-80 has been the only road segment which has witnessed regular and visible levels of congestion.

Under Michigan law, townships have no responsibility for funding road improvements and maintenance. On the other hand, while County Road Commissions must maintain and improve primary roads at their own expense, state law limits the participation of County Road Commissions to no more than 50% on improvements to local roads. In reality, there are very few counties in Michigan where local townships are not actively involved in funding road improvements. Kinross Charter Township provide for 50% of the funding for major road improvements, such as repaving and seal coating, and the CCRC provides 100% of the funding for minor road improvements to primary roads, such as patching and snow removal.

## LAND USE & DEVELOPMENT

Kinross Charter Township's overall land use pattern reflects a comparatively low level of development and expansive areas of open spaces. The vast majority of the Township is characterized by woodlands, wetlands, and open fields. Initial perceptions of the Township may be of a more urban community because nearly all residents live within the urbanized Kinross area, which also includes commercial and industrial development as well as five state correctional facilities, and because the primary access into the Township is through Kinross (Figures B-3, B-4, B-5, and B-6).

Kinross Charter Township is comprised of approximately 121 square miles, or 77,440 acres. Approximately 97% of the Township's total area is comprised of woodlands, wetlands, or otherwise undeveloped land, including approximately 53,000 acres (68% of the total Township area) within the Hiawatha National Forest and Lake Superior State Forest. The remaining 3% of the Township area is comprised of residential, commercial, industrial, and institutional land uses. Kinross is the only urbanized area of the Township and covers approximately 4,600 acres (land area generally included within the Mackinac Trail/Gaines Highway/M-80 loop). Table B-1 presents an overview of land use within Kinross Charter Township and Table B-2 presents an overview of land use within the urbanized Kinross area.

**TABLE B-1**  
**Township-Wide General Land Use/Land Cover**

LAND USE/ LAND COVER	APPROXIMATE ACREAGE	APPROXIMATE PERCENT OF TOWNSHIP AREA
<b>Natural Areas</b> (woodlands, wetlands, fields, water bodies, etc.)	72,750	93.9%
<b>Agriculture</b>	2,300	3.0%
<b>Transportation</b> (right-of-ways and airport)	1,000	1.3%
<b>Public/Institutional</b> (Correction facilities, local recreation lands)	600	0.8%
<b>Residential Areas</b>	500	0.7%
<b>Industrial</b>	200	0.3%
<b>Commercial</b>	90*	0.1%

\* excluding Escanaba Paper Company

**TABLE B-2**  
Kinross Area\* General Land Use/Land Cover

LAND USE/ LAND COVER	APPROXIMATE ACREAGE	APPROXIMATE PERCENT OF TOWNSHIP AREA
<b>Open Space Lands</b> (not otherwise part of public forest lands)	1,660	36.1%
<b>Public Forest Lands</b>	1,100	23.9%
<b>Public/Institutional</b> (Correction facilities, township recreation lands)	600	13.0%
<b>Airport</b>	500	10.9%
<b>Residential Areas</b>	450	9.8%
<b>Industrial</b>	200	4.4%
<b>Commercial</b>	90**	2.0%

\* The Kinross area is generally limited to those lands within or along the Gaines Highway-M-80-Mackinac Trail loop, covering approximately 4,600 acres.

\*\* excluding Escanaba Paper Company

The total state equalized value (SEV) for Kinross Charter Township in 1996 for agricultural, industrial, commercial, and residential development was \$25,518,450. The vast majority of this SEV was due to residential development, which increased in value by approximately 164% since 1985 (see Table B-3). This extreme increase in residential SEV was due to the conversion of the formerly tax exempt public KAFB housing into private sector housing.

**TABLE B-3**  
State Equalized Value (\$)

PROPERTY	1885	1996
<b>Agricultural</b>	443,371	747,150
<b>Residential</b>	7,441,565	19,637,050
<b>Commercial</b>	1,287,410	3,524,700
<b>Industrial</b>	1,693,800	1,609,550

A review of some of the more significant land use and development features of the Township follows.

### **Agriculture**

Approximately 2,300 acres of land in the Township are devoted to agriculture, the majority of which are located along the Township's northern and southern boundaries within five miles west of I-75. The majority of the farming operations involve dairy farming and the growing of hay for local, regional, and out-of-state feed purposes.

## Residential Development

The 1990 U.S. Census recorded 1,465 housing units in the Township, although local officials estimated the number to be close to 2,000. The vast majority of these housing units, approximately 1,100, are contained in the Woodside housing development along M-80 at Country Club Drive. This housing area was originally established to house KAFB personnel and, upon the Base's closing, has gone through several ownership transfers. Presently, the Sault Ste. Marie Tribe of Chippewa Indians owns approximately one third of the dwelling units in the development and the balance are in private ownership. The development includes both single family and duplex units. A small portion of the housing area was converted into the Windemere Condominiums consisting of two-story duplex units. Approximately one quarter of the dwelling units in the Woodside housing area are vacant. The Woodside housing area occupies approximately 300 of the total 500 acres of residential land in the Township. The Country Club Condominiums is located adjacent to the Woodside housing area and includes approximately 100 additional single family dwellings.

In total, approximately 58% of all the housing units in the Township were occupied in 1990. Of the 845 occupied dwelling units in 1990, 52% were owner-occupied and 48% were renter-occupied. Approximately 10% of the 620 recorded unoccupied housing units in 1990 were classified by the Census Bureau as seasonally vacant. The majority of the approximately 365 housing units not situated in the Woodside housing area are located along the primary roads in the Kinross area. The balance are scattered throughout the more distant areas of the Township. Approximately 13% (111) of all housing units in the Township in 1990 were mobile homes.

As of the 1990 Census, approximately 81% of the dwelling units in the Township were constructed between 1950 and 1970 (see Table B-4). This percentage is more than twice that for the County and State as a whole and reflects the residential development surge brought on by the expanding military operations in the Township during these years. This comparatively young housing stock is similarly reflected in the fact that the median year of all units constructed in the Township, according to the 1990 census, was 1964 -- four years younger than that of the State as a whole. The median value of the housing stock in the Township in 1990 was \$39,400, considerably less than that of the State as a whole though somewhat higher the County. Average rent payment in the Township in 1990 was \$406, slightly lower than the State but considerably more than the County as a whole. 34.8% of all housing units in the Township in 1990 were single family units and 54.8 % were units comprising duplexes or other dwellings sharing walls but with private entrances (as opposed to common hallway entrances associated with apartment buildings).

**TABLE B-4**  
Selected Housing Characteristics

RACE	KINROSS TOWNSHIP	CHIPPEWA COUNTY	STATE OF MICHIGAN
<b>Year Built (%)</b>			
<b>Since 1970</b>	15.3	36.1	34.0
<b>1950 to 1969</b>	81.4	31.9	34.1
<b>Before 1950</b>	3.3	32.1	31.9
<b>Median Year Built</b>	1964	1962	1960
<b>Median Value</b>	\$39,400	\$37,100	\$60,100
<b>Median Rent</b>	\$406	\$323	\$423

Residential development has been fairly steady in the Township during the past 15 years, and has been showing signs of vigor in more recent years. While Township issued building permits for new residential construction reached an average of approximately eight permits per year between 1980 and 1988, an average of nearly 16 building permits were issued annually between 1989 and 1993. Nearly half of all the residential building permits issued between 1980 and 1993 were for mobile homes.

### **Commercial Development**

Commercial development within Kinross Charter Township is located in the urbanized Kinross area. Of the approximately 60 commercial establishments in the Township, nearly half are located just east and south of the Kinross Correctional Facility along M-80, Water Tower Drive, Kincheloe Drive, and Riley Dr. Many of the commercial establishments in this area evolved during the closure of the KAFB when the property upon which these establishments exist came under Township ownership and the Township proceeded to offer leases for the abandoned KAFB buildings. The majority of these leases are for five years or multiples thereof, including options to extend the lease. The vast majority of the balance of commercial businesses within the Township are situated along M-80 between I-75 and Kinross Lake, and west of Gaines Highway. The commercial establishments throughout the Kinross area vary in nature and include, but are not limited to, restaurants; convenience stores; personal service establishments such as a barber shop and beauty salon; lodging; repair and service facilities; motor sales; and professional buildings including medical, accounting, and insurance offices. Most commercial establishments are comparatively small and generally do not exceed an acre in size. The largest commercial enterprise in the Township is the Escanaba Paper Company which has harvesting rights to approximately 4,500 acres in the Hiawatha National Forest in the western third of the Township. The second largest commercial operation is a piping and piling distribution center covering approximately 20 acres along Kincheloe Drive just west of the Kinross Correctional Facility. Approximately 90 acres of land is devoted to commercial use in the Township, excluding the operations of the Escanaba Paper Company.

Similar to residential development, commercial development has been fairly steady in the Township during the past 15 years, and has been comparatively brisk in more recent times. While the Township issued an average of nearly two building permits for commercial structures between 1980 and 1988, an average of four building permits were issued annually between 1989 and 1993.

### **Industrial Development**

Industrial development within the Township is similarly limited to the urbanized Kinross area and centered in the Chippewa County Economic Development Corporation Industrial Park adjacent to the Chippewa County International Airport. The industrial park is owned and operated by the Chippewa County Economic Development Corporation. Establishment of the industrial park provides that the Economic Development Corporation must retain ownership of all lands associated with the park but may sell buildings within the park to prospective buyers. To date, very few of the buildings have been sold. Rather, the Economic Development Corporation is leasing the numerous hangars and other buildings previously associated with the Base's operations to businesses engaged in primarily light industrial operations. The principal buildings and open spaces associated with the industrial park covers approximately 200 acres, excluding airport facilities.

## **Correctional Facilities**

A significant portion of the KAFB was transformed into state correctional facilities during the years following the closure of the Base. All of these correctional facilities are located in Kinross. The first of these facilities, the Kinross Correctional Facility, was established in 1978 and utilizes existing buildings formerly part of the KAFB. This facility is located just west of Water Tower Road and south of Kincheloe Drive. Three additional correction facilities were established in 1989 and included: 1) the Hiawatha Temporary Facility, consisting of new buildings and located east of the airport; 2) the Chippewa Regional Facility, constructed as a permanent facility and located south of M-80 across from the Woodside housing area; and 3) the Chippewa Temporary Regional Correctional Facility, constructed as a temporary facility (but which may well be maintained as a permanent facility) and located just west of the Chippewa Regional Correctional Facility along M-80. The fifth and final facility constructed was Camp Koehler. This facility, constructed in 1990 and located just north of the Kinross Correctional Facility, is a prison work camp providing inmate labor to local governments and non-profit groups. Camp Koehler and the Hiawatha Temporary Regional Correctional Facility are the only minimum security facilities in the Township. The other three facilities provide medium and maximum security. According to the 1990 U.S. Census, these correctional facilities housed a total of 4,021 inmates. The correctional facilities cover a total of approximately 300 acres.

## **Chippewa County International Airport**

The [Chippewa County International Airport](#), established in 1978 as part of the KAFB closure and owned by the Chippewa County Economic Development Corporation, is located on the south side of M-80 south of the Kinross Correctional Facility and west of the Hiawatha Temporary Regional Correctional Facility. The airport extends south into Pickford Township and currently operates a single runway 7,200' by 200'. A second runway of approximately 5,600' is proposed for construction during the next several years, depending upon the availability of federal grant dollars. The airport provides flight services to more than 10,000 persons annually and, as such, is classified as a primary air carrier. This federal classification enables the airport to receive \$500,000 annually for safety and security operations and improvements. United Express operates seven daily flights from the airport -- three to Detroit and four to Chicago. The airport is classified as a Class A airport, providing fueling facilities and attendants on a 24 hour daily schedule. The airport covers approximately 400 acres of land in Kinross Charter Township including an abandoned 40 acre paved fueling pad formerly used by the KAFB.

## **Township Owned Land**

Kinross Charter Township owns a comparatively large area of land within its municipal borders, much of which is generally vacant. This land area covers more than 900 acres and accounts for approximately 20% of the total urbanized Kinross area. The largest of these holdings include:

- 1) Approximately 150 acres along M-80, just south of the Woodside housing area and mini-storage facilities, between Country Club Drive and Water Tower Drive. Approximately one quarter of this area, located at M-80 and Water Tower Drive, consists of previously owned KAFB buildings which are now owned by the Township and leased for commercial use. One of the two Township owned RV parks sit to the east of this commercial area. Approximately 100 acres of this land is generally void of development.

- 2) Approximately 800 acres stretching from the Woodside housing area west for approximately one and a half miles, north of the Kinross Correctional Facility. The majority of this land is generally void of development except for the Township's 150 acre golf course and the former 80 acre Kincheloe Manufacturing Corporation site (site of contamination).
- 3) Approximately 40 acres on the east side of I-75, one half mile south of the M-80 interchange.
- 4) Chippewa County Fairgrounds, covering approximately 100 acres.

### **Public Recreation and Natural Resource Lands**

The most expansive public recreation and natural resource lands in the Township are the Hiawatha National Forest and Lake Superior State Forest. These facilities are reviewed in Appendix A in the “*Special Environmental Features*” section. The Township is characterized by several other public holdings dedicated to public recreation and resource protection and are summarized below:

- 1) The [Chippewa County Fairgrounds](#), located primarily on the north side of M-80 approximately one half mile east of I-75, is owned and maintained by the Township. The fairgrounds is a large recreation facility covering approximately 100 acres and includes a 4-H building with a hall, kitchen, and dining area; an exhibit hall; six horse barns and 248 horse stalls; one half mile racetrack with an infield area and 1,500 seat grandstand; office building; three beef and dairy barns; restrooms; 40 table picnic area, a swimming and beach area along Kinross Lake via an underground tunnel across M-80.; primitive camping facilities, a softball field, and numerous support facilities.
- 2) The Township-owned [Kincheloe Memorial Public Golf Course](#) is an 18 hole course located on the former KAFB on Kincheloe Drive east of Water Tower Road. The course covers approximately 150 acres and includes a driving range, pro shop, club and cart rentals, and kitchen facilities, and offers cross country skiing opportunities during the winter season.
- 3) The Township operates the [RV Park East and RV Park West](#) along M-80 near Kinross Lake and east of Riley Drive. Both campground facilities have electric and water hook-ups, bathrooms, and showers. RV Park West has 52 permanent camping sites and RV Park East has 64 permanent sites in addition to 200 temporary camping sites.
- 4) The [Kinross Recreation Center](#) is an approximately 18,000 square foot recreation building located in the Woodside housing area. The building has been vacant since the close of the KAFB although the Township is in the process of making improvements to the facility for future use as a community activities center.
- 5) The [Three Lakes National Forest Campground](#), located in the northwest corner of the Township along Strongs Road in the Hiawatha National Forest, is a federally owned and operated rustic campground facility offering picnicking, hiking, fishing and swimming facilities.
- 6) The [Sullivans Creek National Fish Rearing Station](#), located in the central regions of the Township in the Hiawatha National Forest along Sullivan Creek Truck Trail, is a federal lake trout rearing station.
- 7) [Dukes Lake Recreation Area](#), located just north of M-80 and west of Gaines Highway, is a state owned, Township operated fishing and swimming facility.

In addition to the above facilities, there are 29 miles of state off-road vehicle trails and 112 miles of state snowmobile trails (maintained by the Township) in the Township.

## **COMMUNITY FACILITIES & SERVICES**

### **Sewage Disposal**

Public sewer within Kinross Charter Township is generally limited to those areas of Kinross previously associated with the KAFB. Current average sewage flow into the system is approximately 600,000 gallons per day. With the completion of recent improvements and expansion projects in 1995, the sewer system is capable of accepting approximately 2.2 million gallons per day, yielding a current excess flow capacity of approximately 1.6 million gallons per day. Though there is considerable excess flow capacity as a result of the recent improvements to the system, the system's total capacity is dictated by the rate at which it can adequately treat (organic capacity) the incoming sewage. The recent improvements heightened the systems organic capacity but the new organic capacity has yet to be determined. Both gravity mains and force mains comprise the system as do several lift stations. The treatment plant, situated at the Department of Public Works on Kincheloe Drive west of Water Tower Drive, provides primary, secondary, and tertiary levels of sewage treatment. Kinross Charter Township fully operates and maintains the sewer system.

Those structures and dwelling units outside of the sewer service area rely upon on-site (septic fields) sewage disposal facilities. According to the Department of Agriculture, Natural Resources Conservation Service, nearly all soils in the Township present severe limitations to septic fields. All proposed private septic drain fields must receive the necessary approvals from the Chippewa County Health Department before such fields can be constructed and put into use.

Solid waste collection is provided by private sector services. Solid waste is transported to the Dafter Sanitary Landfill in Dafter for disposal. The Township recently initiated a recycling collection program at the sewage disposal treatment plant where local residents are able to drop off materials for recycling collection.

### **Potable Water**

Public water is available throughout those areas previously associated with the KAFB. Four wells comprise the Township's public water system. Two of the wells are situated near the Kinross Correctional Facility on Curtis Road at Water Tower Drive, as is an elevated 500,000 gallon capacity storage tower. A third well is located across from the R.J. Wallis Elementary School in the Woodside housing area and is adjacent to a 250,000 gallon capacity elevated storage tower. The fourth well is located along Curtis Street west of the RV East park. All of the four public wells produce approximately 500 to 550 gallons of potable water per minute. Average water usage in the Township is approximately 850,000 gallons per day although the system is capable of supplying approximately 3 million gallons per day. Due to the large capacity of the system, it is not uncommon for only one of the public wells to be operating while a second well is online for backup purposes.

The well located west of the RV East park has shown signs of TCE contamination although these levels have recently declined. As a general safety measure, this well is not normally operated except in emergency conditions.

Private wells provide potable water to all other structures and dwellings in the Township not serviced by the Township's public water system.

## **Emergency Services**

Police protection is provided to all areas of the Township by both the County Sheriff's Department and Michigan State Police, with headquarters located 20 miles north in Sault Ste. Marie. The Kinross Charter Township Police Department also provides police protection services to all locations previously part of the KAFB through a special assessment district established in 1981. The Department is comprised of two full-time officers and two part-time officers.

In the late 1940's, Kinross Charter Township entered into an agreement with Rudyard and Superior Townships for shared fire protection services. These agreements were maintained for many years until the former KAFB's police and fire departments were turned over to Kinross Township in the late 1970's. Kinross Charter Township and its neighboring municipalities have put in place a "*good neighbor*" policy of mutual aid, placing principal responsibility for fire emergency services upon that municipality with quickest access to the emergency at hand, with neighboring back-up as necessary. The Kinross Charter Township Volunteer Fire Department is comprised of approximately 20 certified volunteer fire fighters. The Township's fire station is located in Kinross on the south side of M-80 just west of Water Tower Drive. Fire hydrants exist all along the Township's public water system. The Township's fire station also houses the Kinross Township Volunteer Ambulance Corps which provides ambulatory services to the Township and surrounding municipalities in much the same manner as local fire protection services are provided.

## **Education**

The Rudyard School District includes the entire Kinross Charter Township area. Aside from the local adult education programs, the only public school located in the Township is the R.J. Wallis Elementary School on Country Club Drive across from the Woodside housing area. The school closed in 1978 with the closure of the KAFB and was reopened in 1989. The Rudyard School District owns several undeveloped properties in the Township, including a 180 acre and 160 acre parcel approximately five miles west of Kinross and a 40 acre parcel along Gaines Highway near M-80. The Sault Area Public Schools also owns land in the Township including approximately 300 acres near the I-75/Gaines Highway interchange.

## **Figures**

Figures B-1 through B-6, as referenced in Appendix B, are available for viewing at the Kinross Charter Township Hall.

- [B-1](#): Roads (entire Township)
- [B-2](#): Roads (general Kinross area)
- [B-3](#): Land Use (entire Township)
- [B-4](#): Land Use (general Kinross area)
- [B-5](#): Urban Areas (entire Township)

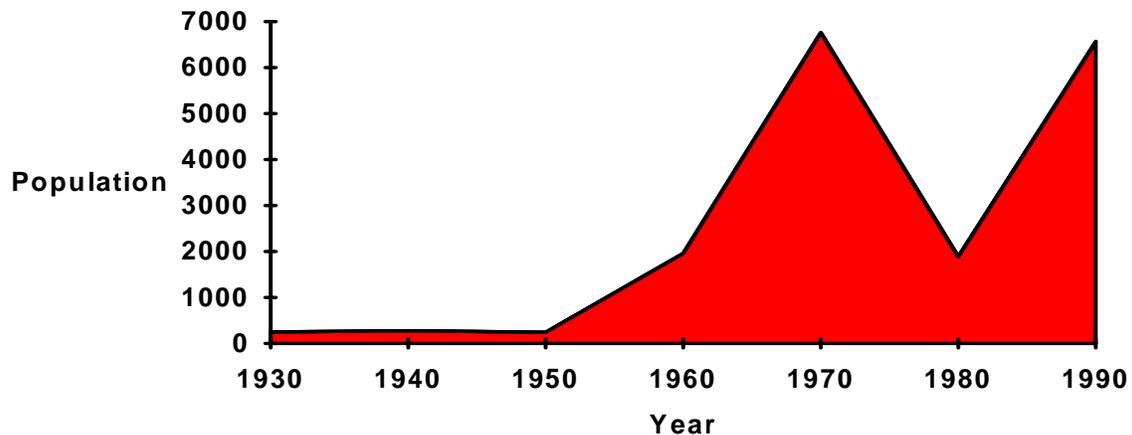
## Appendix C

# DEMOGRAPHIC FEATURES

## POPULATION GROWTH TRENDS & PROJECTIONS

Few townships in the state or nation have undergone the erratic population growth and decline that Kinross Charter Township has experienced (see Figure C-1). Few townships have ever been the home of a military air force base or a state prison complex, let alone the closure of one and establishment of another. The Township's recorded growth rate over the past 50 years has been as high as 809% in a ten year period to as low as -72%.

**FIGURE C-1**  
**Kinross Charter Township Population Growth**  
(according to U.S. Census)



The Township's population ranged from 242 to 278 persons between the years of 1930 and 1950. Its population count took a sudden and dramatic increase (809% increase) by 1960 with the opening of the Kincheloe Air Force Base (KAFB), reaching a population of 1,958. The Township's population continued to increase rapidly with the expansion of the KAFB and reached a population of 6,763 by 1970. Of the 6,763 persons in the Township in 1970, only 432 persons were not residents of the KAFB. An environmental impact statement prepared by the U.S. Air Force in 1977 recorded a still growing population of 8,320 persons. With the closing of the KAFB in 1977, the Township's population dramatically dropped to 1,891 in the following three years. This "rollercoaster" population ride continued through the 1980's as the former KAFB was transformed, in part, into several state correctional facilities. The resulting 1990 Township population reached 6,566. Of the 6,566 persons in the Township in 1990, 4,021 were prison inmates. The Township's recorded civilian population has grown from 251 persons in 1930 to 8,320 persons during the late 1970's, and dropped to 2,545 persons in 1990. It is estimated that the Township lost 6,230 residents as a result of the KAFB closing. Due to the unique conditions in the Township during the past 40 years, the Township's population growth pattern has been very different from that of Chippewa County and the State of Michigan as a whole during this period (see Table C-1).

**TABLE C-1**  
**Population Trends & Growth Rates**  
 (growth rates in parenthesis)

<b>YEAR</b>	<b>KINROSS TOWNSHIP</b>	<b>CHIPPEWA COUNTY</b>	<b>STATE of MICHIGAN</b>
<b>1930</b>	251	25,047	4,842,325
<b>1940</b>	278 (10.8%)	24,807 (-1.0%)	5,256,106 (7.9%)
<b>1950</b>	242 (-0.1%)	29,206 (17.7%)	6,371,766 (17.6%)
<b>1960</b>	1,958 (809.1%)	32,655 (11.8%)	7,823,194 (18.6%)
<b>1970</b>	6,763 (245.4%)	32,412 (-0.7%)	8,881,826 (11.9%)
<b>1980</b>	1,891 (-72.0%)	29,029 (-10.4%)	9,262,078 (4.1%)
<b>1990</b>	6,566 (247.2%)	34,604 (19.2%)	9,295,297 (0.4%)

Source: U.S. Census Bureau

Estimating future population counts in the Township can provide important insight into identifying future land use and public services needs of the community. Projecting the growth of a community's population over a prescribed period of time is not an exact science. The multitude of unpredictable factors which can affect growth make any set of population projections somewhat speculative. This task becomes even more difficult when, as in the case of Kinross Charter Township, unique and dramatic changes in population counts in the past make it particularly difficult to identify an appropriate trend upon which future projections can be based.

If the Township's 1990 civilian population (2,545) increases at a rate similar to that of the State as a whole between 1980 and 1990 (0.4%), the Township's population in year 2010 will have increased by less than two dozen persons (2,565). A stronger rate of growth, such as that of the State between 1970 and 1980 (4.1%), will yield a Township civilian population of approximately 2,760 persons in year 2010. However, if the Township's civilian population were to continue to grow at a rate (16.5%) suggested by the average number of residential building permits issued by the Township between 1990 and 1993

(an average of 14 permits annually), assuming a average household size of three persons, the Township's civilian population in year 2010 could approach 3,400 persons.

## SOCIO-ECONOMIC CHARACTERISTICS

### Race

The 1990 Kinross Charter Township population reflected a far higher percentage of minority groups than the County and State as a whole (see Table C-2). This is due, in part, to the relatively high percentage of minority inmates in the Township's various correctional facilities (see Table C-2). It is reasonable to expect that the Township's civilian population reflects a racial composition more similar to that of the County as a whole.

**TABLE C-2**

**Race**  
(by percent)

RACE	KINROSS TOWNSHIP	CHIPPEWA COUNTY	STATE OF MICHIGAN
<b>White</b>	61.6%	81.9%	83.5%
<b>Black</b>	31.8%	6.2%	13.9%
<b>American Indian</b>	4.1%	11.1%	0.6%
<b>Other</b>	2.4%	0.7%	2.0%

Source: 1990 U.S. Census

### Age, Families, and Households

Kinross Charter Township has a comparatively young population. The percentage of persons less than 18 years of age in 1990 was considerably higher in the Township than in the County or State as a whole. Similarly, the percent of persons 65 years of age or more was approximately half of that for the County and State as a whole (see Table C-3). While the Township is a comparatively young community, it is showing signs of maturation. While only 5.8% of the Township's population was 65 years of age or more in 1990, this is a dramatic increase over the 1980 census count in which no persons were reported of age 65 or older. The median age of Kinross Charter Township residents was 29.6 in 1990, several years lower than the County (32.2) and State (32.6) as a whole.

**TABLE C-3**

**Age in 1990**  
(by percent)

AGE	KINROSS TOWNSHIP*	CHIPPEWA COUNTY*	STATE OF MICHIGAN
<b>Less than 18 yrs.</b>	39.2	26.7	26.5
<b>18 - 64 yrs.</b>	55.0	59.6	61.6
<b>65 yrs. or more</b>	5.8	13.7	11.9

Source: 1990 U.S. Census

\* Civilian population

The 1990 Census recorded 840 households and 659 families in Kinross Charter Township. The average household size in the Township was 3.0 persons per household. Of all the households in the Township, approximately 63% consisted of a married-couple family. This percentage was somewhat higher than the County's and State as a whole. Non-

married households comprised approximately 15% of all Township households, the vast majority of which consisted of a female householder. Approximately one in every five households in the Township was a non-family household. (see Table C-4).

**TABLE C-4**  
**Household Type, 1990**  
(by percent)

HOUSEHOLD TYPE	KINROSS TOWNSHIP	CHIPPEWA COUNTY	STATE OF MICHIGAN
<b>Married-couple family</b>	63.3	56.7	56.0
<b>Other family:</b>			
<b>Male householder</b>	3.8	3.5	3.1
<b>Female householder</b>	11.3	10.0	12.7
<b>Non-family household</b>	21.6	29.8	28.2

Source: 1990 U.S. Census

### Employment & Income

According to the 1990 U.S. Census approximately 95% of the employed Kinross Charter Township work force was employed within Chippewa County and approximately 85% worked within a half hour's commuting time of their residence. The Township workers' proximity to their place of employment places them closer to their work place than the State as a whole and very similar to the County as a whole (see Table C-5). This condition is due, in large part, to the comparatively high rate of Township workers employed in the Township by the Department of Corrections.

**TABLE C-5**  
**Place of, and Distance to Work**  
(employed persons 16 years of age, by percent)

PLACE OF, AND DISTANCE TO WORK	KINROSS TOWNSHIP	CHIPPEWA COUNTY	STATE OF MICHIGAN
<b>Worked in County of residence</b>	95.2	95.8	73.9
<b>Worked outside County of residency</b>	4.2	3.6	24.6
<b>Worked outside of Michigan</b>	0.6	0.6	1.5
<b>Distance to work:</b>			
<b>Worked at home</b>	2.5	3.3	2.5
<b>Less than 29 minutes</b>	84.5	82.4	71.0
<b>30 to 59 minutes</b>	11.6	12.0	22.4
<b>60 minutes or more</b>	1.4	2.2	4.1

Source: 1990 U.S. Census

Nearly 45% of all Township workers are employed by the public administration industry. This is a reflection, again, of the strong role the state correctional facilities play in the Township. Of the 972 employed residents of the Township of age sixteen or older in 1990, 380 (39%) were employed by the state, 63 (6.5%) were employed by the federal government, and 78 (8%) were employed by a local governmental unit including Kinross Charter Township. The public administration industry has provided abundant employment opportunities for Township residents as a result of the KAFB and, presently, the correctional

facilities. However, many of these employment opportunities were and are held by comparatively new residents who had moved to the Township due to their involvement with the U.S. Air Force and, in more recent times, the Michigan Department of Corrections. The retail trade industry and professional and related services industries accounted for an additional 28% of the Township workers (Table C-6). The public administration, professional services, and retail trade industries accounted for 72% of the township workers in 1990. The largest single private employer in the Township is steel fabricator Olofsson's Manufacturing located in the industrial park.

**TABLE C-6**  
**Employment by Industry, 1990**  
 (employed persons 16 years and older, by percent)

OCCUPATION	KINROSS TOWNSHIP	CHIPPEWA COUNTY	STATE OF MICHIGAN
Agriculture, forestry, fisheries, and mining	3.1	3.2	2.0
Construction	3.7	6.0	4.9
Manufacturing	8.7	7.8	<b>24.6</b>
Transportation	4.8	4.1	3.4
Communications and other public utilities	0.4	1.7	2.1
Wholesale trade	0.6	2.3	4.0
Retail trade	<b>12.0</b>	<b>22.9</b>	<b>18.0</b>
Finance, insurance, and real estate	2.2	3.7	5.4
Business and repair services	1.0	2.3	4.7
Personal, entertainment and recreation services	4.4	7.2	3.9
Professional and related services	<b>15.8</b>	<b>24.0</b>	<b>23.3</b>
Public administration	<b>44.1</b>	<b>15.5</b>	3.8

Source: 1990 U.S. Census

The Township's household and family income characteristics show a less prosperous community than the State as a whole. The Township's median household income (\$24,756) falls between the State and County as a whole, but its median family income (\$25,647) is substantially below the State's (\$36,652) and only slightly higher than the County's (\$25,384). The Township's per capita income (\$8,894) lagged behind both the County and State. Approximately 15% of all persons living in the Township in 1990 fell below the poverty level, while approximately 11% of all township families fell below the poverty level. The percent of families in the Township whose income was below the poverty level in 1989 was higher than the State and lower than the County (Table C-7).

**TABLE C-7**  
**Income, 1989 (\$)**

INCOME CHARACTERISTIC	KINROSS TOWNSHIP	CHIPPEWA COUNTY	STATE OF MICHIGAN
Median household income	24,756	21,449	31,020

<b>Median family income</b>	25,647	25,384	36,652
<b>Per capita income</b>	8,894*	10,558*	14,154
<b>Families below poverty level (percent of all families)</b>	11.4%	13.1	9.1

Source: 1990 U.S. Census

\*does not include income of institutionalized persons or persons living in group quarters

## Education

According to the 1990 U.S. Census, approximately 76% of all Township residents 25 years of age or more had received a high school diploma and nearly 15% had continued their education and had received a bachelors, associates, or graduate degree. As a whole, the Township's education levels lag somewhat behind those of the County and State (see Table C-8).

**TABLE C-8**  
**Education Attainment, 1990**  
 (for persons 25 years of age, by percent)

<b>EDUCATION ATTAINMENT</b>	<b>KINROSS TOWNSHIP</b>	<b>CHIPPEWA COUNTY</b>	<b>STATE OF MICHIGAN</b>
<b>Less Than 9th Grade</b>	3.8	9.4	7.8
<b>High School, no diploma</b>	21.0	17.0	15.5
<b>High School Diploma</b>	33.3	37.0	32.3
<b>College, no degree</b>	27.4	19.6	20.4
<b>College Degree (Bachelors or Associates)</b>	13.2	13.1	17.7
<b>Graduate/Professional Degree</b>	1.3	3.8	6.4

Source: 1990 U.S. Census

# Chapter One

# COMPREHENSIVE PLAN

# SUMMARY

# INTRODUCTION

Though introductory in nature, this chapter is as important as any other section in this document. Comprehensive Plans are often misunderstood as to what they consist of and what they are intended to do. This is particularly true in areas where Comprehensive Plans are not commonplace, where a community is undertaking the preparation of a Comprehensive Plan for the first time, or, as in the case of Kinross Charter Township, where a Planning Commission is updating a Comprehensive Plan prepared many years ago. Understanding the fundamentals of what the Kinross Charter Township Comprehensive Plan is all about will assist the residents and officials of the Township in appreciating the role it plays in helping to assure the future welfare of the Township, its residents and its resources. Embracing this Plan as a vital tool in preserving and enhancing the public health, safety, and welfare of the Township is essential if this Plan is to be effective. This Chapter provides an overview of the Comprehensive Plan including its role, its importance, how it should be used, and the process followed during its preparation.

## WHAT IS THE KINROSS CHARTER TOWNSHIP COMPREHENSIVE PLAN ?

### **Purpose**

Just as individuals and families undertake projects in an effort to plan for their future well being, so must municipalities. Whereas individuals may open savings accounts in order to purchase new farm equipment five years into the future, or develop plans for a larger home to house a growing family, municipalities must look to the future and take specific actions to address the current and future needs of the community. Such actions may involve improvements to the roadway network, improvements to the level of emergency services, and the pursuit of new local employment opportunities.

The Kinross Charter Township Comprehensive Plan is a policy document which identifies how growth within the Township, and associated land development and public services, should best be guided to better assure the future welfare of the community. The Comprehensive Plan can generally be described by the following key words and phrases:

***FUTURE ORIENTED:*** The Plan concerns itself with long-range planning in guiding growth and land use needs. The plan is not only a picture of the community today, but a guide to how the community should evolve over the next ten to twenty years in response to growth and community aspirations.

***GENERAL:*** The Plan does not focus upon details and specifics but establishes broad principles and policies to address future growth, land use, and public services.

***COMPREHENSIVE:*** The Plan is comprehensive in that it addresses all types of land use and the practical geographic boundaries of each.

**A PLAN:** The Plan is a specific tangible document which consists of both text and maps, a key portion of which presents and illustrates the Township's policies regarding its planned future land use pattern and delivery of public services.

**DYNAMIC:** The Plan is intended to be continually evolving in light of the aspirations of local residents, changing conditions in the Township, and new strategies to manage growth, land use, and public services.

The Kinross Charter Township Comprehensive Plan was prepared by the Kinross Charter Township Planning Commission, under the authority of the Michigan Township Planning Act, P.A. 168 of 1959. The Act provides for the development of plans by a planning commission for the purposes of, in part:

*"to promote public health, safety, and general welfare; to encourage the use of resources in accordance with their character and adaptability; to avoid the overcrowding of land by buildings or people; to lessen congestion on public roads and streets...and to consider the character of each Township and its suitability for particular uses judged in terms of such factors as the trend in land and population development."*

This Comprehensive Plan is not a regulatory document, but a "policy plan" which serves as a foundation upon which the Township will adopt regulations to implement the policies embodied in the Plan. For example, though the Comprehensive Plan is not a zoning ordinance, the Comprehensive Plan will serve as a basis for updating provisions in the Kinross Charter Township Zoning Ordinance. In fact, the Township Rural Zoning Act stipulates that a municipality's zoning ordinance "shall be based upon a plan..." This Comprehensive Plan has been prepared, in part, to meet this statutory requirement and maintain a strong legal foundation for the Township's zoning regulations.

### **Elements of the Comprehensive Plan**

The Kinross Charter Township Comprehensive Plan consists of five key components:

- 1) An overview of the Township as it exists today and important planning considerations (Chapter Two).
- 2) A set of goals and objectives intended to both identify the intended future character of the Township and guide the development of a strategy for future land use and public services (Chapter Three).
- 3) The planned future land use pattern for the Township (Chapter Four).
- 4) The planned future delivery of public services in the Township (Chapter Five).
- 5) Background studies which provide an extensive review of the conditions and trends in the Township (Appendix).

## **IMPORTANCE & APPLICATION OF THE COMPREHENSIVE PLAN**

The importance and application of the Kinross Charter Township Comprehensive Plan is reflected in both the long term interests of the Township and the day-to-day administration of the Township's planning and zoning program.

### **Long Term Interests**

There are a number of interests shared by residents and officials of Kinross Charter Township that can be expected to continue for years to come and be similarly shared by new future residents and Township officials. Some of these key interests include:

- minimizing increased tax burdens
- assuring appropriate land use and adequate services to protect the public health, safety, and welfare of Township residents and visitors

The Kinross Charter Township Comprehensive Plan supports these long term interests of the local residents and officials through the provision of a future-oriented strategy which seeks to protect these interests. Intensive development without adequate public services to meet the demands of such development, as well as development which places excess demands upon the Township's natural resources (on-site sewage disposal, potable water quality, etc.) can lead the Township into a future of tremendous social and environmental risks which will seriously threaten the public's health, safety, and welfare. Chapters Four and Five establish specific future land use and public services strategies intended to secure these long term interests noted above and others.

### **Day-To-Day Administration**

The Kinross Charter Township Comprehensive Plan plays an equally vital important role in the day-to-day planning and zoning efforts of the Township:

- Advisory Policies: The Kinross Charter Township Comprehensive Plan is an official advisory policy document which should be readily shared with existing and prospective landowners and developers to inform such persons and bodies about the long term intentions of the Township regarding land use and public services and, thus, more closely integrate development proposals with the policies of the Plan.
- Zoning Ordinance Basis: The Plan establishes a practical basis for the Township to revise, update, or otherwise prepare regulatory programs to better assure the policies of the Plan are implemented, including zoning, lot split, and subdivision regulations.
- Review of Rezoning Requests: Chapter Three includes a list of Township goals and objectives which should be reviewed in light of future proposed rezoning requests to further establish a record upon which the rezoning request can be evaluated. Just as important, chapters Four and Five provide policies regarding the planned future land use pattern and public services in the Township and provides valuable reference upon which such rezoning requests should be evaluated.
- Public Services Improvements: The cost-effective use of Kinross Charter Township's tax dollars requires the identification of a planned future land use pattern in order to then pinpoint future population centers and areas planned for commercial and/or industrial growth. While areas in the Township may require future improvements to public services and infrastructure, such as roads and fire protection, population centers and commercial/industrial areas typically require higher levels of public services. This Plan provides the Township with the ability to plan ahead and better pinpoint areas of future need, rather than always playing "catch-up" while the Township's health, safety, and welfare may be at risk.

- Intergovernmental Coordination: This Plan provides the basis for Kinross Charter Township to communicate effectively with its neighbors regarding both the impact of neighboring planning and zoning issues and opportunities for mutual gain through coordinated efforts in the areas of land use and public services.

## **HOW THE PLAN WAS PREPARED**

During the early 1990's, Kinross Charter Township grew increasingly concerned about the proper management of future growth and development, and the use of recently acquired land through the conversion of the former KAFB to correctional facility use. In order to address these concerns, the Planning Commission initiated the preparation of a Comprehensive Plan.

The Planning Commission's initial efforts were directed at establishing a data base about the Township for use during the planning process. This involved a review of physical and cultural conditions in the Township including soils, topography, road network, existing land use patterns, public services, and demographic characteristics, and the preparation of maps to illustrate some of this factual data. The Planning Commission held a town meeting in the spring of 1995 to establish a better understanding of the local residents' desires and aspirations for the Township. The Planning Commission then directed its efforts at the development of goal and objective statements upon which more specific land use and public services policies could be founded

Several alternative future land use patterns were then developed based upon the data collected to date, and the goal and objective statements. A mail survey was undertaken in the spring of 1996 to assist the Planning Commission identify the relative support of local residents for the alternative concepts. The Planning Commission studied these alternatives and input from the public and assembled a complete draft of the Plan suitable for presentation to the residents of the community. A public hearing was held on the draft Plan on July 24, 1997, and the Plan was subsequently adopted by the Planning Commission following the public hearing.

# **Chapter Two KINROSS CHARTER TOWNSHIP: OVERVIEW & PLANNING**

# CONSIDERATIONS

## INTRODUCTION

A fundamental purpose of this Plan is to establish a basis upon which Kinross Charter Township can accommodate future growth and development and plan for the needs of its future residents regarding land use and public services. In developing a strategy to address the future land use and public services needs of the Township, it is important to establish a record of existing conditions in the Township and critical planning issues facing the Township. The purpose of this Chapter is to provide an overview of the Township, as it exists today, and important planning issues facing the Township. A more detailed discussion of existing trends and conditions in the Township can be found in the Appendix.

## KINROSS CHARTER TOWNSHIP OVERVIEW

Kinross Charter Township, a municipality nearly 30 miles long and only four miles wide over the majority of its length, is centrally located in Chippewa County in Michigan's Upper Peninsula and consists largely of the small urban community of Kinross surrounded by approximately 120 square miles of open space (Figure 2-1). The Huron National Forest and the Lake Superior State Forest comprise the vast majority of this open space. With the turn of the century, Kinross was a busy little lumbering town and a railroad center for shipping wood and wood products. The Kinross Auxiliary airfield was established in 1941 and was transformed into the Kincheloe Air Force Base (KAFB). The Township and its air force community grew to approximately 8,000 persons before the air force base was closed in 1977 and converted, in part, into five state correction facilities.

Initial perceptions of the Township may be largely urban because nearly all residents live within Kinross area, which also includes commercial and industrial development as well as the five state correctional facilities, and because the primary access into the Township is via I-75 through the area. For the purposes of this Plan, the "Kinross area" generally refers to the eastern third of the Township, from Tilson Road to the Township line, with its central location extending from the former air force base to Mackinac Trail.

Nearly all of the approximately 60 commercial establishments in the Township are situated in the Kinross area, and nearly half are located just east and south of the Kinross Correctional Facility along Tone Road, Water Tower Drive, Kincheloe Drive, and Wilson Road. Many of the commercial establishments in this area evolved during the closure of the KAFB when the property upon which these establishments existed came under Township ownership and the Township proceeded to offer leases for the abandoned KAFB buildings. The commercial establishments vary in nature and tend to be of a small scale, including lodging, restaurants, convenience stores, and personal and professional service

establishments. Industrial development within the Township is similarly limited to the Kinross area, centered in the Chippewa County Economic Development Corporation Industrial Park adjacent to the Chippewa County International Airport directly south of M-80. The industrial park is owned and operated by the Chippewa County Economic Development Corporation which is leasing the numerous hangars and other buildings previously associated with the air force base's operations to businesses engaged in primarily light industrial operations.

The 1990 U.S. Census recorded 1,465 housing units in the Township. The vast majority of these housing units, approximately 1,100, are contained in the Woodside housing development within the former air force base. The Sault Ste. Marie Tribe of Chippewa Indians owns approximately one third of the dwelling units in the development and the balance are in private ownership. The development includes both single family and duplex units though approximately a third of the dwelling units in the Woodside housing area are vacant. Of the 845 occupied dwelling units in the Township in 1990, 52% were owner-occupied.

The majority of the approximately 265 housing units not situated in the Woodside housing area are located along the primary roads in the Kinross area. The balance are scattered throughout the more distant areas of the Township. The Township's housing is considerably younger than that of the County and State as a whole, although the median home value in the Township in 1990 (\$39,400) was approximately 1/3 less than the State as a whole and only slightly higher than for the County as a whole.

Approximately 2,300 acres of land in the Township are devoted to agriculture, the majority of which are located along the Township's northern and southern boundaries within five miles of I-75. The majority of the farming operations involve dairy farming and the growing of hay for local, regional, and out-of-state feed purposes.

Kinross Charter Township owns a comparatively large area of land within the former air force base, much of which is generally vacant. This land area covers more than 900 acres.

The Township includes numerous public recreational facilities which residents and visitors can enjoy. The most expansive public recreation and natural resource lands in the Township are the Hiawatha National Forest and Lake Superior State Forest. Recreational facilities available within or near the Kinross area include the Chippewa County Fairgrounds (swimming, picnicking, race course, and farm and livestock facilities), Kincheloe Memorial Public Golf Course, two recreational vehicle parks, the Dukes Lake Recreation Area (swimming and fishing), and snowmobile and off-road-vehicle trails.

The Kinross area is provided with extensive public services. All facilities formerly part of the air force base are served by public sewer and water and both systems are capable of accommodating significant increases in demand. Solid waste collection is provided by private sector services. The Township recently initiated a recycling collection program at the sewage disposal treatment plant. Police protection is provided by both the County Sheriff's Department and Michigan State Police. In addition, the Kinross Charter Township Police Department provides police protection services to all locations previously part of the KAFB through a special assessment district established in 1981.

Kinross Charter Township and its neighboring municipalities have put in place a "good neighbor" policy of mutual aid, placing principal responsibility for fire emergency services

upon that municipality with quickest access to the emergency at hand, with neighboring back-up as necessary. The Township's fire station houses the Kinross Township Volunteer Ambulance Corps which provides ambulatory services to the Township and surrounding municipalities in much the same manner as local fire protection services are provided.

Of the 6,566 persons in the Township in 1990, 4,021 were prison inmates. Kinross Charter Township has a comparatively young population. The percentage of persons less than 18 years of age in 1990 was considerably higher in the Township than in the County or State as a whole. Similarly, the percent of persons 65 years of age or more was approximately half of that for the County and State as a whole. The median age of Kinross Charter Township residents was 29.6 in 1990, several years lower than the County (32.2) and State (32.6) as a whole. The 1990 Census recorded 840 households and 659 families in Kinross Charter Township. The average household size in the Township was 3.0 persons. Of all the households in the Township, approximately 63% consisted of a married-couple family. This percentage was somewhat higher than the County and State as a whole.

According to the 1990 U.S. Census, approximately 95% of the employed Kinross Charter Township work force was employed within Chippewa County. Nearly 45% of all Township workers were employed by the public administration industry, reflecting the strong role the state correctional facilities play in the Township. The retail trade industry and professional and related services industries accounted for an additional 28% of the Township workers. The Township's household and family income characteristics show a less prosperous community than the State as a whole. The Township's median household income (\$24,756) falls between the State and County as a whole, but its median family income (\$25,647) is substantially below the State's (\$36,652) and only slightly higher than the County's (\$25,384).

Regional access to Kinross Charter Township is provided primarily by Interstate 75 which travels through the eastern half of the Township. Secondary regional access provided by the Mackinac Trail which generally parallels I-75, and by additional regional arteries in close proximity to the Township including M-129, M-28, and M-123. Except for the immediate Kinross area, the Township's roadway network is limited. The backbone of the Township's local roadway network is the Kinross area loop formed by Mackinac Trail, Gaines Highway and M-80.

## **PLANNING CONSIDERATIONS**

A number of key planning considerations arise in light of the existing trends and conditions in the Township. These considerations vary in scope but are clearly not independent of one another. The future quality of life in the Township and the future character of the Township will be largely shaped by the manner in which the Township's strategy for future land use and public services responds to these issues. Below is a review of these important planning considerations.

### **Accommodating Future Growth & Development**

Though the Township population has witnessed dramatic shifts during the past 50 years, it is reasonable to expect the state correctional facilities to continue operation for many years and serve as a stabilizing force in the Township. The industrial park and airport pro-

vides additional impetus for future growth and development in the Township as does the potential for increased tourism. No municipality is permitted to adopt a zoning ordinance or make a zoning decision which has the effect of totally prohibiting a legal land use where a local or regional need for such a land use can be demonstrated (unless there are no appropriate locations in the municipality for the land use).

Accordingly, recommendations in this Plan must squarely address the growth and development issues facing the Township. The Plan must provide a strategy for effectively shaping and guiding future growth and development in a legally defensible manner and consistent with both the aspirations of the Township's citizenry and the opportunities and constraints presented by the Township's natural and cultural characteristics.

### **Commercial Development**

Commercial development in Kinross Charter Township has not followed a purposeful strategy in regard to location due, in large part, to the precedents established by the former air force base facilities. While the vast majority of commercial development is in the Kinross area in administration and support services buildings of the base, there is little unity to this development. Much of M-80 is characterized by strip commercial development in-between more open and residential areas. Many of the former air force base facilities, such as those along Wilson Road, have been leased to commercial enterprises without a clear policy regarding the long-term use of these land areas and future development and/or redevelopment. There is no recognizable organization to this development and no strategy addressing where additional commercial development should or shouldn't be encouraged. As a result of past trends, there is no clearly identifiable commercial district or downtown area. This undermines the Township's sense of community and undermines the Township's efforts to strengthen its economic base and capture additional tourist dollars. There exists little in the way of site landscaping to make the Township's commercial areas visually attractive and appealing as a place to shop. The Comprehensive Plan should establish recommendations regarding the planned future location of commercial development, planned commercial expansion areas, and minimum requirements regarding the future character of commercial areas including vehicular and pedestrian access and site amenities.

### **Residential Development**

It can be expected that some of the new residents coming to the Township may wish to live in a less urban environment than the Woodside housing area and/or in a different location within the Township. The Township will be greatly impacted by the intensity and location of future residential development. There is a relationship between increasing development densities and increased demands for public services. Urban development densities typically require public sewer and water, increased police and fire protection, and improved vehicular circulation. Such improvements will place increased financial demands upon the Township and its residents.

Accordingly, it is advantageous that existing residential development be maximized to take advantage of existing public sewer and water and infrastructure. Future residential development should be based upon a specific strategy which correlates higher development densities with the cost-effective expansion of public services, and the ability of the soils and other natural conditions to support the planned residential densities where public sewer is not available.

### **Township-Owned Land**

Kinross Charter Township owns hundreds of acres of undeveloped land near and/or in the Kinross area which it acquired during the conversion of the air force base. This condition places the Township in a unique position to actively shape the future character of the area and address the land use needs of the immediate community and Township as a whole. The Comprehensive Plan should address this unique opportunity and identify the planned future land uses for these areas and the proper phasing and/or timing of such development, or otherwise delay recommendations until such time that clearly identified needs can be addressed through the use and/or development of this land based upon the evolving needs of the Township and development patterns and trends.

### **Farmland Protection**

The production of food stuffs is a state, national, and international concern as agricultural lands are being consumed by residential development at a rapid rate. Factors encouraging the disinvestment in farming are numerous, including the economic environment and the limited number of younger persons interested in continuing in their parents' footsteps. Cumulative consumption of farmland for residential purposes and conflicts with nearby nonfarm residences further encourages disinvestment. Much of Kinross Charter Township farmland is not considered to be "prime" by the Natural Resources Conservation Service and is apt to produce somewhat less than the consistent high yields characteristic of regions elsewhere.

It is important that the Plan's recommendations recognize the struggles faced by the local farming community. Recommendations regarding future land use patterns in the Township should not place unreasonable limitations upon the future use of existing farm parcels while, at the same time, should encourage the continuation of farming operations for as long as there is interest among local farmers and/or such operations are economically viable.

### **Protection of Rural Character and Natural Resources**

Protection of the Township's "*rural character*" is extremely important to the residents of Kinross Charter Township. "*Rural character*" is a subjective quality -- an issue of personal perception. What one family considers to be "rural" may not be the same as their neighbors, and this Plan does not attempt to define "*rural character*". However, the Plan does recognize that people typically associate "*rural character*" with an overall perception of limited urban development and expansive open spaces of farmland and/or natural landscapes including woodlands, wetlands, and fields. Not only are these elements important in shaping the character of the Township, but also play vital environmental roles including wildlife habitats, flood control, water purification, groundwater recharge, and air quality.

This Plan does not propose that the protection of "*rural character*" and natural resources means the prohibition of future growth and development. Managed growth and development does not have to jeopardize the Township's overall rural character. Rather, this Plan must constructively guide growth and development to assure its compatibility with the Township's existing natural resources and rural character. The Plan recognizes that protection of "*rural character*" and natural resources is dependent upon site development practices which minimize the negative visual and environmental impact of such development and address open spaces and natural resources as an asset. Protection of natural resources should include, but not necessarily be limited to, wetlands, woodlands, surface and groundwater supplies, and water courses. Protection of surface waters should extend to properly sited and operating septic systems, preservation of natural shorelines, and opportunities for safe boating and fishing.

## **Roads**

Aside from M-80 and the Kinross area, the Township's roadway network is not well developed. Area wetlands, topography, extensive public land holdings, and the surrounding regional road network have discouraged the construction of continuous and convenient cross-township circulation. Many of the road miles in the Township are unpaved, requiring relatively few residences to produce persistent and regular road maintenance problems.

Recommendations regarding a planned future land use pattern for the Township should recognize the presence of paved and unpaved roads and guide more intensive growth and development toward those areas of the Township planned to receive, or already have, road improvements and infrastructure better capable of accommodating the increased traffic needs. Similarly, the allocation of funds for future road improvements should be aimed, in part, at those areas of the Township expected to generate higher levels of traffic.

## **Tax Base & Public Services**

Tax revenues dictate, in part, the extent and quality of public services and area residents do not generally support increases in taxes. Though any new development can be expected to increase the Township's tax base, the new development will never-the-less place additional demands upon current public services available to Township residents and businesses.

Recent research has shown that new development does not necessarily (and contrary to traditional planning wisdom and thought) "*pay its way*." The lack of local support for tax increases should encourage development patterns which minimize new public costs. To this end, it is advantageous to maintain a degree of compactness in future growth and development and, to the extent it is possible, locate higher density and intensity development near or adjacent to areas currently being served with higher levels of public services or anticipated to be served by such services in the future.

## **Compatibility Among Land Uses**

Individual properties and land uses do not exist as islands. Individual properties and land uses exist within a network of adjoining and nearby properties and land uses. The Plan should provide for a township-wide land use pattern which assures compatibility between nearby and neighboring land uses through both recommendations regarding land use type, land use intensity, and buffering. Assuring compatibility among land uses must take into account the operations of the Chippewa County International Airport and associated flight patterns. If compatibility among land uses is to be achieved, the planned future land use pattern must also take into consideration adjacent land uses in neighboring communities as well. The principal adjoining municipalities are similar in character to Kinross Charter Township in that vast areas of these communities are devoted to public lands and other open spaces and the majority of residential acreage is of a low density character.

## **Protection of Public Health, Safety, & Welfare**

Kinross Charter Township government functions to provide for the health, safety, and welfare of the residents within the municipality. The development of a new Comprehensive Plan is an extension of that function and as such, the Plan should provide for a foundation upon which the future health, safety, and welfare of the Township and its residents can be better assured. The Plan should take steps to satisfy fundamental health, safety, and wel-

fare concerns including the avoidance of intensive development in environmentally sensitive and/or structurally unsound areas, the assurance of adequate public facilities (including sewage disposal, water, storm water management, and emergency services) to serve new land uses and developments at the time they become functional, and the protection of property values and the Township's economic stability.

## Chapter Three

# GOALS & OBJECTIVES

### INTRODUCTION

At the onset of the preparation of this Plan, Kinross Charter Township took the position that it wanted to be actively involved in guiding and shaping future growth and development in the Township and establishing the future character of the Township. A fundamental question which must be asked in this regard is *"What should Kinross Charter Township be like in the future?"*. This question must be answered if the Plan is to develop a sound strategy for future land use and public services. Just as an architect must first identify the desired components of a building before plans can be prepared, so must the Township first identify its desired future character. To effectively plan for the Township's well being with regard to future land use and public services, it is necessary to clarify the goals and objectives of the Township. Planning goals are statements that express the Township's long range desires. Each goal has accompanying objectives which are the general approaches that the Township supports to attain the specified goal. For example, one of the goals of the Workhard family may be to take a summer vacation while two of the family's objectives may be to make additional deposits into their savings account and visit a travel agent for suggestions and information.

This Chapter presents the goals and objectives established for the Township regarding land use and public services during the preparation of this Plan. The goals and objectives are important for several reasons:

- The goals and objectives provide current and potential residents of Kinross Charter Township with an overview of the intended future character of the Township.
- The goals and objectives identify and outline the basic parameters which should be used in guiding future land use and public services in the Township.
- The goals and objectives serve as references upon which future rezonings and land development decisions can be evaluated.

The goals and objectives are divided into the following major categories:

- Growth Management
- Community Character and Environment

- Farmland
- Residential Development
- Commercial Development
- Industrial Development
- Transportation & Roads
- Public Services

## GOALS & OBJECTIVES

### Growth Management

**Goal:** Guide future development in a manner which is consistent with the natural limitations of the land, the preservation of open spaces, natural resources, and rural character, and the planned provision or expansion of necessary public facilities and services.

**Objective:** Discourage the expansion of public facilities and services (sewer and paved roads, for example) except where the intensity of development requires such services or where the public health, safety, or welfare is at risk.

**Objective:** Prohibit new growth and development that requires levels of public facilities and services unavailable in the Township, until the time such levels of services become available.

**Objective:** Encourage development in locations which are consistent with the capacity of existing and planned public services and facilities, and are cost effective in relation to service extensions.

**Objective:** Wherever legally permissible, local regulations should require new developments to pay for the direct and indirect Township costs associated with that development. These costs should not be imposed on existing residents. Exceptions should be made where public interests and benefits may be at stake.

**Objective:** Recognize that intergovernmental coordination in growth management and planning decisions is essential because Kinross Charter Township is a critical link in a regional network of communities.

**Objective:** Develop and maintain a meaningful communication program with area municipalities and county agencies to discuss local and area-wide public facilities and services needs, land use conditions and trends, contemporary planning issues, and strategies to address short and long term needs and issues in a mutually beneficial manner.

**Objective:** Continually provide regular opportunities for substantive public input on growth and development issues facing the Township and the future character of the Township.

### Community Character & The Environment

**Goal:** Preserve the quiet, small town, and rural character of Kinross Charter Township and its environmental integrity.

**Objective:** Recognize that the Township's open spaces, including woodlands, fields, and farmland, are a fundamental component of the Township's rural character and should be preserved.

**Objective:** Preservation of the Township's open spaces should equally apply to environmentally sensitive areas, such as steep slopes, wetlands and stream corridors, and land not suitable for development because of soil and/or topographic limitations on structures or septic systems.

**Objective:** Ensure that the quantity and quality of new development does not unreasonably create increases in air, noise, land, and water pollution, or the degradation of land and water resource environments including aquifers and groundwater resources, and that all development and land uses be in compliance with applicable local, county, state, and federal regulations.

**Objective:** Encourage residential, commercial, and industrial development which assures the protection of environmentally sensitive areas, open spaces, and the landscape's natural assets.

**Objective:** Encourage future residential, commercial, and industrial development to be designed in scale with existing developed areas in the Township and to respect the existing rural surroundings and low profile atmosphere of the Township.

**Objective:** Limit disruptions to the Township's prevailing rural and small town character by limiting the future locations within which new or expanded commercial and industrial development may occur.

**Objective:** Encourage the use of programs and tools designed to preserve open spaces including the use of conservation easements and land trusts.

**Objective:** Educate the public regarding the Township's fundamental reliance upon groundwater resources for potable water supplies and the potential detrimental effects of irresponsible land development and/or domestic refuse disposal practices.

## **Farmland**

**GOAL:** Encourage the continuation of local farming operations while also providing opportunities for appropriate alternative land uses.

**Objective:** Adopt zoning regulations designed to protect farming activities in designated agricultural areas from the nuisances (destruction of crops, complaints about legitimate day-to-day farming operations, etc.) associated with incompatible adjacent uses, including but not limited to residences occupied by non-farmers.

**Objective:** To the extent that residential development is permitted to occur in agricultural areas, encourage such development to be sited on less productive farmland.

**Objective:** Ensure through responsible and innovative development and site planning that new development minimizes disturbances to, and premature destruction of, farmland areas.

## **Residential Development**

**GOAL:** Provide for a broad range of housing opportunities which respond to the varying economic, family stage, and lifestyle needs of the Township, encourage a stable and attractive housing stock, and are sensitive to the rural and “small town” community character.

**Objective:** Encourage the continued dominance of single family housing as the principal housing option in the Township and identify land areas, through land use planning and zoning, most appropriate for single family housing.

**Objective:** While maintaining single family housing as the primary housing option in the Township, seek to assure additional housing alternatives to address the varied lifestyles and age characteristics of new residents and the future generations of existing Township families.

**Objective:** Encourage innovative residential development which incorporates the preservation of natural resource systems and open spaces within the site planning process and the preservation of the Township’s rural character.

**Objective:** Prohibit residential development densities in areas where public services and/or natural conditions are inadequate to support the proposed density of development.

**Objective:** Encourage the maintenance and up keep of residential yards and neighborhoods through zoning regulations intended to protect property values and neighborhood stability.

**Objective:** Encourage the rehabilitation and use of existing unoccupied dwelling units to assist in meeting future housing needs.

## **Commercial Development**

**GOAL:** Provide opportunities for the expansion of commercial land uses in a manner which minimizes impacts upon adjacent land uses, responds to the “small town” character of the community, and assures adequate services to meet the needs of these land uses.

**Objective:** Avoid separate parking lots for each business where feasible and encourage centrally placed parking lots which serve multiple businesses.

**Objective:** Improve the quality, vitality, and value of retail areas through sign regulations which control the design and location of signs.

**Objective:** Encourage new commercial development to incorporate site amenities to create a more safe and visually appealing retail center, including sidewalks, landscape areas, and unified signage.

**Objective:** Ensure that commercial land uses have adequate provisions for sewage disposal, storm water management, potable water, and other critical public health and welfare concerns.

**Objective:** Ensure that elements for preservation of the Township's rural character are incorporated into new commercial developments by establishing appropriate site design and building standards, including screening and protection of natural resources.

**Objective:** Prevent the premature conversion of land to uses other than their planned use for future commercial or industrial development to ensure their long term availability for commercial and industrial development.

**Objective:** Ensure that new commercial development does not adversely impact the normal use and enjoyment of adjoining land uses through appropriate buffering and other techniques.

**Objective:** Provide opportunities for home-based occupations within residential dwelling units in appropriate areas of the Township and under conditions which will not negatively impact the residential character, appearance, and quality of life experienced by surrounding residential properties and neighborhoods.

## **Industrial Development**

**GOAL:** Increase the amount of non-polluting light industry to offer employment opportunities to the township work force, without overburdening local roads, utilities and other public services, nor negatively impacting adjoining land uses.

**Objective:** Maximize the existing infrastructure and investment of the industrial park through encouraging new industrial land uses to locate within the park.

**Objective:** Ensure that industrial development does not adversely impact the normal use and enjoyment of adjoining land uses through appropriate buffering and other techniques.

**Objective:** Ensure that industrial land uses have adequate provisions for sewage disposal, storm water management, potable water, and other critical public health and welfare concerns.

**Objective:** Limit land division and access along major roads to prevent industrial strip development.

**Objective:** Require the separation of industrial sites from residential areas through buffers comprised of parking, commercial uses, parks, parkways, or open space.

## **Transportation & Roads**

**GOAL:** Maintain and enhance a transportation network throughout the Township which moves vehicular traffic in an efficient and safe fashion, utilizes road segments specifically designed to accommodate higher traffic flows where higher traffic levels are being generated, and is consistent with the land use goals and policies of this Plan.

**Objective:** Identify priority road segments for maintenance and improvement, based upon the planned future land use pattern for the Township and existing traffic patterns, and systematically undertake these projects.

**Objective:** Discourage high traffic generating land uses and development patterns along the Township's unpaved roads until the time when such roads have been improved to accommodate such development.

**Objective:** Discourage the paving of roads where such improvements will encourage growth and development in areas of the Township not specified for such growth.

**Objective:** Adopt land use and/or other regulations which minimize the potential for traffic congestion and safety hazards along adjacent roadways, including limitations on the number, size, and shape of new land divisions along primary roads and the prevention of "strip" development.

**Objective:** Develop plans to expand alternative transportation facilities, including walkways and bicycle trails, in coordination with public recreation areas, neighboring municipalities and regional efforts.

**Objective:** Prepare a capital improvements program to schedule and prioritize improvements and maintenance.

## **Public Facilities & Services**

**GOAL:** Expand the Township's public facilities and services only as necessary for maintenance of the public health, safety, and welfare, provided such improvements are consistent with the Comprehensive Plan's proposed future land use pattern and do not encourage excessive growth over vast areas of the Township.

**Objective:** Identify those areas of the Township which, due to existing conditions and the planned future land use pattern of the Township, may be in need or will be in need of improved public services including police and fire protection services, sewage disposal, potable water, and storm water management.

**Objective:** All improvements to Township public services and facilities should be planned so that tax dollars are spent wisely and efficiently and any increase in local taxes is minimized.

**Objective:** Establish a regionally coordinated Township-wide recycling program which facilitates ease and convenience of use.

**Objective:** Develop and maintain a regular meaningful communications program with adjoining municipalities and regional agencies to discuss and investigate both infrastructure-based and non-infrastructure-based public facilities and services needs, opportunities for shared facilities and services, and alternative strategies for contracted services versus Township-operated services.

**Objective:** Maintain a current Township-wide recreation plan which responds to the concerns and needs of area residents.

**Objective:** Maximize the use of existing facilities and services, including recreation facilities, until such time when expansion is necessary.

## Chapter 4

# FUTURE LAND USE STRATEGY

### INTRODUCTION

Kinross Charter Township's principal planning components are embodied in the Comprehensive Plan's Future Land Use Strategy, as discussed in this Chapter, and the Public Services Strategy discussed in Chapter 5. The Future Land Use Strategy identifies the desired pattern of land use and development throughout the Township. The Public Services Strategy specifies recommendations regarding future infrastructure improvements, decisions to better assure future public services are coordinated with the planned future land use pattern, and the achievement of the Plan's goals and objectives.

The Future Land Use Strategy concerns itself with policies regarding future land use and development in the Township. Implementation of these policies rests with the regulatory tools of the Township – most importantly the Kinross Charter Township Zoning Ordinance. The Kinross Charter Township Zoning Ordinance will be the primary implementation tool of the Comprehensive Plan through appropriate changes in the provisions of the Ordinance. The Township's Zoning Ordinance generally regulates the type, location, bulk, and intensity of land development throughout the Township.

The Township may also adopt other supporting regulatory tools to further the implementation of the policies of the Comprehensive Plan. Land division and private road regulations are very important as a means to further implement the Comprehensive Plan and the Future Land Use Strategy presented within. Land division regulations are intended to assure efficient land division patterns, the avoidance of non-buildable lots, and adequate public access to public roads. Land division regulations are particularly valuable when lots are created outside the regulatory authority and administrative review procedures of the Michigan Subdivision Control Act. Private road regulations are intended to provide opportunities for road circulation networks restricted from general public use, in response to the local housing market, while at the same time assuring such roads are built to minimum public safety and welfare standards and so maintained. Related ordinances and a capital improvement program, may, from time to time, be adopted or amended to further carry out this Plan.

### OVERVIEW of the FUTURE LAND USE STRATEGY

The Future Land Use Strategy establishes the planned future land use pattern throughout the Township for the next 10 to 20 years. However, no new land uses should be established, or land rezoned, unless adequate public facilities and services are available to meet the needs of the proposed uses and such development does not outpace the Township's ability to effectively manage the rate of development.

The future land use pattern was established based upon an analysis of the Township's natural and cultural characteristics including community attitudes, existing roadway network, soil conditions, existing and nearby public infrastructure, environmentally sensitive areas, and neighboring municipal land use conditions. The opportunities and constraints presented by these characteristics were evaluated within the context of the goals and objectives of Chapter 3 to arrive at a planned future land use pattern.

The Future Land Use Strategy calls for a land use pattern very similar to the Township's existing land use pattern. The vast majority of the Township's acreage is planned for conservation purposes. The Kinross area is proposed to continue as the principle urban growth area in the Township and is intended to accommodate varying densities of new residential development as well as commercial and industrial uses.

## **INDIVIDUAL COMPONENTS of the FUTURE LAND USE STRATEGY**

Following is a review of the five principal components of the Future Land Use Strategy. These individual components collectively formulate the planned future land use pattern in the Township and their approximate geographic limits are illustrated in the Future Land Use Map at the end of this Chapter. *"Development density"* is used in this Plan to describe recommended development intensities. *References to a particular "development density," such as one dwelling unit per 2 acres, means the density that results by dividing the total acreage of the project area by the number of dwelling units planned for that project — it does not necessarily mean a uniform minimum zoning lot size of 2 acres.* Specific lot size requirements and associated development standards will be established in the zoning ordinance.

### ***Conservation Area***

The Future Land Use Strategy establishes a Conservation Area which includes lands primarily characterized by expansive areas of wetlands. These natural resources are evident throughout the Township and, in addition to presenting severe limitations toward development, provide important environmental benefits including habitats for wildlife, flood control, groundwater recharge and discharge, and surface water purification. They also provide special opportunities for passive recreation and contribute to the Township's overall rural character.

The Conservation Area includes the substantial federal and state owned acreage dedicated to resource protection and outdoor recreation. The Conservation Area includes those portions of the Township contained in the Hiawatha National Forest and the Lake Superior State Forest. These public resources are managed for the purposes of timber production, resource-based recreation opportunities, and/ protection of wildlife resources and habitats. These public facilities embody abundant natural resources, including woodlands, wetlands, and water courses.

The Conservation Area also includes the substantial non-wetland acreage in the western half of the Township owned by the Escanaba Paper Company. These lands have been included in the Conservation Area due to their special resource character and expansive size, their proximity and relationship to the Hiawatha National Forest, and the Plan's intent that the management of these woodland resources be based upon responsible conservation practices and reforestation.

In light of the critical roles which the Township's wetland areas play, the severe limitations the wetlands present toward development, and the importance of the public resource management and recreation areas in the Township, the Conservation Area provides for the protection of these resources and their long term viability by strongly discouraging the introduction of new land uses into these areas which are not of a similar character. Development in close proximity to these sensitive resources and public lands will threaten the quantity and quality of these assets as well as increase public safety concerns between hunting activities and neighboring land uses. Future use and development of land in the Conservation Area should be predominantly limited to open-space and natural resource based land uses, including agriculture. Residential development should be permitted at only very low densities, such as 1 dwelling unit or less per 10 acres. Alteration of the natural landscape and development of new roads should be avoided to the greatest extent feasible, and no development should occur within these areas without receipt of appropriate Township and/or state or federal permits. Where only a portion of a single parcel falls within a Conservation Area, future development should occur on only those portions of such properties which are not characterized by wetland habitats.

While the geographic limits of the Conservation Area on the Future Land Use Map include only those wetland areas of a large expansive nature, it is a basic tenant of the Future Land Use Strategy that wetland areas of all sizes be preserved and protected from the negative impacts of land development, and that the Conservation Area includes these smaller wetland areas as well. Future land use decisions must recognize the significance of these resources to the Township. Any loss in the quantity or quality of these resources must be considered permanent and, as such, sound and practical land use and site development practices aimed at preservation of these resources must prevail.

The Conservation Area includes a number of scattered privately owned parcels surrounded by Hiawatha National Forest property. These parcels have been included in the Conservation Area because active development of these parcels will undermine the quality and viability of the surrounding forest lands and will not benefit the public safety and welfare in light of the lack of adequate public and emergency access to the majority of these parcels.

### **Agricultural - Rural Residential Area**

The Agricultural - Rural Residential Area is intended to provide opportunities for, and encourage the continuation of, agricultural operations in the Township. This area is also intended to provide opportunities for rural residential lifestyles of comparatively low development density. The Agricultural - Rural Residential Area is characterized by the principle agricultural areas in the Township not otherwise included in the Conservation Area. The Agricultural - Rural Residential Area discourages indiscriminate encroachment of residential land uses into particularly productive farmland areas in order to more effectively preserve these important agricultural resources. At the same time, it is recognized that the ability of a farmland owner to split off residential lots from the farm acreage, from time to

time or multiple splits in a short period of time, is important both for economic gain and assuring the continued operation of the farm.

Farmland owners should not be required to give up unnecessary farmland acreage in order to limit the amount of future residential development in this Area. For example, one 10 acre residential lot split from a 40 acre farm parcel is far more destructive to the long term viability of that farming operation than four 1 acre lots split from the same parcel. New residential development should be located on less productive portions of agricultural acreage where feasible. Agricultural buffer setbacks which require new residences to be a minimum distance from adjacent agricultural operations to lessen conflicts associated with legitimate agricultural operations should also be considered.

Potential new residents in the Agricultural - Rural Residential Area should recognize that the traditional smells, noises, pesticide applications, and generally recognized agricultural activities associated with farming may well continue on a long term basis, and local developers and real estate agents should disclose this information to prospective buyers of land in this Area.

### **Kinross Mixed Use Area**

The Kinross Mixed Use Area provides for a combination of land uses including residential development of a density higher than recommended elsewhere, commercial and industrial land uses, and the correctional facilities. The Kinross Mixed Use Area generally includes that portion of the Township formerly part of the Kincheloe Air Force Base and lands further north and east not otherwise included in the Conservation Area. The Kinross Mixed Use Area recognizes the existing Mixed Use character of this Area and provides for the continuation and expansion of this pattern. Urban land uses such as those contemplated by this Area typically require a heightened level of public services including road infrastructure, sewage disposal and potable water, and emergency services. This heightened level of public services is available in the Kinross Mixed Use Area. The Kinross Mixed Use Area is the most urbanized area of the Township and in guiding future urban development to this Area, better assures compact urban growth and minimizes future public service costs associated with high intensity land uses. Because of the proposed continuation of this mixed use pattern, the Plan recommends strong screening and bufferyard measures to assure compatibility between new land uses. Limitations on signage, building heights, size, bulk, and related architectural qualities should be established to better assure compatibility of new land uses with the desired character of the Township.

This Mixed Use pattern is to be maintained and expanded as follows:

**Commercial Development:** The Plan supports the continuation of the Township's existing commercial areas and the managed expansion of new commercial development. All new future commercial development is proposed to be located in the Kinross Mixed Use Area, except as may be provided along M-80 outside of this Area (see "M-80 Residential-Commercial Corridor Area" on following page). The Plan supports the continuation of the commercial areas located across from the Kinross Correctional Facility, including those commercial areas along Water Tower Drive, Riley Drive, and Kincheloe Drive, and supports the continuation and expansion of commercial development along M-80 within this Area. The Plan also supports the expansion of commercial development through the conversion of Township-owned vacant land to commercial use, such as the property between M-80 and the Woodside housing area, where such vacant land is adjacent to existing commercial uses and the commercial development does not require the filling of nearby wetlands or otherwise negatively impact adjacent land uses.

Future commercial uses which generate comparatively high traffic levels, or frequent heavy truck traffic, should be located where direct access to M-80 is afforded. Commercial development in the Kinross Mixed Use Area is intended to address both the local day-to-day needs of area residents as well as the needs of regional consumers and highway travelers. All future commercial uses should employ measures to minimize negative impacts on nearby properties, including landscaping, screening, proper site development design, and setbacks.

**Industrial Development:** Future industrial development is to be limited to the Kinross Mixed Use Area. The Plan supports the continuation of the Chippewa County Economic Development Corporation Industrial Park and proposes that the majority of new industrial development be accommodated within the park. The park includes considerable area available for new facilities and, in addition to being served by the heightened public services of this Area, benefits from its proximity to the Chippewa County International Airport. The availability of public sewer and water provides for an array of potential industrial uses. The Plan supports the expansion of the industrial park provided such expansion does not interfere with the planned predominant commercial character of M-80 and adequate measures are taken to minimize potential negative impacts upon abutting land uses.

The Plan also recognizes the existing industrial uses along the north side of M-80 near the railroad spur and, in light of the area's existing industrial character and direct access to M-80, provides for the continuation of this location as an industrial node. Vacant County-owned and Township-owned land to the west may provide appropriate expansion area for this industrial node, and, in light of the periodic north-south fly patterns of the adjacent airport operations, may be a preferred use over residential development.

**Residential Development:** The Kinross Mixed Use Area is intended to provide opportunities for new residential development and accommodate residential uses of a higher density than permitted elsewhere in the Township. The availability of public sewer and water, the proximity of emergency services, opportunities for affordable housing, and the existing higher density character of much of the residential development within this Area supports the continuation of this residential pattern where the market so dictates. Residential development is intended to be the predominant land use in the Kinross Mixed Use Area aside from those locations designated for commercial, industrial, or correctional facility use. The Plan supports residential development of Township-owned vacant land where such development will not encroach into planned commercial or industrial areas or otherwise be negatively impacted by nearby commercial or industrial operations.

Average development densities of up to four dwellings per acre are considered appropriate provided the public services are available to accommodate sewage disposal and potable water needs. Development densities in excess of four dwellings per acre, including multiple family dwellings and mobile home parks, are considered reasonable uses within the Kinross Mixed Use Area but only after special review proceedings to determine if the project on the specifically proposed property is appropriate. Factors such as available infrastructure and public services, the surrounding existing land use pattern, and the specific characteristics of the property should be considered.

**Correctional Facilities:** This Area includes the five state correctional facilities in the Township and this Plan supports the continuation of these facilities within the community. The facilities serve an important purpose and provide important employment opportunities. The future expansion of these facilities, or introduction of new facilities, should occur

only if, after extension study to determine the economic and related impacts upon the community, such expansion plans would be an overall benefit to the Township.

### **Residential Area**

The Residential Area is primarily intended to accommodate residential development at comparatively low to moderate densities. The Residential Area includes those privately owned lands not otherwise included within the Conservation Area, Agricultural - Rural Residential Area, or Kinross Mixed Use Area. In light of the lack of public sewer and water within the Residential Area, and the predominantly difficult conditions which area soils present toward on-site septic systems, development densities of no more than one dwelling unit per acre are advisable. Considerably lower development densities are appropriate where emergency access is limited due to the distance to such services or the lack of adequate road infrastructure, or where natural site conditions, such as soil or topographic conditions, warrant lower densities. The Plan recognizes that there exists some developed properties within the Residential Area which are not of a residential character and the Plan generally supports the continuation of these uses as they currently operate.

### **M-80 Commercial/Residential Corridor**

The Future Land Use Strategy recommends that the M-80 corridor be reserved for residential and commercial use. The corridor provides excellent visibility for commercial uses and provides excellent access for both commercial and residential uses. The Strategy provides for a mix of both commercial and residential development along the entire length of M-80 except within the Kinross Mixed Use Area. Residential development along the M-80 corridor in the Kinross Mixed Use Area is discouraged in an effort to protect the long term stability of the Township's central business area. Because of the proposed mixed commercial and residential land use pattern, the Plan recommends strong screening and buffer yard measures to assure compatibility between land uses. Limitations on signage, building heights, size, bulk, and related architectural qualities should be established to better assure compatibility of new land uses with the desired character of the Township. Minimum site development standards, including lot size, lot width, and the maximum number of access points onto M-80 by a single parcel, should assure the continuation of the intended role of M-80 and minimize safety hazards and congestion.

## **SPECIAL LAND USES**

The previous pages presented recommendations regarding the planned future land use pattern for the Township during the coming ten to twenty years. It is not the intent of this Plan to identify each individual land use which should be permitted in each of the five Areas. This Plan makes broad-based recommendations regarding the dominant land uses intended to be accommodated in each of the five Areas. Specific permitted land uses will be determined by the zoning provisions of the Township. The Township recognizes that some land uses may be considered generally compatible with the intent of a particular zoning district, yet may not necessarily be appropriate on a particular parcel in the subject zoning district due to unique or special conditions. These unique or special circumstances may be a result of traffic, noise, or visual or operational characteristics, which if unmitigated could result in significant public or private nuisance. Such uses are typically referred to as *special land uses* in community zoning ordinances. They should be permitted only after a special review has determined that the land use and associated site development proposal meets special standards to assure its compatibility with surrounding land uses, other permitted uses in the district, public facilities and services, and other community features. Special land uses often include (but are not limited to) landing strips, mineral

extraction pits, commercial kennels, service stations, high traffic generating uses, and heavy industrial projects.

Special land uses should be permitted in appropriate locations pursuant to specific standards and review procedures established in the Township's zoning ordinance. Approval should not be indiscriminate and conditions should be imposed to minimize impacts on surrounding lands. These standards should accomplish the following:

- 1) Assure that the design, construction, operation and maintenance of land uses are in a manner harmonious with the character of adjacent property and the surrounding area.
- 2) Avoid inappropriate changes to the essential character of the surrounding area.
- 3) Avoid interference with the general enjoyment of adjacent property.
- 4) Improve the use or character of the property under consideration and the surrounding area in general, yet also be in keeping with the natural environment of the site.
- 5) Avoid negative impacts upon adjacent property or conditions which will be detrimental to the health, safety, or welfare of persons or property through the excessive production of traffic, noise, smoke, odor, fumes or glare.
- 6) Assure availability of adequate essential public facilities and services, or evidence that the person responsible for the proposed special land use will be able to continually provide for the services and facilities deemed essential to the special land use under consideration.
- 7) Avoid demands on public services and facilities in excess of current capacity.

This Plan strongly discourages the issuance of special land use permits for disruptive commercial or industrial uses in residential areas, under the guise of "*home occupations*." These uses undermine the residential neighborhood and quality of life for current and future residents.

## Chapter 5

# PUBLIC SERVICES STRATEGY

### INTRODUCTION

The Future Land Use Strategy discussed in Chapter 4 describes the planned pattern of land use throughout the Township. The Public Services Strategy described in this Chapter identifies the manner and degree to which public infrastructure and services are to be provided within the Township to support the planned future land use pattern. Public ser-

vices and related infrastructure include sewage disposal and potable water, roads and highways, police and fire protection, recreation, and general government services. As the character and feasibility of land development is directly impacted by the extent to which public services are available, the Public Services Strategy works hand-in-hand with the Future Land Use Strategy and is a critical element of the Township's efforts to control and guide future growth and development.

An important principle of the Public Services Strategy is that no new development will occur in the Township unless public services are adequate to meet the needs of that new development. The Public Services Strategy consists of recommendations regarding improvements to the Township's delivery of individual public services. These policies formulate the manner by which, and conditions upon which, future public service improvements are to be made.

The Public Services Strategy calls for a future public services pattern not very different than the current pattern in the Township. The Strategy does not suggest any substantial expansion of public sewer or water services in the Township, but places priority upon maintaining the current levels of public services and pursuing improvements as necessary to meet the growing demands of an expanding population.

## **INDIVIDUAL PUBLIC SERVICE COMPONENTS**

### **Roadway Network**

**Issues:** As new residential and non-residential land uses are introduced in the Township, demands upon the roadway network will increase. The additional residential development anticipated will result in higher traffic levels. This increased traffic may eventually lower the level of service some of the Township's roads provide, particularly those that are unpaved. Conversely, it must be recognized that improvements may well attract new development which, in turn, will place additional demand on the roadway network. The Roadway Network component of the Public Services Strategy seeks to assure that land development does not sacrifice the public health, safety, and welfare due to inadequate roadway infrastructure, nor prematurely encourage changes in land uses due to improved conditions.

Even with portions of its roadway network composed of unpaved segments that greatly reduce traffic flow capacity, the Township's roadway infrastructure fulfills its function well. This is due, in large part, to the concentration of the Township's population and commercial and industrial services in the Kinross urbanized area where road infrastructure is substantial and accommodates the vast majority of the traffic flow in the Township. However, the level of service of the Township's unpaved roads can be expected to decline as greater demands are placed upon these roads by a growing population.

**Recommendations:** The following recommendations are intended to guide Kinross Charter Township officials regarding improvements to the Township's roadway network:

- 1) Kinross Charter Township will strive to improve the Township roadway network, as financial resources become available, based upon the following guidelines:
  - a. Greatest priority for road improvements will be assigned to those road segments whose current conditions present imminent danger to the public health and safety of Township residents. Such dangerous conditions include roadway impasses and flooding.

- b. Functional classification of roads shall dictate the priority of improvements when all other conditions are generally equal. The functional importance of the various roads in the Township, from highest to lowest, is as follows: 1) county primary; 2) county local, excluding public roads in a platted subdivision or similar neighborhood development; and 3) minor roads, such as local neighborhood roads in platted subdivisions.
  - c. Where imminent danger is not a factor, county local gravel roads shall only be paved based upon the following considerations: 1) there is general consensus among residents living along the road segment for such paving; and 2) the costs to maintain a gravel road become excessive compared to the long term costs of paving a road, undermining the financial stability of the Township, and Township residents are unwilling to pay additional taxes to cover the maintenance costs.
- 2) The Township will strive to obtain and maintain current traffic counts throughout the entire Township and, upon the development of a Township-wide traffic count profile, establish a level of service rating for each road segment to assist in the identification of priority improvements.
  - 3) The Township will coordinate with the Chippewa County Road Commission to identify needed improvements and the perceived relative priority of such improvements.
  - 4) Proposed land uses and site development projects larger than a single-family home on an individual lot will be analyzed in regard to traffic impacts and roadway improvements.
  - 5) The Township will develop standards to regulate new development along roadway corridors to minimize negative impacts including, but not limited to poorly sited and/or designed access, and too many points of access.
  - 6) Subdivisions platted according to PA 288 of 1967 must be built to County Road Commission standards. Private roads must be built to meet minimum design standards to assure adequate means of access, including emergency vehicle access. All roads shall provide adequate right-of-way or easement widths to assure ease of maintenance, improvements, and installation of utilities.

## **Sewage Disposal and Potable Water**

**Issues:** While the vast majority of existing residences in the Township are served by public sewer and water, many residents rely on on-site sewage disposal and potable water. The number of residences relying on on-site facilities may increase considerably in future years, depending upon population growth rates and land development patterns. The fact that many of the Township soils present severe or moderate limitations to on-site sewage disposal highlight the critical relationship between land use, development densities, and on-site sewage disposal and potable water. Improperly operating septic systems can contaminate potable groundwater resources, inland lakes and streams, and pose public health threats to those using the contaminated resources. As land development densities increase, so does the need for public sewer and water. Industrial, commercial, and higher density residential land uses generally have greater sewage disposal and potable water needs than can often be met by traditional on-site facilities. Failure to provide adequate sewer and water facilities to these land uses can lead to severe health and environmental consequences, while the premature provision of these services can lead to accelerated

and unmanaged growth and development. The Sewage Disposal and Potable Water component of the Public Services Strategy strives to assure adequate provisions for future sewage disposal and potable water.

**Recommendations:** The following recommendations are to assure adequate sewage disposal and potable water in the Township during the next 10 to 20 years:

- 1) All on-site sewage disposal and potable water facilities shall be constructed and maintained in accordance with the requirements and standards of the Chippewa County Public Health Department and Michigan Public Health Department as well as those of other applicable local, county, state or federal agencies.
- 2) No land uses or land development projects will be permitted if any applicable regulations regarding on-site sewage disposal and potable water facilities can not be met and public sewer and water services are not available.
- 3) Any extension of public sewer and water services into Township areas should be limited to locations where the public welfare is threatened due to anticipated or discovered environmental hazards, or where this Plan specifically focuses development of a character typically requiring such services – the Kinross Mixed Use Area and the higher density areas of the Residential Area.
- 4) Any extension of a sewer and/or water service area, and associated infrastructure, should be established in a phased manner so as not to open up too great a land area to new and higher intensity development at one time and undermine the Township's ability to effectively manage the rate of growth and development.
- 5) All land uses and land development projects should be serviced by public sewer and water infrastructure if the infrastructure abuts the property in question.

### **Storm Water Management**

**Issues:** As the land surface is increasingly covered by buildings, parking lots and other impermeable surfaces associated with new development, the quantity of storm water runoff increases. The vegetated landscape that previously absorbed and slowed much of the water associated with storms is replaced by urban surfaces. Unless specific preventive measures are taken, this condition encourages flooding, soil erosion, sedimentation and pollution of area water resources. Though these conditions originate from site-specific circumstances, their impact can extend to adjacent properties and more regional areas including other communities within the same watershed. Storm Water management aims to minimize flood conditions, and assure the quality of runoff which is collected and ultimately discharged into the watershed system (streams, rivers, wetlands, lakes, etc.) is adequate.

**Recommendations:** The following recommendations will guide the Township in adequately controlling the quality and quantity of Storm Water runoff associated with the introduction of new land uses.

- 1) Increased quantities of runoff which occur as a result of property development shall be detained on site, if necessary, to avoid placing excess demand on the capacity of the Storm Water system into which the runoff would otherwise be discharged.

- 2) Proposed land uses will not be permitted if and where the level of service currently provided by existing Storm Water management infrastructure and/or existing drainage patterns would be decreased, unless necessary improvements to such infrastructure or natural drainage courses are first made.
- 3) All new and existing land uses must comply with all county, state, and federal regulations regarding Storm Water management and soil erosion, including those regulations of the Chippewa County Drain Commissioner.

### **Emergency Services and Administrative Facilities**

**Issues:** As community growth and land development increases, so does the demand for emergency services and facilities for housing local governmental administrative activities and operations. The Emergency Services and Administrative Facilities component of the Public Services Strategy is intended to assure that adequate fire and police protection services remain available to existing and future residents and property, and that the administrative facilities maintained by the Township are adequate for carrying out its administrative activities.

**Recommendations:** The following recommendations will guide the Township in assuring the availability of emergency services and adequate government facilities for administrative activities:

- 1) The Township will require the provision of fire protection infrastructure (wells, water lines, etc.) for all new developments which are of such size and density that on-site infrastructure is considered critical. On-site fire protection infrastructure is generally considered critical for platted subdivisions and condominium subdivisions which approach 15 or more building sites of two acres or less in size.
- 2) The Township will continually monitor police and fire protection needs and service, and emergency medical care needs and service, and explore improving service levels in response to identified deficiencies through both expanding services with neighboring municipalities and the establishment of additional emergency facilities within the Township.
- 3) The Township will continue to meet the basic governance needs of its citizens in the Township Hall facility on Curtis Road until a demonstrated need for improved service and/or facilities is identified and adequate financial resources are available to meet that need. Should a demonstrated need be identified, alternative solutions will examine: a) expansion of existing Township Hall; b) establishment of a new location of Township offices; and c) the establishment of a second administrative facility in addition to the existing Township Hall.

### **Recreation**

**Issues:** Kinross Charter Township recognizes that the health of its residents is, in part, impacted by the quality of opportunities available for spending leisure time. The Township further recognizes that a critical consideration in this regard is the type of recreational facilities nearby and available to the residents of the Township. Demands for recreational opportunities increase with population growth, and available land resources for recreation decrease as residential and other land uses consume greater amounts of what was previously open space and potential outdoor recreation land. Recreational lands must be purposefully pursued and planned for if these uses are to be appropriately located within

the community and provide services in demand. The Recreation component of the Public Services Strategy is a plan for identifying and addressing the recreation needs of the Township.

The extent to which Township residents are satisfied with available recreational opportunities in the Township is not clearly understood at this time. Up to this time, a survey of resident attitudes specifically addressing recreation issues in the Township has not been pursued. Recreation standards adopted by the Michigan Department of Natural Resources (Table 5-1) identify the minimum number of suggested recreation facilities, by facility type, based upon a community's population. These standards are presented as guidelines and not as absolute *"hard and fast rules."* While these standards may generally suggest adequate recreational facilities in the Township at this time, future Township growth may undermine this level of adequacy. Most importantly, the public's perception of *"adequacy"* is not clear.

**Recommendations:** The following recommendations will guide the Township in its pursuit of an improved recreational environment:

- 1) The Township will determine, approximately every five years, the extent to which area residents are satisfied with recreation opportunities in the Township through the use of surveys, public meetings, and/or interviews with residents.
- 2) The Township will continue to maintain a current MDNR-approved five year action plan which will provide a specific action plan aimed at providing needed Township facilities and enable the Township to compete for state and federal recreation government monies.
- 3) The Township will strive to provide recreation facilities in a manner that recognizes the recreation standards of the MDNR and the particular recreation needs expressed by its residents.
- 4) The Township will adopt incentives to encourage the provision of open space and recreation areas within future development projects.

**Table 5-1  
MICHIGAN RECREATION OPPORTUNITY STANDARDS**

TYPE of RECREATION OPPORTUNITY	MDNR STANDARD <sup>(a)</sup>
Local Park Land (acres)	10/1,000
Archery Ranges (b)	1/50,000
Ballfields (c)	1/3,000
Outdoor Basketball Courts (c)	1/5,000
Bicycle Trails (miles)	1/40,000
Golf Courses (b)	1/25,000
Indoor Ice Rinks	1/50,000
Outdoor Ice Rinks-Art.	1/20,000
Picnic Areas (tables)	1/200
Playgrounds (c)	1/3,000
Rifle Ranges (b)	1/50,000
Shotgun Ranges (b)	1/50,000

Sledding Hills (c)	1/40,000
Soccer Fields (c)	1/20,000
Outdoor Swimming Pools	1/40,000
Outdoor Tennis Courts (c)	1/4,000
Boat Launches (parking)	1/400
Campgrounds (campsites) (d)	1/150
Cross-Country Ski Trails (miles)	1/5,000
Fishing Access (feet)	1,000/1,000
Fishing Piers	1/100,000
Hiking Trails (miles)	1/5,000
Horseback Riding Trails (miles)	1/20,000
Nature Areas (areas)	1/50,000
Nature Trails (miles)	1/20,000
ORV Areas (acres)	1/7,500
ORV Trails (miles)	1/10,000
Land Open to Snowmobiling (acres)	10/1,000
Snowmobile Trails (miles)	1/3,000
Swimming Beaches	1/25,000

- (a) Units/population.
- (b) Includes private clubs and commercial establishments.
- (c) Does not include facilities on school grounds.
- (d) Includes commercial facilities.

Source: Michigan Department of Natural Resources, 1986, Building Michigan Recreation Future, Appendix B, pages 100-101